



**INFORME SEMESTRAL N°7**

**Plan de Manejo Biótico**

**Proyecto “Modificaciones y Mejoramiento del Sistema de Pozas de Evaporación Solar en el Salar de Atacama (RCA RE-N°21/2016)”**

**ANEXO ÁREA DE LAGUNAS**



**Región de Antofagasta**

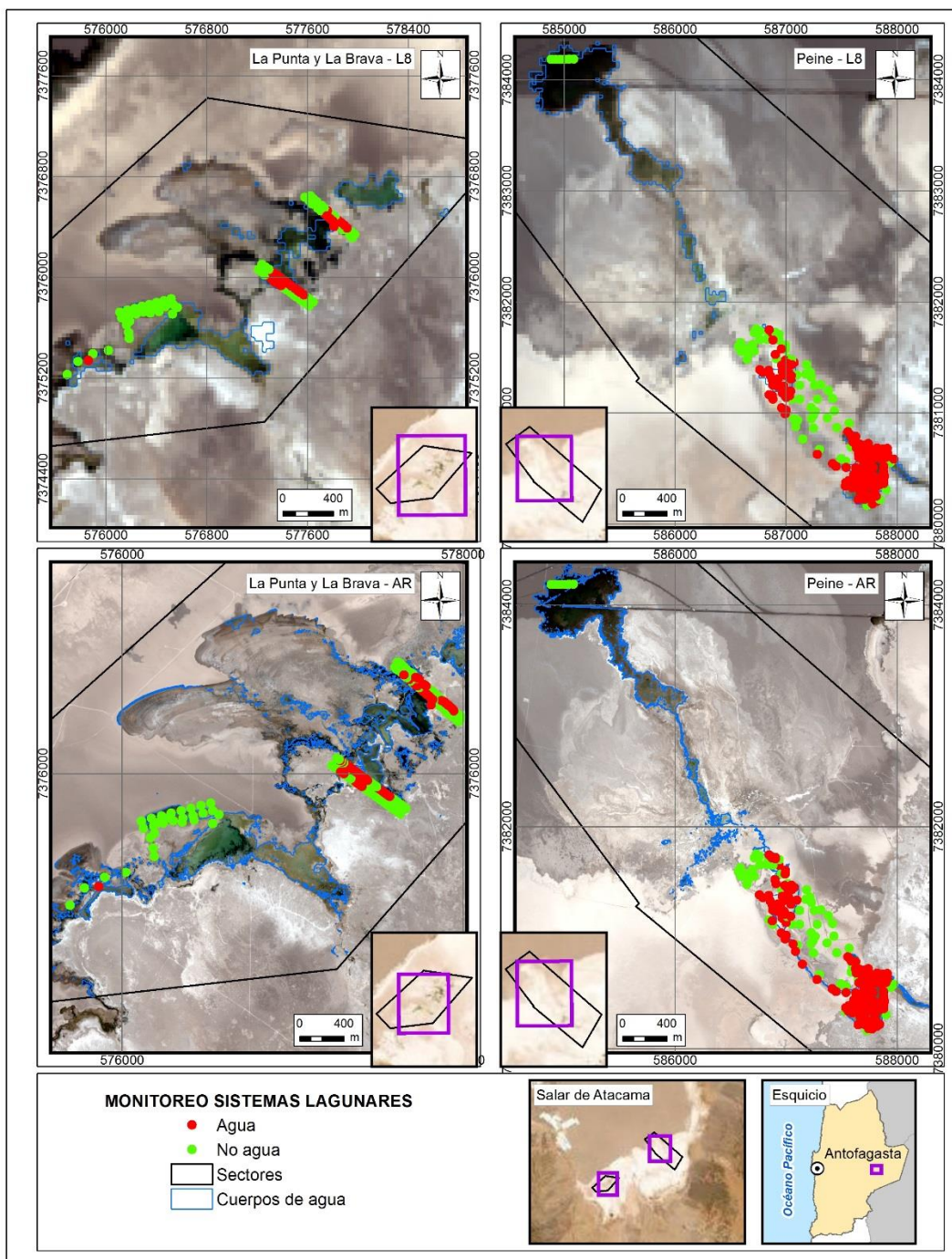
**Noviembre de 2019**

## TABLA DE CONTENIDOS

<b>1</b>	<b>ANEXO ÁREA DE LAGUNAS .....</b>	<b>3</b>
1.1	Distribución de puntos de validación en terreno para imágenes LANDSAT 8 y PLEIADES 1-A, Sectores La Punta y Las Brava y Peine. ....	3
1.2	Mosaico a partir de imágenes de dron, Sector La Punta y Las Brava, agosto de 2019. ....	4
1.3	Mosaico a partir de imágenes de dron, Sector Peine, agosto de 2019.....	5
1.4	Coordenadas de puntos de validación en terreno.....	6
1.4.1	Alta resolución (Pleiades 1A).....	6
1.4.2	Media resolución (Landsat 8) .....	19
1.5	Cuadro comparativo de diferencias implementadas en el estudio actual respecto a la línea de base (Adenda 5 RWL, 2015). ....	27
1.6	Metadatos de Imágenes de alta resolución INV19 – Pleiades 1A .....	29
1.7	Metadatos de Imágenes de media resolución INV19 – Landsat 8.....	156
1.8	Parámetros espectrales para el sistema lagunar La Punta y La Brava, imágenes LANDSAT 8, invierno 2019.....	162
1.9	Parámetros espectrales para el sistema lagunar La Punta y La Brava, imágenes PLEIADES 1A, invierno 2019. ....	163
1.10	Parámetros espectrales para el sistema lagunar Peine, imágenes LANDSAT 8, invierno 2019. ....	164
1.11	Parámetros espectrales para el sistema lagunar Peine, imágenes PLEIADES 1A, invierno 2019. ....	165

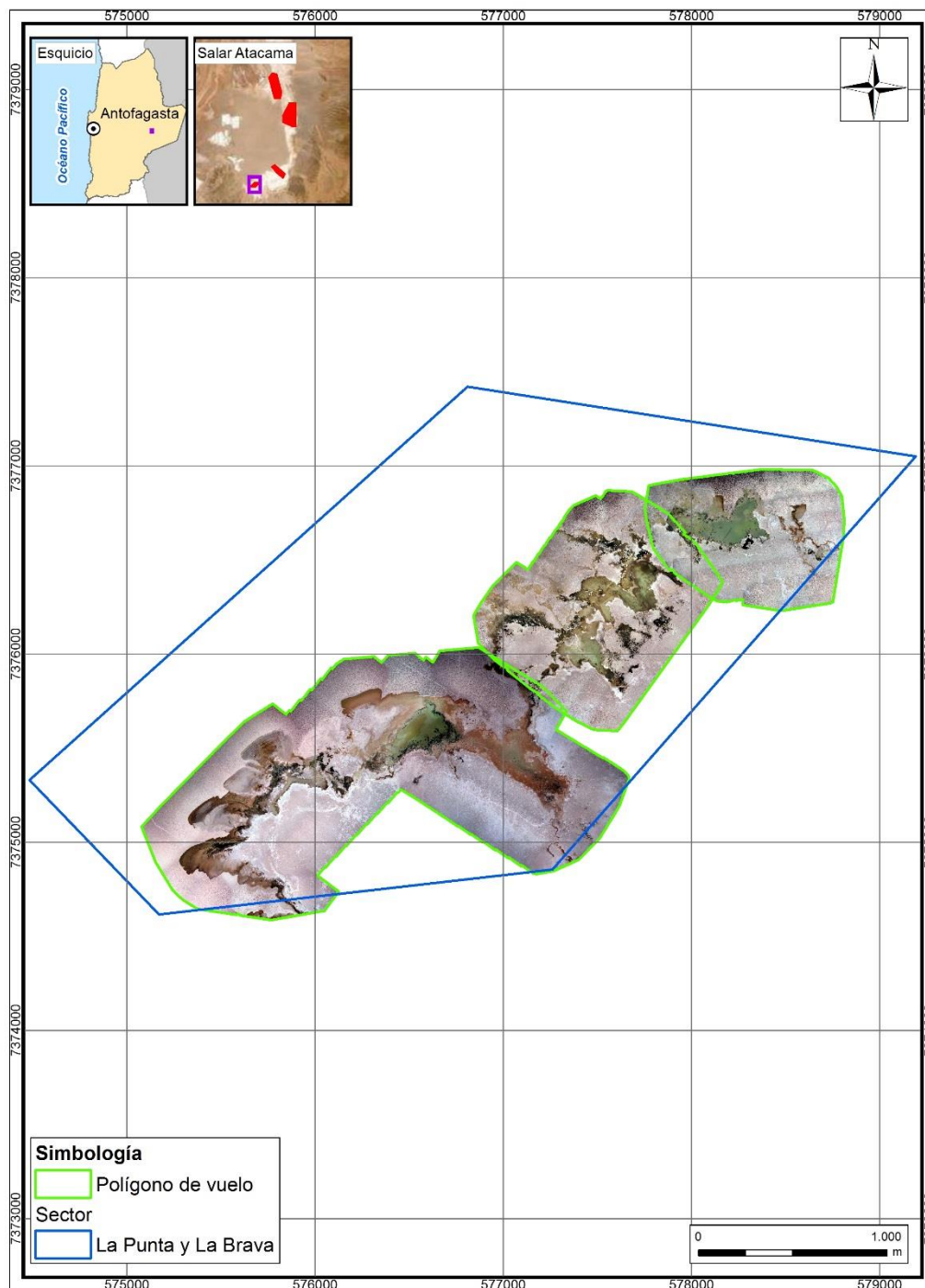
# 1 ANEXO ÁREA DE LAGUNAS

## 1.1 Distribución de puntos de validación en terreno para imágenes LANDSAT 8 y PLEAIDES 1-A, Sectores La Punta y Las Brava y Peine.



Fuente: Elaboración propia

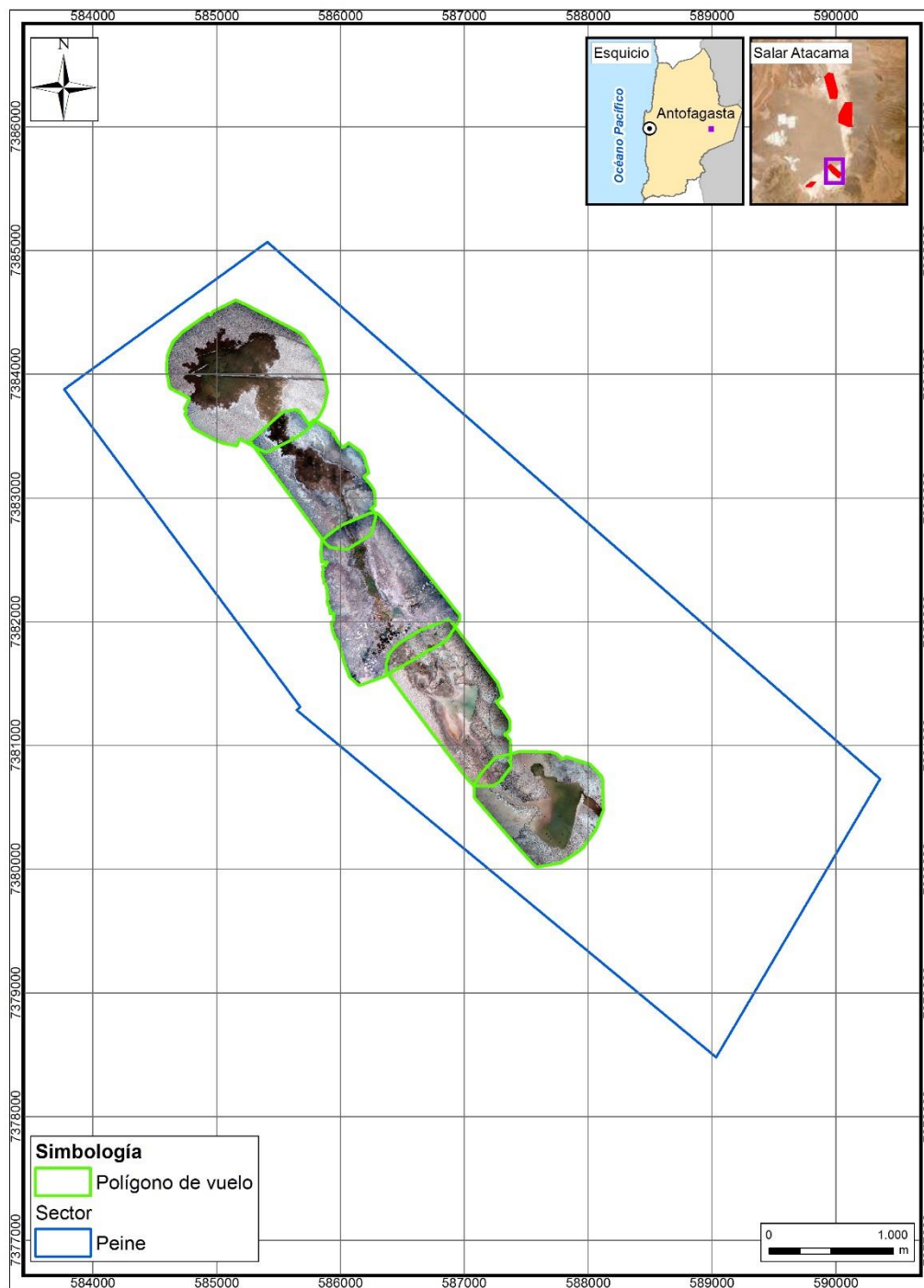
**1.2 Mosaico a partir de imágenes de dron, Sector La Punta y Las Brava, agosto de 2019.**



Fuente: Elaboración propia



### 1.3 Mosaico a partir de imágenes de dron, Sector Peine, agosto de 2019.



Fuente: Elaboración propia

## 1.4 Coordenadas de puntos de validación en terreno

### 1.4.1 Alta resolución (Pleiades 1A)

#### 1.4.1.1 Sector La Punta y La Brava

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-001	577.635	7.375.763	NA	NA
PB-002	577.630	7.375.768	NA	NA
PB-003	577.624	7.375.773	NA	NA
PB-004	577.617	7.375.777	NA	NA
PB-005	577.611	7.375.782	NA	NA
PB-006	577.604	7.375.786	NA	NA
PB-007	577.598	7.375.791	NA	NA
PB-008	577.591	7.375.796	NA	NA
PB-009	577.667	7.375.796	NA	NA
PB-010	577.659	7.375.800	NA	NA
PB-011	577.585	7.375.800	NA	NA
PB-012	577.578	7.375.805	NA	NA
PB-013	577.653	7.375.805	NA	NA
PB-014	577.647	7.375.810	NA	NA
PB-015	577.572	7.375.810	NA	NA
PB-016	577.565	7.375.814	NA	NA
PB-017	577.640	7.375.815	NA	NA
PB-018	577.559	7.375.819	NA	NA
PB-019	577.636	7.375.819	NA	NA
PB-020	577.552	7.375.824	NA	NA
PB-021	577.630	7.375.824	NA	NA
PB-022	577.623	7.375.826	A	NA
PB-023	577.546	7.375.828	NA	NA
PB-024	577.622	7.375.832	NA	NA
PB-025	577.539	7.375.833	NA	NA
PB-026	577.617	7.375.833	A	NA
PB-027	577.533	7.375.838	NA	NA
PB-028	577.611	7.375.838	A	NA
PB-029	577.526	7.375.842	NA	NA
PB-030	577.604	7.375.843	A	NA
PB-031	577.520	7.375.847	NA	NA
PB-032	577.598	7.375.848	A	NA

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-033	577.513	7.375.851	NA	NA
PB-034	577.591	7.375.852	A	NA
PB-035	577.507	7.375.856	NA	NA
PB-036	577.585	7.375.857	NA	NA
PB-037	577.500	7.375.861	NA	NA
PB-038	577.578	7.375.862	NA	NA
PB-039	577.494	7.375.865	NA	NA
PB-040	577.572	7.375.867	A	NA
PB-041	577.487	7.375.870	NA	NA
PB-042	577.565	7.375.871	A	A
PB-043	577.481	7.375.875	NA	NA
PB-044	577.559	7.375.876	A	A
PB-045	577.474	7.375.879	NA	NA
PB-046	577.552	7.375.881	A	A
PB-047	577.467	7.375.884	NA	NA
PB-048	577.546	7.375.885	A	NA
PB-049	577.461	7.375.889	NA	NA
PB-050	577.540	7.375.890	A	NA
PB-051	577.454	7.375.893	NA	NA
PB-052	577.533	7.375.895	A	A
PB-053	577.448	7.375.898	NA	NA
PB-054	577.527	7.375.900	A	A
PB-055	577.441	7.375.903	NA	NA
PB-056	577.520	7.375.904	A	A
PB-057	577.435	7.375.907	NA	NA
PB-058	577.514	7.375.909	A	A
PB-059	577.428	7.375.912	NA	NA
PB-060	577.507	7.375.914	A	A
PB-061	577.422	7.375.917	NA	NA
PB-062	577.501	7.375.918	A	A
PB-063	577.414	7.375.922	NA	NA
PB-064	577.494	7.375.923	A	NA
PB-065	577.410	7.375.925	A	A
PB-066	577.488	7.375.928	A	NA
PB-067	577.402	7.375.930	A	A
PB-068	577.481	7.375.933	A	NA
PB-069	577.396	7.375.935	A	A

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-070	577.475	7.375.937	A	NA
PB-071	577.389	7.375.940	A	A
PB-072	577.468	7.375.942	A	NA
PB-073	577.383	7.375.944	A	A
PB-074	577.462	7.375.947	NA	NA
PB-075	577.376	7.375.949	A	A
PB-076	577.456	7.375.952	NA	NA
PB-077	577.363	7.375.953	NA	NA
PB-078	577.370	7.375.954	A	A
PB-079	577.449	7.375.956	NA	NA
PB-080	577.359	7.375.958	NA	NA
PB-081	577.443	7.375.961	A	A
PB-082	577.355	7.375.962	NA	NA
PB-083	577.348	7.375.966	A	NA
PB-084	577.436	7.375.966	A	A
PB-085	577.430	7.375.970	A	A
PB-086	577.344	7.375.972	A	NA
PB-087	577.423	7.375.975	A	A
PB-088	577.337	7.375.977	A	A
PB-089	577.417	7.375.980	A	A
PB-090	577.331	7.375.982	A	NA
PB-091	577.410	7.375.985	A	A
PB-092	577.323	7.375.986	NA	NA
PB-093	577.319	7.375.988	A	NA
PB-094	577.404	7.375.989	A	A
PB-095	577.313	7.375.992	NA	NA
PB-096	577.397	7.375.994	A	A
PB-097	577.311	7.375.996	A	A
PB-098	577.391	7.375.999	A	A
PB-099	577.305	7.376.000	A	A
PB-100	577.385	7.376.004	A	A
PB-101	577.298	7.376.005	A	A
PB-102	577.378	7.376.008	A	A
PB-103	577.290	7.376.009	A	NA
PB-104	577.283	7.376.011	A	NA
PB-105	577.372	7.376.013	A	A
PB-106	577.279	7.376.018	A	NA



PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-107	577.365	7.376.018	A	A
PB-108	577.274	7.376.019	NA	NA
PB-109	577.359	7.376.022	A	A
PB-110	577.271	7.376.025	NA	NA
PB-111	577.352	7.376.027	A	A
PB-112	577.266	7.376.028	NA	NA
PB-113	577.346	7.376.032	A	A
PB-114	577.261	7.376.033	NA	NA
PB-115	577.256	7.376.036	NA	NA
PB-116	577.339	7.376.037	A	A
PB-117	577.250	7.376.039	NA	NA
PB-118	577.333	7.376.041	A	A
PB-119	577.244	7.376.043	NA	NA
PB-120	577.326	7.376.046	A	A
PB-121	577.238	7.376.046	NA	NA
PB-122	577.232	7.376.051	NA	NA
PB-123	577.320	7.376.051	A	A
PB-124	577.314	7.376.055	A	A
PB-125	577.307	7.376.060	A	NA
PB-126	577.301	7.376.065	NA	NA
PB-127	577.294	7.376.070	A	A
PB-128	577.288	7.376.074	A	NA
PB-129	577.281	7.376.079	A	NA
PB-130	577.275	7.376.084	A	NA
PB-131	577.269	7.376.086	NA	NA
PB-132	577.261	7.376.093	NA	NA
PB-133	577.976	7.376.305	NA	NA
PB-134	577.970	7.376.311	NA	NA
PB-135	577.965	7.376.317	NA	NA
PB-136	577.959	7.376.322	NA	NA
PB-137	577.955	7.376.328	NA	NA
PB-138	577.996	7.376.331	NA	NA
PB-139	577.950	7.376.332	NA	NA
PB-140	577.943	7.376.335	NA	NA
PB-141	577.990	7.376.336	NA	NA
PB-142	577.936	7.376.339	NA	NA
PB-143	577.984	7.376.341	NA	NA

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-144	577.932	7.376.342	NA	NA
PB-145	577.979	7.376.346	NA	NA
PB-146	577.921	7.376.348	NA	NA
PB-147	577.973	7.376.351	NA	NA
PB-148	577.915	7.376.352	NA	NA
PB-149	577.967	7.376.355	NA	NA
PB-150	577.962	7.376.360	NA	NA
PB-151	577.906	7.376.361	NA	NA
PB-152	577.957	7.376.363	NA	NA
PB-153	577.902	7.376.367	NA	NA
PB-154	577.947	7.376.369	NA	NA
PB-155	577.898	7.376.373	NA	NA
PB-156	577.894	7.376.377	NA	NA
PB-157	577.943	7.376.378	A	A
PB-158	577.889	7.376.382	NA	NA
PB-159	577.937	7.376.383	A	A
PB-160	577.884	7.376.387	NA	NA
PB-161	577.931	7.376.388	A	A
PB-162	577.879	7.376.390	NA	NA
PB-163	577.925	7.376.392	A	NA
PB-164	577.873	7.376.395	NA	NA
PB-165	577.923	7.376.397	NA	NA
PB-166	577.867	7.376.399	NA	NA
PB-167	577.919	7.376.400	A	A
PB-168	577.861	7.376.402	NA	NA
PB-169	577.913	7.376.404	A	A
PB-170	577.856	7.376.406	NA	NA
PB-171	577.907	7.376.409	A	A
PB-172	577.850	7.376.409	NA	NA
PB-173	577.845	7.376.413	NA	NA
PB-174	577.901	7.376.414	A	A
PB-175	577.839	7.376.418	NA	NA
PB-176	577.895	7.376.419	A	A
PB-177	577.835	7.376.424	NA	NA
PB-178	577.889	7.376.425	A	A
PB-179	577.832	7.376.427	A	NA
PB-180	577.883	7.376.430	A	A

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-181	577.874	7.376.431	A	NA
PB-182	577.830	7.376.431	A	NA
PB-183	577.877	7.376.435	NA	NA
PB-184	577.824	7.376.437	A	A
PB-185	577.871	7.376.439	NA	NA
PB-186	577.818	7.376.442	A	A
PB-187	577.866	7.376.443	NA	NA
PB-188	577.812	7.376.447	A	A
PB-189	577.860	7.376.447	NA	NA
PB-190	577.855	7.376.451	NA	NA
PB-191	577.806	7.376.452	A	A
PB-192	577.851	7.376.456	NA	NA
PB-193	577.800	7.376.457	A	A
PB-194	577.846	7.376.461	NA	NA
PB-195	577.794	7.376.463	A	A
PB-196	577.841	7.376.466	NA	NA
PB-197	577.788	7.376.468	A	A
PB-198	577.835	7.376.471	NA	NA
PB-199	577.782	7.376.473	A	A
PB-200	577.830	7.376.476	NA	NA
PB-201	577.775	7.376.478	A	A
PB-202	577.825	7.376.481	NA	NA
PB-203	577.769	7.376.483	A	A
PB-204	577.820	7.376.486	NA	NA
PB-205	577.763	7.376.489	A	A
PB-206	577.814	7.376.489	NA	NA
PB-207	577.807	7.376.494	NA	NA
PB-208	577.757	7.376.494	A	A
PB-209	577.751	7.376.499	A	NA
PB-210	577.801	7.376.499	NA	NA
PB-211	577.745	7.376.504	A	NA
PB-212	577.795	7.376.504	NA	NA
PB-213	577.739	7.376.509	A	NA
PB-214	577.733	7.376.515	NA	NA
PB-215	577.786	7.376.515	NA	NA
PB-216	577.780	7.376.519	A	A
PB-217	577.727	7.376.520	A	A

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-218	577.774	7.376.524	NA	NA
PB-219	577.721	7.376.525	A	A
PB-220	577.768	7.376.529	A	NA
PB-221	577.714	7.376.530	A	NA
PB-222	577.762	7.376.534	A	A
PB-223	577.707	7.376.535	NA	NA
PB-224	577.756	7.376.540	A	A
PB-225	577.702	7.376.540	NA	NA
PB-226	577.749	7.376.545	A	A
PB-227	577.697	7.376.545	NA	NA
PB-228	577.694	7.376.548	NA	NA
PB-229	577.746	7.376.553	A	NA
PB-230	577.686	7.376.554	A	NA
PB-231	577.740	7.376.557	A	NA
PB-232	577.680	7.376.560	A	NA
PB-233	577.731	7.376.561	NA	NA
PB-234	577.736	7.376.562	A	NA
PB-235	577.674	7.376.564	NA	NA
PB-236	577.725	7.376.566	A	A
PB-237	577.669	7.376.567	A	NA
PB-238	577.663	7.376.570	A	NA
PB-239	577.719	7.376.571	A	NA
PB-240	577.658	7.376.575	NA	NA
PB-241	577.717	7.376.576	NA	NA
PB-242	577.655	7.376.580	A	A
PB-243	577.712	7.376.580	NA	NA
PB-244	577.648	7.376.586	A	A
PB-245	577.708	7.376.587	NA	NA
PB-246	577.703	7.376.590	NA	NA
PB-247	577.643	7.376.592	NA	NA
PB-248	577.695	7.376.592	NA	NA
PB-249	577.690	7.376.594	NA	NA
PB-250	577.638	7.376.597	NA	NA
PB-251	577.684	7.376.598	NA	NA
PB-252	577.633	7.376.602	NA	NA
PB-253	577.679	7.376.603	NA	NA
PB-254	577.627	7.376.605	NA	NA

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-255	577.674	7.376.608	NA	NA
PB-256	577.621	7.376.608	NA	NA
PB-257	577.615	7.376.611	NA	NA
PB-258	577.669	7.376.612	NA	NA
PB-259	577.610	7.376.616	NA	NA
PB-260	577.664	7.376.617	NA	NA
PB-261	577.606	7.376.620	NA	NA
PB-262	577.659	7.376.622	NA	NA
PB-263	577.600	7.376.626	NA	NA
PB-264	577.655	7.376.627	NA	NA
PB-265	577.650	7.376.632	NA	NA
PB-266	577.644	7.376.638	NA	NA
PB-267	577.639	7.376.644	NA	NA
PB-268	577.633	7.376.647	NA	NA
PB-269	577.623	7.376.653	NA	NA
PB-270	577.617	7.376.656	NA	NA
PB-VC-001	575.464	7.374.935	NA	NA
PB-VC-002	575.517	7.374.971	A	A
PB-VC-003	575.544	7.375.002	A	A
PB-VC-004	575.697	7.375.228	A	A
PB-VC-005	575.782	7.375.331	A	A
PB-VC-006	575.864	7.375.339	A	A
PB-VC-007	575.900	7.375.393	A	NA
PB-VC-008	576.022	7.375.421	NA	NA
PB-VC-009	576.190	7.375.516	NA	NA
PB-VC-010	576.184	7.375.563	A	NA
PB-VC-011	576.168	7.375.624	NA	NA
PB-VC-012	576.192	7.375.651	NA	NA
PB-VC-013	576.127	7.375.679	NA	NA
PB-VC-014	576.185	7.375.694	A	NA
PB-VC-015	576.533	7.375.709	A	A
PB-VC-016	576.243	7.375.709	NA	NA
PB-VC-017	576.208	7.375.713	A	NA
PB-VC-018	576.355	7.375.716	A	NA
PB-VC-019	576.116	7.375.724	NA	NA
PB-VC-020	576.301	7.375.724	NA	NA
PB-VC-021	576.424	7.375.729	A	NA

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PB-VC-022	576.174	7.375.739	A	A
PB-VC-023	576.359	7.375.739	A	NA
PB-VC-024	576.273	7.375.741	A	NA
PB-VC-025	576.232	7.375.754	A	A
PB-VC-026	576.418	7.375.754	A	A
PB-VC-027	576.571	7.375.761	A	A
PB-VC-028	576.290	7.375.769	A	A
PB-VC-029	576.476	7.375.770	A	A
PB-VC-030	576.348	7.375.784	A	A
PB-VC-031	576.534	7.375.785	A	A
PB-VC-032	576.406	7.375.799	NA	NA
PB-VC-033	576.464	7.375.814	NA	NA
PB-VC-034	576.522	7.375.829	NA	NA
PB-VC-035	577.813	7.376.403	A	A

#### 1.4.1.2 Sector Peine

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PE-001	587.730	7.380.165	NA	NA
PE-002	587.778	7.380.181	A	A
PE-003	587.747	7.380.183	NA	NA
PE-004	587.817	7.380.200	A	A
PE-005	587.651	7.380.217	NA	NA
PE-006	587.711	7.380.219	A	A
PE-007	587.845	7.380.220	A	A
PE-008	587.792	7.380.225	A	A
PE-009	587.763	7.380.246	A	A
PE-010	587.813	7.380.249	A	A
PE-011	587.710	7.380.267	A	A
PE-012	587.670	7.380.282	A	A
PE-013	587.798	7.380.284	A	A
PE-014	587.903	7.380.306	NA	NA
PE-015	587.599	7.380.321	A	A
PE-016	587.809	7.380.329	A	A
PE-017	587.725	7.380.332	A	A
PE-018	587.535	7.380.337	A	NA



PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PE-019	587.670	7.380.340	A	A
PE-020	587.559	7.380.341	NA	NA
PE-021	587.636	7.380.344	A	A
PE-022	587.780	7.380.350	A	A
PE-023	587.848	7.380.353	A	A
PE-024	587.598	7.380.358	A	A
PE-025	587.878	7.380.361	A	A
PE-026	587.740	7.380.365	A	A
PE-027	587.539	7.380.369	A	NA
PE-028	587.668	7.380.371	A	A
PE-029	587.817	7.380.371	A	A
PE-030	587.771	7.380.381	A	A
PE-031	587.616	7.380.388	A	A
PE-032	587.567	7.380.390	A	A
PE-033	587.882	7.380.394	A	A
PE-034	587.693	7.380.397	A	A
PE-035	587.728	7.380.399	A	A
PE-036	587.824	7.380.404	A	A
PE-037	587.856	7.380.419	A	A
PE-038	587.638	7.380.419	A	A
PE-039	587.887	7.380.429	A	A
PE-040	587.790	7.380.430	A	A
PE-041	587.670	7.380.432	A	A
PE-042	587.710	7.380.434	A	A
PE-043	587.610	7.380.438	A	A
PE-044	587.750	7.380.445	A	A
PE-045	587.657	7.380.459	A	A
PE-046	587.701	7.380.468	A	A
PE-047	587.878	7.380.472	A	A
PE-048	587.742	7.380.478	A	A
PE-049	587.698	7.380.502	A	A
PE-050	587.630	7.380.505	A	A
PE-051	587.542	7.380.506	A	A
PE-052	587.787	7.380.507	A	A
PE-053	587.880	7.380.517	A	A
PE-054	587.452	7.380.517	A	A
PE-055	587.756	7.380.521	A	A

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PE-056	587.705	7.380.542	A	A
PE-057	587.418	7.380.542	A	A
PE-058	587.941	7.380.552	NA	NA
PE-059	587.538	7.380.562	NA	NA
PE-060	587.718	7.380.577	A	A
PE-061	587.770	7.380.577	A	A
PE-062	587.973	7.380.581	A	A
PE-063	587.859	7.380.583	A	A
PE-064	587.495	7.380.584	NA	NA
PE-065	587.799	7.380.592	A	A
PE-066	587.656	7.380.594	A	A
PE-067	587.900	7.380.596	A	A
PE-068	587.742	7.380.599	A	A
PE-069	587.829	7.380.600	A	A
PE-070	587.782	7.380.621	A	A
PE-071	587.281	7.380.627	A	A
PE-072	587.653	7.380.627	NA	NA
PE-073	587.748	7.380.629	A	A
PE-074	587.688	7.380.630	A	A
PE-075	587.916	7.380.633	A	A
PE-076	587.860	7.380.643	A	A
PE-077	587.801	7.380.649	A	A
PE-078	587.765	7.380.658	A	A
PE-079	587.716	7.380.659	A	A
PE-080	587.302	7.380.668	NA	NA
PE-081	587.876	7.380.671	A	A
PE-082	587.913	7.380.678	A	A
PE-083	587.671	7.380.681	A	A
PE-084	587.822	7.380.682	A	A
PE-085	587.636	7.380.682	A	A
PE-086	587.748	7.380.689	A	A
PE-087	587.588	7.380.690	NA	NA
PE-088	587.704	7.380.707	A	A
PE-089	587.626	7.380.718	A	A
PE-090	587.658	7.380.719	A	A
PE-091	587.741	7.380.722	A	A
PE-092	587.601	7.380.738	NA	NA

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PE-093	587.150	7.380.764	A	A
PE-094	587.628	7.380.786	A	A
PE-095	587.589	7.380.792	A	A
PE-096	587.557	7.380.828	A	A
PE-097	587.249	7.380.862	NA	NA
PE-098	587.458	7.380.867	NA	NA
PE-099	587.087	7.380.877	A	A
PE-100	587.569	7.380.906	NA	NA
PE-101	587.104	7.380.935	NA	NA
PE-102	587.065	7.380.943	A	A
PE-103	587.227	7.380.947	NA	NA
PE-104	587.371	7.380.954	NA	NA
PE-105	587.247	7.380.975	NA	NA
PE-106	586.993	7.380.991	A	NA
PE-107	587.264	7.381.014	NA	NA
PE-108	587.434	7.381.015	NA	NA
PE-109	587.001	7.381.021	A	A
PE-110	586.960	7.381.042	A	A
PE-111	587.227	7.381.047	NA	NA
PE-112	587.052	7.381.121	NA	NA
PE-113	587.124	7.381.121	NA	NA
PE-114	587.283	7.381.122	NA	NA
PE-115	586.881	7.381.122	NA	NA
PE-116	587.419	7.381.129	NA	NA
PE-117	587.001	7.381.136	A	A
PE-118	587.031	7.381.153	A	NA
PE-119	586.877	7.381.154	A	NA
PE-120	586.848	7.381.163	A	NA
PE-121	587.014	7.381.167	A	NA
PE-122	586.966	7.381.179	A	A
PE-123	587.000	7.381.186	A	NA
PE-124	587.009	7.381.193	A	NA
PE-125	587.041	7.381.194	A	A
PE-126	587.382	7.381.200	NA	NA
PE-127	586.980	7.381.209	A	A
PE-128	586.988	7.381.232	A	NA
PE-129	586.922	7.381.237	A	A

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PE-130	586.979	7.381.241	A	NA
PE-131	587.124	7.381.247	NA	NA
PE-132	587.256	7.381.248	NA	NA
PE-133	586.880	7.381.250	A	A
PE-134	587.314	7.381.251	NA	NA
PE-135	586.951	7.381.288	A	A
PE-136	586.876	7.381.296	A	A
PE-137	587.046	7.381.303	A	A
PE-138	586.930	7.381.305	A	A
PE-139	587.229	7.381.320	NA	NA
PE-140	586.860	7.381.329	A	A
PE-141	587.048	7.381.335	A	A
PE-142	586.991	7.381.338	A	A
PE-143	587.099	7.381.340	A	NA
PE-144	587.179	7.381.345	NA	NA
PE-145	586.793	7.381.363	A	A
PE-146	587.219	7.381.367	NA	NA
PE-147	587.020	7.381.370	A	A
PE-148	586.967	7.381.376	A	A
PE-149	586.845	7.381.382	A	A
PE-150	586.763	7.381.389	A	A
PE-151	586.962	7.381.427	NA	NA
PE-152	587.051	7.381.433	A	A
PE-153	587.185	7.381.434	NA	NA
PE-154	587.014	7.381.443	A	A
PE-155	587.074	7.381.453	A	A
PE-156	586.991	7.381.472	A	A
PE-157	587.050	7.381.475	A	A
PE-158	586.650	7.381.482	NA	NA
PE-159	586.913	7.381.488	A	A
PE-160	587.018	7.381.491	NA	NA
PE-161	586.903	7.381.524	NA	NA
PE-162	586.662	7.381.528	NA	NA
PE-163	586.595	7.381.553	NA	NA
PE-164	586.714	7.381.555	NA	NA
PE-165	586.993	7.381.573	A	A
PE-166	586.958	7.381.575	NA	NA

PUNTO DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19S		VALID_M7	MOD_M7
	ESTE	NORTE		
PE-167	586.668	7.381.581	NA	NA
PE-168	586.604	7.381.584	NA	NA
PE-169	586.570	7.381.597	NA	NA
PE-170	586.994	7.381.609	A	A
PE-171	586.699	7.381.614	NA	NA
PE-172	586.591	7.381.632	NA	NA
PE-173	586.936	7.381.654	A	A
PE-174	586.884	7.381.657	NA	NA
PE-175	586.768	7.381.659	NA	NA
PE-176	586.829	7.381.661	A	NA
PE-177	586.939	7.381.704	NA	NA
PE-178	586.842	7.381.708	NA	NA
PE-179	586.907	7.381.713	A	NA
PE-180	586.714	7.381.722	NA	NA
PE-181	586.873	7.381.722	A	A
PE-182	586.905	7.381.725	A	A
PE-183	586.763	7.381.736	NA	NA
PE-184	586.848	7.381.745	A	A
PE-185	586.734	7.381.756	NA	NA
PE-VC-001	584.886	7.384.185	A	A
PE-VC-002	584.926	7.384.185	A	A
PE-VC-003	584.966	7.384.185	A	A
PE-VC-004	585.006	7.384.185	A	A
PE-VC-005	585.046	7.384.186	A	A
PE-VC-006	585.086	7.384.186	A	A

## 1.4.2 Media resolución (Landsat 8)

### 1.4.2.1 Sector La Punta y La Brava

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PB-001	577.616	7.375.771	NA	NA
PB-002	577.592	7.375.790	NA	NA
PB-003	577.648	7.375.804	NA	NA
PB-004	577.566	7.375.809	NA	NA
PB-005	577.621	7.375.823	A	NA

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PB-006	577.540	7.375.827	NA	NA
PB-007	577.598	7.375.842	A	NA
PB-008	577.514	7.375.846	NA	NA
PB-009	577.494	7.375.860	NA	NA
PB-010	577.573	7.375.861	NA	NA
PB-011	577.468	7.375.878	NA	NA
PB-012	577.547	7.375.879	A	NA
PB-013	577.527	7.375.894	A	NA
PB-014	577.442	7.375.897	NA	NA
PB-015	577.502	7.375.912	A	A
PB-016	577.416	7.375.915	NA	NA
PB-017	577.476	7.375.931	A	A
PB-018	577.391	7.375.934	A	A
PB-019	577.371	7.375.948	A	A
PB-020	577.450	7.375.950	NA	A
PB-021	577.344	7.375.961	A	A
PB-022	577.424	7.375.969	A	A
PB-023	577.319	7.375.985	A	A
PB-024	577.398	7.375.988	A	A
PB-025	577.292	7.376.004	A	A
PB-026	577.372	7.376.007	A	A
PB-027	577.264	7.376.019	NA	NA
PB-028	577.347	7.376.026	A	A
PB-029	577.243	7.376.041	NA	NA
PB-030	577.321	7.376.045	A	A
PB-031	577.213	7.376.059	NA	NA
PB-032	577.295	7.376.064	NA	NA
PB-033	577.269	7.376.083	NA	NA
PB-034	577.242	7.376.102	NA	NA
PB-035	577.958	7.376.313	NA	NA
PB-036	577.937	7.376.336	NA	NA
PB-037	577.977	7.376.339	NA	NA
PB-038	577.954	7.376.359	NA	NA
PB-039	577.883	7.376.375	NA	NA
PB-040	577.918	7.376.391	A	NA
PB-041	577.860	7.376.398	NA	NA
PB-042	577.894	7.376.412	A	NA



PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PB-043	577.831	7.376.417	NA	NA
PB-044	577.870	7.376.433	A	NA
PB-045	577.805	7.376.445	A	A
PB-046	577.847	7.376.451	NA	NA
PB-047	577.781	7.376.466	A	NA
PB-048	577.822	7.376.474	NA	NA
PB-049	577.757	7.376.486	A	NA
PB-050	577.795	7.376.498	NA	NA
PB-051	577.733	7.376.507	A	NA
PB-052	577.761	7.376.527	A	NA
PB-053	577.708	7.376.528	A	NA
PB-054	577.737	7.376.548	A	NA
PB-055	577.683	7.376.549	A	NA
PB-056	577.717	7.376.570	A	NA
PB-057	577.639	7.376.583	A	NA
PB-058	577.676	7.376.600	NA	NA
PB-059	577.615	7.376.610	NA	NA
PB-060	577.650	7.376.621	NA	NA
PB-061	577.582	7.376.634	NA	NA
PB-062	577.625	7.376.647	NA	NA
PB-VC-001	575.464	7.374.935	NA	A
PB-VC-002	575.517	7.374.971	A	NA
PB-VC-003	575.544	7.375.002	A	NA
PB-VC-004	575.697	7.375.228	A	NA
PB-VC-005	575.782	7.375.331	A	A
PB-VC-006	575.864	7.375.339	A	A
PB-VC-007	575.900	7.375.393	A	NA
PB-VC-008	576.022	7.375.421	NA	NA
PB-VC-009	576.190	7.375.516	NA	NA
PB-VC-010	576.184	7.375.563	A	NA
PB-VC-011	576.168	7.375.624	NA	NA
PB-VC-012	576.192	7.375.651	NA	NA
PB-VC-013	576.127	7.375.679	NA	NA
PB-VC-014	576.185	7.375.694	A	A
PB-VC-015	576.533	7.375.709	A	A
PB-VC-016	576.243	7.375.709	NA	NA
PB-VC-017	576.208	7.375.713	A	A

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PB-VC-018	576.355	7.375.716	A	A
PB-VC-019	576.116	7.375.724	NA	NA
PB-VC-020	576.301	7.375.724	NA	NA
PB-VC-021	576.424	7.375.729	A	A
PB-VC-022	576.174	7.375.739	A	A
PB-VC-023	576.359	7.375.739	A	A
PB-VC-024	576.273	7.375.741	A	A
PB-VC-025	576.232	7.375.754	A	A
PB-VC-026	576.418	7.375.754	A	A
PB-VC-027	576.571	7.375.761	A	A
PB-VC-028	576.290	7.375.769	A	A
PB-VC-029	576.476	7.375.770	A	A
PB-VC-030	576.348	7.375.784	A	A
PB-VC-031	576.534	7.375.785	A	A
PB-VC-032	576.406	7.375.799	NA	NA
PB-VC-033	576.464	7.375.814	NA	NA
PB-VC-034	576.522	7.375.829	NA	NA
PB-VC-035	577.813	7.376.403	A	A

#### 1.4.2.2 Sector Peine

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PE-001	587.730	7.380.165	NA	NA
PE-002	587.778	7.380.181	A	A
PE-003	587.817	7.380.200	A	A
PE-004	587.651	7.380.216	NA	A
PE-005	587.847	7.380.217	NA	NA
PE-006	587.711	7.380.219	A	A
PE-007	587.763	7.380.246	A	A
PE-008	587.813	7.380.249	A	A
PE-009	587.710	7.380.267	A	A
PE-010	587.670	7.380.282	A	A
PE-011	587.798	7.380.284	A	A
PE-012	587.903	7.380.306	NA	NA
PE-013	587.599	7.380.321	A	A
PE-014	587.809	7.380.329	A	A

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PE-015	587.725	7.380.332	A	A
PE-016	587.535	7.380.337	A	A
PE-017	587.670	7.380.340	A	A
PE-018	587.636	7.380.344	A	A
PE-019	587.780	7.380.350	A	A
PE-020	587.848	7.380.353	A	A
PE-021	587.598	7.380.358	A	A
PE-022	587.878	7.380.361	A	A
PE-023	587.740	7.380.365	A	A
PE-024	587.539	7.380.369	A	A
PE-025	587.668	7.380.371	A	A
PE-026	587.817	7.380.371	A	A
PE-027	587.771	7.380.381	A	A
PE-028	587.616	7.380.388	A	A
PE-029	587.567	7.380.390	A	A
PE-030	587.882	7.380.394	A	A
PE-031	587.693	7.380.397	A	A
PE-032	587.728	7.380.399	A	A
PE-033	587.824	7.380.404	A	A
PE-034	587.856	7.380.419	A	A
PE-035	587.638	7.380.419	A	A
PE-036	587.887	7.380.429	A	A
PE-037	587.790	7.380.430	A	A
PE-038	587.710	7.380.434	A	A
PE-039	587.610	7.380.438	A	A
PE-040	587.750	7.380.445	A	A
PE-041	587.657	7.380.459	A	A
PE-042	587.701	7.380.468	A	A
PE-043	587.878	7.380.472	A	A
PE-044	587.742	7.380.478	A	A
PE-045	587.698	7.380.502	A	A
PE-046	587.630	7.380.505	A	A
PE-047	587.542	7.380.506	A	A
PE-048	587.787	7.380.507	A	A
PE-049	587.880	7.380.517	A	A
PE-050	587.452	7.380.517	A	NA
PE-051	587.756	7.380.521	A	A

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PE-052	587.705	7.380.542	A	A
PE-053	587.418	7.380.542	A	NA
PE-054	587.941	7.380.552	NA	NA
PE-055	587.538	7.380.562	NA	NA
PE-056	587.718	7.380.577	A	A
PE-057	587.770	7.380.577	A	A
PE-058	587.970	7.380.581	A	A
PE-059	587.859	7.380.583	A	A
PE-060	587.495	7.380.584	NA	NA
PE-061	587.799	7.380.592	A	A
PE-062	587.656	7.380.594	A	A
PE-063	587.900	7.380.596	A	A
PE-064	587.742	7.380.599	A	A
PE-065	587.829	7.380.600	A	A
PE-066	587.782	7.380.621	A	A
PE-067	587.281	7.380.627	A	NA
PE-068	587.653	7.380.627	NA	NA
PE-069	587.748	7.380.629	A	A
PE-070	587.688	7.380.630	A	A
PE-071	587.916	7.380.633	A	A
PE-072	587.860	7.380.643	A	A
PE-073	587.801	7.380.649	A	A
PE-074	587.765	7.380.658	A	A
PE-075	587.716	7.380.659	A	A
PE-076	587.302	7.380.668	NA	NA
PE-077	587.876	7.380.671	A	A
PE-078	587.913	7.380.678	A	A
PE-079	587.671	7.380.681	A	A
PE-080	587.822	7.380.682	A	A
PE-081	587.636	7.380.682	A	A
PE-082	587.748	7.380.689	A	A
PE-083	587.588	7.380.690	NA	NA
PE-084	587.704	7.380.707	A	A
PE-085	587.626	7.380.718	A	A
PE-086	587.658	7.380.719	A	A
PE-087	587.741	7.380.722	A	A
PE-088	587.601	7.380.738	NA	NA

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PE-089	587.150	7.380.764	A	NA
PE-090	587.628	7.380.786	A	A
PE-091	587.589	7.380.792	A	A
PE-092	587.557	7.380.828	A	A
PE-093	587.249	7.380.862	NA	NA
PE-094	587.458	7.380.867	NA	NA
PE-095	587.088	7.380.875	A	NA
PE-096	587.569	7.380.906	NA	NA
PE-097	587.104	7.380.935	NA	NA
PE-098	587.067	7.380.944	A	NA
PE-099	587.227	7.380.947	NA	NA
PE-100	587.371	7.380.954	NA	NA
PE-101	587.247	7.380.975	NA	NA
PE-102	586.993	7.380.991	A	A
PE-103	587.264	7.381.014	NA	NA
PE-104	587.434	7.381.015	NA	NA
PE-105	587.001	7.381.021	A	A
PE-106	586.960	7.381.042	A	NA
PE-107	587.227	7.381.047	NA	NA
PE-108	587.052	7.381.121	NA	NA
PE-109	587.124	7.381.121	NA	NA
PE-110	587.283	7.381.122	NA	NA
PE-111	586.881	7.381.122	NA	NA
PE-112	587.419	7.381.129	NA	NA
PE-113	587.001	7.381.136	A	A
PE-114	587.031	7.381.153	A	A
PE-115	586.877	7.381.154	A	NA
PE-116	586.848	7.381.163	A	NA
PE-117	586.966	7.381.179	A	A
PE-118	587.009	7.381.193	A	A
PE-119	587.041	7.381.194	A	A
PE-120	587.382	7.381.200	NA	NA
PE-121	586.980	7.381.209	A	A
PE-122	586.922	7.381.237	A	A
PE-123	586.979	7.381.241	A	A
PE-124	587.124	7.381.247	NA	NA
PE-125	587.256	7.381.248	NA	NA

PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PE-126	586.880	7.381.250	A	A
PE-127	587.314	7.381.251	NA	NA
PE-128	586.876	7.381.296	A	A
PE-129	587.046	7.381.303	A	A
PE-130	586.930	7.381.305	A	A
PE-131	587.229	7.381.320	NA	NA
PE-132	586.860	7.381.329	A	A
PE-133	587.048	7.381.335	A	A
PE-134	586.991	7.381.338	A	A
PE-135	587.099	7.381.340	A	NA
PE-136	587.179	7.381.345	NA	NA
PE-137	586.793	7.381.363	A	A
PE-138	587.219	7.381.367	NA	NA
PE-139	587.020	7.381.370	A	A
PE-140	586.967	7.381.376	A	A
PE-141	586.845	7.381.382	A	A
PE-142	586.763	7.381.389	A	A
PE-143	586.962	7.381.427	NA	NA
PE-144	587.051	7.381.433	A	A
PE-145	587.185	7.381.434	NA	NA
PE-146	587.014	7.381.443	A	A
PE-147	587.074	7.381.453	A	A
PE-148	586.991	7.381.472	A	A
PE-149	587.050	7.381.475	A	A
PE-150	586.650	7.381.482	NA	NA
PE-151	586.913	7.381.488	A	A
PE-152	587.018	7.381.491	NA	NA
PE-153	586.903	7.381.524	NA	NA
PE-154	586.662	7.381.528	NA	NA
PE-155	586.595	7.381.553	NA	NA
PE-156	586.714	7.381.555	NA	NA
PE-157	586.991	7.381.570	NA	NA
PE-158	586.958	7.381.575	NA	NA
PE-159	586.668	7.381.581	NA	NA
PE-160	586.604	7.381.584	NA	NA
PE-161	586.570	7.381.597	NA	NA
PE-162	586.994	7.381.609	A	NA



PUNTOS DE MONITOREO	COORDENADAS DATUM WGS 84, HUSO 19 S		VALID_M7	MOD_M7
	Este	Norte		
PE-163	586.699	7.381.614	NA	NA
PE-164	586.591	7.381.632	NA	NA
PE-165	586.936	7.381.654	A	NA
PE-166	586.884	7.381.657	NA	NA
PE-167	586.768	7.381.659	NA	NA
PE-168	586.829	7.381.661	A	NA
PE-169	586.939	7.381.704	NA	NA
PE-170	586.842	7.381.708	NA	NA
PE-171	586.714	7.381.722	NA	NA
PE-172	586.873	7.381.722	A	NA
PE-173	586.905	7.381.725	A	NA
PE-174	586.763	7.381.736	NA	NA
PE-175	586.848	7.381.745	A	NA
PE-176	586.734	7.381.756	NA	NA
PE-VC-001	584.886	7.384.185	A	A
PE-VC-002	584.926	7.384.185	A	A
PE-VC-003	584.966	7.384.185	A	A
PE-VC-004	585.006	7.384.185	A	A
PE-VC-005	585.046	7.384.186	A	A
PE-VC-006	585.086	7.384.186	A	A

**1.5 Cuadro comparativo de diferencias implementadas en el estudio actual respecto a la línea de base (Adenda 5 RWL, 2015).**

MATERIALES Y MÉTODOS CON MODIFICACIÓN	LÍNEA DE BASE (Adenda 5 RWL, 2015)	MONITOREO FASE DE OPERACIÓN (CEDREM Consultores)	DESCRIPCIÓN DE MODIFICACIÓN APLICADA
1. Imágenes satelitales de alta resolución	Worldview 2, Geoeyes 1 y Quickbird 2.	Pleiades 1A	<p>Cambio efectuado con el fin de acortar -a una semana- el plazo de captura de las imágenes (para toda el área de estudio) y de tal forma que coincidieran con las fechas de validación en terreno.</p> <p>Cabe destacar que son mínimas las diferencias de resolución -espectral y espacial-, entre estas imágenes; por lo mismo conducen a poca variación en los análisis realizados.</p>

MATERIALES Y MÉTODOS CON MODIFICACIÓN	LÍNEA DE BASE (Adenda 5 RWL, 2015)	MONITOREO FASE DE OPERACIÓN (CEDREM Consultores)	DESCRIPCIÓN DE MODIFICACIÓN APLICADA
2. Validación en terreno	No especificado	Índice <i>Kappa</i> en base a diseño de muestreo estadístico aleatorio – estratificado, por sistema lagunar.	Contribuye a realizar una evaluación numérica de la certidumbre en el modelo y, por ende, conocer la bondad de ajuste en las coberturas obtenidas.
3. Procesamiento de imágenes satelitales – Corrección atmosférica	IARR (por su sigla inglés, promedio interno de reflectancia relativa).	Proceso de remoción del error atmosférico proporcionado por el modelo de <i>Airbus</i> ~ ATCOR (por su sigla en inglés, Atmospheric & Topographic Correction)	Este modelo propende la remoción del efecto atmosférico, mientras que IARR lo estandariza sobre la imagen. Por lo mismo, genera una respuesta espectral – corregida- más clara en los objetos de clasificación.  La corrección utilizada (con mejor efecto de remoción del error atmosférico), conllevó a que tanto los parámetros espectrales, como el modelo de clasificación, fueran más sensibles a la detección de cuerpos de agua.
4. Parámetros espectrales del modelo de clasificación	<ul style="list-style-type: none"> <li>• NDWI,</li> <li>• Reflectancia NIR y</li> <li>• Reclasificación de bandas espectrales.</li> </ul>	<ul style="list-style-type: none"> <li>• NDWI,</li> <li>• Reflectancia NIR,</li> <li>• Reclasificación de bandas espectrales (en Pleiades 1A),</li> <li>• NDVI,</li> <li>• Transformada <i>Tasseled Cap</i> “<i>Wetness</i>” (en Landsat 8)</li> </ul>	Esta modificación, se realizó con el fin de robustecer el modelo ya desarrollado y en consideración que los suelos salinos afectan la reflectancia del suelo y puede conducir a errores significativos durante interpretaciones espectrales.  En el modelo de clasificación, la incorporación de más parámetros espectrales, condujo principalmente a una mayor sensibilidad en la detección de cuerpos de agua.
5. Umbrales de clasificación	Clasificación asistida (procedimiento no especificado)	Mejor respuesta entre métodos de clasificación de datos por cuantiles, intervalos equivalentes y quiebres naturales. Además, clasificación asistida en base al patrón de coberturas de línea de base.	Esta modificación, se basó en establecer <i>métricas estadísticas</i> que podrán ser replicables en los monitoreos posteriores, más allá del valor número del umbral, el cual puede estar sujeto a variaciones multitemporales y entre imágenes satelitales.
6. Regla de clasificación de	Cumplía con los	Cumplía con los	Esta modificación, se realizó con

MATERIALES Y MÉTODOS CON MODIFICACIÓN	LÍNEA DE BASE (Adenda 5 RWL, 2015)	MONITOREO FASE DE OPERACIÓN (CEDREM Consultores)	DESCRIPCIÓN DE MODIFICACIÓN APLICADA
<b>pixeles en cuerpo de agua</b>	umbrales de corte de los <b>tres parámetros</b> espectrales de clasificación.	umbrales de corte en <b>tres de los cuatro parámetros</b> espectrales de clasificación.	el fin de robustecer el modelo ya desarrollado y en consideración de evitar errores significativos durante interpretaciones espectrales. Por lo mismo, se clasificaron en cuerpos de agua a los pixeles que tuvieran una alta probabilidad de pertenecer a este tipo de recubrimiento.
<b>7. Fechas de medición</b>	Durante invierno altiplánico: Enero- abril.	Durante Invierno y Verano ~ Agosto y Diciembre del 2016 al 2019	Corresponde con lo establecido por el Plan de Manejo Biótico.  Esta modificación, influye sobre las coberturas lagunares, según variaciones estacionales intranuales propias de los sistemas en el área de estudio.

Fuente: Elaboración propia

## 1.6 Metadata de Imágenes de alta resolución INV19 – Pleiades 1A

### DIM\_PHR1A\_MS\_201908261452185\_ORT\_4461570101-2.XML

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet href="LIBRARY/STYLE.XSL" type="text/xsl"?>
<Dimap_Document>
  <Metadata_Identification>
    <METADATA_FORMAT version="2.15">DIMAP</METADATA_FORMAT>
    <METADATA_PROFILE>PHR_ORTHO</METADATA_PROFILE>
    <METADATA_SUBPROFILE>PRODUCT</METADATA_SUBPROFILE>
    <METADATA_LANGUAGE>en</METADATA_LANGUAGE>
  </Metadata_Identification>
  <Dataset_Identification>
    <DATASET_TYPE>RASTER_ORTHO</DATASET_TYPE>
    <DATASET_NAME
version="1.0">DS_PHR1A_201908261451416_FR1_PX_W069S24_1208_01165</DATASET_NAME>
    <DATASET_TN_PATH href="ICON_PHR1A_MS_201908261452185_ORT_4461570101-2.JPG"/>
    <DATASET_TN_FORMAT>image/jpeg</DATASET_TN_FORMAT>
    <DATASET_QL_PATH href="PREVIEW_PHR1A_MS_201908261452185_ORT_4461570101-2.JPG"/>
    <DATASET_QL_FORMAT>image/jpeg</DATASET_QL_FORMAT>
  <Legal_Constraints>
    <COPYRIGHT>©CNES_2019, distribution AIRBUS DS, France, all rights reserved</COPYRIGHT>
```

```
</Legal_Constraints>
</Dataset_Identification>
<Dataset_Content>
  <SURFACE_AREA unit="square km">33.4334</SURFACE_AREA>
  <CLOUD_COVERAGE unit="percent">0</CLOUD_COVERAGE>
  <SNOW_COVERAGE unit="percent">0</SNOW_COVERAGE>
  <Dataset_Components>
    <Component>
      <COMPONENT_TITLE>Processing</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH
href="LINEAGE/PROCESSING_PHR1A_MS_201908261452185_OR_4461570101-2_DIM.XML"/>
      </Component>
      <Component>
      <COMPONENT_TITLE>Strip Source</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH
href="LINEAGE/STRIP_DS_PHR1A_201908261452185_FR1_PX_W069S24_1208_01200_DIM.XML"/>
      </Component>
      <Component>
      <COMPONENT_TITLE>Source for Ground reset</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH href="LINEAGE/GROUND_R3D_OR_SPOTView_S24W069_DIM.XML"/>
      </Component>
      <Component>
      <COMPONENT_TITLE>Source for Vertical reset</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH href="LINEAGE/HEIGHT_R3D_DT2_S24W069_DIM.XML"/>
      </Component>
    </Dataset_Components>
  <Dataset_Extent>
    <EXTENT_TYPE>Bounding_Polygon</EXTENT_TYPE>
    <Vertex>
      <LON>-68.10724957470593</LON>
      <LAT>-23.6326666422846</LAT>
      <X>591061</X>
      <Y>7386157</Y>
      <COL>1</COL>
```

---

```
<ROW>1</ROW>
</Vertex>
<Vertex>
  <LON>-68.06615588951016</LON>
  <LAT>-23.63242469867138</LAT>
  <X>595253</X>
  <Y>7386157</Y>
  <COL>2097</COL>
  <ROW>1</ROW>
</Vertex>
<Vertex>
  <LON>-68.0653037358821</LON>
  <LAT>-23.75218162401264</LAT>
  <X>595253</X>
  <Y>7372897</Y>
  <COL>2097</COL>
  <ROW>6631</ROW>
</Vertex>
<Vertex>
  <LON>-68.10643490754863</LON>
  <LAT>-23.75242494086613</LAT>
  <X>591061</X>
  <Y>7372897</Y>
  <COL>1</COL>
  <ROW>6631</ROW>
</Vertex>
<Center>
  <LON>-68.08628602691171</LON>
  <LAT>-23.69242447645868</LAT>
  <X>593157</X>
  <Y>7379527</Y>
  <COL>1049</COL>
  <ROW>3316</ROW>
</Center>
</Dataset_Extent>
</Dataset_Content>
<Product_Information>
  <Producer_Information>
    <PRODUCER_NAME>AIRBUS DS GEO</PRODUCER_NAME>
    <PRODUCER_URL href="http://www.geo-airbusds.com"/>
    <PRODUCER_CONTACT>contact@geo-airbus.com</PRODUCER_CONTACT>
```

```
<PRODUCER_ADDRESS>5 rue des Satellites - BP 14359 - F 31030 Toulouse Cedex 4 -  
France</PRODUCER_ADDRESS>  
</Producer_Information>  
<Delivery_Identification>  
  <PRODUCTION_DATE>2019-08-30T04:38:39.960</PRODUCTION_DATE>  
  <JOB_ID>4461570101-2</JOB_ID>  
  <PRODUCT_CODE>PLEIADES</PRODUCT_CODE>  
  <DELIVERY_TYPE>NETWORK</DELIVERY_TYPE>  
<Order_Identification>  
  <CUSTOMER_REFERENCE>SO19034793</CUSTOMER_REFERENCE>  
  
<INTERNAL_REFERENCE>PHR_PRO_4461570101_20190830043519803_1_2</INTERNAL_REFERENCE>  
  <COMMERCIAL_REFERENCE>SO19034793</COMMERCIAL_REFERENCE>  
  <COMMERCIAL_ITEM>7</COMMERCIAL_ITEM>  
</Order_Identification>  
</Delivery_Identification>  
</Product_Information>  
<Coordinate_Reference_System>  
  <Projected_CRS>  
    <CRS_TABLES version="6.3">EPSG</CRS_TABLES>  
    <PROJECTED_CRS_NAME>32719</PROJECTED_CRS_NAME>  
    <PROJECTED_CRS_CODE>urn:ogc:def:crs:EPSG::32719</PROJECTED_CRS_CODE>  
  </Projected_CRS>  
  <Temporal_CRS>  
    <CRS_TABLES version="0.0">ITU</CRS_TABLES>  
    <TEMPORAL_CRS_NAME>UTC</TEMPORAL_CRS_NAME>  
  </Temporal_CRS>  
</Coordinate_Reference_System>  
<Geoposition>  
  <Raster_CRS>  
    <RASTER_GEOMETRY>GROUND</RASTER_GEOMETRY>  
    <PIXEL_ORIENTATION>UL</PIXEL_ORIENTATION>  
    <PIXEL_CRS_TYPE>CELL</PIXEL_CRS_TYPE>  
    <PIXEL_ORIGIN>1</PIXEL_ORIGIN>  
  </Raster_CRS>  
  <Geoposition_Insert>  
    <ULXMAP>591061</ULXMAP>  
    <ULYMAP>7386157</ULYMAP>  
    <XDIM>2</XDIM>  
    <YDIM>2</YDIM>  
  </Geoposition_Insert>  
</Geoposition>
```



```
<Processing_Information>
  <Production_Facility>
    <SOFTWARE version="V2.7.1">DRS-MM V2.7.1</SOFTWARE>
    <PROCESSING_CENTER>FCMUGC</PROCESSING_CENTER>
    <PROCESSING_PLACE>FCMUGC</PROCESSING_PLACE>
  </Production_Facility>
  <Product_Settings>
    <PROCESSING_LEVEL>ORTHO</PROCESSING_LEVEL>
    <SPECTRAL_PROCESSING>MS</SPECTRAL_PROCESSING>
    <Geometric_Settings>
      <GEOMETRIC_PROCESSING>ORTHO</GEOMETRIC_PROCESSING>
      <EPHEMERIS_USED>CORRECTED</EPHEMERIS_USED>
      <ATTITUDES_USED>ACCURATE</ATTITUDES_USED>
      <GROUND_SETTING>true</GROUND_SETTING>
      <GROUND_DESC>R3D_ORTHO</GROUND_DESC>
      <VERTICAL_SETTING>true</VERTICAL_SETTING>
      <VERTICAL_DESC>REFERENCE3D</VERTICAL_DESC>
    </Geometric_Settings>
    <Radiometric_Settings>
      <RADIOMETRIC_PROCESSING>REFLECTANCE</RADIOMETRIC_PROCESSING>
      <INTER_DETECTOR_NORMALIZATION>>false</INTER_DETECTOR_NORMALIZATION>
      <DETECTORS_INTERPOLATION>>true</DETECTORS_INTERPOLATION>
      <STRAYLIGHT_CORRECTION>>false</STRAYLIGHT_CORRECTION>
      <VCTI_CORRECTION>>false</VCTI_CORRECTION>
      <INTER_ARRAY_RECONSTRUCTION>>true</INTER_ARRAY_RECONSTRUCTION>
      <RADIOMETRIC_STRETCH>>false</RADIOMETRIC_STRETCH>
      <OUT_OF_ORDER_THRESHOLD>0.5</OUT_OF_ORDER_THRESHOLD>
    </Radiometric_Settings>
    <Sampling_Settings>
      <RESAMPLING_SPACING unit="m">2</RESAMPLING_SPACING>
      <RESAMPLING_KERNEL>SPLINE</RESAMPLING_KERNEL>
    </Sampling_Settings>
    <MTF_Settings>
      <PAN_RESTORATION>true</PAN_RESTORATION>
      <MS_RESTORATION>>false</MS_RESTORATION>
    </MTF_Settings>
  </Product_Settings>
  <Processing_Lineage>
    <Component>
      <COMPONENT_TITLE>Processing</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    </Component>
  </Processing_Lineage>
</Processing_Information>
```

```
<COMPONENT_PATH
href="LINEAGE/PROCESSING_PHR1A_MS_201908261452185_ORT_4461570101-2_DIM.XML"/>
  </Component>
</Processing_Lineage>
</Processing_Information>
<Raster_Data>
  <Data_Access>
    <DATA_FILE_ORGANISATION>BAND_COMPOSITE</DATA_FILE_ORGANISATION>
    <DATA_FILE_FORMAT>image/tiff</DATA_FILE_FORMAT>
    <DATA_FILE_TILES>>false</DATA_FILE_TILES>
    <Data_Files>
      <Data_File tile_R="1" tile_C="1">
        <DATA_FILE_PATH href="IMG_PHR1A_MS_201908261452185_ORT_4461570101-
2_R1C1.TIF"/>
      </Data_File>
    </Data_Files>
  </Data_Access>
  <Raster_Dimensions>
    <NROWS>6631</NROWS>
    <NCOLS>2097</NCOLS>
    <NBANDS>4</NBANDS>
  </Raster_Dimensions>
  <Raster_Encoding>
    <DATA_TYPE>INTEGER</DATA_TYPE>
    <NBITS>16</NBITS>
    <SIGN>UNSIGNED</SIGN>
    <COMPRESSION_TYPE>LOSSLESS</COMPRESSION_TYPE>
  </Raster_Encoding>
  <Raster_Display>
    <Band_Display_Order>
      <RED_CHANNEL>B2</RED_CHANNEL>
      <GREEN_CHANNEL>B1</GREEN_CHANNEL>
      <BLUE_CHANNEL>B0</BLUE_CHANNEL>
      <ALPHA_CHANNEL>B3</ALPHA_CHANNEL>
    </Band_Display_Order>
    <Special_Value>
      <SPECIAL_VALUE_TEXT>NODATA</SPECIAL_VALUE_TEXT>
      <SPECIAL_VALUE_COUNT>0</SPECIAL_VALUE_COUNT>
    </Special_Value>
    <Special_Value>
      <SPECIAL_VALUE_TEXT>SATURATED</SPECIAL_VALUE_TEXT>
      <SPECIAL_VALUE_COUNT>32767</SPECIAL_VALUE_COUNT>
    </Special_Value>
  </Raster_Display>
</Raster_Data>
```



26025 0 0 26470 0 0 26514 0 0 26302 0 26326 0 0 26481 0 0 26502 0 0 26779 0 0 26881 0 26592 0 0  
 26685 0 0 26683 0 0 26422 0 0 26365 0 0 26652 0 26262 0 0 26275 0 0 25878 0 0 25721 0 0 25669 0  
 25526 0 0 25095 0 0 24967 0 0 24908 0 0 24351 0 0 24376 0 23948 0 0 23614 0 0 23268 0 0 23203 0 0  
 22855 0 22823 0 0 22072 0 0 22191 0 0 21753 0 0 21609 0 0 21520 0 21190 0 0 20821 0 0 20925 0 0  
 20700 0 0 20498 0 20134 0 0 19966 0 0 19878 0 0 19511 0 0 19436 0 0 19117 0 18795 0 0 18682 0 0  
 18785 0 0 18591 0 0 18157 0 18238 0 0 18339 0 0 18060 0 0 17727 0 0 17701 0 0 17790 0 17553 0 0  
 17592 0 0 17511 0 0 17749 0 0 17403 0 17422 0 0 17668 0 0 17378 0 0 17626 0 0 17511 0 0 17399 0  
 17314 0 0 17630 0 0 17889 0 0 18041 0 0 17804 0 18023 0 0 18153 0 0 18520 0 0 18246 0 0 18699 0 0  
 18786 0 19049 0 0 19573 0 0 19485 0 0 19918 0 0 20004 0 20601 0 0 20816 0 0 20862 0 0 21449 0 0  
 21827 0 0 21971 0 22242 0 0 22876 0 0 23143 0 0 23163 0 0 23985 0 24327 0 0 24968 0 0 25262 0 0  
 25580 0 0 26287 0 0 26581 0 27585 0 0 28000 0 0 28856 0 0 29227 0 0 29456 0 30101 0 0 30894 0 0  
 31013 0 0 31947 0 0 32823 0 0 32883 0 33521 0 0 33512 0 0 34272 0 0 34602 0 0 34413 0 34768 0 0  
 34846 0 0 34781 0 0 34592 0 0 34317 0 0 34505 0 34019 0 0 33563 0 0 33214 0 0 32389 0 0 32329 0  
 31375 0 0 30953 0 0 30170 0 0 29558 0 0 28441 0 0 27823 0 27260 0 0 26301 0 0 25582 0 0 24887 0 0  
 24215 0 23081 0 0 22382 0 0 21287 0 0 20842 0 0 19816 0 0 19175 0 18297 0 0 17778 0 0 17207 0 0  
 16469 0 0 15918 0 15376 0 0 14798 0 0 14004 0 0 13508 0 0 13340 0 0 12641 0 12185 0 0 11966 0 0  
 11542 0 0 11281 0 0 10937 0 10394 0 0 10322 0 0 9945 0 0 9595 0 0 9526 0 0 9124 0 8962 0 0 8571 0  
 0 8502 0 0 8244 0 0 8045 0 7896 0 0 7897 0 0 7649 0 0 7499 0 0 7230 0 0 7300 0 7162 0 0 7069 0 0  
 6855 0 0 6835 0 0 6908 0 6622 0 0 6553 0 0 6311 0 0 6402 0 0 6298 0 0 6392 0 6292 0 0 6169 0 0  
 6148 0 0 6037 0 0 5988 0 6030 0 0 5776 0 0 5838 0 0 5867 0 0 5586 0 0 5740 0 5946 0 0 5701 0 0  
 5608 0 0 5633 0 0 5532 0 5546 0 0 5369 0 0 5285 0 0 5406 0 0 5334 0 0 5232 0 5247 0 0 5328 0 0  
 5283 0 0 5218 0 0 5222 0 5125 0 0 5180 0 0 4991 0 0 5190 0 0 4970 0 0 5117 0 5035 0 0 4897 0 0  
 4967 0 0 4934 0 0 5106 0 4795 0 0 4880 0 0 4841 0 0 4898 0 0 4874 0 0 4917 0 4862 0 0 4816 0 0  
 4776 0 0 4840 0 0 4878 0 4730 0 0 4716 0 0 4694 0 0 4704 0 0 4578 0 0 4722 0 4734 0 0 4767 0 0  
 4571 0 0 4552 0 0 4571 0 0 4646 0 4531 0 0 4579 0 0 4519 0 0 4601 0 0 4529 0 4630 0 0 4670 0 0  
 4598 0 0 4695 0 0 4441 0 0 4447 0 4501 0 0 4530 0 0 4477 0 0 4432 0 0 4537 0 4480 0 0 4536 0 0  
 4485 0 0 4333 0 0 4443 0 0 4495 0 4392 0 0 4401 0 0 4388 0 0 4208 0 0 4309 0 4269 0 0 4442 0 0  
 4296 0 0 4243 0 0 4221 0 0 4353 0 4183 0 0 4278 0 0 4227 0 0 4164 0 0 4115 0 4204 0 0 4079 0 0  
 4089 0 0 4122 0 0 4079 0 0 4058 0 4145 0 0 4003 0 0 3998 0 0 3935 0 0 3895 0 4026 0 0 4028 0 0  
 3834 0 0 3994 0 0 3860 0 0 3766 0 3881 0 0 3869 0 0 3767 0 0 3770 0 0 3789 0 3696 0 0 3705 0 0  
 3757 0 0 3660 0 0 3675 0 0 3586 0 3737 0 0 3646 0 0 3578 0 0 3660 0 0 3663 0 3527 0 0 3503 0 0  
 3505 0 0 3501 0 0 3548 0 0 3507 0 3558 0 0 3512 0 0 3501 0 0 3419 0 0 3468 0 3428 0 0 3408 0 0  
 3437 0 0 3439 0 0 3333 0 0 3385 0 3376 0 0 3327 0 0 3287 0 0 3390 0 0 3241 0 3276 0 0 3283 0 0  
 3253 0 0 3300 0 0 3150 0 0 3215 0 3282 0 0 3325 0 0 3206 0 0 3271 0 0 3240 0 3176 0 0 3168 0 0  
 3115 0 0 3178 0 0 3192 0 0 3192 0 3187 0 0 3203 0 0 3052 0 0 3236 0 0 3180 0 3166 0 0 3099 0 0  
 3154 0 0 3177 0 0 3155 0 0 3154 0 3161 0 0 3138 0 0 3205 0 0 3153 0 0 3033 0 3046 0 0 3049 0 0  
 3175 0 0 3053 0 0 3136 0 0 3155 0 3086 0 0 3158 0 0 3079 0 0 3121 0 0 3029 0 3015 0 0 3030 0 0  
 3104 0 0 3024 0 0 3039 0 0 3054 0 3094 0 0 3050 0 0 3027 0 0 3072 0 0 3188 0 2951 0 0 3049 0 0  
 3005 0 0 3096 0 0 3032 0 0 2993 0 3096 0 0 3016 0 0 2941 0 0 2954 0 0 3005 0 2945 0 0 3009 0 0  
 2932 0 0 3046 0 0 3022 0 0 2956 0 3035 0 0 2905 0 0 2946 0 0 2880 0 0 2932 0 2956 0 0 2889 0 0  
 2941 0 0 2899 0 0 2984 0 0 2956 0 2907 0 0 2883 0 0 2769 0 0 2858 0 0 2830 0 2892 0 0 2742 0 0  
 2817 0 0 2857 0 0 2787 0 0 2844 0 2756 0 0 2724 0 0 2948 0 0 2804 0 0 2766 0 2837 0 0 2868 0 0

2781 0 0 2756 0 0 2864 0 0 2785 0 2797 0 0 2786 0 0 2795 0 0 2794 0 0 2853 0 2747 0 0 2775 0 0  
2790 0 0 2643 0 0 2761 0 0 2732 0 2786 0 0 2692 0 0 2736 0 0 2622 0 0 2789 0 2754 0 0 2682 0 0  
2748 0 0 2674 0 0 2714 0 0 2672 0 2782 0 0 2716 0 0 2669 0 0 2751 0 0 2727 0 2770 0 0 2673 0 0  
2605 0 0 2637 0 0 2793 0 0 2813 0 2688 0 0 2714 0 0 2760 0 0 2615 0 0 2742 0 2669 0 0 2678 0 0  
2685 0 0 2663 0 0 2634 0 0 2654 0 2581 0 0 2728 0 0 2755 0 0 2634 0 0 2710 0 2686 0 0 2809 0 0  
2742 0 0 2700 0 0 2860 0 0 2837 0 2814 0 0 2884 0 0 2764 0 0 2865 0 0 2843 0 2864 0 0 2883 0 0  
2877 0 0 2904 0 0 2833 0 0 2922 0 2892 0 0 2897 0 0 2851 0 0 2914 0 0 2954 0 2972 0 0 2930 0 0  
2955 0 0 2931 0 0 3030 0 0 2900 0 2954 0 0 3073 0 0 2959 0 0 3108 0 0 3015 0 3037 0 0 3052 0 0  
2990 0 0 3012 0 0 2972 0 0 3046 0 3103 0 0 2983 0 0 3029 0 0 3034 0 0 3031 0 3012 0 0 3103 0 0  
3111 0 0 3125 0 0 3066 0 0 3021 0 3078 0 0 3134 0 0 3249 0 0 3159 0 0 3160 0 3149 0 0 3183 0 0  
3183 0 0 3151 0 0 3268 0 0 3231 0 3171 0 0 3226 0 0 3241 0 0 3228 0 0 3282 0 3260 0 0 3379 0 0  
3217 0 0 3336 0 0 3353 0 0 3314 0 3441 0 0 3347 0 0 3450 0 0 3504 0 0 3345 0 3433 0 0 3480 0 0  
3677 0 0 3646 0 0 3631 0 0 3613 0 3595 0 0 3723 0 0 3620 0 0 3754 0 0 3719 0 3737 0 0 3802 0 0  
3906 0 0 3821 0 0 3942 0 0 3919 0 4034 0 0 4104 0 0 3984 0 0 3997 0 0 4067 0 4226 0 0 4292 0 0  
4217 0 0 4314 0 0 4401 0 0 4429 0 4434 0 0 4438 0 0 4464 0 0 4460 0 0 4564 0 4564 0 0 4547 0 0  
4589 0 0 4524 0 0 4560 0 0 4764 0 4654 0 0 4677 0 0 4522 0 0 4510 0 0 4597 0 0 4545 0 4580 0 0  
4627 0 0 4519 0 0 4600 0 0 4466 0 4495 0 0 4567 0 0 4542 0 0 4472 0 0 4416 0 0 4441 0 4554 0 0  
4529 0 0 4372 0 0 4427 0 0 4284 0 4326 0 0 4306 0 0 4246 0 0 4420 0 0 4328 0 0 4342 0 4400 0 0  
4337 0 0 4341 0 0 4282 0 0 4365 0 4246 0 0 4482 0 0 4267 0 0 4270 0 0 4213 0 0 4239 0 4143 0 0  
4204 0 0 4148 0 0 3986 0 0 4034 0 4018 0 0 3881 0 0 3959 0 0 3995 0 0 3977 0 0 3962 0 3937 0 0  
3919 0 0 4006 0 0 3994 0 0 3832 0 3941 0 0 3819 0 0 3869 0 0 3883 0 0 3759 0 0 3741 0 3697 0 0  
3646 0 0 3643 0 0 3661 0 0 3575 0 3497 0 0 3521 0 0 3566 0 0 3455 0 0 3451 0 0 3305 0 3478 0 0  
3438 0 0 3479 0 0 3333 0 0 3308 0 3390 0 0 3277 0 0 3274 0 0 3286 0 0 3238 0 0 3094 0 3169 0 0  
3153 0 0 3122 0 0 3081 0 0 3138 0 3043 0 0 3054 0 0 2955 0 0 3032 0 0 2926 0 0 3011 0 2968 0 0  
2921 0 0 2903 0 0 2858 0 0 2827 0 2830 0 0 2831 0 0 2755 0 0 2752 0 0 2706 0 0 2677 0 2636 0 0  
2597 0 0 2576 0 0 2557 0 0 2655 0 2575 0 0 2596 0 0 2468 0 0 2478 0 0 2459 0 0 2440 0 2366 0 0  
2384 0 0 2364 0 0 2352 0 0 2328 0 2257 0 0 2202 0 0 2127 0 0 2270 0 0 2160 0 0 2116 0 2203 0 0  
2112 0 0 2139 0 0 2005 0 0 1975 0 2030 0 0 2018 0 0 1973 0 0 1939 0 0 1949 0 0 1886 0 1782 0 0  
1860 0 0 1841 0 0 1906 0 0 1726 0 1746 0 0 1788 0 0 1758 0 0 1666 0 0 1760 0 0 1725 0 1748 0 0  
1742 0 0 1716 0 0 1614 0 0 1683 0 1705 0 0 1654 0 0 1557 0 0 1622 0 0 1547 0 0 1584 0 1627 0 0  
1574 0 0 1574 0 0 1584 0 0 1605 0 1513 0 0 1590 0 0 1568 0 0 1564 0 0 1610 0 0 1556 0 1583 0 0  
1550 0 0 1577 0 0 1550 0 0 1527 0 1521 0 0 1485 0 0 1441 0 0 1465 0 0 1441 0 0 1524 0 1400 0 0  
1415 0 0 1395 0 0 1450 0 0 1391 0 1356 0 0 1373 0 0 1315 0 0 1374 0 0 1331 0 0 1264 0 1272 0 0  
1297 0 0 1285 0 0 1344 0 0 1223 0 1276 0 0 1203 0 0 1261 0 0 1228 0 0 1191 0 0 1202 0 1222 0 0  
1196 0 0 1238 0 0 1263 0 0 1187 0 1221 0 0 1181 0 0 1218 0 0 1206 0 0 1262 0 0 1138 0 1124 0 0  
1171 0 0 1104 0 0 1152 0 0 1098 0 1121 0 0 1031 0 0 1040 0 0 1028 0 0 972 0 0 999 0 930 0 0 917 0 0  
930 0 0 901 0 0 863 0 854 0 0 809 0 0 777 0 0 797 0 0 734 0 0 731 0 712 0 0 688 0 0 685 0 0 648 0 0  
659 0 636 0 0 573 0 0 560 0 0 541 0 0 547 0 0 511 0 570 0 0 489 0 0 542 0 0 511 0 0 469 0 476 0 0 460  
0 0 451 0 0 490 0 0 415 0 0 392 0 440 0 0 414 0 0 394 0 0 410 0 0 410 0 387 0 0 373 0 0 360 0 0 365 0  
0 388 0 0 345 0 390 0 0 340 0 0 351 0 0 332 0 0 367 0 346 0 0 320 0 0 347 0 0 338 0 0 351 0 0 351 0  
339 0 0 299 0 0 330 0 0 307 0 0 296 0 300 0 0 302 0 0 298 0 0 330 0 0 285 0 0 273 0 297 0 0 277 0 0  
268 0 0 275 0 0 269 0 276 0 0 289 0 0 242 0 0 268 0 0 218 0 0 247 0 241 0 0 247 0 0 216 0 0 239 0 0











0 13580 0 0 13586 0 0 13707 0 13950 0 0 14072 0 0 14162 0 0 14380 0 0 14100 0 0 14348 0 0 14296 0  
 0 14306 0 0 14104 0 0 14235 0 0 14150 0 0 14282 0 0 14018 0 0 14073 0 0 14046 0 0 14072 0 0 13996  
 0 0 13819 0 0 13960 0 13536 0 0 13173 0 0 13476 0 0 13187 0 0 13126 0 0 12981 0 0 13174 0 0 13005  
 0 0 12828 0 0 12763 0 0 12789 0 0 12855 0 0 12531 0 0 12344 0 0 12298 0 0 12463 0 0 12319 0 0  
 12247 0 0 12411 0 0 12511 0 12229 0 0 12150 0 0 12466 0 0 12588 0 0 12790 0 0 12839 0 0 12997 0 0  
 13209 0 0 13437 0 0 13640 0 0 13706 0 0 14184 0 0 14340 0 0 14338 0 0 14761 0 0 14885 0 0 15599 0  
 0 15714 0 0 15969 0 15985 0 0 16144 0 0 16520 0 0 16695 0 0 17179 0 0 17156 0 0 17405 0 0 17686 0  
 0 18080 0 0 18008 0 0 18414 0 0 18894 0 0 19267 0 0 19600 0 0 19587 0 0 20158 0 0 20578 0 0 21072  
 0 0 20888 0 0 21322 0 21536 0 0 21657 0 0 22121 0 0 22043 0 0 22126 0 0 22219 0 0 22133 0 0 22050  
 0 0 22134 0 0 22245 0 0 21898 0 0 21832 0 0 21627 0 0 21382 0 0 21550 0 0 21641 0 0 21606 0 0  
 21464 0 0 21837 0 0 21886 0 21983 0 0 21809 0 0 22030 0 0 21877 0 0 22003 0 0 21873 0 0 21922 0 0  
 21657 0 0 21481 0 0 21354 0 0 21226 0 0 20759 0 0 20609 0 0 20319 0 0 20054 0 0 19734 0 0 19524 0  
 0 19375 0 0 19095 0 18752 0 0 18854 0 0 18253 0 0 17844 0 0 17751 0 0 17884 0 0 17457 0 0 17438 0  
 0 17553 0 0 16869 0 0 16829 0 0 16634 0 0 16638 0 0 16354 0 0 16163 0 0 16302 0 0 15971 0 0 15930  
 0 0 15804 0 0 15543 0 15514 0 0 15453 0 0 15359 0 0 15390 0 0 14816 0 0 15050 0 0 14847 0 0 14834  
 0 0 14615 0 0 14344 0 0 14357 0 0 14295 0 0 14324 0 0 14321 0 0 14245 0 0 14011 0 0 13856 0 0  
 14098 0 0 13946 0 13970 0 0 13564 0 0 13597 0 0 13615 0 0 13683 0 0 13353 0 0 13125 0 0 13247 0 0  
 13181 0 0 12971 0 0 13058 0 0 13062 0 0 12768 0 0 13014 0 0 12752 0 0 12824 0 0 12954 0 0 12992 0  
 0 12859 0 0 12831 0 13200 0 0 12786 0 0 12942 0 0 12952 0 0 12990 0 0 13185 0 0 13183 0 0 13138 0  
 0 13064 0 0 13307 0 0 13221 0 0 13469 0 0 13589 0 0 13631 0 0 14049 0 0 13782 0 0 14136 0 0 14215  
 0 0 14114 0 14408 0 0 14648 0 0 14604 0 0 14779 0 0 14920 0 0 15087 0 0 15283 0 0 15382 0 0 15787  
 0 0 15711 0 0 15862 0 0 16037 0 0 16363 0 0 16521 0 0 16766 0 0 16863 0 0 17098 0 0 17556 0 0  
 17515 0 0 17904 0 18240 0 0 18119 0 0 18410 0 0 18895 0 0 18889 0 0 19337 0 0 19715 0 0 19759 0 0  
 20164 0 0 20323 0 0 20683 0 0 20913 0 0 21230 0 0 21539 0 0 21864 0 0 22391 0 0 22760 0 0 23040 0  
 0 23954 0 0 24119 0 24803 0 0 24895 0 0 25444 0 0 25790 0 0 26068 0 0 26774 0 0 26580 0 0 27216 0  
 0 27354 0 0 27582 0 0 27895 0 0 27932 0 0 28122 0 0 28038 0 0 28192 0 0 28305 0 0 28017 0 0 27744  
 0 0 27885 0 27511 0 0 27365 0 0 26894 0 0 26702 0 0 26150 0 0 26202 0 0 25631 0 0 25265 0 0 24760  
 0 0 24257 0 0 23764 0 0 23437 0 0 22806 0 0 22389 0 0 21549 0 0 21017 0 0 20609 0 0 20167 0 0  
 19161 0 0 18835 0 18635 0 0 17975 0 0 17244 0 0 16791 0 0 16294 0 0 15856 0 0 15452 0 0 14853 0 0  
 14278 0 0 13971 0 0 13365 0 0 13149 0 0 12774 0 0 12494 0 0 12080 0 0 11838 0 0 11344 0 0 11095 0  
 0 10687 0 10321 0 0 10249 0 0 9943 0 0 9625 0 0 9507 0 0 8945 0 0 8985 0 0 8897 0 0 8680 0 0 8348  
 0 0 8221 0 0 8070 0 0 7921 0 0 7609 0 0 7451 0 0 7313 0 0 7129 0 0 7022 0 0 6974 0 0 6797 0 6678 0 0  
 6570 0 0 6468 0 0 6400 0 0 6107 0 0 6250 0 0 6201 0 0 6058 0 0 5908 0 0 5788 0 0 5691 0 0 5845 0 0  
 5653 0 0 5668 0 0 5611 0 0 5517 0 0 5538 0 0 5531 0 0 5276 0 5242 0 0 5204 0 0 5267 0 0 5119 0 0  
 5235 0 0 5106 0 0 5078 0 0 4996 0 0 4993 0 0 4872 0 0 4875 0 0 4782 0 0 4738 0 0 4814 0 0 4736 0 0  
 4816 0 0 4717 0 0 4759 0 0 4720 0 0 4628 0 4610 0 0 4595 0 0 4639 0 0 4506 0 0 4460 0 0 4378 0 0  
 4409 0 0 4379 0 0 4441 0 0 4445 0 0 4463 0 0 4340 0 0 4289 0 0 4277 0 0 4224 0 0 4345 0 0 4364 0 0  
 4305 0 0 4191 0 0 4215 0 4304 0 0 4128 0 0 4178 0 0 4150 0 0 4184 0 0 4132 0 0 4114 0 0 4130 0 0  
 3919 0 0 4077 0 0 4168 0 0 4079 0 0 4191 0 0 4022 0 0 4023 0 0 4077 0 0 4048 0 0 3983 0 0 3999 0  
 4010 0 0 3975 0 0 3913 0 0 3986 0 0 3895 0 0 3897 0 0 3894 0 0 3789 0 0 3767 0 0 3966 0 0 3952 0 0  
 3802 0 0 3940 0 0 3802 0 0 3733 0 0 3870 0 0 3840 0 0 3801 0 0 3830 0 0 3824 0 3775 0 0 3816 0 0  
 3824 0 0 3687 0 0 3794 0 0 3752 0 0 3685 0 0 3744 0 0 3660 0 0 3766 0 0 3835 0 0 3699 0 0 3705 0 0

3681 0 0 3744 0 0 3728 0 0 3766 0 0 3724 0 0 3641 0 3723 0 0 3706 0 0 3727 0 0 3718 0 0 3580 0 0  
 3588 0 0 3771 0 0 3648 0 0 3638 0 0 3666 0 0 3580 0 0 3453 0 0 3601 0 0 3578 0 0 3529 0 0 3610 0 0  
 3552 0 0 3475 0 0 3479 0 0 3422 0 3422 0 0 3506 0 0 3458 0 0 3359 0 0 3458 0 0 3424 0 0 3392 0 0  
 3366 0 0 3252 0 0 3352 0 0 3346 0 0 3304 0 0 3295 0 0 3353 0 0 3333 0 0 3322 0 0 3241 0 0 3250 0 0  
 3158 0 3203 0 0 3166 0 0 3217 0 0 3269 0 0 3217 0 0 3128 0 0 3171 0 0 3086 0 0 3164 0 0 3156 0 0  
 3107 0 0 3154 0 0 3148 0 0 3172 0 0 3144 0 0 3140 0 0 3046 0 0 2969 0 0 3064 0 0 3066 0 3019 0 0  
 3025 0 0 3026 0 0 3056 0 0 3098 0 0 2985 0 0 3135 0 0 3031 0 0 3069 0 0 3059 0 0 3001 0 0 3100 0 0  
 2924 0 0 3047 0 0 3046 0 0 2932 0 0 3050 0 0 3055 0 0 3082 0 0 3108 0 3037 0 0 2951 0 0 2949 0 0  
 2926 0 0 2988 0 0 2909 0 0 3061 0 0 2903 0 0 2834 0 0 2956 0 0 2970 0 0 2945 0 0 2943 0 0 2857 0 0  
 2880 0 0 2953 0 0 2856 0 0 2954 0 0 2870 0 2881 0 0 2906 0 0 2943 0 0 2867 0 0 2865 0 0 2868 0 0  
 2864 0 0 2803 0 0 2832 0 0 2819 0 0 2822 0 0 2799 0 0 2887 0 0 2815 0 0 2828 0 0 2848 0 0 2770 0 0  
 2814 0 0 2843 0 0 2781 0 2792 0 0 2835 0 0 2722 0 0 2834 0 0 2831 0 0 2774 0 0 2783 0 0 2761 0 0  
 2799 0 0 2667 0 0 2726 0 0 2748 0 0 2715 0 0 2756 0 0 2727 0 0 2734 0 0 2740 0 0 2676 0 0 2755 0  
 2637 0 0 2672 0 0 2690 0 0 2655 0 0 2649 0 0 2721 0 0 2695 0 0 2632 0 0 2601 0 0 2707 0 0 2630 0 0  
 2605 0 0 2604 0 0 2606 0 0 2669 0 0 2643 0 0 2590 0 0 2589 0 0 2621 0 0 2578 0 2609 0 0 2605 0 0  
 2528 0 0 2485 0 0 2607 0 0 2558 0 0 2551 0 0 2600 0 0 2500 0 0 2477 0 0 2503 0 0 2454 0 0 2386 0 0  
 2533 0 0 2417 0 0 2483 0 0 2443 0 0 2434 0 0 2377 0 2385 0 0 2334 0 0 2478 0 0 2410 0 0 2399 0 0  
 2297 0 0 2268 0 0 2356 0 0 2399 0 0 2333 0 0 2385 0 0 2333 0 0 2281 0 0 2363 0 0 2356 0 0 2393 0 0  
 2226 0 0 2373 0 0 2365 0 0 2275 0 2344 0 0 2366 0 0 2389 0 0 2325 0 0 2341 0 0 2301 0 0 2254 0 0  
 2333 0 0 2257 0 0 2318 0 0 2251 0 0 2179 0 0 2239 0 0 2296 0 0 2194 0 0 2226 0 0 2353 0 0 2266 0 0  
 2291 0 2251 0 0 2195 0 0 2211 0 0 2283 0 0 2255 0 0 2201 0 0 2303 0 0 2276 0 0 2275 0 0 2272 0 0  
 2252 0 0 2177 0 0 2248 0 0 2217 0 0 2281 0 0 2143 0 0 2193 0 0 2201 0 0 2190 0 0 2239 0 2240 0 0  
 2225 0 0 2262 0 0 2278 0 0 2228 0 0 2164 0 0 2234 0 0 2285 0 0 2227 0 0 2174 0 0 2245 0 0 2193 0 0  
 2270 0 0 2278 0 0 2212 0 0 2278 0 0 2282 0 0 2270 0 0 2213 0 0 2174 0 2170 0 0 2297 0 0 2224 0 0  
 2265 0 0 2192 0 0 2264 0 0 2305 0 0 2219 0 0 2230 0 0 2316 0 0 2214 0 0 2255 0 0 2262 0 0 2303 0 0  
 2210 0 0 2296 0 0 2275 0 0 2372 0 0 2240 0 2311 0 0 2311 0 0 2263 0 0 2407 0 0 2314 0 0 2388 0 0  
 2370 0 0 2367 0 0 2356 0 0 2416 0 0 2376 0 0 2386 0 0 2441 0 0 2429 0 0 2431 0 0 2514 0 0 2460 0 0  
 2504 0 0 2442 0 0 2597 0 2452 0 0 2476 0 0 2356 0 0 2546 0 0 2594 0 0 2552 0 0 2516 0 0 2525 0 0  
 2610 0 0 2601 0 0 2583 0 0 2674 0 0 2737 0 0 2665 0 0 2710 0 0 2603 0 0 2702 0 0 2720 0 0 2810 0  
 2726 0 0 2775 0 0 2783 0 0 2712 0 0 2781 0 0 2854 0 0 2776 0 0 2920 0 0 2885 0 0 2896 0 0 2876 0 0  
 2882 0 0 2873 0 0 2995 0 0 2934 0 0 3037 0 0 2990 0 0 3037 0 0 3080 0 0 3151 0 3094 0 0 3091 0 0  
 3163 0 0 3095 0 0 3113 0 0 3252 0 0 3208 0 0 3198 0 0 3204 0 0 3143 0 0 3154 0 0 3254 0 0 3222 0 0  
 3211 0 0 3237 0 0 3277 0 0 3183 0 0 3361 0 0 3304 0 3251 0 0 3172 0 0 3305 0 0 3432 0 0 3301 0 0  
 3244 0 0 3357 0 0 3293 0 0 3345 0 0 3437 0 0 3351 0 0 3389 0 0 3419 0 0 3391 0 0 3421 0 0 3437 0 0  
 3436 0 0 3532 0 0 3491 0 0 3590 0 3430 0 0 3531 0 0 3566 0 0 3603 0 0 3595 0 0 3522 0 0 3695 0 0  
 3728 0 0 3809 0 0 3761 0 0 3763 0 0 3763 0 0 3902 0 0 3871 0 0 3841 0 0 3986 0 0 3910 0 0 3928 0 0  
 4022 0 0 3951 0 4089 0 0 4125 0 0 4193 0 0 4285 0 0 4174 0 0 4236 0 0 4236 0 0 4404 0 0 4406 0 0  
 4295 0 0 4418 0 0 4312 0 0 4464 0 0 4310 0 0 4365 0 0 4413 0 0 4482 0 0 4386 0 0 4514 0 4520 0 0  
 4503 0 0 4479 0 0 4508 0 0 4511 0 0 4482 0 0 4481 0 0 4406 0 0 4474 0 0 4460 0 0 4420 0 0 4525 0 0  
 4402 0 0 4470 0 0 4489 0 0 4426 0 0 4382 0 0 4305 0 0 4359 0 0 4375 0 4359 0 0 4323 0 0 4217 0 0  
 4206 0 0 4248 0 0 4172 0 0 4143 0 0 4067 0 0 4076 0 0 4079 0 0 3911 0 0 3961 0 0 3976 0 0 3883 0 0  
 3938 0 0 3934 0 0 3812 0 0 3832 0 0 3869 0 3745 0 0 3712 0 0 3726 0 0 3584 0 0 3619 0 0 3518 0 0

3455 0 0 3564 0 0 3531 0 0 3296 0 0 3421 0 0 3476 0 0 3346 0 0 3327 0 0 3324 0 0 3192 0 0 3206 0 0  
 3137 0 0 3131 0 0 3066 0 0 3079 0 0 3025 0 0 2875 0 0 2901 0 0 2923 0 0 2849 0 0 2955 0 0 2807 0 0  
 2786 0 0 2805 0 0 2773 0 0 2701 0 0 2696 0 0 2527 0 0 2610 0 0 2530 0 0 2566 0 0 2489 0 0 2502 0  
 2508 0 0 2544 0 0 2457 0 0 2354 0 0 2352 0 0 2350 0 0 2283 0 0 2335 0 0 2247 0 0 2313 0 0 2233 0 0  
 2269 0 0 2210 0 0 2166 0 0 2117 0 0 2043 0 0 2061 0 0 2074 0 0 2055 0 0 1979 0 0 1937 0 0 1960 0 0  
 1972 0 0 1890 0 0 1915 0 0 1946 0 0 1947 0 0 1934 0 0 1840 0 0 1817 0 0 1886 0 0 1910 0 0 1924 0 0  
 1842 0 0 1879 0 0 1782 0 0 1795 0 0 1717 0 0 1744 0 0 1802 0 0 1809 0 0 1724 0 0 1745 0 0 1745 0 0  
 1723 0 0 1792 0 0 1675 0 0 1620 0 0 1753 0 0 1640 0 0 1621 0 0 1620 0 0 1577 0 0 1558 0 0 1650 0 0  
 1573 0 0 1556 0 0 1559 0 0 1518 0 0 1491 0 0 1470 0 0 1467 0 0 1463 0 0 1453 0 0 1389 0 0 1368 0 0  
 1339 0 0 1388 0 0 1365 0 0 1337 0 0 1252 0 0 1285 0 0 1296 0 0 1260 0 0 1268 0 0 1298 0 0 1291 0 0  
 1258 0 0 1252 0 0 1230 0 0 1199 0 0 1159 0 0 1163 0 0 1140 0 0 1100 0 0 1111 0 0 1141 0 0 1120 0 0  
 1077 0 0 1020 0 0 1029 0 0 1090 0 0 958 0 0 959 0 0 1037 0 0 1005 0 0 1050 0 0 959 0 0 1025 0 0 965 0  
 0 960 0 0 980 0 0 1035 0 0 1010 0 0 997 0 0 945 0 0 993 0 0 920 0 0 970 0 0 927 0 0 999 0 0 992 0 0  
 895 0 0 878 0 0 997 0 0 923 0 0 926 0 0 942 0 0 917 0 0 917 0 0 911 0 0 923 0 0 895 0 0 822 0 0 841 0 0  
 857 0 0 876 0 0 828 0 0 797 0 0 778 0 0 705 0 0 704 0 0 727 0 0 709 0 0 701 0 0 683 0 0 669 0 0 617 0 0  
 643 0 0 635 0 0 588 0 0 598 0 0 613 0 0 590 0 0 550 0 0 564 0 0 540 0 0 500 0 0 499 0 0 489 0 0 483 0  
 0 459 0 0 467 0 0 466 0 0 435 0 0 460 0 0 407 0 0 418 0 0 415 0 0 420 0 0 421 0 0 367 0 0 347 0 0 355 0  
 0 362 0 0 376 0 0 331 0 0 339 0 0 357 0 0 346 0 0 316 0 0 305 0 0 334 0 0 291 0 0 290 0 0 307 0 0 300  
 0 302 0 0 304 0 0 275 0 0 297 0 0 315 0 0 290 0 0 314 0 0 274 0 0 280 0 0 286 0 0 250 0 0 284 0 0 262  
 0 0 271 0 0 279 0 0 227 0 0 260 0 0 247 0 0 230 0 0 217 0 0 242 0 0 233 0 0 254 0 0 246 0 0 229 0 0 220  
 0 0 218 0 0 223 0 0 225 0 0 220 0 0 188 0 0 225 0 0 231 0 0 212 0 0 180 0 0 214 0 0 211 0 0 198 0 0  
 209 0 0 214 0 0 208 0 0 190 0 0 217 0 0 216 0 0 208 0 0 182 0 0 199 0 0 215 0 0 193 0 0 196 0 0 221 0 0  
 192 0 0 187 0 0 190 0 0 214 0 0 228 0 0 205 0 0 155 0 0 189 0 0 211 0 0 203 0 0 199 0 0 178 0 0 166 0 0  
 145 0 0 188 0 0 185 0 0 170 0 0 181 0 0 222 0 0 173 0 0 199 0 0 196 0 0 202 0 0 171 0 0 183 0 0 169 0  
 0 223 0 0 175 0 0 216 0 0 184 0 0 194 0 0 161 0 0 209 0 0 215 0 0 178 0 0 198 0 0 168 0 0 170 0 0 198 0  
 0 175 0 0 184 0 0 193 0 0 176 0 0 183 0 0 190 0 0 172 0 0 161 0 0 162 0 0 164 0 0 184 0 0 168 0 0 193 0  
 0 212 0 0 205 0 0 201 0 0 182 0 0 180 0 0 163 0 0 167 0 0 179 0 0 205 0 0 167 0 0 203 0 0 178 0 0 200  
 0 0 179 0 0 168 0 0 159 0 0 168 0 0 178 0 0 148 0 0 174 0 0 160 0 0 163 0 0 156 0 0 145 0 0 138 0 0 152  
 0 0 160 0 0 119 0 0 151 0 0 125 0 0 126 0 0 135 0 0 122 0 0 124 0 0 155 0 0 123 0 0 137 0 0 131 0 0 116  
 0 0 105 0 0 113 0 0 119 0 0 118 0 0 120 0 0 112 0 0 115 0 0 103 0 0 112 0 0 110 0 0 91 0 0 108 0 0 102  
 0 0 115 0 0 113 0 0 101 0 0 110 0 0 101 0 0 91 0 0 83 0 0 91 0 0 84 0 0 91 0 0 74 0 0 97 0 0 92 0 0 101 0 0  
 83 0 0 87 0 0 79 0 0 85 0 0 95 0 0 88 0 0 61 0 0 68 0 0 61 0 0 69 0 0 77 0 0 57 0 0 78 0 0 67 0 0 61 0 0 61  
 0 0 66 0 0 59 0 0 55 0 0 62 0 0 84 0 0 68 0 0 61 0 0 62 0 0 66 0 0 54 0 0 57 0 0 67 0 0 67 0 0 60 0 0 53 0 0  
 62 0 0 59 0 0 76 0 0 43 0 0 45 0 0 52 0 0 39 0 0 54 0 0 49 0 0 57 0 0 44 0 0 39 0 0 50 0 0 54 0 0 41 0 0 49  
 0 0 36 0 0 32 0 0 39 0 0 44 0 0 42 0 0 38 0 0 33 0 0 41 0 0 30 0 0 38 0 0 46 0 0 52 0 0 29 0 0 35 0 0 41 0  
 0 31 0 0 29 0 0 24 0 0 29 0 0 26 0 0 31 0 0 29 0 0 31 0 0 25 0 0 32 0 0 25 0 0 23 0 0 24 0 0 20 0 0 13 0 0  
 16 0 0 29 0 0 11 0 0 23 0 0 19 0 0 21 0 0 7 0 0 7 0 15 0 0 11 0 0 14 0 0 8 0 0 13 0 0 7 0 0 14 0 0 8 0 0 12  
 0 0 6 0 0 8 0 0 10 0 0 10 0 0 7 0 0 11 0 0 9 0 0 8 0 0 5 0 0 6 0 0 3 0 0 6 0 0 7 0 0 8 0 0 5 0 0 3 0 0 5 0 0 4 0  
 0 6 0 0 3 0 0 4 0 0 4 0 0 4 0 0 4 0 0 3 0 0 3 0 0 3 0 0 4 0 0 3 0 0 1 0 0 0 0 5 0 0 2 0 0 4 0 0 0 0 0 2 0 0 4 0  
 0 3 0 0 3 0 0 1 0 0 1 0 0 5 0 0 2 0 0 2 0 0 0 0 0 1 0 0 1 0 0 4 0 0 1 0 0 2 0 0 0 0 1 0 0 4 0 0 3 0 0 3 0 0 1 0  
 0 2 0 0 0 0 0 0 0 0 4 0 0 1 0 0 3 0 0 2 0 0 0 0 0 4 0 0 1 0 0 0 0 0 2 0 0 3 0 1 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0  
 0 1 0 0 0 0 0 2 0 0 1 0 0 0 0 0 2 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0 1 0 0 1 0 0 0 0 0 0 1 0 0 1 0 0 0 0

000000000000000010000010000000000000000001003000000000000000  
 0000000000000000000010030000000000000001000000001000010000000  
 0010  
 00  
 00  
 00  
 001000000000000000000000  
 00  
 00  
 00  
 00  
 00  
 0001  
 0000010001  
 00  
 00  
 00  
 00  
 00  
 0010000000000000000000  
 00  
 00  
 00  
 00  
 00  
 00  
 00  
 00  
 00  
 00  
 00  
 00  
 0001  
 00  
 00100





11172 0 0 11234 0 0 10986 0 11068 0 0 10953 0 0 11014 0 0 10976 0 0 10719 0 0 10700 0 0 10398 0 0  
 10534 0 0 10475 0 0 10510 0 0 10442 0 10413 0 0 10491 0 0 10281 0 0 10077 0 0 10164 0 0 10191 0 0  
 10162 0 0 10260 0 0 10011 0 0 9884 0 0 9981 0 0 9741 0 9858 0 0 9751 0 0 9687 0 0 9777 0 0 9702 0  
 0 9465 0 0 9573 0 0 9612 0 0 9472 0 0 9470 0 0 9480 0 9533 0 0 9373 0 0 9344 0 0 9450 0 0 9229 0 0  
 9175 0 0 9293 0 0 9474 0 0 9315 0 0 9309 0 0 9243 0 9207 0 0 9096 0 0 9349 0 0 9411 0 0 9151 0 0  
 9251 0 0 9287 0 0 9171 0 0 9324 0 0 9383 0 0 9278 0 0 9403 0 9498 0 0 9331 0 0 9385 0 0 9515 0 0  
 9508 0 0 9644 0 0 9734 0 0 9697 0 0 9769 0 0 9683 0 0 9756 0 9862 0 0 10136 0 0 10051 0 0 10163 0  
 0 10181 0 0 10236 0 0 10243 0 0 10334 0 0 10523 0 0 10603 0 0 10641 0 10691 0 0 10971 0 0 10829 0  
 0 10928 0 0 11020 0 0 11180 0 0 11157 0 0 11184 0 0 11253 0 0 11396 0 0 11674 0 0 11662 0 11898 0  
 0 12162 0 0 11931 0 0 12033 0 0 12020 0 0 12302 0 0 12169 0 0 12494 0 0 12469 0 0 12628 0 0 12475  
 0 12645 0 0 12757 0 0 13011 0 0 13052 0 0 13057 0 0 13276 0 0 13245 0 0 13353 0 0 13579 0 0 13669  
 0 0 13719 0 13864 0 0 14150 0 0 14221 0 0 14569 0 0 14834 0 0 14995 0 0 15353 0 0 15436 0 0 15406  
 0 0 15697 0 0 15965 0 0 16260 0 16693 0 0 16772 0 0 17366 0 0 17227 0 0 17559 0 0 17987 0 0 18087  
 0 0 18575 0 0 18975 0 0 19037 0 0 19039 0 19622 0 0 19704 0 0 19817 0 0 19963 0 0 20090 0 0 20409  
 0 0 20626 0 0 20665 0 0 20719 0 0 20944 0 0 21093 0 20683 0 0 20906 0 0 20944 0 0 21012 0 0 21172  
 0 0 21140 0 0 20835 0 0 20814 0 0 20838 0 0 20750 0 0 20341 0 0 20662 0 20239 0 0 20230 0 0 20027  
 0 0 19753 0 0 19635 0 0 19476 0 0 19332 0 0 19173 0 0 18870 0 0 18567 0 0 18415 0 18108 0 0 17943  
 0 0 17593 0 0 17441 0 0 17085 0 0 16822 0 0 16561 0 0 16141 0 0 15952 0 0 15728 0 0 15495 0 14841  
 0 0 14663 0 0 14323 0 0 14135 0 0 13798 0 0 13506 0 0 13261 0 0 13044 0 0 12668 0 0 12436 0 0  
 12218 0 0 11731 0 11649 0 0 11336 0 0 11361 0 0 10794 0 0 10780 0 0 10553 0 0 10133 0 0 10086 0 0  
 9910 0 0 9590 0 0 9266 0 9020 0 0 9014 0 0 8762 0 0 8622 0 0 8455 0 0 8114 0 0 8171 0 0 7950 0 0  
 7641 0 0 7723 0 0 7664 0 7327 0 0 7148 0 0 7187 0 0 7230 0 0 6912 0 0 6776 0 0 6726 0 0 6628 0 0  
 6403 0 0 6389 0 0 6322 0 0 6160 0 6205 0 0 5953 0 0 5853 0 0 5882 0 0 5635 0 0 5568 0 0 5638 0 0  
 5574 0 0 5519 0 0 5417 0 0 5378 0 5204 0 0 5212 0 0 5122 0 0 5049 0 0 5121 0 0 5023 0 0 5007 0 0  
 4818 0 0 4887 0 0 4774 0 0 4627 0 4846 0 0 4576 0 0 4630 0 0 4796 0 0 4529 0 0 4645 0 0 4478 0 0  
 4423 0 0 4438 0 0 4556 0 0 4330 0 0 4359 0 4357 0 0 4319 0 0 4344 0 0 4228 0 0 4250 0 0 4297 0 0  
 4240 0 0 4175 0 0 4024 0 0 4144 0 0 4119 0 4105 0 0 4053 0 0 3961 0 0 3841 0 0 3916 0 0 3942 0 0  
 3938 0 0 3826 0 0 3726 0 0 3732 0 0 3785 0 3763 0 0 3868 0 0 3625 0 0 3710 0 0 3723 0 0 3630 0 0  
 3698 0 0 3647 0 0 3703 0 0 3615 0 0 3684 0 0 3619 0 3609 0 0 3600 0 0 3513 0 0 3616 0 0 3535 0 0  
 3563 0 0 3554 0 0 3488 0 0 3545 0 0 3503 0 0 3485 0 3519 0 0 3432 0 0 3558 0 0 3551 0 0 3493 0 0  
 3408 0 0 3500 0 0 3407 0 0 3396 0 0 3416 0 0 3442 0 3501 0 0 3358 0 0 3402 0 0 3368 0 0 3463 0 0  
 3336 0 0 3470 0 0 3388 0 0 3426 0 0 3367 0 0 3452 0 0 3432 0 3303 0 0 3338 0 0 3359 0 0 3303 0 0  
 3266 0 0 3262 0 0 3299 0 0 3284 0 0 3253 0 0 3222 0 0 3275 0 3162 0 0 3264 0 0 3148 0 0 3081 0 0  
 3186 0 0 3158 0 0 3200 0 0 3004 0 0 3075 0 0 3194 0 0 3103 0 3173 0 0 3186 0 0 3017 0 0 3133 0 0  
 3242 0 0 3117 0 0 3119 0 0 3117 0 0 3085 0 0 3100 0 0 3022 0 0 3088 0 3184 0 0 3074 0 0 3005 0 0  
 3113 0 0 3014 0 0 3104 0 0 2995 0 0 3058 0 0 2982 0 0 3071 0 0 2950 0 3044 0 0 3016 0 0 2958 0 0  
 2981 0 0 2929 0 0 3020 0 0 2988 0 0 3022 0 0 2958 0 0 3004 0 0 3079 0 2882 0 0 3028 0 0 2951 0 0  
 2890 0 0 2883 0 0 2959 0 0 3042 0 0 2989 0 0 2859 0 0 2865 0 0 2973 0 0 2951 0 2946 0 0 3032 0 0  
 2942 0 0 2888 0 0 2970 0 0 2843 0 0 2972 0 0 3021 0 0 2955 0 0 2951 0 0 2920 0 2983 0 0 3018 0 0  
 2988 0 0 2954 0 0 2918 0 0 2912 0 0 2866 0 0 3013 0 0 2962 0 0 3014 0 0 3025 0 0 2901 0 2932 0 0  
 2934 0 0 2928 0 0 2955 0 0 2987 0 0 2987 0 0 2956 0 0 2962 0 0 2886 0 0 2921 0 0 2933 0 2872 0 0  
 2954 0 0 2960 0 0 2990 0 0 2987 0 0 2832 0 0 2934 0 0 2972 0 0 2908 0 0 2963 0 0 2944 0 2886 0 0



2951 0 0 2821 0 0 2952 0 0 2975 0 0 2940 0 0 2909 0 0 2829 0 0 2907 0 0 2874 0 0 2954 0 0 2926 0  
 2867 0 0 2982 0 0 2942 0 0 2831 0 0 2852 0 0 2894 0 0 2836 0 0 2875 0 0 2907 0 0 2856 0 0 2905 0  
 2875 0 0 2847 0 0 2848 0 0 2855 0 0 2855 0 0 2807 0 0 2817 0 0 2874 0 0 2855 0 0 2849 0 0 2824 0  
 2745 0 0 2806 0 0 2770 0 0 2748 0 0 2801 0 0 2823 0 0 2777 0 0 2766 0 0 2716 0 0 2735 0 0 2814 0 0  
 2705 0 0 2729 0 0 2663 0 0 2745 0 0 2754 0 0 2727 0 0 2710 0 0 2687 0 0 2677 0 0 2726 0 0 2746 0 0  
 2699 0 0 2668 0 0 2647 0 0 2642 0 0 2669 0 0 2679 0 0 2628 0 0 2557 0 0 2637 0 0 2560 0 0 2692 0 0  
 2649 0 0 2599 0 0 2642 0 0 2604 0 0 2601 0 0 2576 0 0 2542 0 0 2511 0 0 2555 0 0 2532 0 0 2584 0 0  
 2644 0 0 2519 0 0 2528 0 0 2507 0 0 2511 0 0 2496 0 0 2434 0 0 2584 0 0 2446 0 0 2528 0 0 2475 0 0  
 2517 0 0 2488 0 0 2509 0 0 2439 0 0 2406 0 0 2474 0 0 2414 0 0 2414 0 0 2449 0 0 2362 0 0 2382 0 0  
 2384 0 0 2303 0 0 2431 0 0 2345 0 0 2277 0 0 2422 0 0 2346 0 0 2355 0 0 2326 0 0 2288 0 0 2290 0 0  
 2336 0 0 2332 0 0 2292 0 0 2258 0 0 2318 0 0 2250 0 0 2249 0 0 2232 0 0 2240 0 0 2210 0 0 2134 0 0  
 2168 0 0 2217 0 0 2158 0 0 2263 0 0 2105 0 0 2177 0 0 2162 0 0 2210 0 0 2087 0 0 2208 0 0 2120 0 0  
 2166 0 0 2191 0 0 2135 0 0 2189 0 0 2103 0 0 2173 0 0 2127 0 0 2089 0 0 2056 0 0 2114 0 0 2151 0 0  
 2145 0 0 2071 0 0 2075 0 0 2144 0 0 2093 0 0 2077 0 0 2134 0 0 2106 0 0 2082 0 0 1977 0 0 2068 0 0  
 1967 0 0 2071 0 0 2107 0 0 1973 0 0 2021 0 0 2018 0 0 1956 0 0 2029 0 0 2069 0 0 2073 0 0 1978 0 0  
 2048 0 0 1999 0 0 2043 0 0 2027 0 0 2037 0 0 2052 0 0 1972 0 0 1988 0 0 2019 0 0 1973 0 0 1935 0 0  
 2000 0 0 1965 0 0 1941 0 0 1915 0 0 2023 0 0 2022 0 0 2019 0 0 1948 0 0 2045 0 0 1938 0 0 1926 0 0  
 1959 0 0 1985 0 0 2026 0 0 2027 0 0 1944 0 0 1965 0 0 1990 0 0 1955 0 0 1963 0 0 1918 0 0 1944 0 0  
 1982 0 0 2026 0 0 2011 0 0 1970 0 0 1991 0 0 1869 0 0 1991 0 0 1992 0 0 1931 0 0 1888 0 0 1968 0 0  
 1961 0 0 2052 0 0 1903 0 0 1895 0 0 1961 0 0 1936 0 0 1973 0 0 2089 0 0 1963 0 0 1975 0 0 1969 0 0  
 1917 0 0 1926 0 0 1984 0 0 1949 0 0 1946 0 0 1982 0 0 1889 0 0 1926 0 0 1963 0 0 1976 0 0 1932 0 0  
 1987 0 0 2000 0 0 1910 0 0 2019 0 0 1817 0 0 1893 0 0 1942 0 0 1947 0 0 1929 0 0 1978 0 0 1932 0 0  
 1923 0 0 1997 0 0 1940 0 0 1895 0 0 1900 0 0 1931 0 0 1934 0 0 1987 0 0 1985 0 0 1993 0 0 1887 0 0  
 1981 0 0 1991 0 0 2036 0 0 2028 0 0 2028 0 0 2067 0 0 2047 0 0 2044 0 0 2039 0 0 2116 0 0 2060 0 0  
 2120 0 0 2066 0 0 2152 0 0 2111 0 0 2105 0 0 2064 0 0 2211 0 0 2146 0 0 2203 0 0 2063 0 0 2112 0 0  
 2173 0 0 2167 0 0 2137 0 0 2080 0 0 2126 0 0 2148 0 0 2147 0 0 2156 0 0 2167 0 0 2178 0 0 2235 0 0  
 2115 0 0 2183 0 0 2224 0 0 2082 0 0 2145 0 0 2244 0 0 2090 0 0 2186 0 0 2218 0 0 2199 0 0 2151 0 0  
 2266 0 0 2264 0 0 2245 0 0 2242 0 0 2195 0 0 2245 0 0 2280 0 0 2195 0 0 2264 0 0 2279 0 0 2254 0 0  
 2235 0 0 2301 0 0 2297 0 0 2317 0 0 2308 0 0 2261 0 0 2416 0 0 2257 0 0 2298 0 0 2418 0 0 2309 0 0  
 2376 0 0 2308 0 0 2422 0 0 2362 0 0 2394 0 0 2363 0 0 2442 0 0 2388 0 0 2446 0 0 2442 0 0 2509 0 0  
 2496 0 0 2481 0 0 2476 0 0 2466 0 0 2466 0 0 2541 0 0 2420 0 0 2442 0 0 2495 0 0 2507 0 0 2611 0 0  
 2541 0 0 2541 0 0 2613 0 0 2614 0 0 2531 0 0 2528 0 0 2600 0 0 2681 0 0 2596 0 0 2616 0 0 2707 0 0  
 2624 0 0 2630 0 0 2657 0 0 2746 0 0 2647 0 0 2664 0 0 2644 0 0 2665 0 0 2670 0 0 2751 0 0 2705 0 0  
 2711 0 0 2652 0 0 2782 0 0 2708 0 0 2751 0 0 2663 0 0 2792 0 0 2775 0 0 2798 0 0 2727 0 0 2770 0 0  
 2806 0 0 2846 0 0 2867 0 0 2793 0 0 2858 0 0 2813 0 0 2925 0 0 2823 0 0 2924 0 0 2884 0 0 2850 0  
 2951 0 0 2935 0 0 3102 0 0 2936 0 0 3015 0 0 3022 0 0 3019 0 0 3093 0 0 3157 0 0 3149 0 0 3277 0  
 3250 0 0 3222 0 0 3155 0 0 3099 0 0 3175 0 0 3173 0 0 3336 0 0 3264 0 0 3181 0 0 3331 0 0 3282 0  
 3314 0 0 3321 0 0 3249 0 0 3347 0 0 3417 0 0 3334 0 0 3421 0 0 3523 0 0 3374 0 0 3512 0 0 3376 0 0  
 3592 0 0 3603 0 0 3468 0 0 3455 0 0 3519 0 0 3655 0 0 3557 0 0 3592 0 0 3578 0 0 3651 0 0 3603 0 0  
 3677 0 0 3712 0 0 3769 0 0 3728 0 0 3814 0 0 3813 0 0 3754 0 0 3698 0 0 3834 0 0 3919 0 0 3832 0 0  
 3833 0 0 3819 0 0 3738 0 0 3818 0 0 3882 0 0 3819 0 0 3776 0 0 3815 0 0 3753 0 0 3771 0 0 3762 0 0  
 3696 0 0 3690 0 0 3706 0 0 3638 0 0 3761 0 0 3647 0 0 3804 0 0 3666 0 0 3782 0 0 3677 0 0 3712 0 0

---

3572 0 0 3538 0 3523 0 0 3699 0 0 3516 0 0 3493 0 0 3499 0 0 3409 0 0 3449 0 0 3432 0 0 3340 0 0  
3445 0 0 3460 0 3506 0 0 3283 0 0 3291 0 0 3281 0 0 3291 0 0 3244 0 0 3118 0 0 3110 0 0 3108 0 0  
3128 0 0 3169 0 0 3111 0 3080 0 0 2967 0 0 2978 0 0 2925 0 0 3066 0 0 2939 0 0 2903 0 0 2834 0 0  
2858 0 0 2881 0 0 2721 0 2805 0 0 2699 0 0 2697 0 0 2609 0 0 2613 0 0 2603 0 0 2516 0 0 2491 0 0  
2487 0 0 2471 0 0 2458 0 2436 0 0 2360 0 0 2353 0 0 2407 0 0 2246 0 0 2268 0 0 2207 0 0 2203 0 0  
2360 0 0 2114 0 0 2163 0 0 2212 0 2056 0 0 2083 0 0 2033 0 0 2013 0 0 1990 0 0 1932 0 0 1868 0 0  
1878 0 0 1860 0 0 1800 0 0 1747 0 1784 0 0 1829 0 0 1739 0 0 1657 0 0 1620 0 0 1625 0 0 1576 0 0  
1608 0 0 1547 0 0 1548 0 0 1562 0 1460 0 0 1471 0 0 1471 0 0 1443 0 0 1407 0 0 1350 0 0 1310 0 0  
1288 0 0 1314 0 0 1230 0 0 1294 0 0 1259 0 1228 0 0 1139 0 0 1162 0 0 1064 0 0 1152 0 0 1180 0 0  
1154 0 0 1078 0 0 1018 0 0 1032 0 0 1004 0 985 0 0 1000 0 0 968 0 0 973 0 0 980 0 0 951 0 0 995 0 0  
975 0 0 995 0 0 935 0 0 874 0 942 0 0 915 0 0 876 0 0 919 0 0 819 0 0 828 0 0 869 0 0 841 0 0 823 0 0  
805 0 0 822 0 0 831 0 800 0 0 782 0 0 827 0 0 819 0 0 806 0 0 818 0 0 774 0 0 812 0 0 797 0 0 772 0 0  
771 0 743 0 0 725 0 0 702 0 0 713 0 0 731 0 0 693 0 0 697 0 0 686 0 0 723 0 0 718 0 0 685 0 632 0 0  
660 0 0 648 0 0 645 0 0 630 0 0 613 0 0 651 0 0 616 0 0 586 0 0 556 0 0 601 0 0 567 0 543 0 0 554 0 0  
547 0 0 524 0 0 521 0 0 525 0 0 482 0 0 471 0 0 521 0 0 510 0 0 501 0 489 0 0 461 0 0 460 0 0 457 0 0  
492 0 0 458 0 0 456 0 0 441 0 0 407 0 0 403 0 0 412 0 412 0 0 398 0 0 365 0 0 408 0 0 363 0 0 363 0 0  
388 0 0 337 0 0 359 0 0 374 0 0 343 0 0 317 0 341 0 0 338 0 0 299 0 0 341 0 0 323 0 0 322 0 0 286 0 0  
298 0 0 282 0 0 288 0 0 261 0 256 0 0 288 0 0 275 0 0 249 0 0 283 0 0 279 0 0 263 0 0 265 0 0 263 0 0  
272 0 0 237 0 240 0 0 212 0 0 227 0 0 231 0 0 215 0 0 236 0 0 251 0 0 211 0 0 212 0 0 212 0 0 218 0 0  
228 0 234 0 0 223 0 0 214 0 0 218 0 0 196 0 0 174 0 0 187 0 0 194 0 0 186 0 0 188 0 0 197 0 190 0 0  
172 0 0 176 0 0 164 0 0 193 0 0 184 0 0 170 0 0 156 0 0 185 0 0 158 0 0 183 0 181 0 0 183 0 0 164 0 0  
194 0 0 179 0 0 181 0 0 176 0 0 156 0 0 176 0 0 179 0 0 165 0 0 177 0 156 0 0 181 0 0 158 0 0 155 0 0  
158 0 0 171 0 0 155 0 0 162 0 0 154 0 0 184 0 0 181 0 162 0 0 166 0 0 152 0 0 179 0 0 150 0 0 166 0 0  
161 0 0 174 0 0 162 0 0 166 0 0 153 0 148 0 0 185 0 0 146 0 0 163 0 0 150 0 0 162 0 0 162 0 0 170 0 0  
156 0 0 194 0 0 158 0 0 171 0 158 0 0 172 0 0 159 0 0 146 0 0 151 0 0 155 0 0 188 0 0 166 0 0 165 0 0  
166 0 0 184 0 179 0 0 170 0 0 172 0 0 151 0 0 137 0 0 159 0 0 148 0 0 166 0 0 155 0 0 174 0 0 142 0  
150 0 0 150 0 0 138 0 0 168 0 0 125 0 0 135 0 0 153 0 0 133 0 0 157 0 0 113 0 0 119 0 0 135 0 116 0 0  
105 0 0 104 0 0 139 0 0 117 0 0 120 0 0 118 0 0 101 0 0 121 0 0 105 0 0 106 0 109 0 0 110 0 0 109 0 0  
94 0 0 99 0 0 93 0 0 98 0 0 85 0 0 91 0 0 78 0 0 86 0 91 0 0 68 0 0 88 0 0 92 0 0 99 0 0 77 0 0 67 0 0 75  
0 0 80 0 0 74 0 0 59 0 0 73 0 76 0 0 80 0 0 65 0 0 57 0 0 64 0 0 66 0 0 60 0 0 63 0 0 72 0 0 75 0 0 54 0  
71 0 0 44 0 0 58 0 0 65 0 0 62 0 0 44 0 0 43 0 0 45 0 0 53 0 0 54 0 0 40 0 46 0 0 44 0 0 40 0 0 41 0 0 40  
0 0 46 0 0 36 0 0 44 0 0 49 0 0 39 0 0 43 0 0 44 0 34 0 0 48 0 0 44 0 0 33 0 0 23 0 0 40 0 0 37 0 0 37 0 0  
32 0 0 34 0 0 37 0 23 0 0 35 0 0 35 0 0 26 0 0 27 0 0 31 0 0 30 0 0 30 0 0 15 0 0 34 0 0 17 0 19 0 0 23 0  
0 17 0 0 19 0 0 19 0 0 18 0 0 15 0 0 10 0 0 14 0 0 15 0 0 18 0 0 12 0 11 0 0 14 0 0 10 0 0 12 0 0 7 0 0 12  
0 0 8 0 0 9 0 0 8 0 0 8 0 0 3 0 8 0 0 4 0 0 6 0 0 2 0 0 3 0 0 1 0 0 6 0 0 0 0 0 3 0 0 0 0 0 3 0 0 0 0 1 0 0 1 0  
0 0 0 0 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0  
0  
0  
0  
0  
0  
0 0





2960 0 0 2958 0 0 3023 0 0 2892 0 0 2896 0 2863 0 0 2715 0 0 2772 0 0 2798 0 2716 0 0 2746 0 0  
 2648 0 0 2652 0 2664 0 0 2702 0 0 2604 0 0 2610 0 2705 0 0 2725 0 0 2730 0 0 2701 0 0 2674 0 2743  
 0 0 2759 0 0 2700 0 0 2784 0 2888 0 0 2927 0 0 2931 0 0 2923 0 2994 0 0 3104 0 0 3186 0 0 3174 0 0  
 3262 0 3362 0 0 3417 0 0 3508 0 0 3514 0 3465 0 0 3560 0 0 3726 0 0 3609 0 3776 0 0 3855 0 0 3880  
 0 0 4040 0 0 4134 0 4183 0 0 4211 0 0 4341 0 0 4443 0 4485 0 0 4623 0 0 4550 0 0 4733 0 4915 0 0  
 4744 0 0 4782 0 0 4979 0 4970 0 0 5081 0 0 5211 0 0 5085 0 0 5327 0 5369 0 0 5406 0 0 5378 0 0  
 5546 0 5518 0 0 5578 0 0 5547 0 0 5482 0 5473 0 0 5445 0 0 5454 0 0 5448 0 0 5356 0 5510 0 0 5503  
 0 0 5310 0 0 5414 0 5290 0 0 5364 0 0 5176 0 0 5133 0 5014 0 0 5091 0 0 5009 0 0 5030 0 4878 0 0  
 4795 0 0 4630 0 0 4738 0 0 4667 0 4550 0 0 4405 0 0 4325 0 0 4376 0 4465 0 0 4245 0 0 4202 0 0  
 4128 0 4279 0 0 4240 0 0 4125 0 0 4053 0 0 3898 0 4090 0 0 4160 0 0 3977 0 0 3999 0 4011 0 0 4063  
 0 0 4098 0 0 3987 0 3971 0 0 4002 0 0 4136 0 0 4159 0 4218 0 0 4054 0 0 4071 0 0 4091 0 0 4178 0  
 4072 0 0 4090 0 0 4219 0 0 4223 0 4112 0 0 4156 0 0 4301 0 0 4166 0 4184 0 0 4179 0 0 4266 0 0  
 4197 0 0 4315 0 4324 0 0 4278 0 0 4307 0 0 4612 0 4515 0 0 4545 0 0 4567 0 0 4578 0 4834 0 0 4856  
 0 0 5079 0 0 5111 0 5302 0 0 5226 0 0 5265 0 0 5633 0 0 5676 0 5798 0 0 5835 0 0 5922 0 0 6099 0  
 6218 0 0 6349 0 0 6311 0 0 6372 0 6536 0 0 6758 0 0 6863 0 0 6939 0 0 6876 0 7076 0 0 7161 0 0  
 7056 0 0 7059 0 7273 0 0 7356 0 0 7421 0 0 7571 0 7438 0 0 7370 0 0 7427 0 0 7256 0 7214 0 0 7355  
 0 0 7406 0 0 7357 0 0 7345 0 7492 0 0 7305 0 0 7438 0 0 7299 0 7366 0 0 7279 0 0 7324 0 0 7266 0  
 7333 0 0 7350 0 0 7270 0 0 7450 0 0 7205 0 7313 0 0 7214 0 0 7375 0 0 7298 0 7493 0 0 7285 0 0  
 7340 0 0 7372 0 7379 0 0 7396 0 0 7422 0 0 7459 0 0 7706 0 7636 0 0 7741 0 0 7508 0 0 7691 0 7641  
 0 0 7755 0 0 7732 0 0 7958 0 7850 0 0 7917 0 0 7955 0 0 8020 0 7899 0 0 8049 0 0 8097 0 0 8027 0 0  
 8104 0 8106 0 0 8041 0 0 8291 0 0 8122 0 8190 0 0 8143 0 0 8257 0 0 8079 0 8010 0 0 8027 0 0 8176  
 0 0 8143 0 0 8277 0 8289 0 0 8335 0 0 8460 0 0 8393 0 8538 0 0 8352 0 0 8541 0 0 8788 0 8493 0 0  
 8293 0 0 8609 0 0 8794 0 8847 0 0 8768 0 0 8869 0 0 8948 0 0 9069 0 9217 0 0 9130 0 0 9238 0 0  
 9084 0 9237 0 0 9237 0 0 9371 0 0 9137 0 9327 0 0 9296 0 0 9512 0 0 9622 0 0 9541 0 9457 0 0 9579  
 0 0 9545 0 0 9557 0 9495 0 0 9817 0 0 9577 0 0 9583 0 9703 0 0 9770 0 0 9909 0 0 9685 0 9561 0 0  
 9696 0 0 9740 0 0 9942 0 0 10048 0 9874 0 0 9898 0 0 9880 0 0 9898 0 9903 0 0 9880 0 0 9895 0 0  
 9856 0 9800 0 0 9985 0 0 9900 0 0 10002 0 0 9756 0 10119 0 0 9931 0 0 10211 0 0 10082 0 10051 0 0  
 9957 0 0 10172 0 0 10345 0 10284 0 0 10415 0 0 10300 0 0 10383 0 10467 0 0 10388 0 0 10494 0 0  
 10664 0 0 10616 0 10550 0 0 10488 0 0 10656 0 0 10615 0 10672 0 0 10574 0 0 10480 0 0 10721 0  
 10608 0 0 10727 0 0 10790 0 0 10697 0 0 10760 0 10628 0 0 10631 0 0 10699 0 0 10923 0 10634 0 0  
 10797 0 0 10560 0 0 10824 0 10740 0 0 10683 0 0 10530 0 0 10622 0 0 11041 0 10814 0 0 10824 0 0  
 10862 0 0 10844 0 10948 0 0 10782 0 0 10879 0 0 11050 0 10940 0 0 11147 0 0 10934 0 0 11145 0  
 11168 0 0 11165 0 0 10999 0 0 11140 0 0 11152 0 11161 0 0 11005 0 0 11246 0 0 11260 0 11135 0 0  
 11047 0 0 11381 0 0 11151 0 11258 0 0 11239 0 0 11091 0 0 11387 0 0 11433 0 11473 0 0 11490 0 0  
 11433 0 0 11205 0 11457 0 0 11176 0 0 11309 0 0 11190 0 10969 0 0 11235 0 0 11245 0 0 11279 0  
 11158 0 0 11000 0 0 11033 0 0 11120 0 0 11091 0 10979 0 0 10725 0 0 10784 0 0 10717 0 10774 0 0  
 10509 0 0 10595 0 0 10364 0 10252 0 0 10314 0 0 10190 0 0 10080 0 0 9807 0 9947 0 0 9859 0 0 9681  
 0 0 9682 0 9674 0 0 9661 0 0 9541 0 0 9498 0 9531 0 0 9338 0 0 9278 0 0 9274 0 9351 0 0 9231 0 0  
 9069 0 0 8996 0 0 8882 0 8856 0 0 8835 0 0 8773 0 0 8758 0 8932 0 0 8678 0 0 8567 0 0 8692 0 8462  
 0 0 8540 0 0 8524 0 0 8615 0 0 8491 0 8471 0 0 8358 0 0 8474 0 0 8203 0 8267 0 0 8340 0 0 8389 0 0  
 8339 0 8425 0 0 8066 0 0 8330 0 0 8184 0 8062 0 0 8342 0 0 8102 0 0 8100 0 0 8043 0 8203 0 0 8148  
 0 0 8075 0 0 8123 0 8200 0 0 8216 0 0 8069 0 0 7984 0 8098 0 0 8027 0 0 8112 0 0 8010 0 0 8207 0

8284 0 0 8129 0 0 8274 0 0 8288 0 8226 0 0 8179 0 0 8272 0 0 8243 0 8293 0 0 8018 0 0 8220 0 0  
 8435 0 8388 0 0 8428 0 0 8395 0 0 8487 0 0 8414 0 8422 0 0 8565 0 0 8445 0 0 8523 0 8504 0 0 8520  
 0 0 8467 0 0 8488 0 8680 0 0 8705 0 0 8771 0 0 8826 0 0 8812 0 8814 0 0 8836 0 0 8823 0 0 8831 0  
 8939 0 0 9130 0 0 8976 0 0 9132 0 9197 0 0 9278 0 0 9210 0 0 9264 0 0 9342 0 9250 0 0 9318 0 0  
 9607 0 0 9585 0 9594 0 0 9646 0 0 9817 0 0 9805 0 9787 0 0 9974 0 0 9969 0 0 10024 0 10025 0 0  
 9979 0 0 9881 0 0 10109 0 0 10041 0 10192 0 0 10423 0 0 10349 0 0 10384 0 10351 0 0 10617 0 0  
 10533 0 0 10643 0 10828 0 0 10702 0 0 10684 0 0 10917 0 0 11118 0 11141 0 0 11073 0 0 11194 0 0  
 11244 0 11378 0 0 11418 0 0 11505 0 0 11310 0 11507 0 0 11815 0 0 12005 0 0 11719 0 11723 0 0  
 12030 0 0 12144 0 0 12269 0 0 12531 0 12255 0 0 12530 0 0 12650 0 0 12702 0 12954 0 0 13312 0 0  
 13100 0 0 13206 0 13656 0 0 13529 0 0 13546 0 0 14061 0 0 14043 0 14438 0 0 14610 0 0 14500 0 0  
 14525 0 14793 0 0 14880 0 0 15080 0 0 15142 0 15365 0 0 15177 0 0 15553 0 0 15966 0 15589 0 0  
 16163 0 0 16108 0 0 16195 0 0 16206 0 16532 0 0 16320 0 0 16607 0 0 16518 0 16419 0 0 16624 0 0  
 16828 0 0 16647 0 16770 0 0 16808 0 0 16668 0 0 16858 0 0 16772 0 16565 0 0 16835 0 0 16942 0 0  
 16712 0 16497 0 0 16296 0 0 16360 0 0 16134 0 16223 0 0 16155 0 0 16140 0 0 15708 0 15920 0 0  
 15418 0 0 15748 0 0 15350 0 0 15287 0 14819 0 0 14947 0 0 14737 0 0 14615 0 14716 0 0 14273 0 0  
 13939 0 0 13999 0 13951 0 0 13825 0 0 13506 0 0 13461 0 0 13044 0 13057 0 0 12725 0 0 12722 0 0  
 12509 0 12241 0 0 11997 0 0 11925 0 0 11673 0 11649 0 0 11400 0 0 11006 0 0 10897 0 0 10746 0  
 10526 0 0 10348 0 0 9988 0 0 10073 0 9863 0 0 9542 0 0 9414 0 0 9293 0 9216 0 0 9042 0 0 8789 0 0  
 8641 0 8634 0 0 8355 0 0 8318 0 0 7935 0 0 8014 0 7881 0 0 7870 0 0 7650 0 0 7494 0 7331 0 0 7201  
 0 0 6934 0 0 7075 0 6961 0 0 6701 0 0 6747 0 0 6702 0 0 6401 0 6440 0 0 6505 0 0 6282 0 0 6241 0  
 6070 0 0 5972 0 0 5994 0 0 5709 0 5843 0 0 5748 0 0 5583 0 0 5401 0 5465 0 0 5410 0 0 5315 0 0  
 5297 0 0 5225 0 5079 0 0 5098 0 0 5060 0 0 5059 0 5087 0 0 4882 0 0 4873 0 0 4974 0 4766 0 0 4798  
 0 0 4724 0 0 4782 0 0 4750 0 4628 0 0 4608 0 0 4548 0 0 4328 0 4354 0 0 4268 0 0 4440 0 0 4421 0  
 4237 0 0 4221 0 0 4276 0 0 4216 0 4203 0 0 4074 0 0 4187 0 0 4102 0 0 3944 0 4136 0 0 4015 0 0  
 4050 0 0 4000 0 3987 0 0 3914 0 0 3947 0 0 3940 0 3889 0 0 3801 0 0 3944 0 0 3839 0 0 3804 0 3709  
 0 0 3680 0 0 3781 0 0 3651 0 3685 0 0 3757 0 0 3751 0 0 3606 0 3630 0 0 3570 0 0 3605 0 0 3601 0  
 3700 0 0 3465 0 0 3550 0 0 3500 0 0 3588 0 3538 0 0 3539 0 0 3438 0 0 3464 0 3556 0 0 3388 0 0  
 3524 0 0 3327 0 3466 0 0 3427 0 0 3431 0 0 3347 0 0 3277 0 3333 0 0 3310 0 0 3235 0 0 3242 0 3333  
 0 0 3268 0 0 3219 0 0 3196 0 3244 0 0 3241 0 0 3185 0 0 3188 0 3142 0 0 3164 0 0 3130 0 0 3107 0 0  
 3123 0 3145 0 0 3145 0 0 3028 0 0 3107 0 3089 0 0 3040 0 0 2995 0 0 3062 0 2932 0 0 2996 0 0 3079  
 0 0 3081 0 0 3026 0 2967 0 0 3070 0 0 3043 0 0 3046 0 3055 0 0 2932 0 0 2967 0 0 2991 0 3029 0 0  
 2973 0 0 2904 0 0 2885 0 0 3012 0 2905 0 0 2932 0 0 2970 0 0 2908 0 3022 0 0 2934 0 0 2986 0 0  
 2932 0 2890 0 0 2916 0 0 2862 0 0 2899 0 2845 0 0 2900 0 0 2860 0 0 2804 0 0 2935 0 2858 0 0 2827  
 0 0 2869 0 0 2809 0 2826 0 0 2854 0 0 2817 0 0 2799 0 2916 0 0 2890 0 0 2835 0 0 2774 0 0 2797 0  
 2682 0 0 2756 0 0 2753 0 0 2737 0 2821 0 0 2803 0 0 2713 0 0 2760 0 2830 0 0 2720 0 0 2806 0 0  
 2683 0 2734 0 0 2758 0 0 2785 0 0 2724 0 0 2772 0 2729 0 0 2807 0 0 2775 0 0 2786 0 2705 0 0 2765  
 0 0 2731 0 0 2680 0 2765 0 0 2810 0 0 2763 0 0 2711 0 0 2738 0 2714 0 0 2767 0 0 2784 0 0 2715 0  
 2830 0 0 2745 0 0 2767 0 0 2795 0 2698 0 0 2697 0 0 2804 0 0 2734 0 2760 0 0 2744 0 0 2718 0 0  
 2753 0 0 2737 0 2866 0 0 2880 0 0 2718 0 0 2643 0 2785 0 0 2726 0 0 2831 0 0 2902 0 2863 0 0 2790  
 0 0 2742 0 0 2823 0 0 2846 0 2848 0 0 2778 0 0 2864 0 0 2878 0 2738 0 0 2888 0 0 2866 0 0 2884 0  
 2891 0 0 2804 0 0 2804 0 0 2786 0 2901 0 0 2877 0 0 2817 0 0 2953 0 0 2852 0 2902 0 0 2849 0 0  
 2790 0 0 2870 0 2886 0 0 2911 0 0 2897 0 0 3022 0 2887 0 0 2935 0 0 2925 0 0 2846 0 0 2828 0 2868

0 0 2838 0 0 2890 0 0 2874 0 2820 0 0 2779 0 0 2866 0 0 2791 0 2802 0 0 2774 0 0 2767 0 0 2826 0 0  
 2808 0 2823 0 0 2766 0 0 2734 0 0 2822 0 2730 0 0 2736 0 0 2675 0 0 2843 0 2691 0 0 2714 0 0 2637  
 0 0 2655 0 2589 0 0 2717 0 0 2663 0 0 2653 0 0 2635 0 2646 0 0 2574 0 0 2671 0 0 2594 0 2585 0 0  
 2541 0 0 2566 0 0 2655 0 2538 0 0 2604 0 0 2558 0 0 2544 0 0 2563 0 2539 0 0 2620 0 0 2377 0 0  
 2506 0 2467 0 0 2432 0 0 2431 0 0 2388 0 2508 0 0 2435 0 0 2468 0 0 2345 0 2411 0 0 2321 0 0 2472  
 0 0 2370 0 0 2401 0 2346 0 0 2326 0 0 2312 0 0 2287 0 2320 0 0 2219 0 0 2283 0 0 2342 0 2392 0 0  
 2276 0 0 2244 0 0 2271 0 0 2257 0 2165 0 0 2257 0 0 2335 0 0 2220 0 2311 0 0 2273 0 0 2221 0 0  
 2209 0 2156 0 0 2120 0 0 2215 0 0 2184 0 2199 0 0 2174 0 0 2232 0 0 2183 0 0 2261 0 2119 0 0 2208  
 0 0 2087 0 0 2136 0 2083 0 0 2098 0 0 2126 0 0 2095 0 2122 0 0 2119 0 0 2132 0 0 2204 0 0 2120 0  
 2094 0 0 2101 0 0 2087 0 0 2056 0 2059 0 0 2054 0 0 2035 0 0 2144 0 2041 0 0 2003 0 0 2005 0 0  
 2057 0 2009 0 0 2001 0 0 2061 0 0 2061 0 0 2083 0 1947 0 0 2034 0 0 2112 0 0 2038 0 1913 0 0 1946  
 0 0 1976 0 0 2042 0 2066 0 0 1986 0 0 2014 0 0 1979 0 0 1997 0 1875 0 0 1917 0 0 1960 0 0 1956 0  
 2079 0 0 1989 0 0 1893 0 0 1995 0 1967 0 0 2008 0 0 1861 0 0 1964 0 1944 0 0 1881 0 0 1936 0 0  
 1895 0 0 1929 0 1943 0 0 1922 0 0 1902 0 0 1894 0 1877 0 0 1820 0 0 1883 0 0 1940 0 1856 0 0 1803  
 0 0 1876 0 0 1934 0 0 1875 0 1835 0 0 1844 0 0 1772 0 0 1850 0 1869 0 0 1818 0 0 1871 0 0 1860 0  
 1831 0 0 1824 0 0 1830 0 0 1771 0 0 1772 0 1837 0 0 1719 0 0 1855 0 0 1730 0 1780 0 0 1761 0 0  
 1669 0 0 1754 0 1798 0 0 1748 0 0 1807 0 0 1717 0 1794 0 0 1710 0 0 1738 0 0 1874 0 0 1744 0 1700  
 0 0 1766 0 0 1764 0 0 1756 0 1714 0 0 1707 0 0 1770 0 0 1748 0 1766 0 0 1786 0 0 1741 0 0 1789 0 0  
 1741 0 1775 0 0 1787 0 0 1749 0 0 1682 0 1766 0 0 1747 0 0 1751 0 0 1767 0 1754 0 0 1775 0 0 1748  
 0 0 1722 0 1703 0 0 1843 0 0 1755 0 0 1727 0 0 1856 0 1772 0 0 1716 0 0 1743 0 0 1774 0 1663 0 0  
 1787 0 0 1793 0 0 1793 0 1775 0 0 1705 0 0 1704 0 0 1782 0 0 1732 0 1796 0 0 1725 0 0 1814 0 0  
 1659 0 1824 0 0 1754 0 0 1778 0 0 1784 0 1806 0 0 1787 0 0 1871 0 0 1811 0 1860 0 0 1845 0 0 1792  
 0 0 1812 0 0 1828 0 1830 0 0 1805 0 0 1778 0 0 1897 0 1866 0 0 1900 0 0 1882 0 0 1798 0 1875 0 0  
 1918 0 0 1913 0 0 1946 0 0 1877 0 1876 0 0 1889 0 0 1976 0 0 1934 0 1928 0 0 1960 0 0 1989 0 0  
 1946 0 2030 0 0 2011 0 0 1926 0 0 1980 0 2019 0 0 2034 0 0 2050 0 0 1974 0 0 2020 0 1959 0 0 1942  
 0 0 1955 0 0 1969 0 1925 0 0 2008 0 0 1948 0 0 2056 0 2012 0 0 1959 0 0 2057 0 0 2046 0 0 2026 0  
 1934 0 0 2007 0 0 1976 0 0 2037 0 1944 0 0 2022 0 0 2010 0 0 2069 0 2068 0 0 2077 0 0 2101 0 0  
 2053 0 0 2032 0 1956 0 0 2050 0 0 2033 0 0 2028 0 1955 0 0 2016 0 0 2029 0 0 2086 0 2072 0 0 2100  
 0 0 2086 0 0 2062 0 2097 0 0 2030 0 0 2091 0 0 2029 0 0 2042 0 2057 0 0 2044 0 0 2087 0 0 2031 0  
 2039 0 0 2086 0 0 2015 0 0 2046 0 2100 0 0 2136 0 0 2007 0 0 2073 0 0 2135 0 2056 0 0 2080 0 0  
 2094 0 0 2137 0 2095 0 0 2054 0 0 2070 0 0 2147 0 2122 0 0 2063 0 0 2114 0 0 2048 0 2159 0 0 2070  
 0 0 2163 0 0 2138 0 0 2106 0 2033 0 0 2173 0 0 2108 0 0 2171 0 2180 0 0 2146 0 0 2095 0 0 2104 0  
 2125 0 0 2174 0 0 2176 0 0 2189 0 0 2172 0 2216 0 0 2083 0 0 2131 0 0 2235 0 2178 0 0 2226 0 0  
 2198 0 0 2266 0 2278 0 0 2173 0 0 2230 0 0 2233 0 2309 0 0 2267 0 0 2287 0 0 2402 0 0 2237 0 2313  
 0 0 2385 0 0 2423 0 0 2343 0 2281 0 0 2388 0 0 2330 0 0 2389 0 2404 0 0 2359 0 0 2442 0 0 2297 0 0  
 2404 0 2406 0 0 2406 0 0 2553 0 0 2338 0 2405 0 0 2395 0 0 2508 0 0 2476 0 2477 0 0 2611 0 0 2508  
 0 0 2565 0 2568 0 0 2566 0 0 2609 0 0 2547 0 0 2467 0 2617 0 0 2622 0 0 2527 0 0 2532 0 2634 0 0  
 2664 0 0 2642 0 0 2643 0 2704 0 0 2721 0 0 2764 0 0 2737 0 0 2786 0 2720 0 0 2827 0 0 2769 0 0  
 2773 0 2821 0 0 2772 0 0 2799 0 0 2758 0 2895 0 0 2904 0 0 2856 0 0 2791 0 2860 0 0 2930 0 0 2950  
 0 0 2991 0 0 2862 0 2931 0 0 2925 0 0 2919 0 0 2894 0 2872 0 0 2952 0 0 2830 0 0 2977 0 2963 0 0  
 3028 0 0 2981 0 0 3017 0 0 2966 0 3029 0 0 2947 0 0 2960 0 0 2986 0 3024 0 0 2957 0 0 2946 0 0  
 3032 0 2988 0 0 2993 0 0 2938 0 0 3016 0 0 2976 0 3083 0 0 3042 0 0 2985 0 0 3090 0 3051 0 0 3103

0 0 2933 0 0 3080 0 3038 0 0 3061 0 0 3083 0 0 3114 0 3032 0 0 3115 0 0 3155 0 0 3027 0 0 3088 0  
 3019 0 0 3115 0 0 3084 0 0 3094 0 3117 0 0 3111 0 0 3028 0 0 3071 0 3080 0 0 3023 0 0 3170 0 0  
 3059 0 0 3098 0 3109 0 0 3004 0 0 2981 0 0 3092 0 2977 0 0 3021 0 0 3055 0 0 3046 0 3104 0 0 3013  
 0 0 3007 0 0 3035 0 2949 0 0 2979 0 0 2986 0 0 3045 0 0 2896 0 3085 0 0 3022 0 0 2879 0 0 2923 0  
 3032 0 0 2958 0 0 3034 0 0 2917 0 3032 0 0 2984 0 0 2973 0 0 2929 0 0 2799 0 2822 0 0 2880 0 0  
 2819 0 0 2813 0 2795 0 0 2782 0 0 2735 0 0 2793 0 2820 0 0 2722 0 0 2563 0 0 2680 0 2688 0 0 2577  
 0 0 2653 0 0 2576 0 0 2582 0 2541 0 0 2487 0 0 2619 0 0 2471 0 2443 0 0 2455 0 0 2366 0 0 2370 0  
 2389 0 0 2379 0 0 2398 0 0 2290 0 0 2307 0 2382 0 0 2222 0 0 2303 0 0 2223 0 2261 0 0 2281 0 0  
 2280 0 0 2119 0 2207 0 0 2303 0 0 2321 0 0 2187 0 2110 0 0 2036 0 0 2142 0 0 2141 0 0 2005 0 1992  
 0 0 2004 0 0 2084 0 0 2026 0 2056 0 0 2048 0 0 2027 0 0 2057 0 1977 0 0 1913 0 0 1822 0 0 1897 0 0  
 1900 0 1853 0 0 1861 0 0 1857 0 0 1908 0 1853 0 0 1760 0 0 1819 0 0 1685 0 1848 0 0 1702 0 0 1767  
 0 0 1732 0 1642 0 0 1724 0 0 1704 0 0 1623 0 0 1584 0 1611 0 0 1594 0 0 1708 0 0 1690 0 1604 0 0  
 1623 0 0 1521 0 0 1579 0 1470 0 0 1489 0 0 1505 0 0 1426 0 0 1434 0 1458 0 0 1403 0 0 1455 0 0  
 1376 0 1358 0 0 1421 0 0 1342 0 0 1283 0 1367 0 0 1302 0 0 1272 0 0 1249 0 0 1239 0 1208 0 0 1177  
 0 0 1144 0 0 1252 0 1117 0 0 1181 0 0 1138 0 0 1168 0 1082 0 0 1064 0 0 1086 0 0 1077 0 1083 0 0  
 1014 0 0 1005 0 0 1011 0 0 991 0 943 0 0 987 0 0 990 0 0 981 0 934 0 0 951 0 0 926 0 0 974 0 913 0 0  
 917 0 0 898 0 0 846 0 0 832 0 799 0 0 783 0 0 775 0 0 793 0 809 0 0 796 0 0 713 0 0 733 0 773 0 0 718  
 0 0 722 0 0 730 0 689 0 0 697 0 0 670 0 0 660 0 0 672 0 677 0 0 628 0 0 639 0 0 640 0 642 0 0 590 0 0  
 575 0 0 612 0 591 0 0 562 0 0 575 0 0 505 0 0 530 0 542 0 0 508 0 0 543 0 0 521 0 526 0 0 474 0 0 472  
 0 0 479 0 516 0 0 499 0 0 462 0 0 459 0 460 0 0 442 0 0 458 0 0 446 0 0 450 0 420 0 0 447 0 0 422 0 0  
 411 0 389 0 0 401 0 0 396 0 0 397 0 351 0 0 421 0 0 362 0 0 384 0 0 359 0 361 0 0 358 0 0 366 0 0 345  
 0 352 0 0 342 0 0 324 0 0 364 0 319 0 0 344 0 0 324 0 0 329 0 277 0 0 309 0 0 328 0 0 292 0 0 291 0  
 292 0 0 270 0 0 281 0 0 272 0 282 0 0 305 0 0 277 0 0 260 0 278 0 0 278 0 0 266 0 0 272 0 0 253 0 270  
 0 0 261 0 0 261 0 0 265 0 265 0 0 266 0 0 229 0 0 262 0 240 0 0 254 0 0 255 0 0 254 0 0 278 0 238 0 0  
 248 0 0 247 0 0 204 0 260 0 0 245 0 0 214 0 0 238 0 254 0 0 246 0 0 244 0 0 242 0 237 0 0 208 0 0 229  
 0 0 239 0 0 235 0 231 0 0 205 0 0 215 0 0 196 0 219 0 0 206 0 0 207 0 0 217 0 174 0 0 209 0 0 221 0 0  
 207 0 0 240 0 192 0 0 199 0 0 209 0 0 204 0 202 0 0 192 0 0 216 0 0 182 0 176 0 0 191 0 0 187 0 0 193  
 0 209 0 0 206 0 0 189 0 0 169 0 0 184 0 157 0 0 183 0 0 174 0 0 170 0 190 0 0 174 0 0 177 0 0 163 0  
 181 0 0 170 0 0 139 0 0 163 0 0 152 0 161 0 0 174 0 0 169 0 0 177 0 172 0 0 155 0 0 145 0 0 158 0 164  
 0 0 128 0 0 158 0 0 129 0 140 0 0 157 0 0 157 0 0 137 0 0 141 0 141 0 0 133 0 0 127 0 0 126 0 147 0 0  
 150 0 0 128 0 0 140 0 117 0 0 117 0 0 109 0 0 117 0 0 118 0 92 0 0 111 0 0 111 0 0 100 0 90 0 0 103 0  
 0 93 0 0 89 0 86 0 0 88 0 0 81 0 0 94 0 107 0 0 71 0 0 97 0 0 77 0 0 84 0 84 0 0 90 0 0 72 0 0 68 0 75 0 0  
 78 0 0 76 0 0 93 0 80 0 0 64 0 0 72 0 0 54 0 0 62 0 69 0 0 70 0 0 50 0 0 63 0 44 0 0 47 0 0 66 0 0 50 0 64  
 0 0 43 0 0 41 0 0 42 0 64 0 0 47 0 0 52 0 0 55 0 0 48 0 53 0 0 59 0 0 63 0 0 39 0 61 0 0 49 0 0 45 0 0 47  
 0 38 0 0 56 0 0 38 0 0 44 0 0 42 0 38 0 0 32 0 0 53 0 0 29 0 27 0 0 41 0 0 32 0 0 36 0 30 0 0 34 0 0 28 0  
 0 28 0 0 29 0 23 0 0 18 0 0 21 0 0 25 0 25 0 0 17 0 0 18 0 0 18 0 18 0 0 15 0 0 25 0 0 14 0 17 0 0 16 0 0  
 15 0 0 11 0 0 7 0 11 0 0 11 0 0 10 0 0 2 0 7 0 0 9 0 0 4 0 0 4 0 6 0 0 5 0 0 4 0 0 3 0 0 5 0 4 0 0 2 0 0 1 0 0  
 2 0 2 0 0 2 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 1 0 1 0 0 0 0 0 1 0  
 0 0 0 0 1 0  
 0 0 0 0 0 0 0 0 0 1 0  
 0  
 0





00

001</VALUES>

<MIN>752</MIN>

<MAX>9225</MAX>

<MEAN>2999.139738977128</MEAN>

<STDV>1071.6209783130425</STDV>

</Histogram\_Band>

</Histogram\_Band\_List>

<Radiometric\_Calibration>

<Instrument\_Calibration>

<Band\_Measurement\_List>

<Band\_Spectral\_Range>

<BAND\_ID>B0</BAND\_ID>

<CALIBRATION\_DATE>2011-12-17T00:00:00.000Z</CALIBRATION\_DATE>

<MEASURE\_DESC>Spectral range value of raw radiometric Band</MEASURE\_DESC>

<MEASURE\_UNIT>micrometers</MEASURE\_UNIT>

<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>

<MIN>0.43</MIN>

<MAX>0.55</MAX>

</Band\_Spectral\_Range>

<Band\_Spectral\_Range>

<BAND\_ID>B1</BAND\_ID>

<CALIBRATION\_DATE>2011-12-17T00:00:00.000Z</CALIBRATION\_DATE>

<MEASURE\_DESC>Spectral range value of raw radiometric Band</MEASURE\_DESC>

<MEASURE\_UNIT>micrometers</MEASURE\_UNIT>

<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>

<MIN>0.50</MIN>

<MAX>0.62</MAX>

</Band\_Spectral\_Range>

<Band\_Spectral\_Range>

<BAND\_ID>B2</BAND\_ID>

<CALIBRATION\_DATE>2011-12-17T00:00:00.000Z</CALIBRATION\_DATE>

<MEASURE\_DESC>Spectral range value of raw radiometric Band</MEASURE\_DESC>

<MEASURE\_UNIT>micrometers</MEASURE\_UNIT>

<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>

<MIN>0.59</MIN>

<MAX>0.71</MAX>

</Band\_Spectral\_Range>

<Band\_Spectral\_Range>

<BAND\_ID>B3</BAND\_ID>

<CALIBRATION\_DATE>2011-12-17T00:00:00.000Z</CALIBRATION\_DATE>

<MEASURE\_DESC>Spectral range value of raw radiometric Band</MEASURE\_DESC>

---

```
<MEASURE_UNIT>micrometers</MEASURE_UNIT>
<MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
<MIN>0.74</MIN>
<MAX>0.94</MAX>
</Band_Spectral_Range>
<Band_Reflectance>
  <BAND_ID>B0</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>10000</GAIN>
  <BIAS>0</BIAS>
</Band_Reflectance>
<Band_Reflectance>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>10000</GAIN>
  <BIAS>0</BIAS>
</Band_Reflectance>
<Band_Reflectance>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>10000</GAIN>
  <BIAS>0</BIAS>
</Band_Reflectance>
<Band_Reflectance>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
```

```

<GAIN>10000</GAIN>
<BIAS>0</BIAS>
</Band_Reflectance>
<Band_Radiance>
  <BAND_ID>B0</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>395.99108797748846</GAIN>
  <BIAS>20.897069619493287</BIAS>
</Band_Radiance>
<Band_Radiance>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>376.3701383711985</GAIN>
  <BIAS>11.844043205455234</BIAS>
</Band_Radiance>
<Band_Radiance>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>341.04327144917903</GAIN>
  <BIAS>5.736855917882172</BIAS>
</Band_Radiance>
<Band_Radiance>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>236.06573697215177</GAIN>
  <BIAS>1.4405417601224635</BIAS>

```

```
</Band_Radiance>
<Band_Digital_Number>
  <BAND_ID>B0</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.11160714285714285</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.11098779134295228</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.09930486593843098</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:53:31Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.06531678641410843</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Solar_Irradiance>
```

```
<BAND_ID>B0</BAND_ID>
<CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
<MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
<MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
<MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
<VALUE>1915.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1831.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1594.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1060.0</VALUE>
</Band_Solar_Irradiance>
</Band_Measurement_List>
</Instrument_Calibration>
</Radiometric_Calibration>
</Radiometric_Data>
<Geometric_Data>
  <Use_Area>
    <Located_Geometric_Values>
      <LOCATION_TYPE>Top Center</LOCATION_TYPE>
      <TIME>2019-08-26T14:52:18.656Z</TIME>
      <GEOMETRIC_GLIDING>0.007048145292099406</GEOMETRIC_GLIDING>
    </Located_Geometric_Values>
  </Use_Area>
  <Acquisition_Angles>
```

```
<AZIMUTH_ANGLE>180.0332556834656</AZIMUTH_ANGLE>
<VIEWING_ANGLE_ACROSS_TRACK
unit="deg">6.851263431266924</VIEWING_ANGLE_ACROSS_TRACK>
<VIEWING_ANGLE_ALONG_TRACK
unit="deg">8.856685087546783</VIEWING_ANGLE_ALONG_TRACK>
<VIEWING_ANGLE unit="deg">11.1315904036049</VIEWING_ANGLE>
<INCIDENCE_ANGLE_ALONG_TRACK>-
11.00242245931521</INCIDENCE_ANGLE_ALONG_TRACK>
<INCIDENCE_ANGLE_ACROSS_TRACK>-
6.02700267938439</INCIDENCE_ANGLE_ACROSS_TRACK>
<INCIDENCE_ANGLE>12.47528150788305</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
<SUN_AZIMUTH unit="deg">39.2376667595728</SUN_AZIMUTH>
<SUN_ELEVATION unit="deg">47.92687781425171</SUN_ELEVATION>
</Solar_Incidences>
<Ground_Sample_Distance>
<GSD_ACROSS_TRACK unit="m">0.725863394313394</GSD_ACROSS_TRACK>
<GSD_ALONG_TRACK unit="m">0.7091102834079902</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
<Located_Geometric_Values>
<LOCATION_TYPE>Center</LOCATION_TYPE>
<TIME>2019-08-26T14:52:19.531Z</TIME>
<GEOMETRIC_GLIDING>0.007584481732483273</GEOMETRIC_GLIDING>
<Acquisition_Angles>
<AZIMUTH_ANGLE>180.0576568317947</AZIMUTH_ANGLE>
<VIEWING_ANGLE_ACROSS_TRACK
unit="deg">6.953954172163293</VIEWING_ANGLE_ACROSS_TRACK>
<VIEWING_ANGLE_ALONG_TRACK
unit="deg">8.864452376970362</VIEWING_ANGLE_ALONG_TRACK>
<VIEWING_ANGLE unit="deg">11.19914970755364</VIEWING_ANGLE>
<INCIDENCE_ANGLE_ALONG_TRACK>-
11.02572094021793</INCIDENCE_ANGLE_ALONG_TRACK>
<INCIDENCE_ANGLE_ACROSS_TRACK>-
6.14478573037756</INCIDENCE_ANGLE_ACROSS_TRACK>
<INCIDENCE_ANGLE>12.5500369703575</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
<SUN_AZIMUTH unit="deg">39.19914219314555</SUN_AZIMUTH>
<SUN_ELEVATION unit="deg">47.88415748874362</SUN_ELEVATION>
</Solar_Incidences>
```

```
<Ground_Sample_Distance>
  <GSD_ACROSS_TRACK unit="m">0.7248536691849459</GSD_ACROSS_TRACK>
  <GSD_ALONG_TRACK unit="m">0.7094474863519555</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
<Located_Geometric_Values>
  <LOCATION_TYPE>Bottom Center</LOCATION_TYPE>
  <TIME>2019-08-26T14:52:20.531Z</TIME>
  <GEOMETRIC_GLIDING>0.008205327689338127</GEOMETRIC_GLIDING>
  <Acquisition_Angles>
    <AZIMUTH_ANGLE>180.0865330791896</AZIMUTH_ANGLE>
    <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">7.070851290548565</VIEWING_ANGLE_ACROSS_TRACK>
    <VIEWING_ANGLE_ALONG_TRACK
unit="deg">8.873588542566713</VIEWING_ANGLE_ALONG_TRACK>
    <VIEWING_ANGLE unit="deg">11.27689150864706</VIEWING_ANGLE>
    <INCIDENCE_ANGLE_ALONG_TRACK>-
11.05234025960529</INCIDENCE_ANGLE_ALONG_TRACK>
    <INCIDENCE_ANGLE_ACROSS_TRACK>-
6.279075944651921</INCIDENCE_ANGLE_ACROSS_TRACK>
    <INCIDENCE_ANGLE>12.6360780216802</INCIDENCE_ANGLE>
  </Acquisition_Angles>
  <Solar_Incidences>
    <SUN_AZIMUTH unit="deg">39.15526592457719</SUN_AZIMUTH>
    <SUN_ELEVATION unit="deg">47.83526133433308</SUN_ELEVATION>
  </Solar_Incidences>
  <Ground_Sample_Distance>
    <GSD_ACROSS_TRACK unit="m">0.7252454796325069</GSD_ACROSS_TRACK>
    <GSD_ALONG_TRACK unit="m">0.7098396348642531</GSD_ALONG_TRACK>
  </Ground_Sample_Distance>
</Located_Geometric_Values>
</Use_Area>
</Geometric_Data>
<Quality_Assessment>
  <Planimetric_Accuracy_Measurement>
    <QUALITY_TABLES>DTED2</QUALITY_TABLES>
    <MEASURE_ID>AHA</MEASURE_ID>
    <MEASURE_NAME>Absolute Horizontal Accuracy</MEASURE_NAME>
    <MEASURE_TYPE>MATCHING</MEASURE_TYPE>
    <MEASURE_UNIT>m</MEASURE_UNIT>
  <Quality_Values>
    <ACCURACY_MEAN>0.0107450484009054</ACCURACY_MEAN>
```



```
<ACCURACY_STDV>0.856883029955081</ACCURACY_STDV>
<ACCURACY_CE90>1.301442117533979</ACCURACY_CE90>
</Quality_Values>
</Planimetric_Accuracy_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Area_Of_Interest (ROI)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Area_Of_Interest Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/ROI_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Detector_Quality (DET)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Detector_Quality Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/DET_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Saturation_Cotation (SLT)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Saturation_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
```

```
<COMPONENT_PATH href="MASKS/SLT_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
  </Component>
</Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Visibility_Cotation (VIS)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Visibility_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/VIS_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Snow_Cotation (SNW)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Snow_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/SNW_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Cloud_Cotation (CLD)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Cloud_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
```

```
<COMPONENT_PATH href="MASKS/CLD_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
  </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Technical_Index (QTE)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Technical_Index Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/QTE_PHR1A_MS_201908261452185_ORT_4461570101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
</Quality_Assessment>
<Dataset_Sources>
  <Source_Identification>
    <SOURCE_ID>DS_PHR1A_201908261452185_FR1_PX_W069S24_1208_01200</SOURCE_ID>
    <SOURCE_TYPE>Strip_Source</SOURCE_TYPE>
    <SOURCE_DESCRIPTION>PHR1A Data Strip</SOURCE_DESCRIPTION>
    <Strip_Source>
      <MISSION>PHR</MISSION>
      <MISSION_INDEX>1A</MISSION_INDEX>
      <INSTRUMENT>PHR</INSTRUMENT>
      <INSTRUMENT_INDEX>1A</INSTRUMENT_INDEX>
      <IMAGING_DATE>2019-08-26</IMAGING_DATE>
      <IMAGING_TIME>14:52:18.5Z</IMAGING_TIME>
      <BAND_MODE>PX</BAND_MODE>
    </Strip_Source>
  <Component>
    <COMPONENT_TITLE>Strip Source</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH
href="LINEAGE/STRIP_DS_PHR1A_201908261452185_FR1_PX_W069S24_1208_01200_DIM.XML"/>
  </Component>
</Source_Identification>
```

```

<Source_Identification>
  <SOURCE_TYPE>Ground_Source</SOURCE_TYPE>
  <SOURCE_DESCRIPTION>Reference3D ORTHO Layer</SOURCE_DESCRIPTION>
  <Component>
    <COMPONENT_TITLE>Source for Ground reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/GROUND_R3D_OR_SPOTView_S24W069_DIM.XML"/>
  </Component>
</Source_Identification>
<Source_Identification>
  <SOURCE_TYPE>Height_Source</SOURCE_TYPE>
  <SOURCE_DESCRIPTION>Reference3D DTED2 Layer</SOURCE_DESCRIPTION>
  <Component>
    <COMPONENT_TITLE>Source for Vertical reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/HEIGHT_R3D_DT2_S24W069_DIM.XML"/>
  </Component>
</Source_Identification>
</Dataset_Sources>
</Dimap_Document>

```

DIM\_PHR1A\_MS\_201908261452276\_ORT\_4461569101-2.XML

```

<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet href="LIBRARY/STYLE.XSL" type="text/xsl"?>
<Dimap_Document>
  <Metadata_Identification>
    <METADATA_FORMAT version="2.15">DIMAP</METADATA_FORMAT>
    <METADATA_PROFILE>PHR_ORTHO</METADATA_PROFILE>
    <METADATA_SUBPROFILE>PRODUCT</METADATA_SUBPROFILE>
    <METADATA_LANGUAGE>en</METADATA_LANGUAGE>
  </Metadata_Identification>
  <Dataset_Identification>
    <DATASET_TYPE>RASTER_ORTHO</DATASET_TYPE>
    <DATASET_NAME
version="1.0">DS_PHR1A_201908261451506_FR1_PX_W069S24_1007_01777</DATASET_NAME>
    <DATASET_TN_PATH href="ICON_PHR1A_MS_201908261452276_ORT_4461569101-2.JPG"/>
    <DATASET_TN_FORMAT>image/jpeg</DATASET_TN_FORMAT>
    <DATASET_QL_PATH href="PREVIEW_PHR1A_MS_201908261452276_ORT_4461569101-2.JPG"/>

```

```
<DATASET_QL_FORMAT>image/jpeg</DATASET_QL_FORMAT>
<Legal_Constraints>
  <COPYRIGHT>Â©CNES_2019, distribution AIRBUS DS, France, all rights reserved</COPYRIGHT>
</Legal_Constraints>
</Dataset_Identification>
<Dataset_Content>
  <SURFACE_AREA unit="square km">302.013</SURFACE_AREA>
  <CLOUD_COVERAGE unit="percent">0</CLOUD_COVERAGE>
  <SNOW_COVERAGE unit="percent">0</SNOW_COVERAGE>
  <Dataset_Components>
    <Component>
      <COMPONENT_TITLE>Processing</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH
href="LINEAGE/PROCESSING_PHR1A_MS_201908261452276_OR_4461569101-2_DIM.XML"/>
      </Component>
    <Component>
      <COMPONENT_TITLE>Strip Source</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH
href="LINEAGE/STRIP_DS_PHR1A_201908261452276_FR1_PX_W069S24_1007_01804_DIM.XML"/>
      </Component>
    <Component>
      <COMPONENT_TITLE>Source for Ground reset</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH href="LINEAGE/GROUND_R3D_OR_SPOTView_S24W069_DIM.XML"/>
      </Component>
    <Component>
      <COMPONENT_TITLE>Source for Vertical reset</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH href="LINEAGE/HEIGHT_R3D_DT2_S24W069_DIM.XML"/>
      </Component>
  </Dataset_Components>
  <Dataset_Extent>
    <EXTENT_TYPE>Bounding_Polygon</EXTENT_TYPE>
    <Vertex>
      <LON>-68.2741194891578</LON>
      <LAT>-23.63353725067552</LAT>
```

---

```
<X>574039</X>
<Y>7386157</Y>
<COL>1</COL>
<ROW>1</ROW>
</Vertex>
<Vertex>
  <LON>-68.07466474673379</LON>
  <LAT>-23.63247568919084</LAT>
  <X>594385</X>
  <Y>7386157</Y>
  <COL>10174</COL>
  <ROW>1</ROW>
</Vertex>
<Vertex>
  <LON>-68.07341145339583</LON>
  <LAT>-23.80994328775029</LAT>
  <X>594385</X>
  <Y>7366507</Y>
  <COL>10174</COL>
  <ROW>9826</ROW>
</Vertex>
<Vertex>
  <LON>-68.27313627558375</LON>
  <LAT>-23.81101378198534</LAT>
  <X>574039</X>
  <Y>7366507</Y>
  <COL>1</COL>
  <ROW>9826</ROW>
</Vertex>
<Center>
  <LON>-68.17383299121779</LON>
  <LAT>-23.7217425024005</LAT>
  <X>584212</X>
  <Y>7376332</Y>
  <COL>5088</COL>
  <ROW>4914</ROW>
</Center>
</Dataset_Extent>
</Dataset_Content>
<Product_Information>
  <Producer_Information>
    <PRODUCER_NAME>AIRBUS DS GEO</PRODUCER_NAME>
```

```
<PRODUCER_URL href="http://www.geo-airbusds.com"/>
<PRODUCER_CONTACT>contact@geo-airbus.com</PRODUCER_CONTACT>
<PRODUCER_ADDRESS>5 rue des Satellites - BP 14359 - F 31030 Toulouse Cedex 4 -
France</PRODUCER_ADDRESS>
</Producer_Information>
<Delivery_Identification>
  <PRODUCTION_DATE>2019-08-30T04:18:54.228</PRODUCTION_DATE>
  <JOB_ID>4461569101-2</JOB_ID>
  <PRODUCT_CODE>PLEIADES</PRODUCT_CODE>
  <DELIVERY_TYPE>NETWORK</DELIVERY_TYPE>
<Order_Identification>
  <CUSTOMER_REFERENCE>C500706</CUSTOMER_REFERENCE>

<INTERNAL_REFERENCE>PHR_PRO_4461569101_20190830041022140_1_2</INTERNAL_REFERENCE>
  <COMMERCIAL_REFERENCE>SO19034793</COMMERCIAL_REFERENCE>
  <COMMERCIAL_ITEM>6</COMMERCIAL_ITEM>
</Order_Identification>
</Delivery_Identification>
</Product_Information>
<Coordinate_Reference_System>
  <Projected_CRS>
    <CRS_TABLES version="6.3">EPSG</CRS_TABLES>
    <PROJECTED_CRS_NAME>32719</PROJECTED_CRS_NAME>
    <PROJECTED_CRS_CODE>urn:ogc:def:crs:EPSG::32719</PROJECTED_CRS_CODE>
  </Projected_CRS>
  <Temporal_CRS>
    <CRS_TABLES version="0.0">ITU</CRS_TABLES>
    <TEMPORAL_CRS_NAME>UTC</TEMPORAL_CRS_NAME>
  </Temporal_CRS>
</Coordinate_Reference_System>
<Geoposition>
  <Raster_CRS>
    <RASTER_GEOMETRY>GROUND</RASTER_GEOMETRY>
    <PIXEL_ORIENTATION>UL</PIXEL_ORIENTATION>
    <PIXEL_CRS_TYPE>CELL</PIXEL_CRS_TYPE>
    <PIXEL_ORIGIN>1</PIXEL_ORIGIN>
  </Raster_CRS>
  <Geoposition_Insert>
    <ULXMAP>574039</ULXMAP>
    <ULYMAP>7386157</ULYMAP>
    <XDIM>2</XDIM>
    <YDIM>2</YDIM>
```

```
</Geoposition_Insert>
</Geoposition>
<Processing_Information>
  <Production_Facility>
    <SOFTWARE version="V2.8">DRS-MM V2.8</SOFTWARE>
    <PROCESSING_CENTER>FCMUGC</PROCESSING_CENTER>
    <PROCESSING_PLACE>FCMUGC</PROCESSING_PLACE>
  </Production_Facility>
  <Product_Settings>
    <PROCESSING_LEVEL>ORTHO</PROCESSING_LEVEL>
    <SPECTRAL_PROCESSING>MS</SPECTRAL_PROCESSING>
    <Geometric_Settings>
      <GEOMETRIC_PROCESSING>ORTHO</GEOMETRIC_PROCESSING>
      <EPHEMERIS_USED>CORRECTED</EPHEMERIS_USED>
      <ATTITUDES_USED>ACCURATE</ATTITUDES_USED>
      <GROUND_SETTING>>true</GROUND_SETTING>
      <GROUND_DESC>R3D_ORTHO</GROUND_DESC>
      <VERTICAL_SETTING>>true</VERTICAL_SETTING>
      <VERTICAL_DESC>REFERENCE3D</VERTICAL_DESC>
    </Geometric_Settings>
    <Radiometric_Settings>
      <RADIOMETRIC_PROCESSING>REFLECTANCE</RADIOMETRIC_PROCESSING>
      <INTER_DETECTOR_NORMALIZATION>>false</INTER_DETECTOR_NORMALIZATION>
      <DETECTORS_INTERPOLATION>>true</DETECTORS_INTERPOLATION>
      <STRAYLIGHT_CORRECTION>>false</STRAYLIGHT_CORRECTION>
      <VCTI_CORRECTION>>false</VCTI_CORRECTION>
      <INTER_ARRAY_RECONSTRUCTION>>true</INTER_ARRAY_RECONSTRUCTION>
      <RADIOMETRIC_STRETCH>>false</RADIOMETRIC_STRETCH>
      <OUT_OF_ORDER_THRESHOLD>0.5</OUT_OF_ORDER_THRESHOLD>
    </Radiometric_Settings>
    <Sampling_Settings>
      <RESAMPLING_SPACING unit="m">2</RESAMPLING_SPACING>
      <RESAMPLING_KERNEL>SPLINE</RESAMPLING_KERNEL>
    </Sampling_Settings>
    <MTF_Settings>
      <PAN_RESTORATION>>true</PAN_RESTORATION>
      <MS_RESTORATION>>false</MS_RESTORATION>
    </MTF_Settings>
  </Product_Settings>
</Processing_Lineage>
  <Component>
    <COMPONENT_TITLE>Processing</COMPONENT_TITLE>
```



```
<COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
<COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
<COMPONENT_PATH
href="LINEAGE/PROCESSING_PHR1A_MS_201908261452276_OR_T_4461569101-2_DIM.XML"/>
</Component>
</Processing_Lineage>
</Processing_Information>
<Raster_Data>
<Data_Access>
<DATA_FILE_ORGANISATION>BAND_COMPOSITE</DATA_FILE_ORGANISATION>
<DATA_FILE_FORMAT>image/tiff</DATA_FILE_FORMAT>
<DATA_FILE_TILES>>true</DATA_FILE_TILES>
<Data_Files>
<Data_File tile_R="1" tile_C="1">
<DATA_FILE_PATH href="IMG_PHR1A_MS_201908261452276_OR_T_4461569101-
2_R1C1.TIF"/>
</Data_File>
<Data_File tile_R="1" tile_C="2">
<DATA_FILE_PATH href="IMG_PHR1A_MS_201908261452276_OR_T_4461569101-
2_R1C2.TIF"/>
</Data_File>
<Data_File tile_R="2" tile_C="1">
<DATA_FILE_PATH href="IMG_PHR1A_MS_201908261452276_OR_T_4461569101-
2_R2C1.TIF"/>
</Data_File>
<Data_File tile_R="2" tile_C="2">
<DATA_FILE_PATH href="IMG_PHR1A_MS_201908261452276_OR_T_4461569101-
2_R2C2.TIF"/>
</Data_File>
</Data_Files>
</Data_Access>
<Raster_Dimensions>
<NROWS>9826</NROWS>
<NCOLS>10174</NCOLS>
<NBANDS>4</NBANDS>
<Tile_Set>
<NTILES>4</NTILES>
<Regular_Tiling>
<NTILES_SIZE ncols="7680" nrows="7680"/>
<NTILES_COUNT ntiles_C="2" ntiles_R="2"/>
<OVERLAP_ROW>0.0</OVERLAP_ROW>
<OVERLAP_COL>0.0</OVERLAP_COL>
```



40 0 0 43 0 56 0 0 53 0 0 69 0 0 52 0 0 66 0 0 76 0 59 0 0 65 0 0 79 0 0 80 0 0 84 0 89 0 0 80 0 0 77 0 0  
95 0 0 99 0 0 97 0 86 0 0 101 0 0 116 0 0 112 0 0 110 0 129 0 0 120 0 0 136 0 0 147 0 0 158 0 0 155 0  
187 0 0 189 0 0 224 0 0 266 0 0 278 0 284 0 0 353 0 0 348 0 0 410 0 0 404 0 372 0 0 491 0 0 559 0 0  
533 0 0 636 0 0 694 0 761 0 0 849 0 0 941 0 0 1003 0 0 1008 0 1065 0 0 1173 0 0 1256 0 0 1208 0 0  
1228 0 0 1322 0 1389 0 0 1349 0 0 1417 0 0 1466 0 0 1561 0 1610 0 0 1546 0 0 1730 0 0 1654 0 0  
1666 0 0 1643 0 1755 0 0 1901 0 0 1816 0 0 1780 0 0 1959 0 2008 0 0 1875 0 0 1873 0 0 1914 0 0  
2005 0 0 1830 0 1918 0 0 1873 0 0 1882 0 0 1800 0 0 1857 0 1803 0 0 1874 0 0 1715 0 0 1745 0 0  
1763 0 0 1782 0 1746 0 0 1796 0 0 1726 0 0 1763 0 0 1776 0 1803 0 0 1720 0 0 1752 0 0 1892 0 0  
1893 0 1881 0 0 1821 0 0 1924 0 0 1987 0 0 1906 0 0 2027 0 2159 0 0 2112 0 0 2088 0 0 2138 0 0  
2172 0 2171 0 0 2249 0 0 2286 0 0 2273 0 0 2312 0 0 2401 0 2377 0 0 2477 0 0 2492 0 0 2610 0 0  
2523 0 2628 0 0 2639 0 0 2781 0 0 2755 0 0 2770 0 0 2920 0 3080 0 0 2980 0 0 3054 0 0 3280 0 0  
3351 0 3331 0 0 3481 0 0 3700 0 0 3738 0 0 3869 0 0 4094 0 4355 0 0 4394 0 0 4757 0 0 5120 0 0  
5259 0 5590 0 0 5922 0 0 6177 0 0 6633 0 0 7010 0 7475 0 0 7746 0 0 8141 0 0 8655 0 0 9269 0 0  
9706 0 10331 0 0 11038 0 0 11529 0 0 12062 0 0 12658 0 12996 0 0 13574 0 0 14319 0 0 15262 0 0  
15539 0 0 16357 0 16903 0 0 17236 0 0 18209 0 0 18778 0 0 19462 0 19812 0 0 20438 0 0 20922 0 0  
21215 0 0 21812 0 0 22283 0 22447 0 0 22504 0 0 22815 0 0 23154 0 0 23064 0 23326 0 0 23069 0 0  
23246 0 0 22922 0 0 22768 0 0 22927 0 22455 0 0 22578 0 0 22277 0 0 22019 0 0 21968 0 22085 0 0  
21728 0 0 22064 0 0 22335 0 0 22452 0 22610 0 0 22615 0 0 22778 0 0 23168 0 0 24083 0 0 24296 0  
24430 0 0 25190 0 0 25632 0 0 26224 0 0 26763 0 27616 0 0 28414 0 0 28694 0 0 29596 0 0 29915 0 0  
30852 0 31396 0 0 31778 0 0 32359 0 0 33222 0 0 34021 0 34408 0 0 34887 0 0 35369 0 0 36038 0 0  
36601 0 0 36484 0 37400 0 0 37738 0 0 38431 0 0 38313 0 0 39103 0 39527 0 0 40199 0 0 40409 0 0  
41011 0 0 41550 0 0 41491 0 41991 0 0 42683 0 0 43037 0 0 43519 0 0 43709 0 44319 0 0 44470 0 0  
44866 0 0 45333 0 0 45653 0 46242 0 0 46954 0 0 47371 0 0 48007 0 0 48788 0 0 49290 0 50390 0 0  
50956 0 0 51604 0 0 52281 0 0 53578 0 54277 0 0 55025 0 0 55837 0 0 57065 0 0 58118 0 0 58937 0  
60108 0 0 60683 0 0 61572 0 0 62246 0 0 63050 0 64221 0 0 65367 0 0 66000 0 0 66726 0 0 67852 0 0  
68423 0 69371 0 0 69938 0 0 70885 0 0 71616 0 0 73140 0 73881 0 0 74588 0 0 75568 0 0 76761 0 0  
77332 0 0 78755 0 79357 0 0 80062 0 0 80706 0 0 82307 0 0 83364 0 83197 0 0 83942 0 0 84706 0 0  
85718 0 0 86171 0 86422 0 0 88139 0 0 88145 0 0 88959 0 0 89860 0 0 90208 0 91742 0 0 91672 0 0  
92893 0 0 93870 0 0 94746 0 95666 0 0 96659 0 0 97485 0 0 98367 0 0 98864 0 0 100219 0 100849 0  
0 102747 0 0 103007 0 0 103701 0 0 104579 0 106103 0 0 106707 0 0 107700 0 0 108921 0 0 110720  
0 0 110425 0 111755 0 0 112379 0 0 113173 0 0 115233 0 0 116333 0 117286 0 0 118718 0 0 119239  
0 0 119906 0 0 120869 0 0 121790 0 123146 0 0 123104 0 0 125067 0 0 125237 0 0 126551 0 127121  
0 0 128523 0 0 129626 0 0 130861 0 0 131113 0 0 131741 0 132783 0 0 133307 0 0 134655 0 0  
135149 0 0 136337 0 137775 0 0 138371 0 0 139555 0 0 140297 0 0 141844 0 142519 0 0 144292 0 0  
144772 0 0 145816 0 0 146433 0 0 146883 0 148300 0 0 150028 0 0 150433 0 0 150743 0 0 152210 0  
152446 0 0 152930 0 0 154219 0 0 155406 0 0 155427 0 0 158083 0 157788 0 0 158852 0 0 159918 0  
0 159648 0 0 162121 0 162643 0 0 163004 0 0 163923 0 0 164491 0 0 166004 0 0 166998 0 167086 0  
0 167657 0 0 169198 0 0 169108 0 0 170349 0 171040 0 0 171302 0 0 171671 0 0 172421 0 0 172061  
0 0 172443 0 172623 0 0 173637 0 0 172265 0 0 173334 0 0 172807 0 172468 0 0 171588 0 0 171877  
0 0 171127 0 0 170238 0 169979 0 0 168812 0 0 168054 0 0 166850 0 0 166174 0 0 165746 0 163909  
0 0 162028 0 0 161452 0 0 159609 0 0 158317 0 156021 0 0 155304 0 0 152844 0 0 150626 0 0  
148514 0 0 146470 0 144638 0 0 142359 0 0 140737 0 0 137754 0 0 135333 0 133440 0 0 131141 0 0

129510 0 0 126248 0 0 124780 0 0 122583 0 120134 0 0 116975 0 0 116026 0 0 113237 0 0 111228 0  
109520 0 0 107392 0 0 105894 0 0 103970 0 0 101907 0 0 100208 0 99313 0 0 97493 0 0 96285 0 0  
95669 0 0 94239 0 93790 0 0 93293 0 0 92981 0 0 92944 0 0 93835 0 93723 0 0 94750 0 0 95417 0 0  
95970 0 0 97205 0 0 99322 0 100736 0 0 102598 0 0 104635 0 0 106778 0 0 109018 0 111581 0 0  
114274 0 0 116243 0 0 118880 0 0 121538 0 0 124204 0 126902 0 0 129557 0 0 131950 0 0 133631 0  
0 135879 0 137470 0 0 139256 0 0 139558 0 0 140167 0 0 140444 0 0 140067 0 139605 0 0 139889 0  
0 138310 0 0 136855 0 0 135408 0 134354 0 0 132580 0 0 130116 0 0 127905 0 0 125270 0 0 122949  
0 120430 0 0 117975 0 0 116029 0 0 112149 0 0 110047 0 107443 0 0 105251 0 0 102630 0 0 100743  
0 0 98277 0 95975 0 0 93435 0 0 91816 0 0 89738 0 0 87723 0 0 85858 0 84921 0 0 82518 0 0 80526 0  
0 80111 0 0 78001 0 77712 0 0 76086 0 0 74903 0 0 73935 0 0 72873 0 0 71177 0 71142 0 0 70136 0 0  
68437 0 0 67759 0 0 66868 0 66307 0 0 65249 0 0 64573 0 0 63298 0 0 62393 0 0 60944 0 60131 0 0  
59333 0 0 58033 0 0 57064 0 0 56596 0 55526 0 0 54453 0 0 53911 0 0 52788 0 0 52242 0 0 51221 0  
50704 0 0 49906 0 0 49279 0 0 48909 0 0 48423 0 47465 0 0 47128 0 0 46450 0 0 46740 0 0 46337 0  
45836 0 0 45729 0 0 45177 0 0 45725 0 0 44968 0 0 45205 0 44845 0 0 44841 0 0 44959 0 0 44676 0 0  
44506 0 44610 0 0 44807 0 0 44691 0 0 44797 0 0 44876 0 0 44255 0 44704 0 0 44647 0 0 44780 0 0  
44341 0 0 44718 0 44686 0 0 44580 0 0 44560 0 0 44095 0 0 44451 0 0 44302 0 44208 0 0 43895 0 0  
43692 0 0 44038 0 0 43855 0 44065 0 0 44009 0 0 43846 0 0 43976 0 0 43531 0 0 43302 0 43493 0 0  
44252 0 0 43516 0 0 43465 0 0 43293 0 43906 0 0 44082 0 0 44060 0 0 43802 0 0 43808 0 0 43720 0  
44042 0 0 43905 0 0 44036 0 0 44334 0 0 44349 0 44836 0 0 44318 0 0 44359 0 0 44344 0 0 44730 0  
44923 0 0 45149 0 0 44594 0 0 44534 0 0 44817 0 0 45127 0 45010 0 0 45170 0 0 45151 0 0 45286 0 0  
44946 0 45315 0 0 45118 0 0 45054 0 0 45237 0 0 45300 0 0 45211 0 45079 0 0 45319 0 0 45389 0 0  
44810 0 0 44840 0 45141 0 0 44906 0 0 44876 0 0 44836 0 0 44904 0 0 45000 0 44683 0 0 44878 0 0  
44717 0 0 44712 0 0 44940 0 44765 0 0 45207 0 0 45089 0 0 44961 0 0 45226 0 0 45174 0 44972 0 0  
45674 0 0 45366 0 0 45582 0 0 45692 0 46307 0 0 46516 0 0 46701 0 0 46787 0 0 47199 0 46767 0 0  
47282 0 0 47219 0 0 47460 0 0 47583 0 0 47762 0 48233 0 0 48451 0 0 48440 0 0 48848 0 0 48648 0  
48601 0 0 48822 0 0 49347 0 0 49734 0 0 49722 0 0 49779 0 49954 0 0 49749 0 0 49730 0 0 49476 0 0  
50310 0 50553 0 0 50349 0 0 50498 0 0 50112 0 0 50282 0 0 50026 0 50115 0 0 50102 0 0 50075 0 0  
50258 0 0 49970 0 49387 0 0 49725 0 0 49408 0 0 49108 0 0 48857 0 0 48767 0 48700 0 0 48202 0 0  
48278 0 0 48006 0 0 47735 0 47559 0 0 46861 0 0 47414 0 0 46962 0 0 46623 0 46580 0 0 46301 0 0  
46428 0 0 46065 0 0 46420 0 0 45992 0 46097 0 0 45693 0 0 45463 0 0 45705 0 0 45073 0 45319 0 0  
45214 0 0 45125 0 0 45033 0 0 44746 0 0 44767 0 45191 0 0 44667 0 0 45031 0 0 44829 0 0 44788 0  
44996 0 0 44651 0 0 44428 0 0 44603 0 0 44708 0 0 44550 0 44419 0 0 44635 0 0 44277 0 0 44411 0 0  
44362 0 44422 0 0 43692 0 0 43888 0 0 44001 0 0 43869 0 0 43891 0 43562 0 0 43984 0 0 43759 0 0  
43774 0 0 43491 0 43722 0 0 43258 0 0 43214 0 0 43222 0 0 43095 0 43108 0 0 42594 0 0 42887 0 0  
42958 0 0 42979 0 0 42934 0 42613 0 0 42286 0 0 42428 0 0 42047 0 0 42358 0 42291 0 0 42189 0 0  
41998 0 0 41926 0 0 41691 0 0 41896 0 42028 0 0 41945 0 0 41676 0 0 41550 0 0 41679 0 41492 0 0  
41678 0 0 41200 0 0 41323 0 0 41474 0 0 40788 0 40812 0 0 41052 0 0 41325 0 0 40961 0 0 41103 0  
40389 0 0 40509 0 0 40314 0 0 40478 0 0 40474 0 0 40239 0 40303 0 0 40243 0 0 40461 0 0 40237 0 0  
40090 0 39987 0 0 40149 0 0 40080 0 0 40078 0 0 40104 0 40563 0 0 40257 0 0 40103 0 0 40379 0 0  
40211 0 0 40010 0 40159 0 0 40260 0 0 40079 0 0 40698 0 0 40284 0 40506 0 0 40081 0 0 40202 0 0  
40200 0 0 40130 0 0 39812 0 40333 0 0 39699 0 0 40052 0 0 40274 0 0 39753 0 39873 0 0 40192 0 0  
39897 0 0 40035 0 0 39947 0 0 39958 0 40219 0 0 40092 0 0 39989 0 0 39945 0 0 40093 0 40247 0 0

39991 0 0 40567 0 0 40454 0 0 40294 0 0 40842 0 40503 0 0 40293 0 0 40788 0 0 40573 0 0 40938 0  
 40771 0 0 41054 0 0 41120 0 0 41364 0 0 41159 0 0 41124 0 41708 0 0 41548 0 0 41722 0 0 41928 0 0  
 42150 0 42037 0 0 42336 0 0 42399 0 0 42006 0 0 42926 0 42352 0 0 42559 0 0 42843 0 0 42463 0 0  
 43046 0 0 42858 0 43208 0 0 43341 0 0 43243 0 0 43358 0 0 43905 0 43758 0 0 43604 0 0 43390 0 0  
 43897 0 0 44163 0 0 44616 0 44536 0 0 44356 0 0 44495 0 0 44994 0 0 44774 0 45357 0 0 45240 0 0  
 45169 0 0 45226 0 0 45493 0 0 45793 0 45724 0 0 45986 0 0 46059 0 0 46061 0 0 45947 0 46444 0 0  
 46549 0 0 46820 0 0 46965 0 0 47165 0 0 46829 0 47371 0 0 47376 0 0 47557 0 0 47624 0 0 47436 0  
 47925 0 0 48288 0 0 48191 0 0 48480 0 0 48978 0 48950 0 0 48885 0 0 48600 0 0 49494 0 0 49793 0 0  
 49519 0 49838 0 0 49911 0 0 50171 0 0 49994 0 0 50150 0 50548 0 0 50569 0 0 50602 0 0 50759 0 0  
 51251 0 0 51066 0 51735 0 0 51529 0 0 52028 0 0 52074 0 0 52152 0 52164 0 0 52553 0 0 52584 0 0  
 52665 0 0 52237 0 0 53025 0 53286 0 0 53505 0 0 53567 0 0 53660 0 0 53832 0 54227 0 0 54217 0 0  
 54817 0 0 54605 0 0 54383 0 0 55108 0 55298 0 0 55734 0 0 55323 0 0 55702 0 0 55618 0 56266 0 0  
 56530 0 0 56796 0 0 56643 0 0 57173 0 57078 0 0 57969 0 0 58080 0 0 57903 0 0 58104 0 0 58615 0  
 58661 0 0 58830 0 0 58954 0 0 59736 0 0 59864 0 59567 0 0 60151 0 0 60137 0 0 60522 0 0 61305 0 0  
 60988 0 60998 0 0 61449 0 0 60999 0 0 61559 0 0 61680 0 62027 0 0 61565 0 0 62037 0 0 61978 0 0  
 62042 0 0 62258 0 62343 0 0 62561 0 0 62864 0 0 63035 0 0 62704 0 63396 0 0 63261 0 0 63238 0 0  
 63448 0 0 63149 0 0 63232 0 63354 0 0 63431 0 0 63505 0 0 63229 0 0 62723 0 63410 0 0 62994 0 0  
 63223 0 0 62935 0 0 63323 0 63373 0 0 63260 0 0 63430 0 0 63249 0 0 63189 0 0 63327 0 63191 0 0  
 63371 0 0 63494 0 0 62918 0 0 63174 0 63181 0 0 62994 0 0 63502 0 0 63375 0 0 63210 0 0 63110 0  
 63279 0 0 63131 0 0 63252 0 0 62507 0 0 63179 0 62862 0 0 63031 0 0 63308 0 0 63275 0 0 63055 0 0  
 63142 0 63182 0 0 62982 0 0 63209 0 0 62810 0 0 62970 0 63313 0 0 62998 0 0 63034 0 0 63133 0 0  
 62823 0 0 62965 0 62348 0 0 62969 0 0 63151 0 0 63136 0 0 62781 0 62465 0 0 62376 0 0 62528 0 0  
 62630 0 0 62624 0 63155 0 0 62238 0 0 62378 0 0 62292 0 0 61945 0 0 62080 0 61744 0 0 61992 0 0  
 61210 0 0 61870 0 0 61620 0 61178 0 0 61822 0 0 61447 0 0 61383 0 0 60903 0 0 61214 0 60923 0 0  
 60372 0 0 61208 0 0 60523 0 0 60309 0 59929 0 0 60109 0 0 59999 0 0 59587 0 0 59623 0 0 59339 0  
 59343 0 0 59331 0 0 58964 0 0 59318 0 0 58425 0 58739 0 0 58023 0 0 57961 0 0 58182 0 0 57844 0 0  
 57623 0 57778 0 0 57135 0 0 57228 0 0 57242 0 0 56900 0 56972 0 0 56390 0 0 56526 0 0 56433 0 0  
 55804 0 0 56260 0 55764 0 0 55974 0 0 55656 0 0 54939 0 0 55311 0 54661 0 0 54938 0 0 54627 0 0  
 54590 0 0 54444 0 54002 0 0 54009 0 0 53523 0 0 54178 0 0 53378 0 0 53478 0 52939 0 0 52777 0 0  
 52382 0 0 52215 0 0 51890 0 51804 0 0 52073 0 0 51495 0 0 51499 0 0 51388 0 0 51207 0 51149 0 0  
 50591 0 0 50980 0 0 50459 0 0 50091 0 50304 0 0 49368 0 0 49647 0 0 49540 0 0 49494 0 0 49233 0  
 48938 0 0 48684 0 0 48203 0 0 48327 0 0 48120 0 47586 0 0 47855 0 0 47768 0 0 47682 0 0 47510 0 0  
 47103 0 46552 0 0 46835 0 0 46463 0 0 46356 0 0 46219 0 46117 0 0 45593 0 0 45698 0 0 45670 0 0  
 45198 0 45060 0 0 45142 0 0 44571 0 0 45257 0 0 44258 0 0 44275 0 44286 0 0 44011 0 0 43775 0 0  
 43421 0 0 43563 0 43409 0 0 42688 0 0 42619 0 0 42564 0 0 42600 0 0 41968 0 41800 0 0 41884 0 0  
 41599 0 0 41298 0 0 41400 0 41613 0 0 40942 0 0 40967 0 0 40612 0 0 41124 0 0 40450 0 40665 0 0  
 40741 0 0 40420 0 0 40106 0 0 40362 0 39733 0 0 39831 0 0 39756 0 0 39386 0 0 39735 0 0 39435 0  
 39594 0 0 39289 0 0 39255 0 0 39525 0 0 39160 0 39501 0 0 39298 0 0 39491 0 0 38744 0 0 38759 0  
 38932 0 0 38422 0 0 38441 0 0 38891 0 0 38316 0 0 38177 0 38103 0 0 38307 0 0 37969 0 0 38121 0 0  
 37643 0 37924 0 0 37862 0 0 37802 0 0 37702 0 0 37452 0 0 37310 0 37124 0 0 37055 0 0 37127 0 0  
 37018 0 0 36954 0 36612 0 0 36724 0 0 36707 0 0 36773 0 0 36710 0 0 36469 0 36541 0 0 36447 0 0  
 36454 0 0 36344 0 0 36221 0 35743 0 0 35850 0 0 36259 0 0 35671 0 0 35816 0 0 35676 0 35553 0 0

35307 0 0 35502 0 0 35466 0 0 34902 0 34996 0 0 34699 0 0 34759 0 0 34700 0 0 34519 0 34572 0 0  
34004 0 0 34175 0 0 33755 0 0 33649 0 0 33153 0 33575 0 0 33466 0 0 32863 0 0 32566 0 0 32606 0  
32606 0 0 32329 0 0 31975 0 0 31866 0 0 31891 0 0 31493 0 30944 0 0 30762 0 0 31108 0 0 30436 0 0  
30338 0 30182 0 0 29949 0 0 29399 0 0 29526 0 0 29226 0 0 29018 0 28555 0 0 28602 0 0 28256 0 0  
28172 0 0 28175 0 27596 0 0 27436 0 0 26934 0 0 26719 0 0 26873 0 0 26554 0 26184 0 0 26094 0 0  
26073 0 0 25828 0 0 25538 0 25027 0 0 24991 0 0 24447 0 0 24740 0 0 24668 0 24617 0 0 24045 0 0  
24417 0 0 24086 0 0 24037 0 0 23952 0 23599 0 0 23344 0 0 23329 0 0 23350 0 0 23201 0 23166 0 0  
23185 0 0 23357 0 0 22937 0 0 23117 0 0 22995 0 22941 0 0 22822 0 0 22848 0 0 22876 0 0 22679 0  
22595 0 0 22750 0 0 22500 0 0 22433 0 0 22575 0 0 22610 0 22699 0 0 22486 0 0 22788 0 0 22504 0 0  
22727 0 22528 0 0 22494 0 0 22656 0 0 22791 0 0 22458 0 0 22316 0 22651 0 0 22521 0 0 22588 0 0  
22689 0 0 23055 0 22784 0 0 22629 0 0 22831 0 0 22841 0 0 22741 0 0 22710 0 22862 0 0 22792 0 0  
23073 0 0 22908 0 0 23035 0 23326 0 0 23333 0 0 23207 0 0 23296 0 0 23376 0 23512 0 0 23294 0 0  
23617 0 0 23532 0 0 23764 0 0 23422 0 23520 0 0 23376 0 0 23415 0 0 23418 0 0 23374 0 22981 0 0  
22906 0 0 22940 0 0 22750 0 0 22598 0 0 22699 0 22118 0 0 22067 0 0 21930 0 0 21489 0 0 21400 0  
21192 0 0 20794 0 0 20477 0 0 20334 0 0 19905 0 0 19870 0 19607 0 0 18962 0 0 18719 0 0 18880 0 0  
18341 0 18208 0 0 17595 0 0 17429 0 0 16919 0 0 16705 0 0 16256 0 16267 0 0 15882 0 0 15615 0 0  
15392 0 0 14564 0 14801 0 0 14297 0 0 14005 0 0 13930 0 0 13557 0 13254 0 0 13112 0 0 12778 0 0  
12290 0 0 12290 0 0 12316 0 11716 0 0 11502 0 0 11241 0 0 11127 0 0 10791 0 10518 0 0 10297 0 0  
10101 0 0 9849 0 0 9636 0 0 9465 0 9291 0 0 8941 0 0 8720 0 0 8846 0 0 8428 0 8404 0 0 7972 0 0  
7881 0 0 8021 0 0 7786 0 0 7621 0 7436 0 0 7178 0 0 7320 0 0 7200 0 0 6895 0 7058 0 0 6790 0 0  
6678 0 0 6570 0 0 6592 0 0 6425 0 6122 0 0 6229 0 0 6135 0 0 6211 0 0 5972 0 5764 0 0 5759 0 0  
5702 0 0 5439 0 0 5470 0 5321 0 0 5099 0 0 4978 0 0 4826 0 0 4918 0 0 4659 0 4631 0 0 4579 0 0  
4259 0 0 4309 0 0 4231 0 4031 0 0 4002 0 0 3920 0 0 3950 0 0 3824 0 0 3674 0 3757 0 0 3698 0 0  
3589 0 0 3655 0 0 3583 0 3466 0 0 3483 0 0 3436 0 0 3220 0 0 3372 0 0 3359 0 3279 0 0 3125 0 0  
3176 0 0 3106 0 0 3030 0 3054 0 0 3013 0 0 2906 0 0 2852 0 0 2849 0 0 2802 0 2838 0 0 2739 0 0  
2698 0 0 2613 0 0 2560 0 2565 0 0 2563 0 0 2468 0 0 2417 0 0 2353 0 2346 0 0 2362 0 0 2305 0 0  
2309 0 0 2221 0 0 2140 0 2221 0 0 2141 0 0 2070 0 0 2136 0 0 2052 0 2026 0 0 1911 0 0 1922 0 0  
1934 0 0 1966 0 0 1917 0 1898 0 0 1808 0 0 1799 0 0 1827 0 0 1754 0 1756 0 0 1683 0 0 1767 0 0  
1719 0 0 1741 0 0 1759 0 1592 0 0 1723 0 0 1628 0 0 1594 0 0 1594 0 1662 0 0 1612 0 0 1620 0 0  
1540 0 0 1590 0 0 1537 0 1473 0 0 1479 0 0 1497 0 0 1421 0 0 1404 0 1469 0 0 1444 0 0 1477 0 0  
1413 0 0 1403 0 1361 0 0 1371 0 0 1365 0 0 1372 0 0 1311 0 0 1323 0 1268 0 0 1273 0 0 1287 0 0  
1213 0 0 1266 0 1274 0 0 1261 0 0 1245 0 0 1229 0 0 1178 0 0 1215 0 1130 0 0 1205 0 0 1216 0 0  
1228 0 0 1182 0 1130 0 0 1156 0 0 1118 0 0 1099 0 0 1044 0 0 1088 0 1044 0 0 1078 0 0 1027 0 0 968  
0 0 1049 0 1039 0 0 973 0 0 1019 0 0 1027 0 0 1000 0 0 991 0 968 0 0 950 0 0 981 0 0 913 0 0 922 0  
929 0 0 898 0 0 850 0 0 854 0 0 888 0 0 829 0 852 0 0 849 0 0 861 0 0 846 0 0 859 0 826 0 0 844 0 0  
756 0 0 759 0 0 767 0 741 0 0 755 0 0 691 0 0 685 0 0 701 0 0 716 0 664 0 0 684 0 0 615 0 0 635 0 0  
652 0 608 0 0 644 0 0 573 0 0 577 0 0 573 0 0 635 0 566 0 0 576 0 0 564 0 0 535 0 0 577 0 547 0 0 511  
0 0 486 0 0 526 0 0 541 0 0 537 0 479 0 0 474 0 0 506 0 0 457 0 0 475 0 453 0 0 460 0 0 496 0 0 407 0  
0 427 0 0 418 0 375 0 0 426 0 0 400 0 0 391 0 0 360 0 392 0 0 380 0 0 340 0 0 371 0 0 328 0 353 0 0  
329 0 0 341 0 0 305 0 0 323 0 0 326 0 268 0 0 275 0 0 264 0 0 253 0 0 274 0 256 0 0 253 0 0 237 0 0  
230 0 0 232 0 0 232 0 224 0 0 216 0 0 222 0 0 212 0 0 229 0 216 0 0 228 0 0 186 0 0 249 0 0 182 0 0  
200 0 176 0 0 213 0 0 177 0 0 145 0 0 178 0 181 0 0 175 0 0 208 0 0 199 0 0 163 0 0 153 0 185 0 0 154

0 0 157 0 0 162 0 0 147 0 135 0 0 135 0 0 151 0 0 144 0 0 138 0 121 0 0 136 0 0 139 0 0 151 0 0 129 0  
 0 138 0 143 0 0 120 0 0 117 0 0 145 0 0 127 0 130 0 0 121 0 0 158 0 0 129 0 0 108 0 0 108 0 110 0 0  
 130 0 0 122 0 0 154 0 0 115 0 121 0 0 127 0 0 140 0 0 112 0 0 108 0 0 114 0 127 0 0 133 0 0 117 0 0  
 126 0 0 102 0 105 0 0 144 0 0 140 0 0 117 0 0 91 0 0 113 0 116 0 0 97 0 0 111 0 0 121 0 0 115 0 135 0  
 0 120 0 0 113 0 0 107 0 0 116 0 103 0 0 103 0 0 119 0 0 124 0 0 116 0 0 114 0 113 0 0 121 0 0 94 0 0  
 82 0 0 118 0 98 0 0 113 0 0 103 0 0 113 0 0 97 0 0 113 0 117 0 0 127 0 0 108 0 0 108 0 0 115 0 127 0 0  
 124 0 0 96 0 0 109 0 0 121 0 0 103 0 98 0 0 100 0 0 114 0 0 113 0 0 110 0 124 0 0 103 0 0 123 0 0 116  
 0 0 118 0 0 124 0 110 0 0 126 0 0 140 0 0 124 0 0 138 0 144 0 0 125 0 0 134 0 0 105 0 0 115 0 0 144 0  
 125 0 0 120 0 0 134 0 0 129 0 0 158 0 126 0 0 120 0 0 130 0 0 136 0 0 146 0 143 0 0 122 0 0 138 0 0  
 117 0 0 127 0 0 112 0 137 0 0 132 0 0 138 0 0 134 0 0 124 0 161 0 0 149 0 0 139 0 0 150 0 0 145 0 0  
 160 0 158 0 0 151 0 0 125 0 0 146 0 0 154 0 153 0 0 132 0 0 158 0 0 161 0 0 153 0 0 163 0 150 0 0 146  
 0 0 146 0 0 150 0 0 142 0 176 0 0 157 0 0 182 0 0 150 0 0 180 0 0 141 0 156 0 0 161 0 0 161 0 0 166 0  
 0 174 0 160 0 0 165 0 0 158 0 0 160 0 0 164 0 162 0 0 154 0 0 148 0 0 165 0 0 163 0 0 170 0 161 0 0  
 177 0 0 180 0 0 190 0 0 184 0 204 0 0 188 0 0 163 0 0 164 0 0 157 0 0 178 0 200 0 0 165 0 0 187 0 0  
 210 0 0 208 0 191 0 0 208 0 0 181 0 0 221 0 0 196 0 0 189 0 197 0 0 195 0 0 196 0 0 195 0 0 217 0 214  
 0 0 210 0 0 232 0 0 217 0 0 229 0 0 188 0 206 0 0 240 0 0 226 0 0 202 0 0 215 0 213 0 0 189 0 0 195 0  
 0 190 0 0 238 0 197 0 0 216 0 0 245 0 0 207 0 0 184 0 0 209 0 217 0 0 230 0 0 215 0 0 210 0 0 202 0  
 215 0 0 197 0 0 211 0 0 238 0 0 211 0 0 236 0 221 0 0 192 0 0 196 0 0 206 0 0 198 0 230 0 0 214 0 0  
 237 0 0 215 0 0 207 0 0 219 0 209 0 0 211 0 0 230 0 0 224 0 0 213 0 267 0 0 224 0 0 223 0 0 217 0 0  
 237 0 0 258 0 188 0 0 242 0 0 235 0 0 217 0 0 209 0 230 0 0 228 0 0 217 0 0 216 0 0 210 0 217 0 0 197  
 0 0 205 0 0 219 0 0 238 0 0 198 0 250 0 0 177 0 0 184 0 0 234 0 0 191 0 207 0 0 231 0 0 210 0 0 182 0  
 0 225 0 0 182 0 173 0 0 189 0 0 175 0 0 170 0 0 173 0 173 0 0 181 0 0 180 0 0 173 0 0 201 0 0 160 0  
 166 0 0 177 0 0 173 0 0 177 0 0 166 0 162 0 0 161 0 0 129 0 0 156 0 0 159 0 0 157 0 164 0 0 162 0 0  
 158 0 0 129 0 0 136 0 156 0 0 165 0 0 137 0 0 135 0 0 134 0 148 0 0 146 0 0 153 0 0 125 0 0 135 0 0  
 124 0 123 0 0 120 0 0 128 0 0 128 0 0 124 0 153 0 0 115 0 0 124 0 0 117 0 0 128 0 0 121 0 123 0 0 133  
 0 0 113 0 0 116 0 0 103 0 114 0 0 94 0 0 119 0 0 105 0 0 82 0 0 105 0 105 0 0 92 0 0 122 0 0 97 0 0 103  
 0 97 0 0 76 0 0 104 0 0 100 0 0 98 0 0 91 0 79 0 0 100 0 0 105 0 0 77 0 0 86 0 82 0 0 85 0 0 90 0 0 103 0  
 0 82 0 0 105 0 70 0 0 69 0 0 80 0 0 83 0 0 93 0 85 0 0 73 0 0 72 0 0 74 0 0 86 0 81 0 0 79 0 0 87 0 0 69 0  
 0 90 0 0 84 0 69 0 0 92 0 0 76 0 0 78 0 0 74 0 81 0 0 98 0 0 86 0 0 86 0 0 87 0 0 74 0 81 0 0 86 0 0 81 0  
 0 64 0 0 84 0 71 0 0 79 0 0 82 0 0 90 0 0 70 0 0 87 0 73 0 0 82 0 0 78 0 0 83 0 0 67 0 71 0 0 59 0 0 73 0  
 0 77 0 0 72 0 0 63 0 93 0 0 76 0 0 82 0 0 72 0 0 61 0 74 0 0 69 0 0 63 0 0 66 0 0 78 0 73 0 0 72 0 0 76 0  
 0 78 0 0 80 0 0 78 0 77 0 0 69 0 0 86 0 0 56 0 0 68 0 69 0 0 65 0 0 69 0 0 87 0 0 87 0 0 60 0 70 0 0 61 0  
 0 75 0 0 69 0 0 60 0 74 0 0 76 0 0 79 0 0 76 0 0 77 0 0 56 0 85 0 0 67 0 0 61 0 0 56 0 0 70 0 62 0 0 71 0  
 0 68 0 0 80 0 0 70 0 0 51 0 74 0 0 72 0 0 73 0 0 77 0 0 61 0 61 0 0 79 0 0 80 0 0 74 0 0 60 0 69 0 0 71 0  
 0 78 0 0 87 0 0 79 0 0 69 0 57 0 0 68 0 0 65 0 0 67 0 0 62 0 63 0 0 76 0 0 61 0 0 52 0 0 63 0 0 56 0 61 0  
 0 62 0 0 45 0 0 52 0 0 62 0 63 0 0 67 0 0 54 0 0 63 0 0 48 0 0 55 0 51 0 0 47 0 0 59 0 0 61 0 0 53 0 50 0  
 0 49 0 0 48 0 0 38 0 0 45 0 0 51 0 43 0 0 44 0 0 39 0 0 52 0 0 43 0 43 0 0 43 0 0 40 0 0 41 0 0 35 0 43 0  
 0 42 0 0 37 0 0 37 0 0 30 0 0 49 0 27 0 0 35 0 0 33 0 0 37 0 0 37 0 32 0 0 33 0 0 33 0 0 42 0 0 31 0 0 32  
 0 28 0 0 38 0 0 35 0 0 32 0 0 15 0 39 0 0 21 0 0 13 0 0 21 0 0 19 0 0 23 0 17 0 0 20 0 0 14 0 0 12 0 0 12  
 0 12 0 0 7 0 0 11 0 0 8 0 0 9 0 0 12 0 5 0 0 6 0 0 7 0 0 6 0 0 3 0 10 0 0 4 0 0 4 0 0 3 0 0 7 0 3 0 0 4 0 0 2 0  
 0 3 0 0 1 0 0 4 0 2 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 3 0 0 1 0 0 1 0 0 1 0 0 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0  
 0 1 0 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 0 0 0 0 0 0 0









0 88375 0 0 89489 0 0 89742 0 0 90364 0 0 91810 0 0 92325 0 0 93207 0 0 94426 0 0 95218 0 0 95886  
0 96850 0 0 97749 0 0 98479 0 0 99770 0 0 101024 0 0 101518 0 0 103501 0 0 104399 0 0 104810 0 0  
106370 0 0 107452 0 0 107968 0 0 109105 0 0 110128 0 0 111243 0 0 112222 0 0 112537 0 0 114059  
0 0 114237 0 116041 0 0 116420 0 0 117577 0 0 118956 0 0 120219 0 0 119661 0 0 121216 0 0  
122048 0 0 122302 0 0 123499 0 0 124534 0 0 124721 0 0 126028 0 0 126717 0 0 127643 0 0 130105  
0 0 128639 0 0 129905 0 0 130992 0 131477 0 0 131871 0 0 133909 0 0 133827 0 0 135187 0 0  
135328 0 0 136842 0 0 137255 0 0 138024 0 0 138958 0 0 140159 0 0 141380 0 0 141631 0 0 142273  
0 0 143566 0 0 144218 0 0 145995 0 0 146093 0 0 147113 0 147328 0 0 147630 0 0 149160 0 0  
149364 0 0 150245 0 0 151430 0 0 150891 0 0 151818 0 0 151955 0 0 152739 0 0 153448 0 0 153044  
0 0 153806 0 0 154688 0 0 154361 0 0 155386 0 0 155552 0 0 155519 0 0 155118 0 154361 0 0  
155069 0 0 154973 0 0 154986 0 0 154256 0 0 153463 0 0 153430 0 0 153584 0 0 151572 0 0 151364  
0 0 150115 0 0 149974 0 0 148163 0 0 147268 0 0 146278 0 0 144510 0 0 143235 0 0 141063 0 0  
140542 0 139388 0 0 138251 0 0 136965 0 0 134626 0 0 132751 0 0 131413 0 0 129705 0 0 128305 0  
0 126352 0 0 125635 0 0 123822 0 0 122342 0 0 121407 0 0 120152 0 0 119295 0 0 118439 0 0  
116515 0 0 116032 0 0 115235 0 114322 0 0 114232 0 0 114190 0 0 113439 0 0 113595 0 0 114164 0  
0 114123 0 0 114672 0 0 114456 0 0 115535 0 0 116649 0 0 117377 0 0 118979 0 0 119744 0 0  
121875 0 0 123302 0 0 124369 0 0 125812 0 0 128176 0 128581 0 0 131351 0 0 132172 0 0 134256 0  
0 135809 0 0 137497 0 0 138570 0 0 140062 0 0 140902 0 0 142414 0 0 142771 0 0 144057 0 0  
142764 0 0 144230 0 0 144402 0 0 144199 0 0 143662 0 0 143161 0 0 141559 0 139624 0 0 138629 0  
0 137038 0 0 134880 0 0 133470 0 0 131023 0 0 128709 0 0 126172 0 0 123762 0 0 121745 0 0  
119647 0 0 117921 0 0 115197 0 0 112815 0 0 110645 0 0 108311 0 0 106216 0 0 103656 0 0 102143  
0 99498 0 0 97921 0 0 95594 0 0 93247 0 0 91920 0 0 90427 0 0 88487 0 0 86695 0 0 85404 0 0 83877  
0 0 82226 0 0 81249 0 0 79325 0 0 77823 0 0 76781 0 0 75698 0 0 74704 0 0 72899 0 0 72286 0 71587  
0 0 70213 0 0 69224 0 0 68292 0 0 66972 0 0 66303 0 0 65367 0 0 64542 0 0 63273 0 0 62351 0 0  
61282 0 0 60637 0 0 59554 0 0 58854 0 0 57527 0 0 56409 0 0 56181 0 0 54369 0 0 54226 0 53187 0 0  
52510 0 0 51314 0 0 50837 0 0 49759 0 0 48632 0 0 48531 0 0 47156 0 0 46558 0 0 45959 0 0 45458 0  
0 44582 0 0 44075 0 0 44152 0 0 43047 0 0 42648 0 0 42526 0 0 41574 0 0 41605 0 41136 0 0 40927 0  
0 40112 0 0 40531 0 0 40236 0 0 39912 0 0 39860 0 0 39832 0 0 39322 0 0 39077 0 0 39850 0 0 39521  
0 0 39700 0 0 39556 0 0 39463 0 0 39494 0 0 39414 0 0 39512 0 0 39328 0 39431 0 0 39221 0 0 39019  
0 0 39197 0 0 38966 0 0 38968 0 0 38873 0 0 38718 0 0 38583 0 0 38434 0 0 38407 0 0 38505 0 0  
37974 0 0 38125 0 0 38146 0 0 38001 0 0 37486 0 0 37611 0 0 37648 0 37746 0 0 37428 0 0 37532 0 0  
37657 0 0 37580 0 0 37242 0 0 37442 0 0 37130 0 0 37445 0 0 37365 0 0 37713 0 0 36915 0 0 37436 0  
0 37228 0 0 37355 0 0 37355 0 0 37318 0 0 37766 0 0 37653 0 37318 0 0 37253 0 0 37768 0 0 37583 0  
0 37730 0 0 37804 0 0 37775 0 0 37981 0 0 37686 0 0 37809 0 0 37974 0 0 38042 0 0 37724 0 0 38014  
0 0 37511 0 0 37801 0 0 37688 0 0 37649 0 0 37445 0 37547 0 0 38001 0 0 37350 0 0 37575 0 0 37792  
0 0 37318 0 0 37414 0 0 37211 0 0 37298 0 0 37698 0 0 37578 0 0 37538 0 0 37662 0 0 37573 0 0  
37445 0 0 37722 0 0 37357 0 0 37426 0 0 37797 0 37562 0 0 37519 0 0 37647 0 0 38033 0 0 38012 0 0  
37328 0 0 37963 0 0 37908 0 0 37972 0 0 37975 0 0 38250 0 0 38055 0 0 37988 0 0 37916 0 0 38078 0  
0 37966 0 0 38078 0 0 37746 0 0 38020 0 38032 0 0 37766 0 0 38119 0 0 38063 0 0 37980 0 0 38444 0  
0 38129 0 0 38677 0 0 38302 0 0 38649 0 0 38920 0 0 38481 0 0 38694 0 0 38729 0 0 38812 0 0 39026  
0 0 39218 0 0 38806 0 0 39503 0 39160 0 0 39250 0 0 39388 0 0 39599 0 0 39672 0 0 40012 0 0 39863  
0 0 40096 0 0 40059 0 0 40372 0 0 40799 0 0 40483 0 0 40693 0 0 41014 0 0 41001 0 0 40824 0 0

41510 0 0 42010 0 0 41974 0 41976 0 0 42059 0 0 42235 0 0 42525 0 0 42994 0 0 43375 0 0 43073 0 0  
43362 0 0 43603 0 0 43682 0 0 43930 0 0 44098 0 0 44381 0 0 44352 0 0 44304 0 0 44809 0 0 45349 0  
0 45101 0 0 45716 0 45802 0 0 45706 0 0 45819 0 0 46270 0 0 46355 0 0 46485 0 0 46614 0 0 46712 0  
0 46932 0 0 47603 0 0 47432 0 0 47578 0 0 47801 0 0 47844 0 0 48149 0 0 48042 0 0 48333 0 0 48067  
0 0 48457 0 48486 0 0 48858 0 0 48650 0 0 49023 0 0 48723 0 0 48593 0 0 48920 0 0 49300 0 0 49173  
0 0 49238 0 0 49070 0 0 48987 0 0 48873 0 0 48682 0 0 48884 0 0 49034 0 0 48720 0 0 48544 0 0  
48634 0 48468 0 0 48698 0 0 48213 0 0 48480 0 0 48509 0 0 48386 0 0 47943 0 0 48377 0 0 47962 0 0  
48081 0 0 47723 0 0 47517 0 0 47484 0 0 47584 0 0 47242 0 0 47139 0 0 47096 0 0 46620 0 0 46490 0  
46602 0 0 46729 0 0 46541 0 0 46397 0 0 46380 0 0 45918 0 0 45941 0 0 45632 0 0 45849 0 0 45330 0  
0 45103 0 0 45015 0 0 45157 0 0 44636 0 0 44650 0 0 44131 0 0 43913 0 0 44016 0 0 43920 0 43799 0  
0 43720 0 0 43088 0 0 42890 0 0 42957 0 0 42887 0 0 42259 0 0 42140 0 0 41764 0 0 41490 0 0 41601  
0 0 41616 0 0 41288 0 0 41095 0 0 40846 0 0 40640 0 0 40657 0 0 40340 0 0 40276 0 40177 0 0 39987  
0 0 39969 0 0 39794 0 0 39760 0 0 39486 0 0 39569 0 0 39576 0 0 39556 0 0 39223 0 0 39505 0 0  
39331 0 0 39263 0 0 38617 0 0 38915 0 0 38922 0 0 38876 0 0 38758 0 0 38741 0 38558 0 0 38475 0 0  
38772 0 0 38356 0 0 38754 0 0 38252 0 0 38639 0 0 38560 0 0 38309 0 0 38244 0 0 38281 0 0 38836 0  
0 37953 0 0 38380 0 0 38472 0 0 38138 0 0 38288 0 0 37939 0 0 38153 0 37953 0 0 38287 0 0 37864 0  
0 38438 0 0 37852 0 0 37660 0 0 37880 0 0 38071 0 0 37769 0 0 38143 0 0 37807 0 0 38213 0 0 38032  
0 0 37658 0 0 37724 0 0 37922 0 0 38120 0 0 37641 0 0 37616 0 37779 0 0 37375 0 0 37600 0 0 37656  
0 0 37682 0 0 37587 0 0 37749 0 0 37914 0 0 37269 0 0 37503 0 0 37782 0 0 37587 0 0 37679 0 0  
37367 0 0 37720 0 0 37331 0 0 37477 0 0 37552 0 0 37967 0 37406 0 0 37552 0 0 37564 0 0 37562 0 0  
37713 0 0 37440 0 0 37678 0 0 37991 0 0 38333 0 0 38061 0 0 37430 0 0 38003 0 0 38109 0 0 38271 0  
0 38010 0 0 38231 0 0 38062 0 0 38642 0 0 38331 0 38731 0 0 38722 0 0 38389 0 0 38603 0 0 38701 0  
0 38558 0 0 39137 0 0 39119 0 0 38946 0 0 39429 0 0 39774 0 0 39512 0 0 39474 0 0 39656 0 0 40185  
0 0 39982 0 0 40050 0 0 39700 0 0 40086 0 40393 0 0 40490 0 0 40754 0 0 40638 0 0 40590 0 0 40335  
0 0 40653 0 0 40764 0 0 41059 0 0 41016 0 0 41064 0 0 41572 0 0 41476 0 0 41518 0 0 42114 0 0  
41994 0 0 42278 0 0 42064 0 42472 0 0 42385 0 0 42187 0 0 42882 0 0 42578 0 0 42824 0 0 42945 0 0  
43466 0 0 43074 0 0 43736 0 0 43379 0 0 43756 0 0 44040 0 0 44044 0 0 44084 0 0 44310 0 0 44819 0  
0 44650 0 0 45126 0 44875 0 0 45235 0 0 45166 0 0 45918 0 0 46119 0 0 46185 0 0 46532 0 0 46304 0  
0 46830 0 0 47205 0 0 47105 0 0 47008 0 0 47364 0 0 47372 0 0 48465 0 0 48084 0 0 48361 0 0 48482  
0 0 48593 0 49018 0 0 49541 0 0 49715 0 0 49528 0 0 50375 0 0 50569 0 0 50473 0 0 51121 0 0 51041  
0 0 51035 0 0 51428 0 0 51854 0 0 51743 0 0 51934 0 0 52456 0 0 52245 0 0 52852 0 0 53162 0 0  
53290 0 53715 0 0 53430 0 0 54019 0 0 54033 0 0 53641 0 0 53817 0 0 54528 0 0 54622 0 0 54538 0 0  
55035 0 0 54999 0 0 55476 0 0 55591 0 0 55826 0 0 56211 0 0 55997 0 0 56096 0 0 56329 0 0 56567 0  
57286 0 0 56894 0 0 57017 0 0 57336 0 0 57538 0 0 57342 0 0 57752 0 0 57711 0 0 58731 0 0 58139 0  
0 58227 0 0 58445 0 0 58654 0 0 59010 0 0 58976 0 0 59004 0 0 58858 0 0 59325 0 0 59505 0 59566 0  
0 59919 0 0 59709 0 0 59711 0 0 60281 0 0 60409 0 0 60614 0 0 60099 0 0 60647 0 0 60497 0 0 60664  
0 0 60475 0 0 60761 0 0 60715 0 0 60783 0 0 60743 0 0 61135 0 0 61499 0 0 61253 0 61241 0 0 61501  
0 0 61617 0 0 61458 0 0 61887 0 0 61596 0 0 61639 0 0 61981 0 0 61837 0 0 61711 0 0 62287 0 0  
62161 0 0 62182 0 0 62105 0 0 62731 0 0 62853 0 0 62441 0 0 62501 0 0 62790 0 63284 0 0 62957 0 0  
62193 0 0 63036 0 0 63398 0 0 62341 0 0 62975 0 0 63131 0 0 62295 0 0 62680 0 0 62708 0 0 62484 0  
0 62370 0 0 62408 0 0 62476 0 0 62902 0 0 62759 0 0 62104 0 0 62057 0 62272 0 0 62056 0 0 61690 0  
0 61636 0 0 61992 0 0 62070 0 0 62040 0 0 61825 0 0 61721 0 0 61503 0 0 61989 0 0 62215 0 0 61729

0 0 61256 0 0 61895 0 0 61113 0 0 61575 0 0 61646 0 0 60720 0 61382 0 0 60937 0 0 61174 0 0 61260  
0 0 60878 0 0 61078 0 0 61137 0 0 60847 0 0 60506 0 0 61150 0 0 60584 0 0 60296 0 0 60416 0 0  
60246 0 0 59986 0 0 59758 0 0 60205 0 0 60085 0 0 59911 0 59799 0 0 59651 0 0 59789 0 0 59453 0 0  
59082 0 0 59165 0 0 58444 0 0 58895 0 0 58413 0 0 58670 0 0 58715 0 0 58462 0 0 58450 0 0 58059 0  
0 57908 0 0 57393 0 0 57303 0 0 57278 0 0 57115 0 56523 0 0 56192 0 0 56963 0 0 56766 0 0 56230 0  
0 56214 0 0 55965 0 0 55678 0 0 55832 0 0 55528 0 0 55627 0 0 54997 0 0 55054 0 0 54944 0 0 54604  
0 0 54333 0 0 54343 0 0 54025 0 0 53675 0 53214 0 0 53340 0 0 52938 0 0 52693 0 0 52207 0 0 52259  
0 0 52288 0 0 51717 0 0 51819 0 0 51278 0 0 51078 0 0 51077 0 0 51110 0 0 50701 0 0 50528 0 0  
50345 0 0 49869 0 0 49959 0 0 49298 0 49588 0 0 49019 0 0 49049 0 0 48555 0 0 48775 0 0 48637 0 0  
48033 0 0 47760 0 0 47632 0 0 47309 0 0 47324 0 0 47488 0 0 46760 0 0 46690 0 0 46450 0 0 47055 0  
0 46339 0 0 46201 0 0 45807 0 45495 0 0 45650 0 0 45649 0 0 45295 0 0 45031 0 0 44947 0 0 44994 0  
0 45129 0 0 44288 0 0 44451 0 0 44128 0 0 44221 0 0 44123 0 0 43857 0 0 43984 0 0 43651 0 0 43633  
0 0 43645 0 0 43705 0 43048 0 0 42978 0 0 43025 0 0 42247 0 0 42617 0 0 42114 0 0 42583 0 0 42176  
0 0 42224 0 0 41681 0 0 41696 0 0 41546 0 0 41118 0 0 41345 0 0 41401 0 0 40624 0 0 40785 0 0  
40735 0 0 40067 0 40687 0 0 40159 0 0 40149 0 0 40039 0 0 39911 0 0 40064 0 0 39388 0 0 39722 0 0  
39331 0 0 38953 0 0 38857 0 0 39074 0 0 38661 0 0 38510 0 0 38138 0 0 38176 0 0 38112 0 0 37717 0  
0 37739 0 37767 0 0 37370 0 0 36999 0 0 36865 0 0 36447 0 0 36199 0 0 36246 0 0 36267 0 0 36372 0  
0 35420 0 0 36015 0 0 35765 0 0 35884 0 0 35417 0 0 35155 0 0 35252 0 0 35110 0 0 34822 0 0 35077  
0 34831 0 0 35025 0 0 34632 0 0 34336 0 0 34584 0 0 34367 0 0 34626 0 0 34308 0 0 34060 0 0 33870  
0 0 34344 0 0 33947 0 0 34145 0 0 33591 0 0 34126 0 0 33857 0 0 33357 0 0 33633 0 0 33272 0 33296  
0 0 33558 0 0 33334 0 0 33237 0 0 33119 0 0 33303 0 0 32938 0 0 32691 0 0 32648 0 0 32762 0 0  
32813 0 0 32568 0 0 32195 0 0 31984 0 0 32051 0 0 32051 0 0 31900 0 0 32148 0 0 31937 0 31921 0 0  
32138 0 0 31763 0 0 31872 0 0 31452 0 0 31730 0 0 31666 0 0 30983 0 0 31023 0 0 31010 0 0 31073 0  
0 31190 0 0 31218 0 0 31174 0 0 30952 0 0 30934 0 0 30522 0 0 30273 0 0 30858 0 30787 0 0 30763 0  
0 30802 0 0 30295 0 0 30426 0 0 30241 0 0 30335 0 0 29995 0 0 30406 0 0 29882 0 0 30420 0 0 30146  
0 0 30038 0 0 29656 0 0 29854 0 0 29745 0 0 29493 0 0 29776 0 0 29481 0 29523 0 0 29377 0 0 28776  
0 0 28873 0 0 28683 0 0 28697 0 0 28581 0 0 28382 0 0 28126 0 0 28237 0 0 27855 0 0 27478 0 0  
27253 0 0 27398 0 0 26971 0 0 26866 0 0 26707 0 0 26402 0 0 26124 0 25776 0 0 25651 0 0 25451 0 0  
25405 0 0 25031 0 0 24764 0 0 24666 0 0 24399 0 0 24107 0 0 23985 0 0 23872 0 0 23536 0 0 23230 0  
0 22953 0 0 22893 0 0 22657 0 0 22608 0 0 22501 0 0 22197 0 21846 0 0 21734 0 0 21528 0 0 21548 0  
0 21105 0 0 21061 0 0 20951 0 0 20877 0 0 20636 0 0 20780 0 0 20661 0 0 20434 0 0 20286 0 0 20103  
0 0 20156 0 0 20141 0 0 20106 0 0 19881 0 0 19678 0 19771 0 0 19634 0 0 19761 0 0 19719 0 0 19717  
0 0 19856 0 0 19759 0 0 19258 0 0 19485 0 0 19578 0 0 19696 0 0 19445 0 0 19635 0 0 19390 0 0  
19511 0 0 19453 0 0 19328 0 0 19655 0 0 19615 0 19583 0 0 19384 0 0 19243 0 0 19250 0 0 19238 0 0  
19475 0 0 19416 0 0 19282 0 0 19644 0 0 19771 0 0 19901 0 0 19959 0 0 19737 0 0 19639 0 0 19909 0  
0 20266 0 0 19892 0 0 20157 0 0 19989 0 20532 0 0 20655 0 0 20182 0 0 20402 0 0 20248 0 0 20246 0  
0 20718 0 0 20733 0 0 20699 0 0 20800 0 0 20768 0 0 20974 0 0 21232 0 0 20850 0 0 20963 0 0 21061  
0 0 20906 0 0 20832 0 0 20952 0 20954 0 0 20749 0 0 20406 0 0 20839 0 0 20331 0 0 20147 0 0 20262  
0 0 20185 0 0 20264 0 0 19828 0 0 19359 0 0 19373 0 0 18992 0 0 19023 0 0 18859 0 0 18556 0 0  
18407 0 0 18104 0 0 17868 0 17901 0 0 17299 0 0 16971 0 0 17024 0 0 16700 0 0 16505 0 0 16358 0 0  
16010 0 0 15766 0 0 15495 0 0 15187 0 0 14789 0 0 14728 0 0 14447 0 0 14056 0 0 14018 0 0 13485 0  
0 13351 0 0 12922 0 12731 0 0 12290 0 0 12192 0 0 11815 0 0 11581 0 0 11270 0 0 10992 0 0 10785 0

0 10482 0 0 10403 0 0 10076 0 0 9928 0 0 9442 0 0 9458 0 0 9083 0 0 9266 0 0 8624 0 0 8367 0 0  
 8270 0 8272 0 0 7879 0 0 7824 0 0 7612 0 0 7299 0 0 7350 0 0 7045 0 0 6928 0 0 6862 0 0 6562 0 0  
 6588 0 0 6400 0 0 6093 0 0 6030 0 0 6022 0 0 5949 0 0 5771 0 0 5634 0 0 5435 0 5323 0 0 5254 0 0  
 5272 0 0 5165 0 0 5093 0 0 4921 0 0 4814 0 0 4874 0 0 4739 0 0 4707 0 0 4676 0 0 4570 0 0 4521 0 0  
 4457 0 0 4457 0 0 4318 0 0 4300 0 0 4207 0 0 4103 0 4101 0 0 3952 0 0 3829 0 0 3903 0 0 3721 0 0  
 3527 0 0 3489 0 0 3446 0 0 3325 0 0 3274 0 0 3133 0 0 3249 0 0 2960 0 0 2962 0 0 2921 0 0 2797 0 0  
 2749 0 0 2681 0 0 2652 0 2527 0 0 2534 0 0 2502 0 0 2430 0 0 2350 0 0 2336 0 0 2347 0 0 2204 0 0  
 2294 0 0 2339 0 0 2201 0 0 2208 0 0 2262 0 0 2151 0 0 2097 0 0 2059 0 0 2042 0 0 2063 0 0 2019 0  
 1963 0 0 1928 0 0 1786 0 0 1829 0 0 1894 0 0 1810 0 0 1752 0 0 1786 0 0 1746 0 0 1667 0 0 1598 0 0  
 1682 0 0 1537 0 0 1512 0 0 1450 0 0 1476 0 0 1396 0 0 1402 0 0 1367 0 1322 0 0 1347 0 0 1380 0 0  
 1232 0 0 1313 0 0 1264 0 0 1220 0 0 1178 0 0 1136 0 0 1141 0 0 1193 0 0 1187 0 0 1094 0 0 1077 0 0  
 1074 0 0 1108 0 0 1072 0 0 1119 0 0 1039 0 1035 0 0 1006 0 0 964 0 0 1026 0 0 973 0 0 955 0 0 902 0  
 0 952 0 0 917 0 0 907 0 0 931 0 0 862 0 0 860 0 0 854 0 0 826 0 0 823 0 0 771 0 0 784 0 0 766 0 777 0  
 0 719 0 0 708 0 0 705 0 0 709 0 0 652 0 0 702 0 0 708 0 0 683 0 0 657 0 0 711 0 0 654 0 0 693 0 0 595  
 0 0 625 0 0 618 0 0 610 0 0 619 0 0 567 0 597 0 0 521 0 0 580 0 0 567 0 0 500 0 0 511 0 0 563 0 0 512  
 0 0 465 0 0 491 0 0 443 0 0 483 0 0 437 0 0 458 0 0 458 0 0 449 0 0 447 0 0 434 0 0 382 0 388 0 0 390  
 0 0 370 0 0 396 0 0 409 0 0 378 0 0 345 0 0 335 0 0 365 0 0 314 0 0 320 0 0 312 0 0 284 0 0 294 0 0  
 317 0 0 290 0 0 282 0 0 273 0 285 0 0 315 0 0 262 0 0 280 0 0 293 0 0 248 0 0 260 0 0 273 0 0 241 0 0  
 251 0 0 235 0 0 207 0 0 221 0 0 241 0 0 245 0 0 219 0 0 247 0 0 232 0 0 210 0 215 0 0 227 0 0 227 0 0  
 211 0 0 228 0 0 189 0 0 192 0 0 203 0 0 185 0 0 179 0 0 183 0 0 182 0 0 197 0 0 162 0 0 177 0 0 203 0  
 0 188 0 0 195 0 0 184 0 184 0 0 179 0 0 168 0 0 196 0 0 169 0 0 162 0 0 172 0 0 180 0 0 162 0 0 179 0  
 0 155 0 0 195 0 0 173 0 0 159 0 0 165 0 0 161 0 0 177 0 0 147 0 0 171 0 176 0 0 154 0 0 164 0 0 154 0  
 0 159 0 0 170 0 0 146 0 0 172 0 0 175 0 0 152 0 0 149 0 0 172 0 0 161 0 0 170 0 0 163 0 0 159 0 0 146  
 0 0 167 0 0 157 0 183 0 0 160 0 0 162 0 0 156 0 0 176 0 0 171 0 0 154 0 0 176 0 0 150 0 0 180 0 0 164  
 0 0 177 0 0 185 0 0 171 0 0 176 0 0 166 0 0 159 0 0 185 0 0 181 0 158 0 0 185 0 0 161 0 0 171 0 0 190  
 0 0 214 0 0 167 0 0 182 0 0 179 0 0 192 0 0 184 0 0 184 0 0 186 0 0 183 0 0 168 0 0 168 0 0 191 0 0  
 166 0 0 178 0 205 0 0 199 0 0 188 0 0 180 0 0 160 0 0 191 0 0 189 0 0 179 0 0 209 0 0 182 0 0 175 0 0  
 172 0 0 194 0 0 160 0 0 192 0 0 182 0 0 199 0 0 195 0 0 185 0 176 0 0 184 0 0 208 0 0 204 0 0 202 0 0  
 192 0 0 199 0 0 210 0 0 202 0 0 186 0 0 198 0 0 209 0 0 190 0 0 193 0 0 189 0 0 198 0 0 217 0 0 194 0  
 0 188 0 185 0 0 208 0 0 237 0 0 217 0 0 198 0 0 195 0 0 199 0 0 188 0 0 214 0 0 192 0 0 210 0 0 197 0  
 0 211 0 0 193 0 0 206 0 0 194 0 0 198 0 0 211 0 0 210 0 215 0 0 240 0 0 191 0 0 205 0 0 216 0 0 187 0  
 0 206 0 0 212 0 0 222 0 0 209 0 0 236 0 0 202 0 0 222 0 0 247 0 0 216 0 0 205 0 0 241 0 0 190 0 0 188  
 0 231 0 0 205 0 0 216 0 0 200 0 0 209 0 0 193 0 0 195 0 0 212 0 0 219 0 0 211 0 0 199 0 0 232 0 0 219  
 0 0 194 0 0 183 0 0 192 0 0 179 0 0 206 0 0 226 0 211 0 0 218 0 0 201 0 0 194 0 0 190 0 0 181 0 0 196  
 0 0 174 0 0 185 0 0 212 0 0 167 0 0 195 0 0 193 0 0 203 0 0 198 0 0 195 0 0 194 0 0 197 0 0 179 0 176  
 0 0 186 0 0 178 0 0 176 0 0 190 0 0 170 0 0 176 0 0 182 0 0 152 0 0 176 0 0 177 0 0 189 0 0 161 0 0  
 156 0 0 163 0 0 167 0 0 150 0 0 149 0 0 157 0 177 0 0 144 0 0 151 0 0 138 0 0 133 0 0 161 0 0 138 0 0  
 130 0 0 122 0 0 136 0 0 130 0 0 128 0 0 131 0 0 131 0 0 136 0 0 139 0 0 128 0 0 117 0 0 108 0 131 0 0  
 130 0 0 107 0 0 117 0 0 105 0 0 110 0 0 119 0 0 104 0 0 117 0 0 120 0 0 126 0 0 100 0 0 121 0 0 106 0  
 0 121 0 0 123 0 0 143 0 0 110 0 0 118 0 106 0 0 106 0 0 109 0 0 104 0 0 102 0 0 110 0 0 92 0 0 98 0 0  
 96 0 0 86 0 0 85 0 0 88 0 0 92 0 0 94 0 0 84 0 0 81 0 0 95 0 0 85 0 0 82 0 79 0 0 79 0 0 83 0 0 79 0 0 73  
 0 0 63 0 0 80 0 0 68 0 0 91 0 0 91 0 0 84 0 0 57 0 0 65 0 0 92 0 0 61 0 0 70 0 0 65 0 0 81 0 0 70 0 65 0 0









3716 0 0 4200 0 0 4448 0 4644 0 0 5092 0 0 5399 0 0 5615 0 0 5742 0 0 5801 0 0 6056 0 0 5943 0 0  
6236 0 0 6310 0 0 6370 0 6286 0 0 6303 0 0 6194 0 0 6147 0 0 6200 0 0 6146 0 0 6162 0 0 6106 0 0  
6094 0 0 6055 0 0 6005 0 0 6158 0 6291 0 0 6303 0 0 6239 0 0 6489 0 0 6639 0 0 6889 0 0 7054 0 0  
7134 0 0 7662 0 0 7706 0 0 8013 0 8464 0 0 8630 0 0 9202 0 0 9720 0 0 10024 0 0 10333 0 0 10799 0  
0 11133 0 0 11663 0 0 11983 0 0 12192 0 12475 0 0 12668 0 0 12980 0 0 13218 0 0 13029 0 0 13097 0  
0 13026 0 0 13047 0 0 12853 0 0 12459 0 0 12210 0 12047 0 0 11863 0 0 11357 0 0 11009 0 0 10890 0  
0 10279 0 0 9851 0 0 9662 0 0 9302 0 0 8801 0 0 8580 0 8299 0 0 8026 0 0 7463 0 0 7429 0 0 7061 0 0  
6840 0 0 6679 0 0 6532 0 0 6396 0 0 6175 0 0 5999 0 5888 0 0 5796 0 0 5747 0 0 5708 0 0 5771 0 0  
5788 0 0 5689 0 0 5626 0 0 5698 0 0 5878 0 0 5905 0 5945 0 0 6047 0 0 6211 0 0 6330 0 0 6479 0 0  
6605 0 0 6850 0 0 6723 0 0 7120 0 0 7213 0 0 7495 0 0 7759 0 7869 0 0 8035 0 0 8310 0 0 8234 0 0  
8406 0 0 8831 0 0 9084 0 0 9099 0 0 9169 0 0 9502 0 0 9590 0 9951 0 0 10369 0 0 10517 0 0 10825 0  
0 10806 0 0 11214 0 0 11311 0 0 11419 0 0 11879 0 0 12044 0 0 12306 0 12619 0 0 12996 0 0 13113 0  
0 13455 0 0 13839 0 0 13991 0 0 14107 0 0 14640 0 0 14580 0 0 14951 0 0 14983 0 15292 0 0 15389 0  
0 15352 0 0 15720 0 0 15746 0 0 15730 0 0 15866 0 0 15838 0 0 16062 0 0 15942 0 0 16114 0 16223 0  
0 15995 0 0 16103 0 0 16247 0 0 15943 0 0 15905 0 0 16024 0 0 16233 0 0 16060 0 0 16311 0 0 16208  
0 16388 0 0 16504 0 0 16278 0 0 16686 0 0 16854 0 0 16732 0 0 16964 0 0 17050 0 0 16962 0 0 17308  
0 0 17281 0 0 17331 0 17277 0 0 17375 0 0 17593 0 0 17656 0 0 17462 0 0 17614 0 0 17682 0 0 17653  
0 0 17601 0 0 18029 0 0 17803 0 17957 0 0 17911 0 0 18225 0 0 18316 0 0 18485 0 0 18345 0 0 18441  
0 0 18504 0 0 18656 0 0 18611 0 0 19142 0 18935 0 0 19108 0 0 19045 0 0 19198 0 0 19115 0 0 19398  
0 0 19434 0 0 19516 0 0 19500 0 0 19591 0 0 20051 0 20045 0 0 20214 0 0 20359 0 0 20525 0 0 20339  
0 0 20556 0 0 20793 0 0 20889 0 0 20719 0 0 21509 0 0 21572 0 21852 0 0 21849 0 0 22493 0 0 22398  
0 0 22681 0 0 22826 0 0 23060 0 0 23335 0 0 23224 0 0 24107 0 0 24220 0 24354 0 0 24564 0 0 25229  
0 0 24941 0 0 25458 0 0 25703 0 0 25762 0 0 26088 0 0 26515 0 0 26559 0 0 27086 0 27285 0 0 27377  
0 0 27597 0 0 27680 0 0 28115 0 0 28271 0 0 28678 0 0 28870 0 0 29160 0 0 29338 0 0 29871 0 0  
30221 0 30062 0 0 31283 0 0 31601 0 0 31563 0 0 31855 0 0 32321 0 0 33015 0 0 32567 0 0 33646 0 0  
33939 0 0 34349 0 35106 0 0 35581 0 0 35344 0 0 36253 0 0 36484 0 0 36875 0 0 37140 0 0 37798 0 0  
38551 0 0 38753 0 0 38925 0 39576 0 0 39903 0 0 40245 0 0 40746 0 0 41284 0 0 41566 0 0 41733 0 0  
41919 0 0 42192 0 0 42956 0 0 43120 0 43170 0 0 43515 0 0 44040 0 0 44075 0 0 44661 0 0 44712 0 0  
45700 0 0 45356 0 0 45867 0 0 46052 0 0 46966 0 46584 0 0 47083 0 0 47351 0 0 47610 0 0 47795 0 0  
48465 0 0 48593 0 0 48842 0 0 49265 0 0 49613 0 0 49691 0 50353 0 0 50748 0 0 50901 0 0 51694 0 0  
52261 0 0 52216 0 0 52999 0 0 53399 0 0 53581 0 0 53942 0 0 54336 0 0 55080 0 55842 0 0 55681 0 0  
56428 0 0 57345 0 0 58019 0 0 58410 0 0 58644 0 0 59165 0 0 60168 0 0 60860 0 0 61329 0 62215 0 0  
62689 0 0 63827 0 0 63823 0 0 64584 0 0 65325 0 0 65710 0 0 66768 0 0 67669 0 0 67587 0 0 68825 0  
69308 0 0 69891 0 0 70482 0 0 71462 0 0 72210 0 0 72642 0 0 73908 0 0 74149 0 0 74909 0 0 75826 0  
0 76336 0 76611 0 0 78024 0 0 79053 0 0 79471 0 0 79584 0 0 81297 0 0 82141 0 0 82964 0 0 83779 0  
0 84585 0 0 85430 0 86550 0 0 86869 0 0 87377 0 0 88575 0 0 89581 0 0 90560 0 0 91708 0 0 92073 0  
0 92782 0 0 94207 0 0 94845 0 96286 0 0 96882 0 0 98704 0 0 99146 0 0 100228 0 0 101392 0 0  
101961 0 0 103039 0 0 104210 0 0 104491 0 0 105207 0 106574 0 0 107572 0 0 108446 0 0 108760 0  
0 110436 0 0 110444 0 0 111198 0 0 112099 0 0 112941 0 0 113396 0 0 113869 0 0 114953 0 115588  
0 0 115826 0 0 116108 0 0 116424 0 0 117504 0 0 117703 0 0 117906 0 0 118856 0 0 119169 0 0  
119556 0 0 119837 0 120258 0 0 121435 0 0 120604 0 0 121400 0 0 121497 0 0 121647 0 0 122062 0  
0 122140 0 0 122843 0 0 122992 0 0 122564 0 122636 0 0 124154 0 0 123555 0 0 123731 0 0 123529

0 0 123639 0 0 123235 0 0 124039 0 0 124627 0 0 123675 0 0 124006 0 123713 0 0 124140 0 0  
 123775 0 0 123324 0 0 123671 0 0 121869 0 0 123193 0 0 122602 0 0 121706 0 0 121593 0 0 121441  
 0 120783 0 0 120260 0 0 120036 0 0 120162 0 0 120104 0 0 118919 0 0 119331 0 0 118539 0 0  
 118132 0 0 118263 0 0 117722 0 117851 0 0 116971 0 0 116558 0 0 116881 0 0 116241 0 0 116562 0  
 0 116636 0 0 116506 0 0 116262 0 0 117022 0 0 115981 0 0 116306 0 116601 0 0 117107 0 0 117100  
 0 0 117567 0 0 117274 0 0 119345 0 0 119187 0 0 119804 0 0 119592 0 0 121423 0 0 121637 0  
 122588 0 0 124674 0 0 124533 0 0 125630 0 0 126544 0 0 128325 0 0 129060 0 0 130152 0 0 131691  
 0 0 132973 0 0 133617 0 134710 0 0 135943 0 0 136673 0 0 138503 0 0 138912 0 0 139699 0 0  
 140020 0 0 141059 0 0 141350 0 0 141946 0 0 142584 0 142351 0 0 142716 0 0 142152 0 0 141733 0  
 0 142025 0 0 140409 0 0 139588 0 0 139009 0 0 137431 0 0 136754 0 0 134913 0 134221 0 0 132665  
 0 0 131046 0 0 129639 0 0 127833 0 0 125632 0 0 123674 0 0 122333 0 0 120517 0 0 118428 0 0  
 117916 0 115790 0 0 114244 0 0 112591 0 0 110805 0 0 108991 0 0 108219 0 0 107066 0 0 104860 0  
 0 103883 0 0 103057 0 0 101415 0 100003 0 0 98861 0 0 97045 0 0 95474 0 0 94490 0 0 92745 0 0  
 91935 0 0 90946 0 0 89293 0 0 88314 0 0 87691 0 0 86241 0 84922 0 0 83293 0 0 82872 0 0 81107 0 0  
 80475 0 0 79726 0 0 79005 0 0 77624 0 0 76605 0 0 75033 0 0 74996 0 74003 0 0 72759 0 0 72167 0 0  
 71425 0 0 70334 0 0 69505 0 0 68770 0 0 67961 0 0 66895 0 0 66723 0 0 64822 0 64018 0 0 63713 0 0  
 62490 0 0 61216 0 0 60621 0 0 59732 0 0 58743 0 0 57484 0 0 56580 0 0 55910 0 0 55478 0 54124 0 0  
 53326 0 0 52690 0 0 51731 0 0 51099 0 0 50095 0 0 49923 0 0 48945 0 0 48283 0 0 47995 0 0 47480 0  
 46235 0 0 45831 0 0 45594 0 0 45221 0 0 44650 0 0 44452 0 0 44228 0 0 43705 0 0 43485 0 0 43036 0  
 0 42982 0 42800 0 0 42439 0 0 42207 0 0 41855 0 0 41984 0 0 41537 0 0 41445 0 0 41531 0 0 40957 0  
 0 41021 0 0 41213 0 40465 0 0 40459 0 0 40411 0 0 39941 0 0 39807 0 0 39817 0 0 39375 0 0 39276 0  
 0 39535 0 0 38723 0 0 38769 0 0 38347 0 38367 0 0 38185 0 0 38339 0 0 38045 0 0 37462 0 0 37118 0  
 0 36961 0 0 36936 0 0 36591 0 0 36235 0 0 36538 0 36204 0 0 36145 0 0 36072 0 0 36137 0 0 35582 0  
 0 35552 0 0 35353 0 0 35291 0 0 35345 0 0 34932 0 0 35143 0 35066 0 0 34768 0 0 34710 0 0 34986 0  
 0 34515 0 0 34442 0 0 34695 0 0 34550 0 0 34740 0 0 34214 0 0 34235 0 34313 0 0 34166 0 0 34146 0  
 0 33914 0 0 33864 0 0 33938 0 0 33529 0 0 33663 0 0 33706 0 0 33701 0 0 33477 0 33531 0 0 33621 0  
 0 33397 0 0 32851 0 0 33202 0 0 32956 0 0 33151 0 0 32805 0 0 33379 0 0 33155 0 0 32843 0 32732 0  
 0 32350 0 0 32274 0 0 32259 0 0 32817 0 0 32191 0 0 32310 0 0 32642 0 0 32774 0 0 32382 0 0 32106  
 0 0 32571 0 32446 0 0 32573 0 0 32352 0 0 32362 0 0 32307 0 0 32523 0 0 32279 0 0 32471 0 0 32483  
 0 0 32626 0 0 32633 0 32576 0 0 32320 0 0 32067 0 0 32360 0 0 32333 0 0 32394 0 0 32225 0 0 32267  
 0 0 32535 0 0 32847 0 0 32677 0 32769 0 0 32746 0 0 32672 0 0 32690 0 0 32642 0 0 32904 0 0 32960  
 0 0 33098 0 0 33150 0 0 32859 0 0 33227 0 32926 0 0 33325 0 0 33329 0 0 33048 0 0 33567 0 0 33477  
 0 0 33802 0 0 33399 0 0 33287 0 0 33594 0 0 33113 0 33482 0 0 33596 0 0 34010 0 0 33636 0 0 33748  
 0 0 33774 0 0 33734 0 0 33839 0 0 33548 0 0 33818 0 0 33534 0 33398 0 0 33739 0 0 33778 0 0 33619  
 0 0 34265 0 0 33986 0 0 33689 0 0 34174 0 0 33882 0 0 34068 0 0 34317 0 34114 0 0 34153 0 0 34052  
 0 0 34537 0 0 34588 0 0 34208 0 0 34852 0 0 34902 0 0 34604 0 0 34757 0 0 34671 0 0 34923 0 35236  
 0 0 35549 0 0 35510 0 0 35337 0 0 35339 0 0 35185 0 0 35416 0 0 35738 0 0 35659 0 0 36090 0 0  
 35892 0 36090 0 0 36556 0 0 36517 0 0 36365 0 0 36541 0 0 36777 0 0 37023 0 0 36969 0 0 37175 0 0  
 37336 0 0 37383 0 37542 0 0 37236 0 0 37777 0 0 38264 0 0 37985 0 0 37878 0 0 38292 0 0 38125 0 0  
 39023 0 0 38660 0 0 39334 0 39447 0 0 39132 0 0 39900 0 0 39324 0 0 39534 0 0 40177 0 0 40447 0 0  
 40442 0 0 40621 0 0 40828 0 0 41038 0 41111 0 0 41518 0 0 41401 0 0 41558 0 0 41754 0 0 42138 0 0  
 42043 0 0 41664 0 0 42187 0 0 42098 0 0 42293 0 42711 0 0 42821 0 0 43017 0 0 42921 0 0 42942 0 0

42989 0 0 43361 0 0 43229 0 0 43298 0 0 43895 0 0 43688 0 0 43885 0 43940 0 0 43841 0 0 43960 0 0  
 43840 0 0 44215 0 0 44027 0 0 44317 0 0 44302 0 0 44400 0 0 44372 0 0 44444 0 44753 0 0 44240 0 0  
 44303 0 0 44562 0 0 44637 0 0 44442 0 0 44824 0 0 44727 0 0 44405 0 0 44518 0 0 44492 0 44780 0 0  
 44793 0 0 44635 0 0 44332 0 0 44792 0 0 44867 0 0 44409 0 0 44800 0 0 44815 0 0 44776 0 0 44246 0  
 44694 0 0 44243 0 0 44598 0 0 44511 0 0 44538 0 0 44228 0 0 44283 0 0 44490 0 0 44409 0 0 44365 0  
 0 44592 0 44794 0 0 44503 0 0 43904 0 0 44051 0 0 44572 0 0 44092 0 0 44394 0 0 44404 0 0 44133 0  
 0 43986 0 0 44563 0 44521 0 0 44678 0 0 44231 0 0 44552 0 0 44314 0 0 44212 0 0 44072 0 0 44205 0  
 0 44439 0 0 43978 0 0 43736 0 43897 0 0 43829 0 0 43940 0 0 43788 0 0 44050 0 0 44208 0 0 43853 0  
 0 43485 0 0 43438 0 0 43673 0 0 44146 0 0 43902 0 43610 0 0 43311 0 0 43863 0 0 43522 0 0 43028 0  
 0 43226 0 0 43078 0 0 43073 0 0 43203 0 0 42921 0 0 43122 0 42823 0 0 42744 0 0 42706 0 0 43129 0  
 0 42835 0 0 42470 0 0 42621 0 0 42860 0 0 42702 0 0 42644 0 0 42657 0 42632 0 0 42258 0 0 42368 0  
 0 42447 0 0 42124 0 0 42453 0 0 42434 0 0 41942 0 0 42389 0 0 42207 0 0 42484 0 42445 0 0 42085 0  
 0 41953 0 0 42102 0 0 41749 0 0 41817 0 0 41963 0 0 41758 0 0 41862 0 0 41330 0 0 41425 0 41241 0  
 0 41613 0 0 41286 0 0 41428 0 0 41562 0 0 41430 0 0 41383 0 0 41220 0 0 41504 0 0 41121 0 0 41223  
 0 41155 0 0 41125 0 0 40897 0 0 40788 0 0 40941 0 0 41136 0 0 41024 0 0 40921 0 0 41014 0 0 41066  
 0 0 40820 0 0 40777 0 40723 0 0 40979 0 0 41433 0 0 41085 0 0 41143 0 0 41319 0 0 40879 0 0 41498  
 0 0 41104 0 0 40916 0 0 41054 0 41079 0 0 41111 0 0 40948 0 0 40938 0 0 41148 0 0 41511 0 0 41429  
 0 0 40862 0 0 41447 0 0 41597 0 0 41550 0 41370 0 0 41197 0 0 41699 0 0 41163 0 0 41648 0 0 41462  
 0 0 41849 0 0 41543 0 0 41382 0 0 41425 0 0 41660 0 41961 0 0 41779 0 0 41462 0 0 41781 0 0 41840  
 0 0 42114 0 0 41885 0 0 42357 0 0 41855 0 0 41854 0 0 41986 0 42097 0 0 42080 0 0 42506 0 0 42368  
 0 0 42353 0 0 42326 0 0 42565 0 0 42660 0 0 42478 0 0 42482 0 0 42888 0 42749 0 0 42842 0 0 42909  
 0 0 43447 0 0 43037 0 0 43152 0 0 43295 0 0 43498 0 0 43598 0 0 43534 0 0 43601 0 43684 0 0 43746  
 0 0 43964 0 0 43933 0 0 44383 0 0 44426 0 0 44167 0 0 44974 0 0 44934 0 0 45245 0 0 44998 0 0  
 45499 0 45211 0 0 45559 0 0 45842 0 0 46159 0 0 46246 0 0 46116 0 0 46451 0 0 46289 0 0 46819 0 0  
 47034 0 0 47026 0 47377 0 0 47448 0 0 47912 0 0 48431 0 0 47868 0 0 47999 0 0 48602 0 0 48793 0 0  
 48547 0 0 48818 0 0 49405 0 49375 0 0 49575 0 0 50267 0 0 50088 0 0 50115 0 0 50247 0 0 50369 0 0  
 51129 0 0 50907 0 0 51296 0 0 51790 0 51917 0 0 51522 0 0 52277 0 0 52550 0 0 52819 0 0 52470 0 0  
 53352 0 0 53595 0 0 53417 0 0 53850 0 0 53896 0 53895 0 0 54720 0 0 54985 0 0 54895 0 0 55157 0 0  
 55386 0 0 55233 0 0 55842 0 0 55878 0 0 56031 0 0 56096 0 56377 0 0 56431 0 0 56586 0 0 57133 0 0  
 57342 0 0 57427 0 0 57477 0 0 57469 0 0 58226 0 0 58352 0 0 57896 0 58658 0 0 58483 0 0 58498 0 0  
 59314 0 0 58915 0 0 59326 0 0 59723 0 0 59737 0 0 59879 0 0 59804 0 0 59793 0 0 59999 0 60453 0 0  
 60381 0 0 60287 0 0 60232 0 0 60727 0 0 60415 0 0 60751 0 0 60910 0 0 61688 0 0 61218 0 0 61016 0  
 61425 0 0 61419 0 0 61297 0 0 61679 0 0 61362 0 0 61465 0 0 61793 0 0 62264 0 0 62272 0 0 61908 0  
 0 62033 0 61652 0 0 62148 0 0 62063 0 0 61783 0 0 62121 0 0 61916 0 0 62092 0 0 62060 0 0 62229 0  
 0 62266 0 0 62368 0 62122 0 0 62294 0 0 62581 0 0 61916 0 0 62134 0 0 62339 0 0 62325 0 0 62771 0  
 0 63021 0 0 62424 0 0 62792 0 62785 0 0 62320 0 0 62211 0 0 62523 0 0 62570 0 0 63191 0 0 62684 0  
 0 63183 0 0 62907 0 0 62971 0 0 62447 0 62461 0 0 62767 0 0 63423 0 0 62859 0 0 62479 0 0 63050 0  
 0 62535 0 0 62798 0 0 62239 0 0 62499 0 0 62904 0 0 62586 0 62578 0 0 62633 0 0 62581 0 0 62448 0  
 0 62845 0 0 62461 0 0 62293 0 0 62693 0 0 62610 0 0 62248 0 0 62216 0 62418 0 0 62568 0 0 62236 0  
 0 62296 0 0 62376 0 0 62006 0 0 62113 0 0 61579 0 0 61683 0 0 61596 0 0 61351 0 61504 0 0 61024 0  
 0 61255 0 0 60747 0 0 60677 0 0 60133 0 0 60040 0 0 60394 0 0 59979 0 0 60413 0 0 59843 0 59423 0  
 0 58861 0 0 59061 0 0 58717 0 0 58757 0 0 58840 0 0 58290 0 0 57816 0 0 58260 0 0 57340 0 0 57367

0 57231 0 0 56758 0 0 56935 0 0 56820 0 0 56247 0 0 56060 0 0 55939 0 0 55964 0 0 55233 0 0 55357  
0 0 55490 0 54900 0 0 54826 0 0 54888 0 0 54423 0 0 54826 0 0 54689 0 0 54309 0 0 54308 0 0 54020  
0 0 53405 0 0 53681 0 53198 0 0 52830 0 0 53012 0 0 52834 0 0 52668 0 0 52796 0 0 52127 0 0 52039  
0 0 51920 0 0 51925 0 0 51367 0 0 51097 0 51352 0 0 51033 0 0 50906 0 0 50570 0 0 50142 0 0 50283  
0 0 50164 0 0 49839 0 0 49896 0 0 50064 0 0 49420 0 49557 0 0 49163 0 0 49394 0 0 49076 0 0 48732  
0 0 48784 0 0 48383 0 0 48242 0 0 47961 0 0 48551 0 0 47955 0 48041 0 0 48117 0 0 47877 0 0 47798  
0 0 47604 0 0 47583 0 0 47521 0 0 47319 0 0 47330 0 0 47146 0 0 46819 0 47014 0 0 46758 0 0 46362  
0 0 46381 0 0 45927 0 0 46348 0 0 46155 0 0 46095 0 0 45738 0 0 45878 0 0 45541 0 45232 0 0 44834  
0 0 44641 0 0 44933 0 0 44504 0 0 44256 0 0 44265 0 0 44126 0 0 43549 0 0 43759 0 0 43349 0 43305  
0 0 42869 0 0 42199 0 0 42373 0 0 42495 0 0 42397 0 0 41831 0 0 41688 0 0 41505 0 0 41300 0 0  
41249 0 0 40815 0 40725 0 0 40418 0 0 40524 0 0 40166 0 0 40010 0 0 40131 0 0 39751 0 0 39565 0 0  
39268 0 0 39201 0 0 38605 0 38886 0 0 38357 0 0 38333 0 0 38381 0 0 38300 0 0 38141 0 0 37818 0 0  
37549 0 0 37841 0 0 37488 0 0 37145 0 36976 0 0 37089 0 0 36581 0 0 36869 0 0 36784 0 0 36524 0 0  
36219 0 0 36121 0 0 35727 0 0 35638 0 0 35765 0 35995 0 0 35429 0 0 35054 0 0 34821 0 0 34964 0 0  
34636 0 0 34553 0 0 34241 0 0 33804 0 0 34191 0 0 33558 0 33327 0 0 33157 0 0 32917 0 0 32851 0 0  
32727 0 0 32290 0 0 32177 0 0 32252 0 0 31387 0 0 31770 0 0 31608 0 31047 0 0 31014 0 0 30923 0 0  
30928 0 0 30564 0 0 30195 0 0 30273 0 0 29977 0 0 29625 0 0 29660 0 0 29947 0 29587 0 0 29381 0 0  
29210 0 0 29481 0 0 29443 0 0 29136 0 0 28900 0 0 28780 0 0 28643 0 0 28391 0 0 28532 0 0 28409 0  
28404 0 0 28430 0 0 28186 0 0 28176 0 0 27991 0 0 28048 0 0 28302 0 0 28045 0 0 27934 0 0 27509 0  
0 27618 0 27695 0 0 27369 0 0 27630 0 0 27408 0 0 26942 0 0 27081 0 0 27263 0 0 27165 0 0 27391 0  
0 26872 0 0 26632 0 26759 0 0 26526 0 0 26552 0 0 26324 0 0 26161 0 0 25951 0 0 25997 0 0 25963 0  
0 26148 0 0 25709 0 0 25558 0 25529 0 0 25300 0 0 25427 0 0 25308 0 0 25235 0 0 25045 0 0 25011 0  
0 24977 0 0 24803 0 0 24691 0 0 24613 0 24512 0 0 24598 0 0 24802 0 0 24588 0 0 24674 0 0 24626 0  
0 24508 0 0 24555 0 0 24702 0 0 24793 0 0 24696 0 24783 0 0 24891 0 0 24629 0 0 25026 0 0 25203 0  
0 24863 0 0 25000 0 0 25234 0 0 24920 0 0 25112 0 0 25066 0 0 25488 0 25513 0 0 25443 0 0 25457 0  
0 25210 0 0 25185 0 0 25285 0 0 25723 0 0 25696 0 0 25124 0 0 25288 0 0 25316 0 25167 0 0 25187 0  
0 24993 0 0 24822 0 0 24627 0 0 24497 0 0 24376 0 0 24212 0 0 24044 0 0 23839 0 0 23650 0 23331 0  
0 23101 0 0 22875 0 0 22815 0 0 22642 0 0 22518 0 0 22082 0 0 21894 0 0 21770 0 0 21133 0 0 21005  
0 21070 0 0 20472 0 0 20241 0 0 20195 0 0 20088 0 0 19845 0 0 19652 0 0 19534 0 0 19414 0 0 19035  
0 0 19110 0 18835 0 0 18665 0 0 18633 0 0 18242 0 0 18088 0 0 18100 0 0 17945 0 0 18066 0 0 17864  
0 0 17832 0 0 17419 0 17541 0 0 17392 0 0 17418 0 0 17468 0 0 17347 0 0 17037 0 0 17244 0 0 17336  
0 0 17153 0 0 16752 0 0 16874 0 16973 0 0 17023 0 0 16937 0 0 16900 0 0 16824 0 0 16965 0 0 16865  
0 0 16940 0 0 16826 0 0 16866 0 0 17027 0 0 17036 0 16858 0 0 16970 0 0 17015 0 0 17188 0 0 17174  
0 0 17226 0 0 16868 0 0 17199 0 0 17386 0 0 17433 0 0 17476 0 17312 0 0 17314 0 0 17525 0 0 17656  
0 0 17630 0 0 17795 0 0 17978 0 0 17752 0 0 17886 0 0 18161 0 0 18220 0 18203 0 0 18266 0 0 18396  
0 0 18564 0 0 18469 0 0 18291 0 0 18464 0 0 18725 0 0 18381 0 0 18626 0 0 18466 0 18839 0 0 18722  
0 0 18640 0 0 18372 0 0 18458 0 0 18407 0 0 18677 0 0 18588 0 0 18346 0 0 18200 0 0 18076 0 17925  
0 0 17944 0 0 17687 0 0 17712 0 0 17430 0 0 16969 0 0 17142 0 0 16696 0 0 16602 0 0 16705 0 0  
16289 0 16121 0 0 15872 0 0 15550 0 0 15572 0 0 15225 0 0 14791 0 0 14325 0 0 14364 0 0 13867 0 0  
13504 0 0 13324 0 13015 0 0 12880 0 0 12684 0 0 12373 0 0 11959 0 0 11713 0 0 11429 0 0 10988 0 0  
10558 0 0 10727 0 0 10274 0 0 9970 0 9864 0 0 9603 0 0 9264 0 0 9005 0 0 8808 0 0 8744 0 0 8392 0  
0 8311 0 0 8159 0 0 7965 0 0 7471 0 7519 0 0 7259 0 0 6938 0 0 7090 0 0 6778 0 0 6752 0 0 6697 0 0

6439 0 0 6204 0 0 6193 0 0 5946 0 5721 0 0 5622 0 0 5451 0 0 5478 0 0 5267 0 0 5072 0 0 4933 0 0  
 4814 0 0 4646 0 0 4555 0 0 4413 0 4282 0 0 4155 0 0 4173 0 0 3981 0 0 3863 0 0 3779 0 0 3603 0 0  
 3545 0 0 3393 0 0 3379 0 0 3332 0 3223 0 0 3142 0 0 3134 0 0 3034 0 0 2847 0 0 2848 0 0 2828 0 0  
 2691 0 0 2753 0 0 2558 0 0 2522 0 2560 0 0 2484 0 0 2464 0 0 2407 0 0 2363 0 0 2354 0 0 2301 0 0  
 2173 0 0 2177 0 0 2219 0 0 2191 0 0 2231 0 2080 0 0 2012 0 0 1955 0 0 1989 0 0 1944 0 0 1870 0 0  
 1892 0 0 1772 0 0 1683 0 0 1639 0 0 1617 0 1521 0 0 1555 0 0 1505 0 0 1393 0 0 1402 0 0 1295 0 0  
 1205 0 0 1189 0 0 1107 0 0 1109 0 0 1071 0 1045 0 0 953 0 0 930 0 0 897 0 0 868 0 0 855 0 0 753 0 0  
 712 0 0 704 0 0 637 0 0 618 0 570 0 0 530 0 0 550 0 0 497 0 0 489 0 0 469 0 0 448 0 0 437 0 0 424 0 0  
 377 0 0 384 0 346 0 0 312 0 0 323 0 0 290 0 0 290 0 0 274 0 0 264 0 0 249 0 0 222 0 0 247 0 0 226 0  
 241 0 0 200 0 0 176 0 0 187 0 0 184 0 0 170 0 0 179 0 0 168 0 0 161 0 0 156 0 0 159 0 157 0 0 145 0 0  
 154 0 0 138 0 0 144 0 0 136 0 0 128 0 0 145 0 0 121 0 0 120 0 0 121 0 0 124 0 111 0 0 95 0 0 107 0 0  
 79 0 0 133 0 0 89 0 0 113 0 0 92 0 0 84 0 0 99 0 0 95 0 95 0 0 85 0 0 93 0 0 88 0 0 87 0 0 98 0 0 81 0 0  
 66 0 0 96 0 0 85 0 0 92 0 91 0 0 88 0 0 97 0 0 63 0 0 74 0 0 84 0 0 90 0 0 87 0 0 64 0 0 89 0 0 74 0 74 0  
 0 58 0 0 68 0 0 81 0 0 77 0 0 74 0 0 79 0 0 70 0 0 73 0 0 80 0 0 74 0 83 0 0 70 0 0 77 0 0 64 0 0 63 0 0  
 71 0 0 67 0 0 62 0 0 69 0 0 76 0 0 64 0 58 0 0 51 0 0 66 0 0 64 0 0 71 0 0 63 0 0 55 0 0 50 0 0 65 0 0 70  
 0 55 0 0 67 0 61 0 0 57 0 0 59 0 0 57 0 0 72 0 0 60 0 0 75 0 0 57 0 0 58 0 0 53 0 0 61 0 49 0 0 48 0 0  
 53 0 0 59 0 0 65 0 0 67 0 0 66 0 0 58 0 0 69 0 0 54 0 0 54 0 47 0 0 41 0 0 57 0 0 67 0 0 40 0 0 51 0 0 56  
 0 61 0 0 60 0 0 68 0 0 60 0 67 0 0 73 0 0 57 0 0 47 0 0 58 0 0 47 0 0 54 0 0 56 0 0 59 0 0 50 0 0 57 0  
 58 0 0 45 0 0 57 0 0 51 0 0 52 0 0 57 0 0 53 0 0 53 0 0 40 0 0 62 0 0 47 0 59 0 0 54 0 0 58 0 0 58 0 0 57  
 0 0 42 0 0 49 0 0 56 0 0 50 0 0 46 0 0 55 0 46 0 0 46 0 0 57 0 0 46 0 0 62 0 0 61 0 0 45 0 0 38 0 0 57 0 0  
 57 0 0 65 0 0 48 0 48 0 0 48 0 0 46 0 0 53 0 0 42 0 0 45 0 0 49 0 0 55 0 0 53 0 0 46 0 0 58 0 35 0 0 41 0  
 0 45 0 0 55 0 0 37 0 0 35 0 0 37 0 0 53 0 0 54 0 0 39 0 0 46 0 48 0 0 49 0 0 55 0 0 43 0 0 46 0 0 53 0 0  
 47 0 0 43 0 0 43 0 0 62 0 0 51 0 51 0 0 61 0 0 50 0 0 44 0 0 43 0 0 54 0 0 42 0 0 55 0 0 54 0 0 54 0 0 42  
 0 61 0 0 48 0 0 42 0 0 42 0 0 50 0 0 53 0 0 53 0 0 43 0 0 51 0 0 42 0 0 60 0 49 0 0 60 0 0 53 0 0 63 0 0  
 52 0 0 58 0 0 45 0 0 49 0 0 56 0 0 40 0 0 31 0 0 57 0 58 0 0 57 0 0 51 0 0 50 0 0 61 0 0 52 0 0 50 0 0 62  
 0 0 55 0 0 64 0 0 70 0 59 0 0 56 0 0 46 0 0 46 0 0 56 0 0 60 0 0 37 0 0 74 0 0 59 0 0 57 0 0 48 0 53 0 0  
 55 0 0 54 0 0 56 0 0 55 0 0 46 0 0 49 0 0 54 0 0 54 0 0 45 0 0 51 0 63 0 0 61 0 0 59 0 0 51 0 0 62 0 0 57  
 0 0 56 0 0 44 0 0 71 0 0 72 0 0 65 0 58 0 0 56 0 0 60 0 0 53 0 0 65 0 0 77 0 0 47 0 0 72 0 0 71 0 0 69 0 0  
 63 0 67 0 0 67 0 0 64 0 0 61 0 0 69 0 0 62 0 0 78 0 0 77 0 0 71 0 0 66 0 0 67 0 72 0 0 57 0 0 67 0 0 67 0  
 0 65 0 0 79 0 0 57 0 0 73 0 0 70 0 0 67 0 0 65 0 0 64 0 67 0 0 58 0 0 55 0 0 65 0 0 52 0 0 72 0 0 72 0 0  
 57 0 0 66 0 0 67 0 0 65 0 75 0 0 52 0 0 72 0 0 48 0 0 65 0 0 55 0 0 71 0 0 62 0 0 65 0 0 64 0 0 74 0 80 0  
 0 83 0 0 72 0 0 69 0 0 73 0 0 64 0 0 52 0 0 61 0 0 65 0 0 64 0 0 64 0 63 0 0 71 0 0 68 0 0 65 0 0 59 0 0  
 67 0 0 76 0 0 66 0 0 59 0 0 65 0 0 57 0 71 0 0 55 0 0 53 0 0 75 0 0 69 0 0 76 0 0 55 0 0 54 0 0 63 0 0 72  
 0 0 60 0 66 0 0 59 0 0 54 0 0 86 0 0 62 0 0 57 0 0 58 0 0 72 0 0 54 0 0 70 0 0 55 0 65 0 0 54 0 0 68 0 0  
 80 0 0 53 0 0 72 0 0 61 0 0 62 0 0 60 0 0 47 0 0 52 0 0 72 0 68 0 0 60 0 0 65 0 0 49 0 0 49 0 0 66 0 0 64  
 0 0 75 0 0 63 0 0 61 0 0 68 0 69 0 0 73 0 0 84 0 0 59 0 0 60 0 0 56 0 0 62 0 0 75 0 0 73 0 0 66 0 0 58 0  
 63 0 0 73 0 0 54 0 0 52 0 0 58 0 0 76 0 0 62 0 0 66 0 0 56 0 0 64 0 0 48 0 48 0 0 73 0 0 50 0 0 56 0 0 66  
 0 0 49 0 0 53 0 0 51 0 0 47 0 0 66 0 0 50 0 61 0 0 68 0 0 59 0 0 53 0 0 62 0 0 53 0 0 68 0 0 55 0 0 51 0 0  
 72 0 0 65 0 76 0 0 44 0 0 67 0 0 60 0 0 67 0 0 62 0 0 63 0 0 67 0 0 64 0 0 72 0 0 71 0 0 55 0 72 0 0 60 0  
 0 48 0 0 73 0 0 69 0 0 58 0 0 80 0 0 50 0 0 64 0 0 58 0 0 60 0 73 0 0 77 0 0 52 0 0 67 0 0 47 0 0 69 0 0  
 63 0 0 66 0 0 70 0 0 55 0 0 54 0 59 0 0 44 0 0 53 0 0 44 0 0 70 0 0 51 0 0 51 0 0 54 0 0 51 0 0 62 0 0 58  
 0 56 0 0 61 0 0 54 0 0 55 0 0 46 0 0 61 0 0 60 0 0 52 0 0 52 0 0 57 0 0 52 0 66 0 0 63 0 0 38 0 0 55 0 0







811 0 0 806 0 0 818 0 0 807 0 846 0 0 813 0 0 874 0 0 836 0 802 0 0 837 0 0 822 0 0 820 0 0 835 0 842  
0 0 812 0 0 829 0 0 920 0 817 0 0 836 0 0 792 0 0 830 0 818 0 0 861 0 0 816 0 0 781 0 0 766 0 783 0 0  
831 0 0 824 0 0 807 0 795 0 0 824 0 0 834 0 0 833 0 866 0 0 844 0 0 880 0 0 812 0 861 0 0 815 0 0 798  
0 0 818 0 0 790 0 780 0 0 819 0 0 813 0 0 867 0 867 0 0 847 0 0 828 0 0 793 0 879 0 0 852 0 0 839 0 0  
809 0 823 0 0 864 0 0 830 0 0 788 0 0 845 0 839 0 0 876 0 0 882 0 0 874 0 879 0 0 867 0 0 933 0 0 927  
0 988 0 0 925 0 0 1041 0 0 1018 0 1066 0 0 1176 0 0 1297 0 0 1381 0 0 1397 0 1554 0 0 1774 0 0 1924  
0 0 2197 0 2304 0 0 2623 0 0 2736 0 0 2986 0 3079 0 0 3187 0 0 3467 0 0 3688 0 3837 0 0 3994 0 0  
4104 0 0 4192 0 0 4208 0 4272 0 0 4272 0 0 4339 0 0 4442 0 4394 0 0 4386 0 0 4262 0 0 4298 0 4300  
0 0 4308 0 0 4343 0 0 4277 0 0 4399 0 4242 0 0 4139 0 0 4137 0 0 4039 0 4070 0 0 4040 0 0 3929 0 0  
4064 0 3980 0 0 3829 0 0 3786 0 0 3702 0 3749 0 0 3865 0 0 3812 0 0 3785 0 0 3724 0 3612 0 0 3756  
0 0 3753 0 0 3685 0 3703 0 0 3808 0 0 3715 0 0 3636 0 3736 0 0 3778 0 0 3788 0 0 3827 0 3926 0 0  
3967 0 0 4052 0 0 4060 0 0 4006 0 4075 0 0 4188 0 0 4165 0 0 4235 0 4317 0 0 4303 0 0 4505 0 0  
4509 0 4518 0 0 4669 0 0 4755 0 0 4864 0 5050 0 0 5035 0 0 4894 0 0 5082 0 0 5119 0 5310 0 0 5309  
0 0 5581 0 0 5630 0 5743 0 0 5727 0 0 5837 0 0 5872 0 6091 0 0 6120 0 0 6100 0 0 6202 0 0 6190 0  
6442 0 0 6450 0 0 6606 0 0 6459 0 6522 0 0 6629 0 0 6700 0 0 6861 0 6642 0 0 6689 0 0 6886 0 0  
6880 0 6890 0 0 6723 0 0 6837 0 0 6748 0 0 6736 0 6614 0 0 6751 0 0 6765 0 0 6620 0 6696 0 0 6727  
0 0 6646 0 0 6362 0 6418 0 0 6353 0 0 6367 0 0 6396 0 6332 0 0 6115 0 0 6169 0 0 6097 0 0 6025 0  
5903 0 0 5998 0 0 5728 0 0 5749 0 5730 0 0 5757 0 0 5847 0 0 5672 0 5544 0 0 5639 0 0 5501 0 0  
5479 0 5575 0 0 5502 0 0 5569 0 0 5720 0 0 5643 0 5622 0 0 5612 0 0 5633 0 0 5619 0 5721 0 0 5659  
0 0 5601 0 0 5690 0 5683 0 0 5781 0 0 5729 0 0 5704 0 5777 0 0 5722 0 0 5655 0 0 5831 0 0 5878 0  
5975 0 0 5873 0 0 5904 0 0 5882 0 6027 0 0 5988 0 0 6029 0 0 6149 0 6116 0 0 6348 0 0 6368 0 0  
6362 0 0 6366 0 6309 0 0 6446 0 0 6675 0 0 6709 0 6890 0 0 6971 0 0 7088 0 0 7265 0 7503 0 0 7317  
0 0 7486 0 0 7772 0 7779 0 0 7856 0 0 8169 0 0 8260 0 0 8321 0 8394 0 0 8597 0 0 8774 0 0 8857 0  
8979 0 0 8991 0 0 9028 0 0 9241 0 9127 0 0 9486 0 0 9435 0 0 9442 0 9577 0 0 9681 0 0 9577 0 0  
9591 0 0 9765 0 9956 0 0 9844 0 0 9839 0 0 9686 0 9814 0 0 9804 0 0 9828 0 0 9682 0 9870 0 0 9971  
0 0 9810 0 0 9972 0 9934 0 0 9819 0 0 9978 0 0 9932 0 0 10078 0 9770 0 0 9594 0 0 9801 0 0 9853 0  
9963 0 0 9886 0 0 9918 0 0 9952 0 10112 0 0 9885 0 0 10197 0 0 10041 0 0 10123 0 10325 0 0 10043  
0 0 10424 0 0 10776 0 10308 0 0 10706 0 0 10654 0 0 10725 0 10533 0 0 10832 0 0 10644 0 0 10870 0  
11095 0 0 10888 0 0 10980 0 0 10832 0 0 11147 0 11111 0 0 11400 0 0 11445 0 0 11303 0 11337 0 0  
11464 0 0 11414 0 0 11529 0 11538 0 0 11699 0 0 11711 0 0 11895 0 12003 0 0 12042 0 0 12081 0 0  
12161 0 0 12079 0 12368 0 0 12572 0 0 12599 0 0 12655 0 12972 0 0 12915 0 0 13133 0 0 13263 0  
13366 0 0 13691 0 0 13974 0 0 14135 0 14129 0 0 14563 0 0 14694 0 0 14774 0 0 14945 0 15220 0 0  
15273 0 0 15234 0 0 15633 0 15946 0 0 16151 0 0 16137 0 0 16466 0 16759 0 0 16311 0 0 16657 0 0  
16798 0 17114 0 0 17085 0 0 17055 0 0 17101 0 0 17562 0 17574 0 0 17728 0 0 17756 0 0 17856 0  
17788 0 0 17870 0 0 17860 0 0 17956 0 17796 0 0 18010 0 0 18176 0 0 18248 0 0 18327 0 18035 0 0  
18249 0 0 18392 0 0 18218 0 18409 0 0 18465 0 0 18453 0 0 18335 0 18501 0 0 18634 0 0 18575 0 0  
18553 0 18306 0 0 18538 0 0 18602 0 0 18463 0 0 18544 0 18525 0 0 18754 0 0 18619 0 0 18717 0  
18759 0 0 18574 0 0 18497 0 0 18859 0 18691 0 0 18815 0 0 18686 0 0 18758 0 18913 0 0 18880 0 0  
18860 0 0 19041 0 0 18862 0 18940 0 0 19138 0 0 19312 0 0 19230 0 19484 0 0 19293 0 0 19509 0 0  
19822 0 19513 0 0 19473 0 0 19688 0 0 19854 0 20059 0 0 19910 0 0 19911 0 0 20192 0 0 20240 0  
20571 0 0 20613 0 0 20656 0 0 21184 0 21164 0 0 21359 0 0 21778 0 0 21484 0 21625 0 0 21961 0 0  
22298 0 0 22588 0 22540 0 0 23184 0 0 22933 0 0 23333 0 0 23382 0 23781 0 0 24148 0 0 24344 0 0

24402 0 24877 0 0 24807 0 0 25389 0 0 25193 0 25819 0 0 26215 0 0 26553 0 0 26265 0 0 26734 0  
27230 0 0 27386 0 0 27443 0 0 27765 0 28266 0 0 28299 0 0 28427 0 0 29003 0 29103 0 0 29307 0 0  
29502 0 0 29801 0 30106 0 0 30780 0 0 30773 0 0 31096 0 0 31362 0 31486 0 0 31780 0 0 31945 0 0  
32565 0 32956 0 0 32898 0 0 33265 0 0 33761 0 34136 0 0 34268 0 0 34523 0 0 35200 0 35510 0 0  
35814 0 0 36439 0 0 36462 0 0 36841 0 37355 0 0 37621 0 0 37955 0 0 37857 0 38576 0 0 38791 0 0  
39341 0 0 39372 0 39802 0 0 39774 0 0 40130 0 0 40853 0 40879 0 0 41163 0 0 41573 0 0 41889 0 0  
41825 0 42473 0 0 42821 0 0 43371 0 0 43494 0 44024 0 0 43711 0 0 44118 0 0 44541 0 44517 0 0  
44963 0 0 44954 0 0 45835 0 0 46045 0 46052 0 0 46573 0 0 46920 0 0 47159 0 47264 0 0 47521 0 0  
47633 0 0 48392 0 48020 0 0 48540 0 0 48981 0 0 49216 0 49543 0 0 49495 0 0 50336 0 0 50121 0 0  
50872 0 50816 0 0 51337 0 0 51451 0 0 52067 0 51854 0 0 52573 0 0 52968 0 0 52645 0 53109 0 0  
53224 0 0 54097 0 0 53920 0 54409 0 0 54505 0 0 55206 0 0 54743 0 0 55541 0 55833 0 0 56270 0 0  
56680 0 0 57118 0 57426 0 0 57806 0 0 58125 0 0 58922 0 59153 0 0 59462 0 0 59623 0 0 59617 0  
60348 0 0 60967 0 0 61975 0 0 62198 0 0 62309 0 62727 0 0 63455 0 0 63779 0 0 64497 0 65053 0 0  
65595 0 0 66295 0 0 66313 0 67111 0 0 67586 0 0 68311 0 0 69058 0 69474 0 0 70739 0 0 71058 0 0  
71320 0 0 72343 0 73209 0 0 73872 0 0 74689 0 0 75299 0 75684 0 0 76187 0 0 77060 0 0 77953 0  
78121 0 0 79188 0 0 80008 0 0 80386 0 0 80893 0 80899 0 0 81968 0 0 82164 0 0 82170 0 83897 0 0  
83864 0 0 84499 0 0 85573 0 85073 0 0 86203 0 0 86937 0 0 87188 0 87620 0 0 87976 0 0 89074 0 0  
89128 0 0 90097 0 90745 0 0 91015 0 0 92000 0 0 92252 0 93341 0 0 94070 0 0 93637 0 0 94561 0  
95752 0 0 96194 0 0 96717 0 0 97051 0 97132 0 0 98140 0 0 98460 0 0 99884 0 0 100246 0 100446 0  
0 100654 0 0 101064 0 0 102077 0 103341 0 0 102818 0 0 103908 0 0 104071 0 104868 0 0 105230 0  
0 106562 0 0 107247 0 107205 0 0 108493 0 0 109071 0 0 109829 0 0 110057 0 110876 0 0 112003 0  
0 112145 0 0 113016 0 114404 0 0 115027 0 0 115440 0 0 116966 0 118473 0 0 119636 0 0 120598 0  
0 121799 0 123189 0 0 124668 0 0 125868 0 0 126703 0 0 128054 0 129611 0 0 130871 0 0 131847 0  
0 133790 0 134535 0 0 136468 0 0 137588 0 0 139588 0 140374 0 0 141442 0 0 142908 0 0 144680 0  
0 145627 0 145913 0 0 147172 0 0 149367 0 0 148970 0 150857 0 0 151799 0 0 151870 0 0 152326 0  
153738 0 0 153421 0 0 154384 0 0 153357 0 154112 0 0 153944 0 0 153211 0 0 153701 0 0 152231 0  
150915 0 0 150618 0 0 149863 0 0 148727 0 146889 0 0 145558 0 0 143753 0 0 142323 0 140775 0 0  
138320 0 0 137026 0 0 135496 0 133028 0 0 131472 0 0 129200 0 0 126668 0 0 125252 0 122220 0 0  
120969 0 0 118763 0 0 117380 0 114670 0 0 113400 0 0 111121 0 0 108929 0 107658 0 0 105792 0 0  
104052 0 0 102025 0 101145 0 0 99317 0 0 97919 0 0 96952 0 0 95813 0 94224 0 0 93404 0 0 91890 0  
0 90616 0 89576 0 0 88907 0 0 87802 0 0 86771 0 85900 0 0 85289 0 0 84174 0 0 83463 0 0 82946 0  
81627 0 0 81070 0 0 80873 0 0 80462 0 79489 0 0 78704 0 0 78883 0 0 78329 0 76970 0 0 76905 0 0  
75968 0 0 75159 0 74745 0 0 74713 0 0 73730 0 0 72933 0 0 72214 0 71876 0 0 71385 0 0 70485 0 0  
69343 0 68537 0 0 67639 0 0 67710 0 0 66112 0 65991 0 0 64784 0 0 64075 0 0 63664 0 62568 0 0  
61858 0 0 61018 0 0 60658 0 0 59436 0 58720 0 0 58164 0 0 57784 0 0 56565 0 56364 0 0 55843 0 0  
55072 0 0 54461 0 54038 0 0 53003 0 0 52796 0 0 52232 0 52111 0 0 51110 0 0 50923 0 0 50342 0 0  
49751 0 49371 0 0 49332 0 0 48884 0 0 48935 0 48143 0 0 47835 0 0 47037 0 0 47146 0 46757 0 0  
46324 0 0 45971 0 0 46187 0 45798 0 0 45680 0 0 44869 0 0 44553 0 0 44379 0 44311 0 0 44103 0 0  
43565 0 0 43481 0 42733 0 0 42866 0 0 42299 0 0 42410 0 42233 0 0 41543 0 0 40705 0 0 41452 0 0  
40226 0 40290 0 0 40308 0 0 39939 0 0 39986 0 39439 0 0 39094 0 0 38618 0 0 38743 0 38418 0 0  
38322 0 0 37982 0 0 38283 0 37547 0 0 37203 0 0 37068 0 0 37034 0 0 36714 0 36600 0 0 36303 0 0  
36136 0 0 36474 0 35805 0 0 35850 0 0 35349 0 0 35521 0 35162 0 0 34903 0 0 34741 0 0 34665 0

34578 0 0 34392 0 0 34396 0 0 33808 0 0 34186 0 34114 0 0 34115 0 0 33452 0 0 33637 0 33310 0 0  
33005 0 0 33193 0 0 33004 0 32594 0 0 32529 0 0 32598 0 0 32596 0 32197 0 0 32310 0 0 31848 0 0  
31772 0 0 31978 0 31756 0 0 31805 0 0 31534 0 0 31447 0 31431 0 0 31320 0 0 31341 0 0 31202 0  
30931 0 0 31149 0 0 30938 0 0 30550 0 30311 0 0 30382 0 0 30315 0 0 30312 0 0 30319 0 30231 0 0  
30347 0 0 29709 0 0 30056 0 30090 0 0 29192 0 0 29873 0 0 29549 0 29929 0 0 29614 0 0 29477 0 0  
29492 0 0 29232 0 29302 0 0 28985 0 0 29133 0 0 29020 0 28994 0 0 28948 0 0 29138 0 0 28569 0  
29076 0 0 28686 0 0 28448 0 0 28595 0 28631 0 0 28802 0 0 28533 0 0 28539 0 0 28534 0 28663 0 0  
28396 0 0 28259 0 0 28395 0 28266 0 0 28317 0 0 28347 0 0 28296 0 28113 0 0 27902 0 0 28108 0 0  
28140 0 28072 0 0 28041 0 0 28073 0 0 28208 0 0 28048 0 28489 0 0 28041 0 0 28186 0 0 28142 0  
28175 0 0 27947 0 0 28202 0 0 27904 0 28215 0 0 28311 0 0 28458 0 0 28377 0 28426 0 0 28402 0 0  
28395 0 0 28084 0 0 28484 0 28222 0 0 28503 0 0 28436 0 0 28263 0 28470 0 0 28589 0 0 28701 0 0  
28897 0 28677 0 0 29187 0 0 28602 0 0 28792 0 0 29081 0 29234 0 0 28924 0 0 29066 0 0 29150 0  
29384 0 0 29345 0 0 29199 0 0 29253 0 29480 0 0 29757 0 0 29597 0 0 29822 0 30014 0 0 30092 0 0  
30278 0 0 30057 0 0 29927 0 30035 0 0 30428 0 0 30598 0 0 30345 0 30633 0 0 30627 0 0 30814 0 0  
30627 0 31087 0 0 31211 0 0 31361 0 0 31306 0 31588 0 0 31644 0 0 31417 0 0 31702 0 0 31981 0  
31876 0 0 31889 0 0 31689 0 0 31961 0 31983 0 0 32442 0 0 32243 0 0 32258 0 32398 0 0 32847 0 0  
32862 0 0 32820 0 33420 0 0 33218 0 0 33347 0 0 33331 0 0 33636 0 34214 0 0 33771 0 0 33922 0 0  
34225 0 34475 0 0 34271 0 0 34524 0 0 34701 0 35019 0 0 35216 0 0 35104 0 0 35535 0 35413 0 0  
35690 0 0 35438 0 0 35846 0 0 35892 0 36088 0 0 36262 0 0 36464 0 0 36637 0 36650 0 0 36694 0 0  
36738 0 0 36839 0 36558 0 0 37336 0 0 37366 0 0 37444 0 0 37270 0 37654 0 0 37434 0 0 37805 0 0  
37382 0 37959 0 0 37946 0 0 37879 0 0 38368 0 38043 0 0 38073 0 0 38333 0 0 38276 0 38856 0 0  
38675 0 0 37974 0 0 38662 0 0 38604 0 39045 0 0 38821 0 0 38921 0 0 38800 0 38643 0 0 38822 0 0  
38660 0 0 38900 0 39044 0 0 38430 0 0 39301 0 0 38586 0 39048 0 0 38589 0 0 38933 0 0 39176 0 0  
38505 0 39073 0 0 38988 0 0 39083 0 0 38769 0 39014 0 0 39203 0 0 38890 0 0 38755 0 39029 0 0  
38958 0 0 38889 0 0 38852 0 38972 0 0 38767 0 0 38942 0 0 39018 0 0 39113 0 39055 0 0 39268 0 0  
39118 0 0 39277 0 39050 0 0 39034 0 0 39461 0 0 39133 0 39381 0 0 39122 0 0 39482 0 0 39384 0  
39220 0 0 39693 0 0 39784 0 0 39941 0 0 39917 0 40002 0 0 40124 0 0 40195 0 0 40238 0 40698 0 0  
40297 0 0 40455 0 0 40458 0 40424 0 0 40668 0 0 41047 0 0 40798 0 0 40916 0 41056 0 0 41478 0 0  
41441 0 0 41140 0 40967 0 0 41497 0 0 41263 0 0 41811 0 41817 0 0 42042 0 0 41218 0 0 41869 0  
41936 0 0 41877 0 0 41864 0 0 41848 0 0 42185 0 41828 0 0 42170 0 0 42307 0 0 42167 0 42778 0 0  
42640 0 0 42771 0 0 42930 0 43138 0 0 42825 0 0 42958 0 0 42935 0 43325 0 0 43306 0 0 43115 0 0  
43563 0 0 43244 0 43524 0 0 43669 0 0 43742 0 0 44078 0 43591 0 0 43810 0 0 44116 0 0 43815 0  
43899 0 0 44252 0 0 44391 0 0 44357 0 44567 0 0 44482 0 0 44622 0 0 45059 0 0 45209 0 45221 0 0  
45097 0 0 45313 0 0 45431 0 45582 0 0 45553 0 0 45760 0 0 45792 0 45878 0 0 45730 0 0 46194 0 0  
46055 0 0 46289 0 46251 0 0 45977 0 0 46577 0 0 46581 0 46553 0 0 46475 0 0 46854 0 0 46983 0  
47158 0 0 46968 0 0 46855 0 0 47018 0 47210 0 0 47149 0 0 47446 0 0 47705 0 0 47492 0 47619 0 0  
47927 0 0 47862 0 0 48020 0 48212 0 0 48139 0 0 47911 0 0 48273 0 48044 0 0 48402 0 0 48443 0 0  
48085 0 48940 0 0 48495 0 0 48969 0 0 48995 0 0 49098 0 49236 0 0 49087 0 0 49223 0 0 48954 0  
49636 0 0 49849 0 0 49807 0 0 49716 0 50169 0 0 50090 0 0 50175 0 0 50115 0 50084 0 0 50813 0 0  
50401 0 0 50469 0 0 50234 0 50770 0 0 50829 0 0 50842 0 0 50802 0 50821 0 0 51149 0 0 51029 0 0  
51175 0 51100 0 0 52026 0 0 51178 0 0 51752 0 51300 0 0 51606 0 0 51906 0 0 51693 0 0 51819 0  
51900 0 0 52086 0 0 52158 0 0 51975 0 51738 0 0 52329 0 0 52359 0 0 52052 0 52168 0 0 53011 0 0

52435 0 0 53146 0 0 52535 0 52658 0 0 53127 0 0 53361 0 0 52964 0 53794 0 0 53442 0 0 53898 0 0  
53754 0 53747 0 0 54092 0 0 53979 0 0 54275 0 53876 0 0 54300 0 0 53982 0 0 54319 0 0 54159 0  
54455 0 0 54408 0 0 54753 0 0 54608 0 55392 0 0 55321 0 0 55592 0 0 55383 0 55450 0 0 55480 0 0  
55199 0 0 55320 0 55204 0 0 56012 0 0 55961 0 0 56111 0 0 56400 0 56443 0 0 56692 0 0 56543 0 0  
56567 0 56557 0 0 56859 0 0 57247 0 0 57233 0 57082 0 0 57589 0 0 57486 0 0 57811 0 57969 0 0  
58148 0 0 57538 0 0 58189 0 0 57875 0 58811 0 0 58474 0 0 58334 0 0 59109 0 58455 0 0 58374 0 0  
59007 0 0 59090 0 59179 0 0 59355 0 0 58973 0 0 59740 0 0 59540 0 59480 0 0 59547 0 0 59605 0 0  
59928 0 59982 0 0 60623 0 0 60419 0 0 60313 0 60674 0 0 60364 0 0 60701 0 0 60701 0 60610 0 0  
60577 0 0 60802 0 0 60424 0 0 61402 0 61284 0 0 61297 0 0 60956 0 0 61124 0 61383 0 0 61520 0 0  
61424 0 0 61493 0 61117 0 0 61529 0 0 61260 0 0 61088 0 61535 0 0 61425 0 0 61499 0 0 61384 0 0  
61860 0 62230 0 0 62076 0 0 62293 0 0 62261 0 62189 0 0 62016 0 0 62260 0 0 62601 0 61947 0 0  
62506 0 0 62455 0 0 62462 0 62415 0 0 62667 0 0 62313 0 0 62413 0 0 62620 0 62756 0 0 62403 0 0  
62249 0 0 62421 0 62475 0 0 62169 0 0 62371 0 0 62443 0 61997 0 0 62623 0 0 62167 0 0 62686 0  
62507 0 0 62501 0 0 62883 0 0 62850 0 0 62592 0 62428 0 0 62466 0 0 62814 0 0 62240 0 61781 0 0  
61956 0 0 61814 0 0 61552 0 61828 0 0 61602 0 0 61445 0 0 61561 0 0 60976 0 61174 0 0 61027 0 0  
61233 0 0 60832 0 61044 0 0 60790 0 0 60415 0 0 60226 0 60129 0 0 59483 0 0 59908 0 0 59673 0  
59763 0 0 59869 0 0 59359 0 0 59131 0 0 59570 0 59202 0 0 59147 0 0 59062 0 0 58885 0 58773 0 0  
58519 0 0 58679 0 0 58338 0 58196 0 0 57926 0 0 58064 0 0 57749 0 57949 0 0 57627 0 0 57282 0 0  
57460 0 0 56582 0 56643 0 0 57106 0 0 56156 0 0 56547 0 57003 0 0 56029 0 0 56056 0 0 55936 0  
55599 0 0 55700 0 0 55228 0 0 55116 0 54964 0 0 54659 0 0 54724 0 0 55251 0 0 54669 0 54598 0 0  
54747 0 0 54172 0 0 54403 0 54218 0 0 54320 0 0 53961 0 0 53522 0 53367 0 0 53100 0 0 53287 0 0  
53474 0 52921 0 0 52723 0 0 53124 0 0 52319 0 0 52622 0 52372 0 0 52425 0 0 52312 0 0 51940 0  
51589 0 0 51690 0 0 51839 0 0 51841 0 51000 0 0 51372 0 0 51269 0 0 51260 0 0 50936 0 50538 0 0  
50611 0 0 50140 0 0 50191 0 50016 0 0 49676 0 0 49789 0 0 49553 0 49305 0 0 48930 0 0 49198 0 0  
49225 0 48940 0 0 48787 0 0 48766 0 0 48649 0 0 48480 0 48518 0 0 48565 0 0 47958 0 0 48142 0  
47984 0 0 47660 0 0 47935 0 0 47652 0 47853 0 0 47508 0 0 47150 0 0 47606 0 47077 0 0 47108 0 0  
47385 0 0 46565 0 0 46842 0 46794 0 0 46444 0 0 46500 0 0 46242 0 45945 0 0 45967 0 0 45794 0 0  
45827 0 45235 0 0 45629 0 0 45620 0 0 45239 0 45451 0 0 45145 0 0 44655 0 0 44207 0 0 44169 0  
44090 0 0 44223 0 0 43949 0 0 43649 0 44022 0 0 43892 0 0 43706 0 0 43444 0 43166 0 0 43263 0 0  
43227 0 0 42821 0 0 42627 0 42739 0 0 42732 0 0 42639 0 0 42579 0 42058 0 0 42025 0 0 42299 0 0  
41738 0 41844 0 0 41567 0 0 41565 0 0 41184 0 41112 0 0 41232 0 0 41016 0 0 40800 0 0 40960 0  
40495 0 0 40421 0 0 40147 0 0 39905 0 39757 0 0 39487 0 0 40120 0 0 39586 0 39141 0 0 39326 0 0  
38939 0 0 38704 0 39173 0 0 38838 0 0 38298 0 0 38148 0 0 38376 0 37833 0 0 37948 0 0 37431 0 0  
37866 0 37351 0 0 37708 0 0 37361 0 0 37361 0 36820 0 0 36859 0 0 36650 0 0 36215 0 36033 0 0  
35956 0 0 35724 0 0 35658 0 0 35747 0 35614 0 0 35344 0 0 35100 0 0 34847 0 34661 0 0 34695 0 0  
34322 0 0 34753 0 34149 0 0 34361 0 0 33730 0 0 33932 0 33575 0 0 33369 0 0 33288 0 0 33056 0 0  
32783 0 32436 0 0 32560 0 0 32540 0 0 32145 0 32208 0 0 31894 0 0 31804 0 0 31735 0 31639 0 0  
31418 0 0 31557 0 0 31133 0 0 31031 0 31151 0 0 30849 0 0 30410 0 0 30347 0 30191 0 0 30216 0 0  
30068 0 0 29624 0 29718 0 0 29476 0 0 29534 0 0 29417 0 29080 0 0 28749 0 0 28726 0 0 28854 0 0  
28493 0 28245 0 0 28151 0 0 28362 0 0 27914 0 27938 0 0 27437 0 0 27577 0 0 27349 0 27186 0 0  
27101 0 0 26833 0 0 26689 0 26689 0 0 26590 0 0 26306 0 0 26324 0 0 25949 0 25710 0 0 25629 0 0  
25296 0 0 25357 0 25192 0 0 25065 0 0 25095 0 0 24656 0 24681 0 0 24550 0 0 24236 0 0 23993 0

23930 0 0 24018 0 0 23676 0 0 23758 0 0 23356 0 23511 0 0 23371 0 0 23022 0 0 22994 0 23067 0 0  
 22785 0 0 22688 0 0 22757 0 22780 0 0 22589 0 0 22603 0 0 22211 0 22331 0 0 22192 0 0 22137 0 0  
 21982 0 0 22145 0 22102 0 0 21763 0 0 22084 0 0 22058 0 21977 0 0 21901 0 0 21775 0 0 21639 0  
 21466 0 0 21768 0 0 21502 0 0 21451 0 0 21330 0 21380 0 0 21254 0 0 21272 0 0 21270 0 20758 0 0  
 21081 0 0 20777 0 0 20737 0 20681 0 0 20458 0 0 20612 0 0 20419 0 20883 0 0 20381 0 0 20534 0 0  
 20251 0 0 20476 0 20394 0 0 20179 0 0 20294 0 0 20066 0 20065 0 0 19834 0 0 20145 0 0 19887 0  
 19913 0 0 20042 0 0 20026 0 0 19948 0 19743 0 0 19668 0 0 20106 0 0 19945 0 0 20035 0 19926 0 0  
 20272 0 0 20357 0 0 20226 0 20238 0 0 20300 0 0 20598 0 0 20256 0 20663 0 0 20643 0 0 20576 0 0  
 20620 0 20625 0 0 20980 0 0 20877 0 0 21265 0 0 21098 0 21366 0 0 21253 0 0 21307 0 0 21428 0  
 21399 0 0 21434 0 0 21528 0 0 21990 0 21745 0 0 21636 0 0 21699 0 0 22129 0 0 21594 0 21608 0 0  
 21557 0 0 21476 0 0 21571 0 21629 0 0 21511 0 0 21117 0 0 20873 0 20931 0 0 20704 0 0 20340 0 0  
 20519 0 20357 0 0 20180 0 0 20102 0 0 19770 0 0 19734 0 19478 0 0 18974 0 0 18998 0 0 18822 0  
 18631 0 0 18385 0 0 18115 0 0 17821 0 17923 0 0 17599 0 0 17309 0 0 17327 0 16845 0 0 16766 0 0  
 16620 0 0 16554 0 0 16568 0 16193 0 0 15982 0 0 16105 0 0 15956 0 15644 0 0 15736 0 0 15315 0 0  
 15710 0 15329 0 0 15553 0 0 15437 0 0 15139 0 15133 0 0 15637 0 0 15219 0 0 14876 0 0 14994 0  
 14757 0 0 14989 0 0 14879 0 0 14948 0 14838 0 0 14990 0 0 14963 0 0 14834 0 14655 0 0 14984 0 0  
 14846 0 0 14562 0 14727 0 0 14771 0 0 14966 0 0 14904 0 0 15148 0 14935 0 0 15134 0 0 15069 0 0  
 14770 0 15235 0 0 15194 0 0 15051 0 0 15055 0 14927 0 0 15002 0 0 15028 0 0 15249 0 0 15297 0  
 15267 0 0 15418 0 0 15443 0 0 15513 0 15592 0 0 15632 0 0 15744 0 0 15624 0 15562 0 0 15905 0 0  
 15841 0 0 16067 0 16053 0 0 15937 0 0 15796 0 0 15890 0 0 15956 0 15960 0 0 16067 0 0 16264 0 0  
 16083 0 16167 0 0 16196 0 0 16363 0 0 15996 0 16343 0 0 16226 0 0 16182 0 0 16149 0 15814 0 0  
 16182 0 0 16309 0 0 16006 0 0 16011 0 15949 0 0 15531 0 0 15562 0 0 15212 0 15425 0 0 14935 0 0  
 15028 0 0 14893 0 14454 0 0 14541 0 0 14093 0 0 13772 0 13537 0 0 13419 0 0 13279 0 0 13059 0 0  
 12881 0 12744 0 0 12447 0 0 12058 0 0 12070 0 11629 0 0 11233 0 0 11165 0 0 10803 0 10623 0 0  
 10234 0 0 10112 0 0 10154 0 9836 0 0 9536 0 0 9389 0 0 9058 0 0 9019 0 8645 0 0 8279 0 0 8409 0 0  
 8092 0 7814 0 0 7602 0 0 7496 0 0 7372 0 7327 0 0 6990 0 0 6711 0 0 6710 0 0 6495 0 6390 0 0 6326  
 0 0 6030 0 0 5984 0 5864 0 0 5802 0 0 5625 0 0 5418 0 5327 0 0 5223 0 0 4989 0 0 4906 0 4765 0 0  
 4760 0 0 4491 0 0 4606 0 0 4334 0 4285 0 0 4142 0 0 4003 0 0 4028 0 3801 0 0 3668 0 0 3694 0 0  
 3655 0 3531 0 0 3346 0 0 3346 0 0 3234 0 3102 0 0 3060 0 0 3055 0 0 2924 0 0 2843 0 2915 0 0 2764  
 0 0 2629 0 0 2584 0 2497 0 0 2545 0 0 2342 0 0 2296 0 2222 0 0 2218 0 0 2113 0 0 2035 0 2025 0 0  
 1924 0 0 1887 0 0 1854 0 0 1831 0 1860 0 0 1776 0 0 1669 0 0 1650 0 1618 0 0 1629 0 0 1625 0 0  
 1565 0 1573 0 0 1589 0 0 1533 0 0 1525 0 0 1627 0 1460 0 0 1493 0 0 1405 0 0 1428 0 1413 0 0 1409  
 0 0 1477 0 0 1377 0 1395 0 0 1320 0 0 1261 0 0 1263 0 1231 0 0 1167 0 0 1192 0 0 1100 0 0 1136 0  
 1071 0 0 1030 0 0 1002 0 0 973 0 934 0 0 932 0 0 865 0 0 802 0 744 0 0 714 0 0 678 0 0 692 0 692 0 0  
 598 0 0 558 0 0 524 0 0 521 0 472 0 0 411 0 0 422 0 0 396 0 351 0 0 354 0 0 311 0 0 280 0 279 0 0 278  
 0 0 225 0 0 229 0 219 0 0 224 0 0 188 0 0 198 0 0 172 0 169 0 0 146 0 0 151 0 0 146 0 150 0 0 141 0 0  
 138 0 0 128 0 129 0 0 112 0 0 137 0 0 93 0 103 0 0 98 0 0 97 0 0 94 0 0 100 0 69 0 0 98 0 0 70 0 0 84 0  
 63 0 0 91 0 0 80 0 0 82 0 73 0 0 63 0 0 94 0 0 69 0 0 65 0 67 0 0 71 0 0 86 0 0 67 0 75 0 0 68 0 0 55 0 0  
 66 0 64 0 0 58 0 0 69 0 0 65 0 66 0 0 65 0 0 68 0 0 51 0 0 66 0 60 0 0 54 0 0 63 0 0 56 0 62 0 0 63 0 0 63  
 0 0 59 0 57 0 0 54 0 0 52 0 0 52 0 51 0 0 60 0 0 63 0 0 70 0 0 57 0 56 0 0 51 0 0 51 0 0 49 0 57 0 0 52 0  
 0 48 0 0 55 0 58 0 0 54 0 0 43 0 0 62 0 65 0 0 63 0 0 47 0 0 58 0 0 63 0 61 0 0 47 0 0 47 0 0 54 0 45 0 0  
 46 0 0 51 0 0 58 0 56 0 0 67 0 0 48 0 0 51 0 48 0 0 56 0 0 44 0 0 58 0 0 51 0 45 0 0 47 0 0 53 0 0 54 0 58





```
</Histogram_Band>
</Histogram_Band_List>
<Radiometric_Calibration>
  <Instrument_Calibration>
    <Band_Measurement_List>
      <Band_Spectral_Range>
        <BAND_ID>B0</BAND_ID>
        <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
        <MEASURE_DESC>Spectral range value of raw radiometric Band</MEASURE_DESC>
        <MEASURE_UNIT>micrometers</MEASURE_UNIT>
        <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
        <MIN>0.43</MIN>
        <MAX>0.55</MAX>
      </Band_Spectral_Range>
      <Band_Spectral_Range>
        <BAND_ID>B1</BAND_ID>
        <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
        <MEASURE_DESC>Spectral range value of raw radiometric Band</MEASURE_DESC>
        <MEASURE_UNIT>micrometers</MEASURE_UNIT>
        <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
        <MIN>0.50</MIN>
        <MAX>0.62</MAX>
      </Band_Spectral_Range>
      <Band_Spectral_Range>
        <BAND_ID>B2</BAND_ID>
        <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
        <MEASURE_DESC>Spectral range value of raw radiometric Band</MEASURE_DESC>
        <MEASURE_UNIT>micrometers</MEASURE_UNIT>
        <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
        <MIN>0.59</MIN>
        <MAX>0.71</MAX>
      </Band_Spectral_Range>
      <Band_Spectral_Range>
        <BAND_ID>B3</BAND_ID>
        <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
        <MEASURE_DESC>Spectral range value of raw radiometric Band</MEASURE_DESC>
        <MEASURE_UNIT>micrometers</MEASURE_UNIT>
        <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
        <MIN>0.74</MIN>
        <MAX>0.94</MAX>
      </Band_Spectral_Range>
    <Band_Reflectance>
```



---

```
<BAND_ID>B0</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>10000</GAIN>
<BIAS>0</BIAS>
</Band_Reflectance>
<Band_Reflectance>
<BAND_ID>B1</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>10000</GAIN>
<BIAS>0</BIAS>
</Band_Reflectance>
<Band_Reflectance>
<BAND_ID>B2</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>10000</GAIN>
<BIAS>0</BIAS>
</Band_Reflectance>
<Band_Reflectance>
<BAND_ID>B3</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae
RHO=RHO'/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>10000</GAIN>
<BIAS>0</BIAS>
</Band_Reflectance>
<Band_Radiance>
<BAND_ID>B0</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
```

<MEASURE\_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae  
 $L=RHO/GAIN+BIAS$ </MEASURE\_DESC>  
<MEASURE\_UNIT>watt/m2/steradians/micrometers</MEASURE\_UNIT>  
<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>  
<GAIN>396.27470644969605</GAIN>  
<BIAS>19.89069520510544</BIAS>  
</Band\_Radiance>  
<Band\_Radiance>  
<BAND\_ID>B1</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T06:12:10Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae  
 $L=RHO/GAIN+BIAS$ </MEASURE\_DESC>  
<MEASURE\_UNIT>watt/m2/steradians/micrometers</MEASURE\_UNIT>  
<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>  
<GAIN>376.5742982312535</GAIN>  
<BIAS>11.255320372990866</BIAS>  
</Band\_Radiance>  
<Band\_Radiance>  
<BAND\_ID>B2</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T06:12:10Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae  
 $L=RHO/GAIN+BIAS$ </MEASURE\_DESC>  
<MEASURE\_UNIT>watt/m2/steradians/micrometers</MEASURE\_UNIT>  
<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>  
<GAIN>341.2149949520074</GAIN>  
<BIAS>5.443340468501629</BIAS>  
</Band\_Radiance>  
<Band\_Radiance>  
<BAND\_ID>B3</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T06:12:10Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae  
 $L=RHO/GAIN+BIAS$ </MEASURE\_DESC>  
<MEASURE\_UNIT>watt/m2/steradians/micrometers</MEASURE\_UNIT>  
<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>  
<GAIN>236.18515851884058</GAIN>  
<BIAS>1.3654275323736587</BIAS>  
</Band\_Radiance>  
<Band\_Digital\_Number>  
<BAND\_ID>B0</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T06:12:10Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae  
 $DN=L/GAIN+BIAS$ </MEASURE\_DESC>

---

```
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>0.11160714285714285</GAIN>
<BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
<BAND_ID>B1</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>0.11098779134295228</GAIN>
<BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
<BAND_ID>B2</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>0.09930486593843098</GAIN>
<BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
<BAND_ID>B3</BAND_ID>
<CALIBRATION_DATE>2019-08-30T06:12:10Z</CALIBRATION_DATE>
<MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
<MEASURE_UNIT/>
<MEASURE_UNCERTAINTY/>
<GAIN>0.06531678641410843</GAIN>
<BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Solar_Irradiance>
<BAND_ID>B0</BAND_ID>
<CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
<MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
<MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
<MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
<VALUE>1915.0</VALUE>
```

```
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1831.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1594.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1060.0</VALUE>
</Band_Solar_Irradiance>
</Band_Measurement_List>
</Instrument_Calibration>
</Radiometric_Calibration>
</Radiometric_Data>
<Geometric_Data>
  <Use_Area>
    <Located_Geometric_Values>
      <LOCATION_TYPE>Top Center</LOCATION_TYPE>
      <TIME>2019-08-26T14:52:27.781Z</TIME>
      <GEOMETRIC_GLIDING>0.009112412263020619</GEOMETRIC_GLIDING>
      <Acquisition_Angles>
        <AZIMUTH_ANGLE>180.0020282884556</AZIMUTH_ANGLE>
        <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">5.807765971657502</VIEWING_ANGLE_ACROSS_TRACK>
        <VIEWING_ANGLE_ALONG_TRACK
unit="deg">4.086088768358835</VIEWING_ANGLE_ALONG_TRACK>
        <VIEWING_ANGLE unit="deg">7.085140826144421</VIEWING_ANGLE>
```

```
<INCIDENCE_ANGLE_ALONG_TRACK>-
5.601678118270836</INCIDENCE_ANGLE_ALONG_TRACK>
  <INCIDENCE_ANGLE_ACROSS_TRACK>-
5.70678485410168</INCIDENCE_ANGLE_ACROSS_TRACK>
  <INCIDENCE_ANGLE>7.970884400267739</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
  <SUN_AZIMUTH unit="deg">39.36253504478525</SUN_AZIMUTH>
  <SUN_ELEVATION unit="deg">47.86433257974404</SUN_ELEVATION>
</Solar_Incidences>
<Ground_Sample_Distance>
  <GSD_ACROSS_TRACK unit="m">0.7088667312886519</GSD_ACROSS_TRACK>
  <GSD_ALONG_TRACK unit="m">0.7161036801597671</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
<Located_Geometric_Values>
  <LOCATION_TYPE>Center</LOCATION_TYPE>
  <TIME>2019-08-26T14:52:29.156Z</TIME>
  <GEOMETRIC_GLIDING>0.01089295292642167</GEOMETRIC_GLIDING>
<Acquisition_Angles>
  <AZIMUTH_ANGLE>179.9794198324936</AZIMUTH_ANGLE>
  <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">5.96800047158784</VIEWING_ANGLE_ACROSS_TRACK>
  <VIEWING_ANGLE_ALONG_TRACK
unit="deg">4.079458963209231</VIEWING_ANGLE_ALONG_TRACK>
  <VIEWING_ANGLE unit="deg">7.21249672358559</VIEWING_ANGLE>
  <INCIDENCE_ANGLE_ALONG_TRACK>-
5.624036101133032</INCIDENCE_ANGLE_ALONG_TRACK>
  <INCIDENCE_ANGLE_ACROSS_TRACK>-
5.882745354180026</INCIDENCE_ANGLE_ACROSS_TRACK>
  <INCIDENCE_ANGLE>8.111484821666387</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
  <SUN_AZIMUTH unit="deg">39.3033409594743</SUN_AZIMUTH>
  <SUN_ELEVATION unit="deg">47.79899729403018</SUN_ELEVATION>
</Solar_Incidences>
<Ground_Sample_Distance>
  <GSD_ACROSS_TRACK unit="m">0.7074466892405612</GSD_ACROSS_TRACK>
  <GSD_ALONG_TRACK unit="m">0.7165931971037663</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
<Located_Geometric_Values>
```

```
<LOCATION_TYPE>Bottom Center</LOCATION_TYPE>
<TIME>2019-08-26T14:52:30.531Z</TIME>
<GEOMETRIC_GLIDING>0.009985874905714232</GEOMETRIC_GLIDING>
<Acquisition_Angles>
  <AZIMUTH_ANGLE>180.1134241202898</AZIMUTH_ANGLE>
  <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">6.12705231849108</VIEWING_ANGLE_ACROSS_TRACK>
  <VIEWING_ANGLE_ALONG_TRACK
unit="deg">4.073607217587971</VIEWING_ANGLE_ALONG_TRACK>
  <VIEWING_ANGLE unit="deg">7.340574020289822</VIEWING_ANGLE>
  <INCIDENCE_ANGLE_ALONG_TRACK>-
5.630714709249423</INCIDENCE_ANGLE_ALONG_TRACK>
  <INCIDENCE_ANGLE_ACROSS_TRACK>-
6.072576500254728</INCIDENCE_ANGLE_ACROSS_TRACK>
  <INCIDENCE_ANGLE>8.252939854829044</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
  <SUN_AZIMUTH unit="deg">39.24446695682054</SUN_AZIMUTH>
  <SUN_ELEVATION unit="deg">47.73347771645858</SUN_ELEVATION>
</Solar_Incidences>
<Ground_Sample_Distance>
  <GSD_ACROSS_TRACK unit="m">0.7083335628793103</GSD_ACROSS_TRACK>
  <GSD_ALONG_TRACK unit="m">0.7170944970263955</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
</Use_Area>
</Geometric_Data>
<Quality_Assessment>
  <Planimetric_Accuracy_Measurement>
    <QUALITY_TABLES>DTED2</QUALITY_TABLES>
    <MEASURE_ID>AHA</MEASURE_ID>
    <MEASURE_NAME>Absolute Horizontal Accuracy</MEASURE_NAME>
    <MEASURE_TYPE>MATCHING</MEASURE_TYPE>
    <MEASURE_UNIT>m</MEASURE_UNIT>
  <Quality_Values>
    <ACCURACY_MEAN>0.00874901181577097</ACCURACY_MEAN>
    <ACCURACY_STDV>0.792573323913946</ACCURACY_STDV>
    <ACCURACY_CE90>1.201983503594575</ACCURACY_CE90>
  </Quality_Values>
</Planimetric_Accuracy_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
```

```
<MEASURE_NAME>Area_Of_Interest (ROI)</MEASURE_NAME>
<MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
<Quality_Mask>
  <Component>
    <COMPONENT_TITLE>Area_Of_Interest Mask</COMPONENT_TITLE>
    <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
    <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
    <COMPONENT_PATH href="MASKS/ROI_PHR1A_MS_201908261452276_ORT_4461569101-
2_MSK.GML"/>
  </Component>
</Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Detector_Quality (DET)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Detector_Quality Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/DET_PHR1A_MS_201908261452276_ORT_4461569101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Saturation_Cotation (SLT)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Saturation_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/SLT_PHR1A_MS_201908261452276_ORT_4461569101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
```

```
<MEASURE_NAME>Visibility_Cotation (VIS)</MEASURE_NAME>
<MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
<Quality_Mask>
  <Component>
    <COMPONENT_TITLE>Visibility_Cotation Mask</COMPONENT_TITLE>
    <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
    <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
    <COMPONENT_PATH href="MASKS/VIS_PHR1A_MS_201908261452276_ORT_4461569101-
2_MSK.GML"/>
  </Component>
</Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Snow_Cotation (SNW)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Snow_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/SNW_PHR1A_MS_201908261452276_ORT_4461569101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Cloud_Cotation (CLD)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Cloud_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/CLD_PHR1A_MS_201908261452276_ORT_4461569101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
```



```
<MEASURE_NAME>Technical_Index (QTE)</MEASURE_NAME>
<MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
<Quality_Mask>
  <Component>
    <COMPONENT_TITLE>Technical_Index Mask</COMPONENT_TITLE>
    <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
    <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
    <COMPONENT_PATH href="MASKS/QTE_PHR1A_MS_201908261452276_OR_4461569101-
2_MSK.GML"/>
  </Component>
</Quality_Mask>
</Imaging_Quality_Measurement>
</Quality_Assessment>
<Dataset_Sources>
  <Source_Identification>
    <SOURCE_ID>DS_PHR1A_201908261452276_FR1_PX_W069S24_1007_01804</SOURCE_ID>
    <SOURCE_TYPE>Strip_Source</SOURCE_TYPE>
    <SOURCE_DESCRIPTION>PHR1A Data Strip</SOURCE_DESCRIPTION>
    <Strip_Source>
      <MISSION>PHR</MISSION>
      <MISSION_INDEX>1A</MISSION_INDEX>
      <INSTRUMENT>PHR</INSTRUMENT>
      <INSTRUMENT_INDEX>1A</INSTRUMENT_INDEX>
      <IMAGING_DATE>2019-08-26</IMAGING_DATE>
      <IMAGING_TIME>14:52:27.6Z</IMAGING_TIME>
      <BAND_MODE>PX</BAND_MODE>
    </Strip_Source>
    <Component>
      <COMPONENT_TITLE>Strip Source</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
      <COMPONENT_PATH
href="LINEAGE/STRIP_DS_PHR1A_201908261452276_FR1_PX_W069S24_1007_01804_DIM.XML"/>
    </Component>
  </Source_Identification>
  <Source_Identification>
    <SOURCE_TYPE>Ground_Source</SOURCE_TYPE>
    <SOURCE_DESCRIPTION>Reference3D ORTHO Layer</SOURCE_DESCRIPTION>
    <Component>
      <COMPONENT_TITLE>Source for Ground reset</COMPONENT_TITLE>
      <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
      <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
```

```

    <COMPONENT_PATH href="LINEAGE/GROUND_R3D_OR_SPOTView_S24W069_DIM.XML"/>
  </Component>
</Source_Identification>
<Source_Identification>
  <SOURCE_TYPE>Height_Source</SOURCE_TYPE>
  <SOURCE_DESCRIPTION>Reference3D DTED2 Layer</SOURCE_DESCRIPTION>
  <Component>
    <COMPONENT_TITLE>Source for Vertical reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/HEIGHT_R3D_DT2_S24W069_DIM.XML"/>
  </Component>
</Source_Identification>
</Dataset_Sources>
</Dimap_Document>

```

DIM\_PHR1A\_MS\_201908261452376\_OR\_4461568101-2.XML

```

<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet href="LIBRARY/STYLE.XSL" type="text/xsl"?>
<Dimap_Document>
  <Metadata_Identification>
    <METADATA_FORMAT version="2.15">DIMAP</METADATA_FORMAT>
    <METADATA_PROFILE>PHR_ORTHO</METADATA_PROFILE>
    <METADATA_SUBPROFILE>PRODUCT</METADATA_SUBPROFILE>
    <METADATA_LANGUAGE>en</METADATA_LANGUAGE>
  </Metadata_Identification>
  <Dataset_Identification>
    <DATASET_TYPE>RASTER_ORTHO</DATASET_TYPE>
    <DATASET_NAME
version="1.0">DS_PHR1A_201908261452006_FR1_PX_W069S24_0906_01073</DATASET_NAME>
    <DATASET_TN_PATH href="ICON_PHR1A_MS_201908261452376_OR_4461568101-2.JPG"/>
    <DATASET_TN_FORMAT>image/jpeg</DATASET_TN_FORMAT>
    <DATASET_QL_PATH href="PREVIEW_PHR1A_MS_201908261452376_OR_4461568101-2.JPG"/>
    <DATASET_QL_FORMAT>image/jpeg</DATASET_QL_FORMAT>
    <Legal_Constraints>
      <COPYRIGHT>Â©CNES_2019, distribution AIRBUS DS, France, all rights reserved</COPYRIGHT>
    </Legal_Constraints>
  </Dataset_Identification>
  <Dataset_Content>
    <SURFACE_AREA unit="square km">62.0217</SURFACE_AREA>
    <CLOUD_COVERAGE unit="percent">0</CLOUD_COVERAGE>

```

```
<SNOW_COVERAGE unit="percent">0</SNOW_COVERAGE>
<Dataset_Components>
  <Component>
    <COMPONENT_TITLE>Processing</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH
href="LINEAGE/PROCESSING_PHR1A_MS_201908261452376_OR_4461568101-2_DIM.XML"/>
    </Component>
    <Component>
    <COMPONENT_TITLE>Strip Source</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH
href="LINEAGE/STRIP_DS_PHR1A_201908261452376_FR1_PX_W069S24_0806_01124_DIM.XML"/>
    </Component>
    <Component>
    <COMPONENT_TITLE>Source for Ground reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/GROUND_R3D_OR_SPOTView_S24W069_DIM.XML"/>
    </Component>
    <Component>
    <COMPONENT_TITLE>Source for Vertical reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/HEIGHT_R3D_DT2_S24W069_DIM.XML"/>
    </Component>
  </Dataset_Components>
  <Dataset_Extent>
    <EXTENT_TYPE>Bounding_Polygon</EXTENT_TYPE>
    <Vertex>
      <LON>-68.31271881830227</LON>
      <LAT>-23.70252062624089</LAT>
      <X>570065</X>
      <Y>7378539</Y>
      <COL>1</COL>
      <ROW>1</ROW>
    </Vertex>
    <Vertex>
      <LON>-68.24241107271899</LON>
      <LAT>-23.7021924646469</LAT>
```

```
<X>577233</X>
<Y>7378539</Y>
<COL>3585</COL>
<ROW>1</ROW>
</Vertex>
<Vertex>
  <LON>-68.24178188456189</LON>
  <LAT>-23.81086284023473</LAT>
  <X>577233</X>
  <Y>7366507</Y>
  <COL>3585</COL>
  <ROW>6017</ROW>
</Vertex>
<Vertex>
  <LON>-68.31214800991683</LON>
  <LAT>-23.81119268804891</LAT>
  <X>570065</X>
  <Y>7366507</Y>
  <COL>1</COL>
  <ROW>6017</ROW>
</Vertex>
<Center>
  <LON>-68.277264946375</LON>
  <LAT>-23.75669215479286</LAT>
  <X>573649</X>
  <Y>7372523</Y>
  <COL>1793</COL>
  <ROW>3009</ROW>
</Center>
</Dataset_Extent>
</Dataset_Content>
<Product_Information>
  <Producer_Information>
    <PRODUCER_NAME>AIRBUS DS GEO</PRODUCER_NAME>
    <PRODUCER_URL href="http://www.geo-airbusds.com"/>
    <PRODUCER_CONTACT>contact@geo-airbus.com</PRODUCER_CONTACT>
    <PRODUCER_ADDRESS>5 rue des Satellites - BP 14359 - F 31030 Toulouse Cedex 4 -
France</PRODUCER_ADDRESS>
  </Producer_Information>
  <Delivery_Identification>
    <PRODUCTION_DATE>2019-08-30T04:17:48.314</PRODUCTION_DATE>
    <JOB_ID>4461568101-2</JOB_ID>
```

```
<PRODUCT_CODE>PLEIADES</PRODUCT_CODE>
<DELIVERY_TYPE>NETWORK</DELIVERY_TYPE>
<Order_Identification>
  <CUSTOMER_REFERENCE>C500706</CUSTOMER_REFERENCE>

<INTERNAL_REFERENCE>PHR_PRO_4461568101_20190830041019643_1_2</INTERNAL_REFERENCE>
  <COMMERCIAL_REFERENCE>SO19034793</COMMERCIAL_REFERENCE>
  <COMMERCIAL_ITEM>5</COMMERCIAL_ITEM>
</Order_Identification>
</Delivery_Identification>
</Product_Information>
<Coordinate_Reference_System>
  <Projected_CRS>
    <CRS_TABLES version="6.3">EPSG</CRS_TABLES>
    <PROJECTED_CRS_NAME>32719</PROJECTED_CRS_NAME>
    <PROJECTED_CRS_CODE>urn:ogc:def:crs:EPSG::32719</PROJECTED_CRS_CODE>
  </Projected_CRS>
  <Temporal_CRS>
    <CRS_TABLES version="0.0">ITU</CRS_TABLES>
    <TEMPORAL_CRS_NAME>UTC</TEMPORAL_CRS_NAME>
  </Temporal_CRS>
</Coordinate_Reference_System>
<Geoposition>
  <Raster_CRS>
    <RASTER_GEOMETRY>GROUND</RASTER_GEOMETRY>
    <PIXEL_ORIENTATION>UL</PIXEL_ORIENTATION>
    <PIXEL_CRS_TYPE>CELL</PIXEL_CRS_TYPE>
    <PIXEL_ORIGIN>1</PIXEL_ORIGIN>
  </Raster_CRS>
  <Geoposition_Insert>
    <ULXMAP>570065</ULXMAP>
    <ULYMAP>7378539</ULYMAP>
    <XDIM>2</XDIM>
    <YDIM>2</YDIM>
  </Geoposition_Insert>
</Geoposition>
<Processing_Information>
  <Production_Facility>
    <SOFTWARE version="V2.8">DRS-MM V2.8</SOFTWARE>
    <PROCESSING_CENTER>FCMUGC</PROCESSING_CENTER>
    <PROCESSING_PLACE>FCMUGC</PROCESSING_PLACE>
  </Production_Facility>
```

```
<Product_Settings>
  <PROCESSING_LEVEL>ORTHO</PROCESSING_LEVEL>
  <SPECTRAL_PROCESSING>MS</SPECTRAL_PROCESSING>
  <Geometric_Settings>
    <GEOMETRIC_PROCESSING>ORTHO</GEOMETRIC_PROCESSING>
    <EPHEMERIS_USED>CORRECTED</EPHEMERIS_USED>
    <ATTITUDES_USED>ACCURATE</ATTITUDES_USED>
    <GROUND_SETTING>>true</GROUND_SETTING>
    <GROUND_DESC>R3D_ORTHO</GROUND_DESC>
    <VERTICAL_SETTING>>true</VERTICAL_SETTING>
    <VERTICAL_DESC>REFERENCE3D</VERTICAL_DESC>
  </Geometric_Settings>
  <Radiometric_Settings>
    <RADIOMETRIC_PROCESSING>REFLECTANCE</RADIOMETRIC_PROCESSING>
    <INTER_DETECTOR_NORMALIZATION>>false</INTER_DETECTOR_NORMALIZATION>
    <DETECTORS_INTERPOLATION>>true</DETECTORS_INTERPOLATION>
    <STRAYLIGHT_CORRECTION>>false</STRAYLIGHT_CORRECTION>
    <VCTI_CORRECTION>>false</VCTI_CORRECTION>
    <INTER_ARRAY_RECONSTRUCTION>>true</INTER_ARRAY_RECONSTRUCTION>
    <RADIOMETRIC_STRETCH>>false</RADIOMETRIC_STRETCH>
    <OUT_OF_ORDER_THRESHOLD>0.5</OUT_OF_ORDER_THRESHOLD>
  </Radiometric_Settings>
  <Sampling_Settings>
    <RESAMPLING_SPACING unit="m">2</RESAMPLING_SPACING>
    <RESAMPLING_KERNEL>SPLINE</RESAMPLING_KERNEL>
  </Sampling_Settings>
  <MTF_Settings>
    <PAN_RESTORATION>>true</PAN_RESTORATION>
    <MS_RESTORATION>>false</MS_RESTORATION>
  </MTF_Settings>
</Product_Settings>
<Processing_Lineage>
  <Component>
    <COMPONENT_TITLE>Processing</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH
href="LINEAGE/PROCESSING_PHR1A_MS_201908261452376_ORT_4461568101-2_DIM.XML"/>
  </Component>
</Processing_Lineage>
</Processing_Information>
<Raster_Data>
```

```
<Data_Access>
  <DATA_FILE_ORGANISATION>BAND_COMPOSITE</DATA_FILE_ORGANISATION>
  <DATA_FILE_FORMAT>image/tiff</DATA_FILE_FORMAT>
  <DATA_FILE_TILES>>false</DATA_FILE_TILES>
  <Data_Files>
    <Data_File tile_R="1" tile_C="1">
      <DATA_FILE_PATH href="IMG_PHR1A_MS_201908261452376_ORT_4461568101-
2_R1C1.TIF"/>
    </Data_File>
  </Data_Files>
</Data_Access>
<Raster_Dimensions>
  <NROWS>6017</NROWS>
  <NCOLS>3585</NCOLS>
  <NBANDS>4</NBANDS>
</Raster_Dimensions>
<Raster_Encoding>
  <DATA_TYPE>INTEGER</DATA_TYPE>
  <NBITS>16</NBITS>
  <SIGN>UNSIGNED</SIGN>
  <COMPRESSION_TYPE>LOSSLESS</COMPRESSION_TYPE>
</Raster_Encoding>
<Raster_Display>
  <Band_Display_Order>
    <RED_CHANNEL>B2</RED_CHANNEL>
    <GREEN_CHANNEL>B1</GREEN_CHANNEL>
    <BLUE_CHANNEL>B0</BLUE_CHANNEL>
    <ALPHA_CHANNEL>B3</ALPHA_CHANNEL>
  </Band_Display_Order>
  <Special_Value>
    <SPECIAL_VALUE_TEXT>NODATA</SPECIAL_VALUE_TEXT>
    <SPECIAL_VALUE_COUNT>0</SPECIAL_VALUE_COUNT>
  </Special_Value>
  <Special_Value>
    <SPECIAL_VALUE_TEXT>SATURATED</SPECIAL_VALUE_TEXT>
    <SPECIAL_VALUE_COUNT>32767</SPECIAL_VALUE_COUNT>
  </Special_Value>
</Raster_Display>
</Raster_Data>
<Radiometric_Data>
  <Dynamic_Range>
    <ACQUISITION_RANGE>12</ACQUISITION_RANGE>
```

```

<PRODUCT_RANGE>16</PRODUCT_RANGE>
</Dynamic_Range>
<Histogram_Band_List>
  <Histogram_Band>
    <BAND_ID>B0</BAND_ID>
    <VALUES>0000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000
00000000000000000000000000000000000000000000000000000000000000000000
0000100000000100001000000004003010060040010001700180410059
004700740011701280014700167001550018401770017200152001470018700
17801720017400177001390015001590015500136001490012901210012300125
0012300113001120113001050010800113001200124001110014500139001710
172001850023200256002690031703640041000418004610047304820057700
60600712006610730007790081700919009310089609810010330010100098800
1058010690010370011840011830012240111500118100122800127300116601309
001206001265001271001224001229012420011800011240012290012690114200
1183001154001163001144011870010550010300010310010300010840993009070
0944008730086108840083900835008570078808360077300749007760076700
78207280074400696007050074607620069600717007650078607830073400789
0071800767006990794007610072600821007700820007790086600835008270
834008500092400862008640908008610091600933009630095109810097200
9980098200976010360010510010160010870010970109700119300118200118900
1210001231012020013110013340012410013710136700142200140600152300
1402014480015140015990015690016350016470172000174800179400184100
1884018810018840020160021370021470227100224100229800227900254800
2573026470026040027730028800029370296900302800321500336600346503544
003636003787003851004126004140043040043670047110047080049470495700
5342005368005579005788058700060320063710065520065150666100689600
7366007319007514007747077610080450083490084370087110881700907600
936000937000963109909001010100103060010539001082900108150113160011522
00117220012127001230012551001292600134180013725001425501466700149990
015209001593800164420016591017289001778200183180018765001931302003100
20819002119000218390022590023176002387000246700025163002611400267120
27751002839900289450029733003067003133000325500032698003337700343780
345600035301003625600367760037479037975003808100389490039170003984400
39973040154004042900403120040706004084304110100405940040446004050600
40124040234004003700394280039332003923800391540388090038541003778200
37485003731203693000367110036193003582200351740348310034208003405300
33717003338800332780329050032926003240000316980031687031445003107700
31170003100300308290305390030463003008100302000030439003048103009100
    
```



30160 0 0 30524 0 0 30755 0 0 30531 0 30523 0 0 30774 0 0 30943 0 0 31047 0 0 31187 0 31964 0 0  
32102 0 0 32211 0 0 32419 0 0 32883 0 33071 0 0 33452 0 0 33550 0 0 34139 0 0 34475 0 0 34696 0  
34962 0 0 35343 0 0 35853 0 0 36016 0 0 36173 0 36608 0 0 36891 0 0 37011 0 0 37031 0 0 36806 0  
37562 0 0 37185 0 0 37487 0 0 37366 0 0 37535 0 0 37592 0 37403 0 0 37153 0 0 37323 0 0 37148 0 0  
37186 0 36817 0 0 37204 0 0 36504 0 0 36096 0 0 36106 0 35672 0 0 35738 0 0 35346 0 0 35561 0 0  
35409 0 0 35123 0 34812 0 0 34872 0 0 34589 0 0 34394 0 0 34348 0 34323 0 0 33936 0 0 33757 0 0  
34113 0 0 33715 0 33695 0 0 33650 0 0 33861 0 0 33547 0 0 33472 0 0 33521 0 33574 0 0 33530 0 0  
33555 0 0 33371 0 0 33444 0 33121 0 0 33065 0 0 33162 0 0 33120 0 0 33207 0 32865 0 0 32623 0 0  
32472 0 0 32598 0 0 32459 0 0 32053 0 32023 0 0 31725 0 0 31553 0 0 31364 0 0 31195 0 30964 0 0  
30299 0 0 30115 0 0 30183 0 0 29752 0 29440 0 0 29155 0 0 29087 0 0 28448 0 0 28657 0 28531 0 0  
28034 0 0 27772 0 0 27467 0 0 27310 0 0 27417 0 26952 0 0 26764 0 0 26709 0 0 26703 0 0 26425 0  
26214 0 0 26108 0 0 25952 0 0 25939 0 0 26237 0 26177 0 0 26124 0 0 26145 0 0 26334 0 0 26473 0 0  
26815 0 26920 0 0 27097 0 0 27795 0 0 28296 0 0 28760 0 29305 0 0 29843 0 0 30448 0 0 31407 0 0  
32374 0 33266 0 0 34325 0 0 35551 0 0 36519 0 0 37893 0 0 38783 0 39962 0 0 41632 0 0 42819 0 0  
43855 0 0 44761 0 46170 0 0 46999 0 0 48944 0 0 49351 0 0 50056 0 50897 0 0 51845 0 0 51902 0 0  
52779 0 0 52841 0 0 52602 0 53419 0 0 53309 0 0 53245 0 0 52474 0 0 52071 0 51724 0 0 51201 0 0  
50198 0 0 49559 0 0 48473 0 47417 0 0 46207 0 0 44904 0 0 43537 0 0 41862 0 40618 0 0 39356 0 0  
37387 0 0 36198 0 0 34522 0 0 33304 0 31550 0 0 29904 0 0 28752 0 0 27365 0 0 25860 0 24486 0 0  
23387 0 0 22226 0 0 20997 0 0 20199 0 19122 0 0 18359 0 0 17217 0 0 16697 0 0 15908 0 0 15474 0  
14703 0 0 14255 0 0 13648 0 0 13265 0 0 13043 0 12433 0 0 12049 0 0 11559 0 0 11542 0 0 11384 0  
10901 0 0 10911 0 0 10644 0 0 10524 0 0 10397 0 0 10149 0 10105 0 0 9787 0 0 9628 0 0 9540 0 0  
9436 0 9353 0 0 9289 0 0 9068 0 0 9186 0 0 9054 0 8918 0 0 8895 0 0 8737 0 0 8676 0 0 8591 0 0  
8633 0 8451 0 0 8441 0 0 8276 0 0 8447 0 0 8088 0 8132 0 0 7953 0 0 7918 0 0 7890 0 0 7861 0 7824  
0 0 7860 0 0 7796 0 0 7753 0 0 7868 0 0 7723 0 7682 0 0 7695 0 0 7691 0 0 7490 0 0 7608 0 7620 0 0  
7609 0 0 7810 0 0 7550 0 0 7623 0 7707 0 0 7596 0 0 7754 0 0 7635 0 0 7747 0 7633 0 0 7791 0 0  
7730 0 0 7893 0 0 7930 0 0 7846 0 7919 0 0 7765 0 0 8025 0 0 7966 0 0 7960 0 8083 0 0 8167 0 0  
8106 0 0 8262 0 0 8175 0 8383 0 0 8495 0 0 8384 0 0 8332 0 0 8770 0 0 8607 0 8687 0 0 8685 0 0  
8868 0 0 9004 0 0 8967 0 9292 0 0 9251 0 0 9197 0 0 9427 0 0 9480 0 9717 0 0 9847 0 0 9976 0 0  
9864 0 0 10073 0 0 10223 0 10413 0 0 10507 0 0 10735 0 0 10746 0 0 10843 0 10970 0 0 10959 0 0  
11104 0 0 11223 0 0 11344 0 11544 0 0 11484 0 0 11480 0 0 11566 0 0 11783 0 0 11888 0 11750 0 0  
11960 0 0 12249 0 0 12030 0 0 12147 0 12302 0 0 12396 0 0 12341 0 0 12329 0 0 12515 0 12556 0 0  
12477 0 0 12605 0 0 12572 0 0 12671 0 12833 0 0 12811 0 0 12668 0 0 12851 0 0 12407 0 0 12743 0  
12705 0 0 12628 0 0 12854 0 0 12518 0 0 12781 0 12643 0 0 12602 0 0 12839 0 0 12506 0 0 12679 0  
12385 0 0 12581 0 0 12497 0 0 12559 0 0 12544 0 0 12544 0 12572 0 0 12386 0 0 12607 0 0 12631 0 0  
12465 0 12646 0 0 12397 0 0 12346 0 0 12270 0 0 12307 0 12429 0 0 12247 0 0 12347 0 0 12256 0 0  
12001 0 0 12180 0 12140 0 0 12205 0 0 12375 0 0 12016 0 0 12113 0 12127 0 0 12213 0 0 12070 0 0  
11818 0 0 11998 0 12013 0 0 12006 0 0 11744 0 0 11855 0 0 11745 0 0 11864 0 11559 0 0 11824 0 0  
11509 0 0 11670 0 0 11352 0 11475 0 0 11483 0 0 11323 0 0 11388 0 0 11298 0 11352 0 0 11225 0 0  
11102 0 0 11148 0 0 11007 0 0 10967 0 11013 0 0 10804 0 0 10894 0 0 10745 0 0 10841 0 10736 0 0  
10461 0 0 10500 0 0 10432 0 0 10395 0 10180 0 0 10411 0 0 10281 0 0 10463 0 0 10209 0 10386 0 0  
10218 0 0 10147 0 0 9997 0 0 10123 0 0 9941 0 10096 0 0 9936 0 0 9937 0 0 10064 0 0 9875 0 9946 0  
0 9947 0 0 9857 0 0 9677 0 0 9664 0 9569 0 0 9706 0 0 9685 0 0 9719 0 0 9604 0 0 9575 0 9611 0 0

9585 0 0 9292 0 0 9441 0 0 9600 0 9501 0 0 9347 0 0 9423 0 0 9303 0 0 9245 0 9220 0 0 9276 0 0  
9222 0 0 9093 0 0 9223 0 0 9035 0 8996 0 0 9072 0 0 9079 0 0 9257 0 0 9110 0 8875 0 0 9028 0 0  
8885 0 0 8856 0 0 8931 0 8800 0 0 8803 0 0 8747 0 0 8650 0 0 8662 0 0 8482 0 8904 0 0 8721 0 0  
8678 0 0 8767 0 0 8807 0 8492 0 0 8612 0 0 8556 0 0 8543 0 0 8783 0 8701 0 0 8472 0 0 8440 0 0  
8484 0 0 8408 0 8445 0 0 8411 0 0 8574 0 0 8430 0 0 8495 0 0 8432 0 8610 0 0 8411 0 0 8587 0 0  
8381 0 0 8342 0 8421 0 0 8341 0 0 8418 0 0 8402 0 0 8387 0 8330 0 0 8339 0 0 8293 0 0 8355 0 0  
8262 0 0 8296 0 8070 0 0 8172 0 0 8210 0 0 8119 0 0 8270 0 8241 0 0 8166 0 0 8100 0 0 8231 0 0  
8019 0 8016 0 0 7986 0 0 8036 0 0 7927 0 0 8092 0 0 8062 0 8064 0 0 7925 0 0 7802 0 0 7964 0 0  
7959 0 8161 0 0 7776 0 0 7960 0 0 7977 0 0 7772 0 7771 0 0 7811 0 0 7881 0 0 7821 0 0 7902 0 0  
7885 0 7801 0 0 7802 0 0 7651 0 0 7666 0 0 7779 0 7585 0 0 7587 0 0 7559 0 0 7656 0 0 7532 0 7589  
0 0 7411 0 0 7521 0 0 7544 0 0 7446 0 7410 0 0 7498 0 0 7473 0 0 7289 0 0 7244 0 0 7054 0 7095 0 0  
7193 0 0 6995 0 0 7153 0 0 6894 0 6936 0 0 6908 0 0 6762 0 0 6917 0 0 6727 0 6701 0 0 6717 0 0  
6843 0 0 6660 0 0 6558 0 0 6515 0 6511 0 0 6442 0 0 6367 0 0 6421 0 0 6308 0 6289 0 0 6226 0 0  
6275 0 0 6187 0 0 6091 0 6152 0 0 6101 0 0 6079 0 0 5920 0 0 5922 0 0 5941 0 6022 0 0 5882 0 0  
5967 0 0 5804 0 0 5814 0 5788 0 0 5811 0 0 5708 0 0 5660 0 0 5766 0 5762 0 0 5732 0 0 5704 0 0  
5687 0 0 5587 0 0 5679 0 5648 0 0 5464 0 0 5663 0 0 5563 0 0 5599 0 5304 0 0 5418 0 0 5546 0 0  
5360 0 0 5399 0 5337 0 0 5343 0 0 5372 0 0 5226 0 0 5396 0 0 5304 0 5292 0 0 5169 0 0 5240 0 0  
5146 0 0 5180 0 5117 0 0 5032 0 0 5073 0 0 5152 0 0 5108 0 5012 0 0 4969 0 0 5027 0 0 5035 0 0  
4940 0 4928 0 0 4906 0 0 4905 0 0 4859 0 0 4795 0 0 4791 0 4817 0 0 4843 0 0 4828 0 0 4776 0 0  
4817 0 4626 0 0 4573 0 0 4644 0 0 4798 0 0 4785 0 4752 0 0 4789 0 0 4707 0 0 4556 0 0 4731 0 0  
4717 0 4722 0 0 4616 0 0 4583 0 0 4730 0 0 4577 0 4512 0 0 4731 0 0 4767 0 0 4737 0 0 4648 0 4554  
0 0 4569 0 0 4560 0 0 4794 0 0 4710 0 0 4595 0 4521 0 0 4587 0 0 4590 0 0 4659 0 0 4682 0 4531 0 0  
4597 0 0 4633 0 0 4470 0 0 4534 0 4541 0 0 4588 0 0 4622 0 0 4707 0 0 4507 0 0 4716 0 4728 0 0  
4404 0 0 4519 0 0 4545 0 0 4538 0 4623 0 0 4692 0 0 4556 0 0 4552 0 0 4631 0 4473 0 0 4575 0 0  
4673 0 0 4556 0 0 4587 0 4547 0 0 4568 0 0 4540 0 0 4612 0 0 4527 0 0 4564 0 4552 0 0 4607 0 0  
4616 0 0 4468 0 0 4569 0 4515 0 0 4621 0 0 4615 0 0 4509 0 0 4499 0 4445 0 0 4590 0 0 4569 0 0  
4551 0 0 4592 0 0 4619 0 4566 0 0 4571 0 0 4506 0 0 4601 0 0 4596 0 4583 0 0 4587 0 0 4517 0 0  
4456 0 0 4581 0 4631 0 0 4497 0 0 4615 0 0 4586 0 0 4563 0 0 4597 0 4518 0 0 4615 0 0 4513 0 0  
4614 0 0 4521 0 4519 0 0 4616 0 0 4537 0 0 4534 0 0 4433 0 4672 0 0 4528 0 0 4457 0 0 4581 0 0  
4564 0 0 4494 0 4289 0 0 4570 0 0 4588 0 0 4511 0 0 4447 0 4505 0 0 4441 0 0 4364 0 0 4417 0 0  
4513 0 4309 0 0 4273 0 0 4338 0 0 4414 0 0 4378 0 0 4300 0 4357 0 0 4307 0 0 4283 0 0 4472 0 0  
4465 0 4272 0 0 4408 0 0 4366 0 0 4322 0 0 4240 0 4292 0 0 4348 0 0 4435 0 0 4459 0 0 4338 0 4250  
0 0 4348 0 0 4299 0 0 4301 0 0 4331 0 0 4339 0 4180 0 0 4303 0 0 4326 0 0 4353 0 0 4169 0 4329 0 0  
4170 0 0 4267 0 0 4286 0 0 4296 0 4234 0 0 4112 0 0 4260 0 0 4235 0 0 4087 0 0 4145 0 4076 0 0  
4177 0 0 4186 0 0 4194 0 0 4060 0 4156 0 0 4143 0 0 4054 0 0 4045 0 0 4039 0 4052 0 0 4050 0 0  
3893 0 0 4083 0 0 4059 0 0 4047 0 3958 0 0 3922 0 0 3913 0 0 3935 0 0 3984 0 3913 0 0 3866 0 0  
3928 0 0 3922 0 0 3880 0 3933 0 0 3816 0 0 3781 0 0 3876 0 0 3869 0 0 3869 0 3916 0 0 3813 0 0  
3741 0 0 3802 0 0 3795 0 3690 0 0 3687 0 0 3673 0 0 3752 0 0 3656 0 3750 0 0 3614 0 0 3540 0 0  
3677 0 0 3507 0 3566 0 0 3558 0 0 3493 0 0 3554 0 0 3432 0 0 3461 0 3437 0 0 3340 0 0 3380 0 0  
3389 0 0 3418 0 3422 0 0 3308 0 0 3312 0 0 3257 0 0 3233 0 3062 0 0 3099 0 0 3088 0 0 3076 0 0  
3110 0 0 2966 0 3086 0 0 3038 0 0 3075 0 0 2939 0 0 2953 0 2876 0 0 2872 0 0 2853 0 0 2873 0 0  
2799 0 2804 0 0 2697 0 0 2792 0 0 2814 0 0 2709 0 0 2792 0 2656 0 0 2713 0 0 2588 0 0 2555 0 0

2503 0 2539 0 0 2522 0 0 2493 0 0 2480 0 0 2489 0 2486 0 0 2470 0 0 2376 0 0 2395 0 0 2328 0 0  
 2342 0 2301 0 0 2340 0 0 2248 0 0 2325 0 0 2293 0 2202 0 0 2242 0 0 2249 0 0 2287 0 0 2165 0 2079  
 0 0 2126 0 0 2175 0 0 2089 0 0 2033 0 0 2030 0 2049 0 0 1996 0 0 2019 0 0 1991 0 0 2027 0 2027 0 0  
 2019 0 0 1969 0 0 1954 0 0 1963 0 1902 0 0 1862 0 0 1822 0 0 1928 0 0 1804 0 1920 0 0 1852 0 0  
 1846 0 0 1819 0 0 1714 0 0 1767 0 1796 0 0 1792 0 0 1796 0 0 1766 0 0 1700 0 1702 0 0 1683 0 0  
 1676 0 0 1710 0 0 1617 0 1664 0 0 1531 0 0 1668 0 0 1618 0 0 1602 0 0 1590 0 1566 0 0 1529 0 0  
 1570 0 0 1618 0 0 1598 0 1474 0 0 1510 0 0 1484 0 0 1506 0 0 1493 0 1414 0 0 1451 0 0 1447 0 0  
 1461 0 0 1499 0 0 1429 0 1412 0 0 1431 0 0 1440 0 0 1416 0 0 1356 0 1391 0 0 1353 0 0 1411 0 0  
 1318 0 0 1301 0 1392 0 0 1250 0 0 1332 0 0 1281 0 0 1248 0 0 1268 0 1291 0 0 1272 0 0 1196 0 0  
 1179 0 0 1264 0 1211 0 0 1180 0 0 1186 0 0 1223 0 0 1172 0 1114 0 0 1230 0 0 1149 0 0 1203 0 0  
 1085 0 1146 0 0 1167 0 0 1129 0 0 1139 0 0 1125 0 0 1127 0 1070 0 0 1085 0 0 1076 0 0 1085 0 0  
 1053 0 1038 0 0 1033 0 0 1043 0 0 1030 0 0 974 0 1017 0 0 1018 0 0 1020 0 0 1022 0 0 1019 0 0 987 0  
 992 0 0 909 0 0 990 0 0 920 0 0 940 0 935 0 0 970 0 0 947 0 0 932 0 0 931 0 895 0 0 944 0 0 898 0 0  
 904 0 0 890 0 0 978 0 933 0 0 918 0 0 843 0 0 884 0 0 861 0 861 0 0 829 0 0 870 0 0 803 0 0 818 0 828  
 0 0 810 0 0 835 0 0 787 0 0 794 0 0 793 0 807 0 0 840 0 0 814 0 0 770 0 0 767 0 788 0 0 800 0 0 739 0  
 0 757 0 0 828 0 741 0 0 800 0 0 741 0 0 781 0 0 763 0 0 685 0 761 0 0 749 0 0 722 0 0 734 0 0 737 0  
 710 0 0 749 0 0 756 0 0 717 0 0 763 0 692 0 0 678 0 0 709 0 0 717 0 0 646 0 716 0 0 670 0 0 702 0 0  
 696 0 0 692 0 0 735 0 657 0 0 693 0 0 658 0 0 679 0 0 651 0 668 0 0 674 0 0 598 0 0 682 0 0 651 0 628  
 0 0 669 0 0 682 0 0 657 0 0 638 0 0 638 0 640 0 0 580 0 0 629 0 0 611 0 0 639 0 603 0 0 626 0 0 622 0  
 0 617 0 0 615 0 606 0 0 587 0 0 600 0 0 618 0 0 589 0 0 570 0 545 0 0 580 0 0 578 0 0 628 0 0 614 0  
 559 0 0 560 0 0 563 0 0 552 0 0 566 0 559 0 0 562 0 0 519 0 0 527 0 0 556 0 0 524 0 533 0 0 520 0 0  
 488 0 0 489 0 0 518 0 505 0 0 553 0 0 537 0 0 531 0 0 492 0 512 0 0 534 0 0 471 0 0 450 0 0 497 0 488  
 0 0 495 0 0 496 0 0 432 0 0 500 0 0 422 0 440 0 0 463 0 0 409 0 0 464 0 0 437 0 425 0 0 428 0 0 444 0  
 0 426 0 0 458 0 430 0 0 419 0 0 435 0 0 407 0 0 433 0 0 401 0 388 0 0 431 0 0 347 0 0 408 0 0 356 0  
 363 0 0 378 0 0 356 0 0 339 0 0 351 0 339 0 0 334 0 0 334 0 0 354 0 0 321 0 0 316 0 348 0 0 295 0 0  
 301 0 0 318 0 0 284 0 307 0 0 279 0 0 299 0 0 298 0 0 249 0 269 0 0 277 0 0 273 0 0 236 0 0 278 0 0  
 239 0 251 0 0 235 0 0 226 0 0 250 0 0 229 0 207 0 0 229 0 0 222 0 0 231 0 0 237 0 228 0 0 220 0 0 213  
 0 0 206 0 0 221 0 184 0 0 197 0 0 195 0 0 184 0 0 191 0 0 175 0 184 0 0 175 0 0 169 0 0 170 0 0 175 0  
 147 0 0 182 0 0 164 0 0 118 0 0 144 0 125 0 0 149 0 0 143 0 0 129 0 0 133 0 0 161 0 147 0 0 144 0 0  
 151 0 0 135 0 0 127 0 134 0 0 131 0 0 151 0 0 132 0 0 112 0 131 0 0 128 0 0 125 0 0 136 0 0 135 0 0  
 103 0 111 0 0 104 0 0 106 0 0 101 0 0 95 0 99 0 0 104 0 0 107 0 0 105 0 0 109 0 118 0 0 84 0 0 113 0 0  
 94 0 0 89 0 0 96 0 98 0 0 98 0 0 86 0 0 95 0 0 95 0 76 0 0 85 0 0 100 0 0 80 0 0 74 0 107 0 0 70 0 0 74 0  
 0 82 0 0 63 0 0 77 0 81 0 0 80 0 0 62 0 0 73 0 0 81 0 61 0 0 67 0 0 78 0 0 68 0 0 63 0 58 0 0 49 0 0 61 0  
 0 60 0 0 64 0 58 0 0 44 0 0 59 0 0 43 0 0 53 0 0 46 0 62 0 0 45 0 0 33 0 0 39 0 0 36 0 41 0 0 40 0 0 36 0  
 0 50 0 0 39 0 52 0 0 45 0 0 30 0 0 48 0 0 41 0 0 39 0 35 0 0 46 0 0 26 0 0 30 0 0 22 0 34 0 0 32 0 0 31 0  
 0 45 0 0 33 0 22 0 0 31 0 0 27 0 0 27 0 0 20 0 0 24 0 30 0 0 26 0 0 24 0 0 23 0 0 17 0 22 0 0 21 0 0 16 0  
 0 21 0 0 20 0 21 0 0 12 0 0 19 0 0 24 0 0 20 0 0 25 0 16 0 0 27 0 0 18 0 0 17 0 0 16 0 10 0 0 17 0 0 17 0  
 0 9 0 0 26 0 16 0 0 17 0 0 15 0 0 11 0 0 16 0 12 0 0 9 0 0 10 0 0 11 0 0 13 0 0 18 0 15 0 0 9 0 0 18 0 0 12  
 0 0 12 0 16 0 0 10 0 0 18 0 0 14 0 0 6 0 13 0 0 11 0 0 13 0 0 12 0 0 7 0 0 13 0 14 0 0 9 0 0 2 0 0 11 0 0 8  
 0 12 0 0 10 0 0 9 0 0 5 0 0 9 0 10 0 0 10 0 0 11 0 0 5 0 0 5 0 0 11 0 14 0 0 8 0 0 8 0 0 9 0 0 8 0 10 0 0 15  
 0 0 7 0 0 7 0 0 5 0 10 0 0 9 0 0 13 0 0 10 0 0 8 0 0 4 0 7 0 0 7 0 0 5 0 0 7 0 0 9 0 7 0 0 6 0 0 6 0 0 4 0 0 9  
 0 4 0 0 9 0 0 6 0 0 1 0 0 9 0 0 2 0 5 0 0 3 0 0 4 0 0 6 0 0 3 0 7 0 0 6 0 0 6 0 0 3 0 0 7 0 1 0 0 4 0 0 5 0 0 5







0 588 0 0 661 0 0 611 0 0 602 0 0 603 0 0 621 0 0 635 0 0 648 0 0 668 0 627 0 0 728 0 0 682 0 0 637 0  
 0 658 0 0 658 0 0 672 0 0 710 0 0 694 0 0 686 0 0 713 0 0 713 0 0 783 0 0 724 0 0 794 0 0 745 0 0 769  
 0 765 0 0 717 0 0 795 0 0 875 0 0 867 0 0 803 0 0 851 0 0 790 0 0 805 0 0 815 0 0 869 0 0 845 0 0 928  
 0 0 862 0 0 907 0 0 908 0 0 945 0 0 971 0 915 0 0 954 0 0 973 0 0 913 0 0 982 0 0 946 0 0 1050 0 0  
 1014 0 0 1065 0 0 1089 0 0 1123 0 0 1112 0 0 1113 0 0 1169 0 0 1192 0 0 1217 0 0 1262 0 0 1254 0  
 1268 0 0 1368 0 0 1388 0 0 1479 0 0 1498 0 0 1457 0 0 1603 0 0 1613 0 0 1699 0 0 1698 0 0 1809 0 0  
 1866 0 0 1883 0 0 2082 0 0 2074 0 0 2152 0 0 2204 0 2326 0 0 2445 0 0 2485 0 0 2577 0 0 2771 0 0  
 2903 0 0 2991 0 0 3136 0 0 3229 0 0 3362 0 0 3413 0 0 3580 0 0 3707 0 0 3805 0 0 3931 0 0 4062 0 0  
 4161 0 0 4244 0 4336 0 0 4503 0 0 4601 0 0 4636 0 0 4645 0 0 4867 0 0 5118 0 0 5049 0 0 5105 0 0  
 5202 0 0 5271 0 0 5402 0 0 5325 0 0 5329 0 0 5486 0 0 5434 0 0 5431 0 5685 0 0 5638 0 0 5595 0 0  
 5721 0 0 5840 0 0 5695 0 0 5833 0 0 5885 0 0 5996 0 0 6190 0 0 6218 0 0 6339 0 0 6323 0 0 6541 0 0  
 6612 0 0 6497 0 0 6746 0 0 6755 0 6972 0 0 7012 0 0 6987 0 0 7216 0 0 7316 0 0 7537 0 0 7631 0 0  
 7789 0 0 7878 0 0 7879 0 0 8144 0 0 8211 0 0 8274 0 0 8488 0 0 8734 0 0 9011 0 0 9022 0 0 9188 0  
 9291 0 0 9630 0 0 9834 0 0 9838 0 0 10065 0 0 10459 0 0 10705 0 0 10791 0 0 11117 0 0 11288 0 0  
 11799 0 0 11951 0 0 12094 0 0 12577 0 0 12899 0 0 13334 0 0 13424 0 13748 0 0 13989 0 0 14220 0 0  
 14704 0 0 15150 0 0 15437 0 0 15753 0 0 16273 0 0 16480 0 0 16890 0 0 17255 0 0 17471 0 0 18156 0  
 0 18342 0 0 18862 0 0 19338 0 0 19670 0 0 20205 0 20538 0 0 21203 0 0 21371 0 0 21964 0 0 22233 0  
 0 22807 0 0 23110 0 0 23765 0 0 24214 0 0 24307 0 0 25151 0 0 25386 0 0 25706 0 0 26518 0 0 26759  
 0 0 27159 0 0 27542 0 28052 0 0 28263 0 0 28662 0 0 28826 0 0 29256 0 0 29837 0 0 29841 0 0 30428  
 0 0 30796 0 0 31329 0 0 31514 0 0 31981 0 0 32175 0 0 32289 0 0 32618 0 0 32637 0 0 33032 0 0  
 33359 0 33631 0 0 33341 0 0 33433 0 0 33908 0 0 33826 0 0 33807 0 0 33778 0 0 33688 0 0 33686 0 0  
 33632 0 0 33276 0 0 33415 0 0 33098 0 0 33489 0 0 32969 0 0 32924 0 0 32582 0 0 32253 0 32103 0 0  
 32085 0 0 32028 0 0 31634 0 0 31150 0 0 30999 0 0 30858 0 0 30741 0 0 30356 0 0 30294 0 0 29969 0  
 0 30175 0 0 30165 0 0 29712 0 0 29150 0 0 29270 0 0 29281 0 28929 0 0 28973 0 0 28693 0 0 28532 0  
 0 28358 0 0 28313 0 0 28287 0 0 28315 0 0 27993 0 0 27996 0 0 28105 0 0 27900 0 0 27938 0 0 27943  
 0 0 27928 0 0 28016 0 0 28341 0 0 28177 0 28041 0 0 28480 0 0 28445 0 0 28702 0 0 28875 0 0 29280  
 0 0 29533 0 0 29778 0 0 29615 0 0 29895 0 0 30417 0 0 30979 0 0 30593 0 0 31535 0 0 31352 0 0  
 31892 0 0 32067 0 0 32239 0 32373 0 0 32754 0 0 32966 0 0 33324 0 0 33546 0 0 33368 0 0 33495 0 0  
 33683 0 0 33665 0 0 34040 0 0 34264 0 0 34058 0 0 34030 0 0 34492 0 0 34259 0 0 34031 0 0 33808 0  
 34427 0 0 33569 0 0 34083 0 0 34022 0 0 33976 0 0 33331 0 0 33219 0 0 33678 0 0 33349 0 0 33460 0  
 0 33099 0 0 33234 0 0 33009 0 0 33016 0 0 33038 0 0 32923 0 0 32615 0 0 32772 0 32239 0 0 32157 0  
 0 31632 0 0 31663 0 0 31487 0 0 31753 0 0 31217 0 0 31379 0 0 30783 0 0 30611 0 0 30200 0 0 30065  
 0 0 29658 0 0 29591 0 0 29271 0 0 28965 0 0 28997 0 28949 0 0 28561 0 0 28068 0 0 28161 0 0 27887  
 0 0 27679 0 0 27411 0 0 27302 0 0 27250 0 0 26992 0 0 26991 0 0 26979 0 0 26707 0 0 26765 0 0  
 26694 0 0 26845 0 0 26406 0 0 26706 0 27024 0 0 26509 0 0 26954 0 0 27130 0 0 27180 0 0 27431 0 0  
 27635 0 0 27780 0 0 28323 0 0 28717 0 0 29416 0 0 29912 0 0 30502 0 0 31239 0 0 32425 0 0 33097 0  
 0 33625 0 0 34846 0 35509 0 0 37020 0 0 38195 0 0 39531 0 0 40813 0 0 41536 0 0 43557 0 0 44177 0  
 0 46120 0 0 46895 0 0 47661 0 0 49141 0 0 49460 0 0 50802 0 0 51472 0 0 52300 0 0 53092 0 53283 0  
 0 53945 0 0 54473 0 0 55255 0 0 54650 0 0 54695 0 0 54880 0 0 54353 0 0 54610 0 0 53526 0 0 53558  
 0 0 53352 0 0 52529 0 0 52282 0 0 51838 0 0 50604 0 0 49635 0 0 48996 0 48914 0 0 47955 0 0 46741  
 0 0 46115 0 0 44831 0 0 43884 0 0 43049 0 0 42503 0 0 41186 0 0 39793 0 0 38750 0 0 37498 0 0  
 36738 0 0 35096 0 0 33844 0 0 32379 0 0 31596 0 0 30585 0 29240 0 0 28300 0 0 26791 0 0 26155 0 0

25082 0 0 23714 0 0 22907 0 0 21908 0 0 21334 0 0 20456 0 0 19891 0 0 19132 0 0 18591 0 0 17890 0  
 0 17432 0 0 16952 0 0 16529 0 15948 0 0 15531 0 0 15283 0 0 14821 0 0 14321 0 0 14301 0 0 14078 0  
 0 13762 0 0 13605 0 0 13467 0 0 13299 0 0 13129 0 0 12873 0 0 12557 0 0 12539 0 0 12395 0 0 12513  
 0 0 12274 0 12308 0 0 12058 0 0 11788 0 0 11753 0 0 11927 0 0 11691 0 0 11596 0 0 11488 0 0 11189  
 0 0 11188 0 0 11334 0 0 10965 0 0 10995 0 0 10826 0 0 10593 0 0 10661 0 0 10539 0 10472 0 0 10326  
 0 0 10070 0 0 10082 0 0 10138 0 0 10025 0 0 9878 0 0 9524 0 0 9626 0 0 9469 0 0 9418 0 0 9287 0 0  
 9159 0 0 9281 0 0 8985 0 0 8990 0 0 8982 0 0 8735 0 8595 0 0 8636 0 0 8529 0 0 8433 0 0 8186 0 0  
 8327 0 0 8268 0 0 8150 0 0 8184 0 0 8110 0 0 7976 0 0 7966 0 0 7867 0 0 7859 0 0 7937 0 0 7969 0 0  
 7913 0 0 7742 0 7839 0 0 7863 0 0 7808 0 0 7743 0 0 7734 0 0 7766 0 0 7568 0 0 7762 0 0 7802 0 0  
 7754 0 0 7622 0 0 7669 0 0 7668 0 0 7696 0 0 7834 0 0 7712 0 0 7716 0 7949 0 0 7870 0 0 7708 0 0  
 7794 0 0 8027 0 0 7887 0 0 8057 0 0 7900 0 0 8065 0 0 8088 0 0 8112 0 0 8227 0 0 8353 0 0 8311 0 0  
 8382 0 0 8490 0 0 8316 0 0 8624 0 8556 0 0 8771 0 0 8800 0 0 8780 0 0 8909 0 0 9179 0 0 9141 0 0  
 9194 0 0 9268 0 0 9473 0 0 9622 0 0 9652 0 0 9801 0 0 9966 0 0 10249 0 0 10058 0 0 10215 0 0 10240  
 0 10335 0 0 10501 0 0 10539 0 0 10616 0 0 10586 0 0 10945 0 0 10881 0 0 10992 0 0 11027 0 0 11285  
 0 0 11270 0 0 11371 0 0 11321 0 0 11482 0 0 11437 0 0 11634 0 0 11702 0 11701 0 0 11862 0 0 11932  
 0 0 11952 0 0 11736 0 0 11824 0 0 12070 0 0 11768 0 0 12057 0 0 12164 0 0 11988 0 0 11998 0 0  
 12025 0 0 12133 0 0 12095 0 0 12186 0 0 11892 0 0 12140 0 12063 0 0 11812 0 0 11996 0 0 11669 0 0  
 12034 0 0 11954 0 0 12013 0 0 11940 0 0 11940 0 0 12018 0 0 11709 0 0 11848 0 0 11670 0 0 11798 0  
 0 11624 0 0 11737 0 0 11628 0 11758 0 0 11670 0 0 11855 0 0 11686 0 0 11730 0 0 11554 0 0 11571 0  
 0 11625 0 0 11713 0 0 11682 0 0 11406 0 0 11483 0 0 11525 0 0 11689 0 0 11459 0 0 11747 0 0 11466  
 0 0 11657 0 11556 0 0 11490 0 0 11418 0 0 11387 0 0 11399 0 0 11269 0 0 11564 0 0 11332 0 0 11428  
 0 0 11224 0 0 11482 0 0 11246 0 0 11447 0 0 11252 0 0 11114 0 0 11206 0 0 11313 0 0 11225 0 11113  
 0 0 11158 0 0 11000 0 0 10911 0 0 10814 0 0 10832 0 0 10750 0 0 10623 0 0 10625 0 0 10778 0 0  
 10781 0 0 10669 0 0 10584 0 0 10474 0 0 10336 0 0 10351 0 0 10434 0 10337 0 0 10249 0 0 10437 0 0  
 9998 0 0 10182 0 0 10299 0 0 10110 0 0 9956 0 0 9825 0 0 10022 0 0 9958 0 0 9773 0 0 9708 0 0 9766  
 0 0 9674 0 0 9615 0 0 9591 0 0 9562 0 9494 0 0 9401 0 0 9379 0 0 9539 0 0 9415 0 0 9521 0 0 9491 0 0  
 9375 0 0 9261 0 0 9222 0 0 9408 0 0 9299 0 0 9231 0 0 9259 0 0 9410 0 0 9250 0 0 9120 0 0 9134 0  
 9215 0 0 9166 0 0 9115 0 0 9192 0 0 9041 0 0 8968 0 0 9192 0 0 9048 0 0 9105 0 0 8882 0 0 9147 0 0  
 9035 0 0 8798 0 0 8781 0 0 8813 0 0 8829 0 0 8900 0 8816 0 0 8537 0 0 8701 0 0 8799 0 0 8654 0 0  
 8465 0 0 8696 0 0 8587 0 0 8557 0 0 8510 0 0 8643 0 0 8460 0 0 8330 0 0 8338 0 0 8405 0 0 8453 0 0  
 8545 0 0 8360 0 8208 0 0 8107 0 0 8316 0 0 8146 0 0 8138 0 0 8190 0 0 8168 0 0 8196 0 0 8105 0 0  
 8101 0 0 8199 0 0 8057 0 0 8022 0 0 7972 0 0 7855 0 0 7934 0 0 8116 0 7905 0 0 7961 0 0 7819 0 0  
 8056 0 0 8065 0 0 7931 0 0 7802 0 0 7976 0 0 7897 0 0 7899 0 0 7730 0 0 7770 0 0 7821 0 0 7911 0 0  
 7876 0 0 7933 0 0 7769 0 0 7858 0 7937 0 0 7834 0 0 7548 0 0 7711 0 0 7741 0 0 7768 0 0 7688 0 0  
 7557 0 0 7614 0 0 7687 0 0 7646 0 0 7683 0 0 7651 0 0 7716 0 0 7538 0 0 7577 0 0 7640 0 0 7388 0  
 7369 0 0 7629 0 0 7537 0 0 7600 0 0 7547 0 0 7605 0 0 7382 0 0 7438 0 0 7582 0 0 7409 0 0 7433 0 0  
 7291 0 0 7395 0 0 7281 0 0 7329 0 0 7352 0 0 7238 0 7254 0 0 7272 0 0 7106 0 0 7178 0 0 7219 0 0  
 7347 0 0 7038 0 0 7290 0 0 7364 0 0 7064 0 0 7280 0 0 7170 0 0 7261 0 0 7212 0 0 7184 0 0 7075 0 0  
 7171 0 0 7154 0 7071 0 0 7187 0 0 7158 0 0 7122 0 0 7108 0 0 7124 0 0 7012 0 0 7246 0 0 6959 0 0  
 6893 0 0 6995 0 0 6993 0 0 7059 0 0 6999 0 0 6856 0 0 6955 0 0 6994 0 0 7008 0 6978 0 0 6785 0 0  
 6896 0 0 6775 0 0 6714 0 0 6671 0 0 6643 0 0 6761 0 0 6579 0 0 6757 0 0 6457 0 0 6483 0 0 6524 0 0  
 6443 0 0 6320 0 0 6283 0 0 6211 0 6285 0 0 6168 0 0 5943 0 0 6092 0 0 6092 0 0 6035 0 0 6024 0 0



5934 0 0 5945 0 0 5853 0 0 5678 0 0 5774 0 0 5844 0 0 5639 0 0 5539 0 0 5593 0 0 5611 0 0 5448 0  
5310 0 0 5523 0 0 5467 0 0 5449 0 0 5324 0 0 5321 0 0 5239 0 0 5307 0 0 5336 0 0 5096 0 0 5225 0 0  
5223 0 0 5114 0 0 5194 0 0 5192 0 0 5114 0 0 5090 0 0 5038 0 0 5119 0 0 4975 0 0 5091 0 0 5041 0 0  
5043 0 0 5118 0 0 5083 0 0 5001 0 0 5113 0 0 5128 0 0 4867 0 0 4989 0 0 4950 0 0 5012 0 0 4910 0 0  
5073 0 0 5006 0 0 4964 0 0 4891 0 0 5032 0 0 4845 0 0 4915 0 0 4890 0 0 4866 0 0 4998 0 0 4854 0 0  
5044 0 0 4963 0 0 4859 0 0 4748 0 0 4985 0 0 4918 0 0 4925 0 0 4831 0 0 4896 0 0 4728 0 0 4670 0 0  
4685 0 0 4751 0 0 4743 0 0 4733 0 0 4611 0 0 4673 0 0 4623 0 0 4510 0 0 4515 0 0 4513 0 0 4596 0 0  
4467 0 0 4622 0 0 4601 0 0 4575 0 0 4415 0 0 4326 0 0 4427 0 0 4511 0 0 4448 0 0 4481 0 0 4407 0 0  
4463 0 0 4447 0 0 4430 0 0 4515 0 0 4416 0 0 4482 0 0 4347 0 0 4395 0 0 4487 0 0 4346 0 0 4372 0  
4408 0 0 4480 0 0 4508 0 0 4246 0 0 4363 0 0 4275 0 0 4424 0 0 4420 0 0 4416 0 0 4378 0 0 4464 0 0  
4457 0 0 4353 0 0 4424 0 0 4448 0 0 4441 0 0 4541 0 0 4344 0 0 4468 0 0 4475 0 0 4405 0 0 4477 0 0  
4577 0 0 4474 0 0 4454 0 0 4457 0 0 4494 0 0 4528 0 0 4481 0 0 4535 0 0 4498 0 0 4408 0 0 4350 0 0  
4516 0 0 4541 0 0 4507 0 0 4447 0 0 4378 0 0 4475 0 0 4540 0 0 4698 0 0 4437 0 0 4430 0 0 4424 0 0  
4577 0 0 4479 0 0 4609 0 0 4511 0 0 4590 0 0 4472 0 0 4408 0 0 4541 0 0 4444 0 0 4519 0 0 4501 0 0  
4552 0 0 4494 0 0 4614 0 0 4420 0 0 4596 0 0 4536 0 0 4589 0 0 4499 0 0 4449 0 0 4484 0 0 4490 0 0  
4432 0 0 4600 0 0 4528 0 0 4433 0 0 4523 0 0 4339 0 0 4421 0 0 4546 0 0 4379 0 0 4442 0 0 4395 0 0  
4425 0 0 4386 0 0 4438 0 0 4354 0 0 4336 0 0 4431 0 0 4452 0 0 4381 0 0 4391 0 0 4469 0 0 4309 0  
4352 0 0 4364 0 0 4325 0 0 4328 0 0 4369 0 0 4326 0 0 4368 0 0 4240 0 0 4313 0 0 4245 0 0 4295 0 0  
4143 0 0 4251 0 0 4241 0 0 4193 0 0 4145 0 0 4317 0 0 4186 0 0 4113 0 0 4226 0 0 4198 0 0 4177 0 0  
4092 0 0 4152 0 0 4201 0 0 4152 0 0 4213 0 0 4087 0 0 4118 0 0 4207 0 0 4195 0 0 4205 0 0 4277 0 0  
4145 0 0 4114 0 0 4095 0 0 4058 0 0 4073 0 0 4210 0 0 4106 0 0 4078 0 0 4121 0 0 4189 0 0 4172 0 0  
4149 0 0 4053 0 0 4001 0 0 4187 0 0 4126 0 0 3959 0 0 4153 0 0 4109 0 0 4027 0 0 4082 0 0 4005 0 0  
4043 0 0 4039 0 0 4170 0 0 4166 0 0 3952 0 0 3977 0 0 4060 0 0 4072 0 0 4120 0 0 3947 0 0 4003 0 0  
4106 0 0 4160 0 0 3964 0 0 3892 0 0 3919 0 0 3996 0 0 3900 0 0 3990 0 0 3920 0 0 3908 0 0 3827 0 0  
3881 0 0 3990 0 0 3914 0 0 3844 0 0 3902 0 0 3884 0 0 3883 0 0 3813 0 0 3779 0 0 3807 0 0 3781 0  
3809 0 0 3831 0 0 3831 0 0 3778 0 0 3738 0 0 3723 0 0 3738 0 0 3610 0 0 3640 0 0 3558 0 0 3635 0 0  
3597 0 0 3610 0 0 3511 0 0 3557 0 0 3512 0 0 3488 0 0 3425 0 0 3390 0 0 3543 0 0 3542 0 0 3482 0 0  
3449 0 0 3478 0 0 3398 0 0 3394 0 0 3440 0 0 3366 0 0 3300 0 0 3386 0 0 3418 0 0 3278 0 0 3264 0 0  
3216 0 0 3252 0 0 3289 0 0 3132 0 0 3193 0 0 3187 0 0 3124 0 0 3126 0 0 3240 0 0 3245 0 0 3178 0 0  
3016 0 0 3137 0 0 2986 0 0 3003 0 0 3171 0 0 3015 0 0 3023 0 0 3003 0 0 2936 0 0 2872 0 0 2995 0 0  
2921 0 0 2912 0 0 2853 0 0 2767 0 0 2796 0 0 2748 0 0 2756 0 0 2770 0 0 2689 0 0 2794 0 0 2750 0 0  
2720 0 0 2610 0 0 2619 0 0 2693 0 0 2465 0 0 2532 0 0 2499 0 0 2448 0 0 2549 0 0 2392 0 0 2461 0 0  
2477 0 0 2423 0 0 2378 0 0 2362 0 0 2317 0 0 2317 0 0 2311 0 0 2307 0 0 2253 0 0 2248 0 0 2147 0  
2181 0 0 2201 0 0 2174 0 0 2050 0 0 2051 0 0 2067 0 0 2073 0 0 1992 0 0 2026 0 0 2065 0 0 1991 0 0  
1983 0 0 1932 0 0 1983 0 0 1906 0 0 1964 0 0 1904 0 0 1815 0 0 1856 0 0 1827 0 0 1833 0 0 1810 0 0  
1779 0 0 1762 0 0 1758 0 0 1685 0 0 1776 0 0 1676 0 0 1674 0 0 1573 0 0 1507 0 0 1604 0 0 1571 0 0  
1517 0 0 1504 0 0 1574 0 0 1507 0 0 1490 0 0 1538 0 0 1451 0 0 1443 0 0 1394 0 0 1490 0 0 1384 0 0  
1376 0 0 1372 0 0 1374 0 0 1450 0 0 1278 0 0 1326 0 0 1299 0 0 1327 0 0 1376 0 0 1259 0 0 1326 0 0  
1258 0 0 1221 0 0 1195 0 0 1151 0 0 1220 0 0 1207 0 0 1189 0 0 1248 0 0 1126 0 0 1124 0 0 1187 0 0  
1133 0 0 1121 0 0 1149 0 0 1112 0 0 1187 0 0 1073 0 0 1036 0 0 1054 0 0 1084 0 0 1113 0 0 1142 0 0  
1031 0 0 1107 0 0 1096 0 0 1024 0 0 1038 0 0 1045 0 0 957 0 0 1026 0 0 982 0 0 1001 0 0 969 0 0 1008 0  
0 980 0 0 956 0 0 979 0 0 973 0 0 1000 0 0 951 0 0 909 0 0 932 0 0 961 0 0 911 0 0 908 0 0 897 0 0 932

0 0 859 0 0 923 0 0 849 0 0 843 0 877 0 0 949 0 0 853 0 0 858 0 0 860 0 0 896 0 0 829 0 0 902 0 0 861  
 0 0 856 0 0 823 0 0 855 0 0 819 0 0 812 0 0 795 0 0 790 0 0 795 0 0 791 0 796 0 0 744 0 0 800 0 0 757  
 0 0 738 0 0 841 0 0 754 0 0 778 0 0 781 0 0 744 0 0 756 0 0 707 0 0 701 0 0 761 0 0 739 0 0 721 0 0  
 734 0 724 0 0 660 0 0 708 0 0 743 0 0 716 0 0 739 0 0 729 0 0 733 0 0 694 0 0 702 0 0 708 0 0 702 0 0  
 669 0 0 710 0 0 719 0 0 699 0 0 701 0 0 636 0 643 0 0 742 0 0 639 0 0 636 0 0 638 0 0 615 0 0 616 0 0  
 631 0 0 626 0 0 692 0 0 609 0 0 638 0 0 623 0 0 623 0 0 612 0 0 609 0 0 603 0 0 608 0 605 0 0 597 0 0  
 558 0 0 616 0 0 609 0 0 611 0 0 561 0 0 562 0 0 564 0 0 551 0 0 563 0 0 562 0 0 556 0 0 522 0 0 563 0  
 0 539 0 0 548 0 516 0 0 523 0 0 528 0 0 548 0 0 569 0 0 525 0 0 533 0 0 504 0 0 546 0 0 554 0 0 528 0  
 0 517 0 0 511 0 0 515 0 0 507 0 0 473 0 0 486 0 0 482 0 540 0 0 466 0 0 497 0 0 471 0 0 475 0 0 503 0  
 0 468 0 0 446 0 0 463 0 0 429 0 0 419 0 0 422 0 0 421 0 0 459 0 0 437 0 0 423 0 0 448 0 398 0 0 444 0  
 0 404 0 0 404 0 0 391 0 0 362 0 0 385 0 0 371 0 0 366 0 0 394 0 0 400 0 0 392 0 0 334 0 0 348 0 0 349  
 0 0 341 0 0 361 0 0 323 0 311 0 0 292 0 0 345 0 0 309 0 0 314 0 0 292 0 0 322 0 0 269 0 0 305 0 0 268  
 0 0 292 0 0 290 0 0 290 0 0 296 0 0 286 0 0 231 0 0 245 0 0 215 0 230 0 0 220 0 0 237 0 0 227 0 0 236  
 0 0 224 0 0 224 0 0 218 0 0 219 0 0 195 0 0 200 0 0 205 0 0 182 0 0 216 0 0 197 0 0 190 0 0 176 0 184  
 0 0 186 0 0 177 0 0 165 0 0 164 0 0 184 0 0 157 0 0 164 0 0 160 0 0 160 0 0 176 0 0 143 0 0 143 0 0  
 154 0 0 161 0 0 148 0 0 137 0 0 159 0 138 0 0 156 0 0 139 0 0 117 0 0 120 0 0 162 0 0 124 0 0 108 0 0  
 125 0 0 130 0 0 119 0 0 135 0 0 103 0 0 124 0 0 114 0 0 107 0 0 101 0 125 0 0 114 0 0 104 0 0 112 0 0  
 105 0 0 101 0 0 106 0 0 116 0 0 104 0 0 92 0 0 85 0 0 95 0 0 95 0 0 89 0 0 95 0 0 109 0 0 85 0 0 109 0  
 78 0 0 83 0 0 93 0 0 89 0 0 83 0 0 74 0 0 95 0 0 71 0 0 81 0 0 66 0 0 67 0 0 69 0 0 78 0 0 66 0 0 72 0 0  
 79 0 0 69 0 0 76 0 68 0 0 62 0 0 49 0 0 61 0 0 60 0 0 65 0 0 51 0 0 54 0 0 56 0 0 58 0 0 51 0 0 48 0 0 50  
 0 0 41 0 0 33 0 0 35 0 0 58 0 34 0 0 47 0 0 32 0 0 28 0 0 30 0 0 36 0 0 32 0 0 26 0 0 40 0 0 27 0 0 29 0 0  
 29 0 0 29 0 0 25 0 0 35 0 0 26 0 0 29 0 0 35 0 30 0 0 21 0 0 28 0 0 24 0 0 22 0 0 20 0 0 20 0 0 23 0 0 29  
 0 0 26 0 0 17 0 0 16 0 0 26 0 0 21 0 0 17 0 0 25 0 0 18 0 0 23 0 21 0 0 17 0 0 12 0 0 11 0 0 19 0 0 17 0 0  
 13 0 0 20 0 0 16 0 0 13 0 0 16 0 0 15 0 0 18 0 0 14 0 0 9 0 0 10 0 0 17 0 10 0 0 12 0 0 18 0 0 16 0 0 10 0  
 0 14 0 0 8 0 0 13 0 0 13 0 0 7 0 0 10 0 0 12 0 0 15 0 0 9 0 0 6 0 0 12 0 0 10 0 0 9 0 6 0 0 12 0 0 9 0 0 9 0  
 0 9 0 0 6 0 0 5 0 0 7 0 0 11 0 0 4 0 0 6 0 0 8 0 0 8 0 0 10 0 0 11 0 0 7 0 0 4 0 9 0 0 8 0 0 3 0 0 7 0 0 6 0 0  
 11 0 0 7 0 0 3 0 0 7 0 0 1 0 0 8 0 0 4 0 0 8 0 0 7 0 0 6 0 0 5 0 0 2 0 0 8 0 5 0 0 3 0 0 9 0 0 7 0 0 3 0 0 4 0 0  
 3 0 0 5 0 0 3 0 0 5 0 0 10 0 0 3 0 0 2 0 0 6 0 0 4 0 0 5 0 0 5 0 0 0 0 6 0 0 6 0 0 3 0 0 6 0 0 3 0 0 5 0 0 4 0 0  
 6 0 0 4 0 0 2 0 0 4 0 0 6 0 0 4 0 0 2 0 0 4 0 0 5 0 0 3 0 3 0 0 3 0 0 6 0 0 3 0 0 3 0 0 2 0 0 7 0 0 3 0 0 6 0 0  
 2 0 0 4 0 0 2 0 0 7 0 0 3 0 0 4 0 0 2 0 0 1 0 0 3 0 4 0 0 5 0 0 3 0 0 4 0 0 3 0 0 3 0 0 6 0 0 4 0 0 4 0 0 4 0 0  
 1 0 0 4 0 0 6 0 0 7 0 0 2 0 0 2 0 0 0 0 0 3 0 2 0 0 3 0 0 2 0 0 1 0 0 0 0 0 3 0 0 3 0 0 0 0 0 1 0 0 1 0 0 2 0 0  
 5 0 0 2 0 0 1 0 0 0 0 0 5 0 0 3 0 1 0 0 2 0 0 1 0 0 0 0 0 4 0 0 0 0 0 3 0 0 2 0 0 2 0 0 1 0 0 2 0 0 1 0 0 1 0 0  
 1 0 0 2 0 0 1 0 0 3 0 0 2 0 3 0 0 2 0 0 3 0 0 3 0 0 0 0 0 0 0 0 1 0 0 2 0 0 3 0 0 1 0 0 1 0 0 2 0 0 2 0 0 3 0 0  
 1 0 0 2 0 0 3 0 2 0 0 2 0 0 2 0 0 1 0 0 0 0 0 1 0 0 2 0 0 0 0 0 1 0 0 2 0 0 6 0 0 2 0 0 4 0 0 4 0 0 1 0 0 1 0 0  
 3 0 0 0 0 0 0 0 1 0 0 4 0 0 2 0 0 5 0 0 3 0 0 0 0 0 3 0 0 0 0 0 2 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 2 0 0 1 0 0  
 1 0 0 0 0 2 0 0 2 0 0 1 0 0 0 0 0 0 0 0 1 0 0 1 0 0 2 0 0 3 0 0 2 0 0 1 0 0 0 0 0 1 0 0 1 0 0 2 0 0 1 0 1 0 0 0  
 0 0 5 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 2 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 2 0 1 0 0 2 0 0 0  
 0 0 0 0 0 0 0 0 2 0 0 2 0 0 1 0 0 1 0 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 1 0 0 0 0 0 0 0 0 0 0 1 0 0 0  
 0 0 1 0 0 1 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0  
 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 1 0 0 1  
 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0  
 0 0 0 0 0 0 0 0 0 0 0 0 1 0





545 0 0 504 0 0 564 0 0 574 0 0 530 0 0 529 0 0 603 0 0 556 0 0 580 0 0 613 0 0 654 0 0 677 0 0 637 0 0  
672 0 0 731 0 0 744 0 0 783 0 0 764 0 0 787 0 0 763 0 0 752 0 0 741 0 0 731 0 0 746 0 0 726 0 0 701 0  
752 0 0 766 0 0 713 0 0 742 0 0 695 0 0 789 0 0 797 0 0 767 0 0 760 0 0 736 0 0 731 0 0 744 0 0 715 0 0  
765 0 0 796 0 0 669 0 0 751 0 0 708 0 0 758 0 0 792 0 0 701 0 0 717 0 0 749 0 0 725 0 0 701 0 0 717 0 0  
725 0 0 699 0 0 698 0 0 665 0 0 660 0 0 679 0 0 675 0 0 642 0 0 642 0 0 688 0 0 647 0 0 658 0 0 617 0 0  
657 0 0 599 0 0 605 0 0 622 0 0 606 0 0 580 0 0 559 0 0 565 0 0 586 0 0 565 0 0 584 0 0 608 0 0 574 0 0  
521 0 0 595 0 0 500 0 0 478 0 0 544 0 0 545 0 0 519 0 0 541 0 0 508 0 0 478 0 0 515 0 0 518 0 0 507 0  
564 0 0 547 0 0 491 0 0 547 0 0 509 0 0 517 0 0 493 0 0 544 0 0 527 0 0 565 0 0 550 0 0 550 0 0 544 0 0  
536 0 0 504 0 0 564 0 0 543 0 0 525 0 0 547 0 0 550 0 0 571 0 0 518 0 0 587 0 0 563 0 0 572 0 0 569 0 0  
549 0 0 560 0 0 593 0 0 572 0 0 573 0 0 583 0 0 553 0 0 598 0 0 577 0 0 611 0 0 621 0 0 606 0 0 634 0 0  
620 0 0 624 0 0 613 0 0 678 0 0 641 0 0 688 0 0 641 0 0 655 0 0 674 0 0 673 0 0 680 0 0 730 0 0 747 0 0  
696 0 0 715 0 0 740 0 0 777 0 0 777 0 0 760 0 0 772 0 0 824 0 0 834 0 0 814 0 0 830 0 0 821 0 0 848 0  
890 0 0 913 0 0 870 0 0 875 0 0 914 0 0 938 0 0 964 0 0 940 0 0 942 0 0 936 0 0 1049 0 0 1029 0 0 1023  
0 0 1014 0 0 1097 0 0 1067 0 0 1133 0 0 1085 0 0 1126 0 0 1220 0 0 1234 0 0 1249 0 0 1251 0 0 1326 0 0  
1359 0 0 1464 0 0 1433 0 0 1456 0 0 1520 0 0 1487 0 0 1569 0 0 1626 0 0 1622 0 0 1654 0 0 1726 0 0  
1742 0 0 1771 0 0 1814 0 0 1884 0 0 1876 0 0 1901 0 0 1915 0 0 1964 0 0 1936 0 0 2108 0 0 2001 0 0  
2064 0 0 2085 0 0 2224 0 0 2097 0 0 2218 0 0 2314 0 0 2187 0 0 2266 0 0 2296 0 0 2250 0 0 2228 0 0  
2316 0 0 2275 0 0 2280 0 0 2310 0 0 2286 0 0 2309 0 0 2382 0 0 2506 0 0 2476 0 0 2484 0 0 2548 0 0  
2569 0 0 2574 0 0 2582 0 0 2580 0 0 2646 0 0 2708 0 0 2809 0 0 2748 0 0 2900 0 0 2883 0 0 2695 0 0  
2807 0 0 2957 0 0 2926 0 0 2889 0 0 3080 0 0 3030 0 0 3123 0 0 3197 0 0 3217 0 0 3223 0 0 3230 0 0  
3233 0 0 3334 0 0 3275 0 0 3368 0 0 3464 0 0 3341 0 0 3408 0 0 3559 0 0 3564 0 0 3568 0 0 3582 0 0  
3580 0 0 3688 0 0 3756 0 0 3772 0 0 3722 0 0 3659 0 0 3845 0 0 3907 0 0 3885 0 0 3926 0 0 4049 0 0  
4020 0 0 4065 0 0 4104 0 0 4202 0 0 4196 0 0 4226 0 0 4298 0 0 4239 0 0 4429 0 0 4559 0 0 4577 0 0  
4544 0 0 4672 0 0 4725 0 0 4694 0 0 4832 0 0 4833 0 0 4877 0 0 4771 0 0 4966 0 0 5042 0 0 5079 0 0  
5021 0 0 5178 0 0 5198 0 0 5212 0 0 5304 0 0 5417 0 0 5314 0 0 5314 0 0 5540 0 0 5530 0 0 5659 0 0  
5734 0 0 5609 0 0 5721 0 0 5782 0 0 5790 0 0 5810 0 0 5915 0 0 5864 0 0 5924 0 0 6088 0 0 6209 0 0  
6285 0 0 6296 0 0 6299 0 0 6361 0 0 6344 0 0 6564 0 0 6598 0 0 6786 0 0 6609 0 0 6899 0 0 6753 0 0  
7032 0 0 7024 0 0 7009 0 0 7266 0 0 7299 0 0 7198 0 0 7470 0 0 7346 0 0 7633 0 0 7578 0 0 7751 0 0  
7840 0 0 7844 0 0 7969 0 0 7956 0 0 8080 0 0 8205 0 0 8151 0 0 8265 0 0 8530 0 0 8645 0 0 8658 0 0  
8728 0 0 8869 0 0 8981 0 0 9004 0 0 9410 0 0 9132 0 0 9351 0 0 9488 0 0 9487 0 0 9787 0 0 9672 0 0  
9783 0 0 9936 0 0 10044 0 0 10137 0 0 10203 0 0 10554 0 0 10479 0 0 10785 0 0 10828 0 0 10942 0 0  
11042 0 0 11136 0 0 11304 0 0 11424 0 0 11609 0 0 11674 0 0 11932 0 0 12059 0 0 12246 0 0 12284 0 0  
12552 0 0 12561 0 0 12691 0 0 13040 0 0 12936 0 0 13320 0 0 13476 0 0 13655 0 0 13814 0 0 13882 0 0  
14272 0 0 14452 0 0 14493 0 0 14834 0 0 14970 0 0 15157 0 0 15409 0 0 15464 0 0 15810 0 0 15910 0 0  
16134 0 0 16324 0 0 16706 0 0 17093 0 0 17219 0 0 17363 0 0 17657 0 0 17590 0 0 17908 0 0 18277 0 0  
18565 0 0 18811 0 0 19126 0 0 19308 0 0 19650 0 0 19860 0 0 19977 0 0 20272 0 0 20343 0 0 20828 0 0  
21152 0 0 21280 0 0 21601 0 0 21935 0 0 22221 0 0 22496 0 0 22847 0 0 22489 0 0 23025 0 0 23335 0  
23567 0 0 24029 0 0 24104 0 0 24663 0 0 24584 0 0 24625 0 0 25227 0 0 25486 0 0 25162 0 0 25608 0  
0 25969 0 26086 0 26320 0 26471 0 26709 0 26784 0 27314 0 27156 0 27658 0 27903 0  
0 28302 0 28202 0 28364 0 28836 0 28909 0 28696 0 28846 0 29182 0 29377 0 29359 0  
0 29565 0 29607 0 30018 0 30503 0 30103 0 30559 0 30795 0 31068 0 31179 0 31538 0  
0 31834 0 31861 0 32225 0 32082 0 32417 0 33034 0 33414 0 33136 0 33318 0 33525 0

0 33835 0 0 33751 0 0 34512 0 0 34521 0 34766 0 0 34958 0 0 35233 0 0 35124 0 0 35261 0 0 35558 0  
 0 35746 0 0 35661 0 0 35755 0 0 35914 0 0 35736 0 35787 0 0 36055 0 0 35725 0 0 36319 0 0 36407 0  
 0 36073 0 0 36072 0 0 35634 0 0 35790 0 0 35376 0 0 35241 0 35147 0 0 35099 0 0 34630 0 0 34689 0  
 0 34305 0 0 34476 0 0 33921 0 0 33900 0 0 33854 0 0 33671 0 0 33482 0 33347 0 0 32891 0 0 32716 0  
 0 32998 0 0 32772 0 0 32399 0 0 32299 0 0 32037 0 0 31911 0 0 31730 0 32048 0 0 31630 0 0 31950 0  
 0 32209 0 0 31951 0 0 31825 0 0 31962 0 0 32449 0 0 32926 0 0 33185 0 0 33390 0 33517 0 0 34104 0  
 0 34389 0 0 34855 0 0 35254 0 0 35913 0 0 36731 0 0 37306 0 0 38299 0 0 39119 0 0 39874 0 40303 0  
 0 41588 0 0 41974 0 0 42873 0 0 43951 0 0 44867 0 0 45597 0 0 46418 0 0 47041 0 0 47485 0 0 48115  
 0 48654 0 0 49547 0 0 49695 0 0 50476 0 0 50506 0 0 50715 0 0 50941 0 0 50896 0 0 50786 0 0 50765  
 0 0 50558 0 50743 0 0 50070 0 0 50212 0 0 49429 0 0 49753 0 0 48951 0 0 48392 0 0 48435 0 0 47688  
 0 0 47656 0 46885 0 0 45902 0 0 45729 0 0 45113 0 0 44520 0 0 44363 0 0 43785 0 0 43155 0 0 42547  
 0 0 42441 0 0 41344 0 41401 0 0 40514 0 0 39942 0 0 39403 0 0 38818 0 0 38273 0 0 37643 0 0 36981  
 0 0 35997 0 0 35485 0 0 34506 0 34152 0 0 33581 0 0 32571 0 0 31871 0 0 31094 0 0 30333 0 0 29482  
 0 0 28902 0 0 28410 0 0 27410 0 0 26734 0 26048 0 0 25622 0 0 24778 0 0 24433 0 0 23832 0 0 23243  
 0 0 22755 0 0 22421 0 0 22123 0 0 21413 0 0 21077 0 20681 0 0 20549 0 0 20101 0 0 19616 0 0 19425  
 0 0 19285 0 0 18623 0 0 18872 0 0 18715 0 0 18152 0 0 18323 0 18080 0 0 17706 0 0 17780 0 0 17607  
 0 0 17610 0 0 17298 0 0 17404 0 0 17100 0 0 17122 0 0 16870 0 16684 0 0 16606 0 0 16573 0 0 16441  
 0 0 16424 0 0 16234 0 0 16105 0 0 15991 0 0 15984 0 0 16057 0 0 15714 0 15568 0 0 15338 0 0 15384  
 0 0 14839 0 0 15093 0 0 15060 0 0 14998 0 0 14740 0 0 14681 0 0 14503 0 0 14245 0 14156 0 0 13995  
 0 0 13999 0 0 13879 0 0 13565 0 0 13353 0 0 13274 0 0 13143 0 0 13214 0 0 12839 0 0 12874 0 12745  
 0 0 12501 0 0 12385 0 0 12302 0 0 12207 0 0 11928 0 0 12212 0 0 11897 0 0 11770 0 0 11545 0 0  
 11799 0 11411 0 0 11293 0 0 11372 0 0 10971 0 0 11110 0 0 11108 0 0 10927 0 0 10754 0 0 10733 0 0  
 10721 0 10505 0 0 10379 0 0 10527 0 0 10377 0 0 10185 0 0 10132 0 0 10230 0 0 10059 0 0 10042 0 0  
 10001 0 0 9953 0 9904 0 0 9685 0 0 9817 0 0 9779 0 0 9538 0 0 9385 0 0 9499 0 0 9495 0 0 9427 0 0  
 9065 0 0 9293 0 9089 0 0 9037 0 0 9094 0 0 8973 0 0 9123 0 0 9030 0 0 8968 0 0 8867 0 0 8969 0 0  
 8758 0 0 8834 0 8812 0 0 8656 0 0 8687 0 0 8697 0 0 8606 0 0 8653 0 0 8612 0 0 8705 0 0 8553 0 0  
 8502 0 0 8593 0 8443 0 0 8485 0 0 8531 0 0 8447 0 0 8338 0 0 8489 0 0 8373 0 0 8425 0 0 8338 0 0  
 8302 0 8369 0 0 8291 0 0 8431 0 0 8185 0 0 8326 0 0 8319 0 0 8301 0 0 8419 0 0 8464 0 0 8594 0 0  
 8537 0 8382 0 0 8323 0 0 8488 0 0 8692 0 0 8689 0 0 8501 0 0 8617 0 0 8652 0 0 8821 0 0 8795 0 0  
 8567 0 8876 0 0 8914 0 0 9047 0 0 9027 0 0 9149 0 0 9137 0 0 9326 0 0 9260 0 0 9502 0 0 9414 0 0  
 9524 0 9599 0 0 9579 0 0 9708 0 0 9890 0 0 10064 0 0 9996 0 0 9939 0 0 10146 0 0 10136 0 0 10420 0  
 0 10410 0 10462 0 0 10581 0 0 10545 0 0 10751 0 0 10632 0 0 10984 0 0 10850 0 0 10807 0 0 10967 0  
 0 10817 0 10947 0 0 10975 0 0 11263 0 0 11070 0 0 11072 0 0 10946 0 0 11180 0 0 11163 0 0 11320 0  
 0 11285 0 0 11377 0 11125 0 0 11208 0 0 11211 0 0 11312 0 0 11366 0 0 11292 0 0 11239 0 0 11179 0  
 0 11251 0 0 11222 0 0 11444 0 11202 0 0 11404 0 0 11210 0 0 11317 0 0 11216 0 0 11250 0 0 11217 0  
 0 11170 0 0 11250 0 0 11311 0 0 10938 0 11181 0 0 11036 0 0 11075 0 0 11122 0 0 10967 0 0 11022 0  
 0 10984 0 0 11083 0 0 11167 0 0 11071 0 0 11223 0 10936 0 0 11130 0 0 11237 0 0 11278 0 0 11026 0  
 0 10866 0 0 10898 0 0 10695 0 0 11067 0 0 10889 0 10836 0 0 10972 0 0 10732 0 0 10766 0 0 10887 0  
 0 10597 0 0 10906 0 0 10608 0 0 10753 0 0 10608 0 0 10528 0 10653 0 0 10757 0 0 10684 0 0 10591 0  
 0 10556 0 0 10564 0 0 10473 0 0 10559 0 0 10614 0 0 10234 0 0 10302 0 10338 0 0 10357 0 0 10331 0  
 0 10313 0 0 9965 0 0 10219 0 0 10179 0 0 10211 0 0 10087 0 0 10094 0 0 10094 0 10071 0 0 10102 0  
 0 9996 0 0 9930 0 0 9998 0 0 9822 0 0 9829 0 0 9871 0 0 9851 0 0 9645 0 0 9660 0 9668 0 0 9627 0 0

9728 0 0 9658 0 0 9482 0 0 9641 0 0 9533 0 0 9585 0 0 9381 0 0 9438 0 9378 0 0 9465 0 0 9442 0 0  
9116 0 0 9277 0 0 9354 0 0 9206 0 0 9108 0 0 9155 0 0 9073 0 0 9002 0 9108 0 0 9158 0 0 9072 0 0  
9007 0 0 8825 0 0 8876 0 0 8929 0 0 9066 0 0 8977 0 0 9014 0 0 8903 0 8852 0 0 8897 0 0 8551 0 0  
8800 0 0 8785 0 0 8615 0 0 8585 0 0 8593 0 0 8831 0 0 8667 0 0 8655 0 8652 0 0 8576 0 0 8616 0 0  
8551 0 0 8536 0 0 8620 0 0 8470 0 0 8430 0 0 8435 0 0 8478 0 0 8314 0 8554 0 0 8371 0 0 8347 0 0  
8372 0 0 8221 0 0 8451 0 0 8327 0 0 8301 0 0 8258 0 0 8056 0 8330 0 0 8422 0 0 8383 0 0 8298 0 0  
8254 0 0 8154 0 0 8333 0 0 8302 0 0 8069 0 0 8076 0 0 8248 0 7962 0 0 8196 0 0 8223 0 0 8251 0 0  
8134 0 0 8037 0 0 8066 0 0 8137 0 0 8195 0 0 8073 0 0 8016 0 8115 0 0 8136 0 0 7957 0 0 8002 0 0  
8012 0 0 7758 0 0 7858 0 0 7873 0 0 7696 0 0 7766 0 0 7769 0 7874 0 0 7684 0 0 7557 0 0 7695 0 0  
7627 0 0 7667 0 0 7710 0 0 7521 0 0 7588 0 0 7699 0 0 7437 0 7437 0 0 7376 0 0 7316 0 0 7585 0 0  
7568 0 0 7329 0 0 7335 0 0 7408 0 0 7421 0 0 7408 0 7357 0 0 7492 0 0 7197 0 0 7199 0 0 7482 0 0  
7273 0 0 7021 0 0 7266 0 0 7175 0 0 7140 0 0 7131 0 7200 0 0 7116 0 0 7278 0 0 7025 0 0 7074 0 0  
6940 0 0 7022 0 0 7025 0 0 6819 0 0 7012 0 0 6895 0 6970 0 0 6971 0 0 6942 0 0 6881 0 0 6917 0 0  
6724 0 0 6779 0 0 6961 0 0 6771 0 0 6924 0 0 6754 0 6753 0 0 6800 0 0 6905 0 0 6679 0 0 6612 0 0  
6714 0 0 6749 0 0 6769 0 0 6596 0 0 6564 0 0 6532 0 6600 0 0 6619 0 0 6660 0 0 6739 0 0 6384 0 0  
6494 0 0 6660 0 0 6661 0 0 6512 0 0 6556 0 0 6537 0 6392 0 0 6402 0 0 6466 0 0 6592 0 0 6451 0 0  
6537 0 0 6510 0 0 6292 0 0 6494 0 0 6309 0 6395 0 0 6313 0 0 6335 0 0 6466 0 0 6321 0 0 6278 0 0  
6309 0 0 6349 0 0 6427 0 0 6274 0 0 6328 0 6417 0 0 6400 0 0 6244 0 0 6358 0 0 6179 0 0 6317 0 0  
6250 0 0 6162 0 0 6247 0 0 6302 0 0 6253 0 6188 0 0 6199 0 0 6290 0 0 6139 0 0 5985 0 0 5908 0 0  
6030 0 0 6141 0 0 6082 0 0 6137 0 0 5962 0 5929 0 0 5980 0 0 6036 0 0 5946 0 0 5966 0 0 5935 0 0  
5823 0 0 5878 0 0 5847 0 0 5847 0 0 5678 0 5821 0 0 5627 0 0 5603 0 0 5578 0 0 5470 0 0 5554 0 0  
5632 0 0 5597 0 0 5535 0 0 5589 0 5413 0 0 5364 0 0 5404 0 0 5337 0 0 5473 0 0 5371 0 0 5285 0 0  
5191 0 0 5205 0 0 5159 0 0 5302 0 5215 0 0 5183 0 0 5196 0 0 4976 0 0 5181 0 0 5077 0 0 5090 0 0  
5151 0 0 5121 0 0 5074 0 0 4916 0 5096 0 0 5141 0 0 5003 0 0 4857 0 0 5058 0 0 5006 0 0 5021 0 0  
5028 0 0 5172 0 0 4907 0 0 4980 0 5032 0 0 5067 0 0 5018 0 0 5002 0 0 4878 0 0 5112 0 0 4896 0 0  
4862 0 0 4940 0 0 4831 0 0 4782 0 4852 0 0 4982 0 0 4915 0 0 4821 0 0 4904 0 0 4893 0 0 4887 0 0  
4970 0 0 4935 0 0 4920 0 5031 0 0 4872 0 0 5001 0 0 4830 0 0 4881 0 0 4997 0 0 4738 0 0 4886 0 0  
4989 0 0 4835 0 0 4865 0 4909 0 0 4928 0 0 4863 0 0 4785 0 0 4787 0 0 4816 0 0 4873 0 0 4834 0 0  
4846 0 0 4884 0 0 4817 0 4813 0 0 4819 0 0 4704 0 0 4935 0 0 4762 0 0 4816 0 0 4832 0 0 4839 0 0  
4736 0 0 4817 0 0 4742 0 4805 0 0 4742 0 0 4780 0 0 4670 0 0 4833 0 0 4747 0 0 4811 0 0 4838 0 0  
4519 0 0 4618 0 0 4663 0 4703 0 0 4699 0 0 4579 0 0 4557 0 0 4552 0 0 4622 0 0 4629 0 0 4629 0 0  
4565 0 0 4587 0 4501 0 0 4669 0 0 4476 0 0 4563 0 0 4478 0 0 4492 0 0 4466 0 0 4441 0 0 4495 0 0  
4478 0 0 4363 0 4421 0 0 4366 0 0 4403 0 0 4483 0 0 4543 0 0 4263 0 0 4336 0 0 4440 0 0 4412 0 0  
4345 0 0 4425 0 4470 0 0 4348 0 0 4335 0 0 4423 0 0 4394 0 0 4357 0 0 4320 0 0 4356 0 0 4383 0 0  
4320 0 0 4329 0 4313 0 0 4212 0 0 4426 0 0 4399 0 0 4319 0 0 4402 0 0 4391 0 0 4194 0 0 4279 0 0  
4316 0 0 4248 0 4229 0 0 4333 0 0 4161 0 0 4176 0 0 4193 0 0 4218 0 0 4207 0 0 4115 0 0 4278 0 0  
4238 0 4121 0 0 4174 0 0 4184 0 0 4227 0 0 4178 0 0 4101 0 0 3979 0 0 4091 0 0 4067 0 0 4136 0 0  
4107 0 4066 0 0 4020 0 0 4023 0 0 4073 0 0 4031 0 0 4005 0 0 4010 0 0 4063 0 0 4089 0 0 4127 0 0  
4024 0 4160 0 0 4075 0 0 4029 0 0 4117 0 0 4101 0 0 4092 0 0 3945 0 0 4158 0 0 4181 0 0 3983 0 0  
4050 0 4019 0 0 4061 0 0 3981 0 0 3974 0 0 4015 0 0 4016 0 0 4107 0 0 4025 0 0 4044 0 0 4077 0 0  
4067 0 4061 0 0 4045 0 0 4118 0 0 4130 0 0 3950 0 0 4117 0 0 4046 0 0 4054 0 0 4084 0 0 4034 0  
3964 0 0 3996 0 0 3953 0 0 4053 0 0 3998 0 0 4104 0 0 3978 0 0 3914 0 0 4095 0 0 4095 0 0 4096 0

4054 0 0 4026 0 0 4012 0 0 4006 0 0 4138 0 0 3975 0 0 4003 0 0 4039 0 0 3987 0 0 3928 0 0 4033 0  
 4048 0 0 4020 0 0 3834 0 0 4153 0 0 3965 0 0 3957 0 0 3979 0 0 3904 0 0 3846 0 0 3876 0 0 4037 0  
 3968 0 0 3856 0 0 3905 0 0 3813 0 0 3790 0 0 3890 0 0 3907 0 0 3841 0 0 3812 0 0 3861 0 0 3896 0  
 3763 0 0 3796 0 0 3909 0 0 3738 0 0 3709 0 0 3676 0 0 3682 0 0 3711 0 0 3686 0 0 3766 0 3672 0 0  
 3631 0 0 3666 0 0 3642 0 0 3673 0 0 3552 0 0 3625 0 0 3545 0 0 3565 0 0 3543 0 0 3466 0 3550 0 0  
 3475 0 0 3489 0 0 3489 0 0 3350 0 0 3426 0 0 3443 0 0 3380 0 0 3390 0 0 3429 0 0 3391 0 3348 0 0  
 3415 0 0 3454 0 0 3334 0 0 3262 0 0 3215 0 0 3369 0 0 3254 0 0 3147 0 0 3165 0 0 3280 0 3269 0 0  
 3110 0 0 3186 0 0 3079 0 0 3095 0 0 3056 0 0 3032 0 0 2984 0 0 3041 0 0 2985 0 0 2907 0 2912 0 0  
 2893 0 0 2898 0 0 2793 0 0 2897 0 0 2799 0 0 2745 0 0 2761 0 0 2820 0 0 2721 0 2711 0 0 2773 0 0  
 2695 0 0 2689 0 0 2692 0 0 2593 0 0 2653 0 0 2637 0 0 2631 0 0 2630 0 0 2607 0 2598 0 0 2483 0 0  
 2474 0 0 2412 0 0 2409 0 0 2490 0 0 2447 0 0 2427 0 0 2520 0 0 2382 0 0 2377 0 2346 0 0 2288 0 0  
 2289 0 0 2422 0 0 2330 0 0 2279 0 0 2325 0 0 2220 0 0 2290 0 0 2184 0 0 2076 0 2238 0 0 2143 0 0  
 2192 0 0 2141 0 0 2135 0 0 2142 0 0 2116 0 0 2101 0 0 2066 0 0 2045 0 0 2036 0 2005 0 0 2017 0 0  
 2012 0 0 2012 0 0 1990 0 0 1991 0 0 1960 0 0 1979 0 0 1900 0 0 1916 0 0 1923 0 1908 0 0 1913 0 0  
 1892 0 0 1848 0 0 1855 0 0 1787 0 0 1876 0 0 1827 0 0 1767 0 0 1726 0 1721 0 0 1803 0 0 1745 0 0  
 1731 0 0 1765 0 0 1639 0 0 1734 0 0 1682 0 0 1577 0 0 1637 0 0 1645 0 1622 0 0 1582 0 0 1572 0 0  
 1512 0 0 1481 0 0 1551 0 0 1533 0 0 1502 0 0 1508 0 0 1481 0 0 1507 0 1444 0 0 1482 0 0 1496 0 0  
 1340 0 0 1458 0 0 1438 0 0 1364 0 0 1391 0 0 1408 0 0 1330 0 0 1256 0 1281 0 0 1306 0 0 1246 0 0  
 1260 0 0 1271 0 0 1168 0 0 1254 0 0 1187 0 0 1175 0 0 1115 0 0 1168 0 1167 0 0 1129 0 0 1070 0 0  
 1130 0 0 1139 0 0 1089 0 0 1090 0 0 1020 0 0 1031 0 0 1013 0 1069 0 0 977 0 0 962 0 0 1009 0 0 913 0  
 0 931 0 0 989 0 0 907 0 0 964 0 0 877 0 0 902 0 878 0 0 875 0 0 903 0 0 812 0 0 859 0 0 826 0 0 771 0  
 0 843 0 0 789 0 0 812 0 0 788 0 772 0 0 809 0 0 770 0 0 769 0 0 791 0 0 750 0 0 710 0 0 763 0 0 778 0  
 0 763 0 0 724 0 727 0 0 721 0 0 693 0 0 665 0 0 691 0 0 676 0 0 734 0 0 696 0 0 697 0 0 679 0 0 649 0  
 648 0 0 659 0 0 623 0 0 650 0 0 643 0 0 659 0 0 611 0 0 581 0 0 630 0 0 608 0 614 0 0 595 0 0 564 0 0  
 582 0 0 566 0 0 591 0 0 613 0 0 594 0 0 593 0 0 510 0 0 561 0 558 0 0 547 0 0 539 0 0 552 0 0 537 0 0  
 527 0 0 509 0 0 500 0 0 579 0 0 529 0 0 490 0 522 0 0 512 0 0 486 0 0 478 0 0 482 0 0 431 0 0 459 0 0  
 492 0 0 453 0 0 483 0 0 462 0 434 0 0 429 0 0 414 0 0 413 0 0 428 0 0 416 0 0 374 0 0 408 0 0 392 0 0  
 406 0 0 381 0 369 0 0 355 0 0 368 0 0 366 0 0 340 0 0 370 0 0 326 0 0 310 0 0 316 0 0 334 0 295 0 0  
 301 0 0 281 0 0 295 0 0 300 0 0 266 0 0 244 0 0 280 0 0 281 0 0 290 0 0 264 0 231 0 0 242 0 0 230 0 0  
 244 0 0 230 0 0 193 0 0 184 0 0 244 0 0 209 0 0 186 0 0 213 0 188 0 0 210 0 0 200 0 0 201 0 0 197 0 0  
 186 0 0 193 0 0 170 0 0 168 0 0 167 0 0 162 0 151 0 0 163 0 0 158 0 0 159 0 0 165 0 0 161 0 0 147 0 0  
 154 0 0 125 0 0 130 0 0 105 0 128 0 0 149 0 0 142 0 0 111 0 0 130 0 0 127 0 0 134 0 0 117 0 0 125 0 0  
 129 0 113 0 0 124 0 0 116 0 0 110 0 0 111 0 0 113 0 0 110 0 0 89 0 0 117 0 0 109 0 0 115 0 92 0 0 111  
 0 0 116 0 0 99 0 0 91 0 0 96 0 0 72 0 0 87 0 0 104 0 0 87 0 0 76 0 89 0 0 77 0 0 85 0 0 77 0 0 78 0 0 57 0  
 0 82 0 0 67 0 0 63 0 0 62 0 0 63 0 71 0 0 58 0 0 62 0 0 56 0 0 60 0 0 65 0 0 85 0 0 48 0 0 70 0 0 59 0 0  
 47 0 52 0 0 42 0 0 40 0 0 51 0 0 39 0 0 53 0 0 51 0 0 48 0 0 39 0 0 41 0 42 0 0 30 0 0 45 0 0 41 0 0 26 0  
 0 50 0 0 40 0 0 41 0 0 39 0 0 29 0 0 34 0 38 0 0 25 0 0 33 0 0 27 0 0 30 0 0 29 0 0 26 0 0 25 0 0 22 0 0  
 24 0 0 24 0 31 0 0 36 0 0 21 0 0 26 0 0 14 0 0 20 0 0 20 0 0 26 0 0 14 0 0 21 0 0 18 0 25 0 0 16 0 0 25 0  
 0 24 0 0 12 0 0 11 0 0 15 0 0 16 0 0 12 0 0 17 0 0 11 0 5 0 0 15 0 0 10 0 0 14 0 0 13 0 0 13 0 0 12 0 0 13  
 0 0 16 0 0 15 0 16 0 0 14 0 0 12 0 0 8 0 0 11 0 0 8 0 0 12 0 0 11 0 0 10 0 0 14 0 0 6 0 8 0 0 12 0 0 9 0 0  
 16 0 0 6 0 0 7 0 0 5 0 0 9 0 0 8 0 0 4 0 0 6 0 12 0 0 8 0 0 7 0 0 4 0 0 5 0 0 12 0 0 4 0 0 5 0 0 5 0 0 4 0 0 7  
 0 5 0 0 3 0 0 8 0 0 6 0 0 8 0 0 3 0 0 3 0 0 6 0 0 2 0 0 4 0 0 5 0 7 0 0 3 0 0 1 0 0 5 0 0 3 0 0 2 0 0 4 0 0 1 0









0 307 0 0 338 0 0 328 0 0 325 0 321 0 0 337 0 0 291 0 0 349 0 337 0 0 313 0 0 335 0 0 319 0 321 0 0  
338 0 0 307 0 0 313 0 0 333 0 324 0 0 334 0 0 318 0 0 340 0 328 0 0 319 0 0 309 0 0 329 0 311 0 0 309  
0 0 301 0 0 333 0 317 0 0 318 0 0 356 0 0 339 0 336 0 0 349 0 0 312 0 0 333 0 0 316 0 313 0 0 317 0 0  
315 0 0 319 0 295 0 0 285 0 0 326 0 0 342 0 291 0 0 330 0 0 300 0 0 358 0 306 0 0 361 0 0 310 0 0 311  
0 308 0 0 317 0 0 342 0 0 321 0 0 360 0 316 0 0 314 0 0 338 0 0 303 0 332 0 0 331 0 0 320 0 0 310 0  
334 0 0 306 0 0 316 0 0 337 0 298 0 0 309 0 0 322 0 0 336 0 323 0 0 336 0 0 346 0 0 338 0 0 298 0 353  
0 0 297 0 0 304 0 0 343 0 325 0 0 346 0 0 354 0 0 318 0 329 0 0 324 0 0 373 0 0 318 0 333 0 0 332 0 0  
325 0 0 315 0 375 0 0 338 0 0 383 0 0 351 0 0 336 0 347 0 0 336 0 0 383 0 0 373 0 345 0 0 325 0 0 356  
0 0 323 0 344 0 0 349 0 0 335 0 0 371 0 375 0 0 361 0 0 309 0 0 337 0 366 0 0 370 0 0 342 0 0 377 0 0  
338 0 350 0 0 365 0 0 394 0 0 362 0 356 0 0 397 0 0 342 0 0 387 0 423 0 0 350 0 0 393 0 0 370 0 383 0  
0 411 0 0 409 0 0 387 0 402 0 0 385 0 0 381 0 0 443 0 0 407 0 398 0 0 438 0 0 448 0 0 427 0 425 0 0  
447 0 0 454 0 0 476 0 458 0 0 444 0 0 440 0 0 459 0 461 0 0 461 0 0 475 0 0 492 0 536 0 0 505 0 0 529  
0 0 516 0 0 559 0 515 0 0 524 0 0 549 0 0 575 0 544 0 0 541 0 0 585 0 0 604 0 578 0 0 631 0 0 606 0 0  
597 0 632 0 0 629 0 0 623 0 0 619 0 622 0 0 643 0 0 646 0 0 696 0 0 660 0 637 0 0 686 0 0 716 0 0 774  
0 749 0 0 786 0 0 759 0 0 759 0 791 0 0 774 0 0 813 0 0 777 0 813 0 0 830 0 0 839 0 0 855 0 817 0 0  
895 0 0 916 0 0 987 0 926 0 0 910 0 0 910 0 0 1014 0 0 991 0 1035 0 0 1084 0 0 1048 0 0 1066 0 1070  
0 0 1099 0 0 1123 0 0 1169 0 1146 0 0 1167 0 0 1120 0 0 1144 0 1215 0 0 1201 0 0 1240 0 0 1241 0  
1258 0 0 1307 0 0 1264 0 0 1234 0 0 1327 0 1328 0 0 1353 0 0 1371 0 0 1349 0 1371 0 0 1332 0 0  
1372 0 0 1396 0 1387 0 0 1417 0 0 1429 0 0 1378 0 1442 0 0 1434 0 0 1400 0 0 1496 0 1466 0 0 1433  
0 0 1433 0 0 1401 0 0 1474 0 1437 0 0 1465 0 0 1474 0 0 1475 0 1394 0 0 1443 0 0 1509 0 0 1466 0  
1491 0 0 1373 0 0 1490 0 0 1471 0 1421 0 0 1450 0 0 1492 0 0 1512 0 1537 0 0 1537 0 0 1539 0 0  
1492 0 0 1560 0 1556 0 0 1563 0 0 1533 0 0 1535 0 1568 0 0 1454 0 0 1615 0 0 1590 0 1568 0 0 1529  
0 0 1483 0 0 1545 0 1543 0 0 1647 0 0 1549 0 0 1555 0 1564 0 0 1570 0 0 1625 0 0 1622 0 0 1713 0  
1631 0 0 1634 0 0 1629 0 0 1634 0 1668 0 0 1690 0 0 1718 0 0 1689 0 1767 0 0 1722 0 0 1692 0 0  
1708 0 1734 0 0 1748 0 0 1794 0 0 1797 0 1771 0 0 1798 0 0 1830 0 0 1832 0 0 1795 0 1967 0 0 1808  
0 0 2041 0 0 1983 0 1906 0 0 1897 0 0 1980 0 0 1992 0 2024 0 0 2089 0 0 2107 0 0 2046 0 2021 0 0  
2102 0 0 2053 0 0 2084 0 2105 0 0 2081 0 0 2149 0 0 2161 0 0 2245 0 2188 0 0 2226 0 0 2154 0 0  
2172 0 2189 0 0 2255 0 0 2301 0 0 2260 0 2257 0 0 2311 0 0 2350 0 0 2403 0 2325 0 0 2417 0 0 2404  
0 0 2381 0 2491 0 0 2427 0 0 2539 0 0 2521 0 0 2474 0 2555 0 0 2526 0 0 2538 0 0 2618 0 2614 0 0  
2687 0 0 2656 0 0 2637 0 2752 0 0 2703 0 0 2750 0 0 2755 0 2884 0 0 2800 0 0 2823 0 0 2966 0 2959  
0 0 2963 0 0 3065 0 0 3132 0 0 3007 0 3100 0 0 3109 0 0 3143 0 0 3126 0 3266 0 0 3328 0 0 3215 0 0  
3347 0 3262 0 0 3442 0 0 3462 0 0 3344 0 3306 0 0 3479 0 0 3471 0 0 3597 0 3496 0 0 3496 0 0 3621  
0 0 3628 0 0 3568 0 3616 0 0 3641 0 0 3757 0 0 3753 0 3822 0 0 3781 0 0 3924 0 0 4016 0 3899 0 0  
4001 0 0 4069 0 0 4082 0 4081 0 0 4119 0 0 4159 0 0 4126 0 4370 0 0 4274 0 0 4283 0 0 4467 0 0  
4542 0 4516 0 0 4465 0 0 4527 0 0 4621 0 4586 0 0 4724 0 0 4781 0 0 4744 0 4862 0 0 4984 0 0 4920  
0 0 4817 0 5031 0 0 5090 0 0 5238 0 0 5323 0 5332 0 0 5402 0 0 5435 0 0 5570 0 5390 0 0 5636 0 0  
5730 0 0 5726 0 0 5776 0 5942 0 0 5967 0 0 5922 0 0 6066 0 6140 0 0 6280 0 0 6291 0 0 6165 0 6427  
0 0 6451 0 0 6555 0 0 6668 0 6566 0 0 6723 0 0 6704 0 0 6928 0 6949 0 0 6980 0 0 7024 0 0 7181 0 0  
7161 0 7221 0 0 7433 0 0 7329 0 0 7500 0 7491 0 0 7549 0 0 7775 0 0 8002 0 7785 0 0 7891 0 0 7892  
0 0 8051 0 8178 0 0 8071 0 0 8174 0 0 8194 0 8309 0 0 8434 0 0 8345 0 0 8583 0 0 8547 0 8596 0 0  
8683 0 0 8688 0 0 8806 0 8799 0 0 8829 0 0 9092 0 0 8952 0 8997 0 0 9125 0 0 9260 0 0 9278 0 9400  
0 0 9466 0 0 9470 0 0 9509 0 9531 0 0 9597 0 0 9754 0 0 9777 0 0 9976 0 9949 0 0 9779 0 0 10036 0 0

10249 0 10032 0 0 10196 0 0 10238 0 0 10380 0 10401 0 0 10363 0 0 10577 0 0 10732 0 10599 0 0  
10780 0 0 10833 0 0 11101 0 11182 0 0 10970 0 0 11237 0 0 11256 0 0 11341 0 11309 0 0 11535 0 0  
11491 0 0 11650 0 11636 0 0 12044 0 0 12011 0 0 12051 0 12063 0 0 12183 0 0 12252 0 0 12263 0  
12557 0 0 12653 0 0 12838 0 0 12883 0 13035 0 0 13069 0 0 13436 0 0 13217 0 0 13390 0 13777 0 0  
13637 0 0 13790 0 0 14197 0 14156 0 0 14145 0 0 14493 0 0 14666 0 14982 0 0 15003 0 0 15601 0 0  
15773 0 15873 0 0 16046 0 0 16118 0 0 16593 0 16818 0 0 16991 0 0 17302 0 0 17351 0 0 17880 0  
17662 0 0 18179 0 0 18704 0 0 18659 0 19002 0 0 19349 0 0 19830 0 0 19883 0 20135 0 0 20439 0 0  
20355 0 0 20855 0 21228 0 0 21341 0 0 21655 0 0 22067 0 22183 0 0 22566 0 0 22475 0 0 23073 0 0  
23109 0 23555 0 0 23562 0 0 23759 0 0 24153 0 24078 0 0 24421 0 0 24787 0 0 25029 0 24889 0 0  
25090 0 0 25724 0 0 25616 0 25627 0 0 26084 0 0 25980 0 0 26647 0 26153 0 0 26554 0 0 26750 0 0  
26959 0 0 27156 0 27153 0 0 27446 0 0 28052 0 0 27879 0 28193 0 0 28046 0 0 28581 0 0 28274 0  
28507 0 0 28928 0 0 29280 0 0 29454 0 29615 0 0 29984 0 0 30154 0 0 30176 0 30636 0 0 30963 0 0  
31465 0 0 31409 0 0 32039 0 32459 0 0 32821 0 0 33228 0 0 33459 0 34287 0 0 34605 0 0 35400 0 0  
35510 0 36602 0 0 37185 0 0 37632 0 0 37976 0 38931 0 0 39485 0 0 40349 0 0 40613 0 41365 0 0  
41917 0 0 42874 0 0 43501 0 0 44179 0 44665 0 0 45161 0 0 45442 0 0 45840 0 46444 0 0 46917 0 0  
47451 0 0 47765 0 48192 0 0 48101 0 0 48276 0 0 48618 0 48722 0 0 48840 0 0 49097 0 0 49725 0  
49465 0 0 48909 0 0 49013 0 0 49546 0 49249 0 0 49465 0 0 48718 0 0 48644 0 0 48355 0 48213 0 0  
47997 0 0 47591 0 0 47462 0 47369 0 0 47552 0 0 46988 0 0 46446 0 46407 0 0 46152 0 0 45540 0 0  
45398 0 45139 0 0 45064 0 0 44914 0 0 44356 0 44214 0 0 43786 0 0 43255 0 0 43825 0 0 42974 0  
42706 0 0 42441 0 0 41902 0 0 42046 0 41750 0 0 41061 0 0 40783 0 0 40177 0 39820 0 0 39393 0 0  
39120 0 0 38917 0 38186 0 0 37700 0 0 37091 0 0 36632 0 36005 0 0 35482 0 0 35198 0 0 34330 0 0  
34101 0 33694 0 0 33051 0 0 32313 0 0 31799 0 30706 0 0 30835 0 0 30086 0 0 29587 0 29287 0 0  
28149 0 0 28041 0 0 27729 0 27237 0 0 26771 0 0 26053 0 0 25421 0 25106 0 0 25148 0 0 24428 0 0  
24039 0 0 23759 0 23366 0 0 22867 0 0 22800 0 0 22647 0 22436 0 0 22029 0 0 21864 0 0 21426 0  
21408 0 0 21288 0 0 20689 0 0 21142 0 20824 0 0 20394 0 0 20550 0 0 20151 0 20023 0 0 19725 0 0  
19667 0 0 19619 0 0 19458 0 19192 0 0 18981 0 0 18953 0 0 18739 0 18809 0 0 18464 0 0 18633 0 0  
18612 0 18373 0 0 18196 0 0 18245 0 0 18137 0 18087 0 0 17999 0 0 18082 0 0 17752 0 17885 0 0  
17846 0 0 17380 0 0 17526 0 0 17674 0 17256 0 0 17530 0 0 17159 0 0 17282 0 16829 0 0 16783 0 0  
16794 0 0 16803 0 16645 0 0 16535 0 0 16428 0 0 16393 0 16102 0 0 16222 0 0 15952 0 0 15896 0  
15772 0 0 15801 0 0 15629 0 0 15463 0 0 15513 0 15692 0 0 15275 0 0 15003 0 0 15112 0 15034 0 0  
14770 0 0 14742 0 0 14833 0 14483 0 0 14220 0 0 14354 0 0 14043 0 14120 0 0 13883 0 0 13834 0 0  
13734 0 13624 0 0 13634 0 0 13372 0 0 13255 0 0 13052 0 13139 0 0 13079 0 0 12972 0 0 12824 0  
12685 0 0 12642 0 0 12508 0 0 12405 0 12245 0 0 12191 0 0 12167 0 0 11878 0 12070 0 0 11788 0 0  
11865 0 0 11523 0 11523 0 0 11508 0 0 11467 0 0 11449 0 0 11456 0 11403 0 0 11252 0 0 11067 0 0  
11062 0 11068 0 0 10969 0 0 10906 0 0 10754 0 10671 0 0 10738 0 0 10774 0 0 10629 0 10536 0 0  
10367 0 0 10811 0 0 10465 0 10529 0 0 10281 0 0 10339 0 0 10241 0 0 10175 0 10160 0 0 10123 0 0  
10026 0 0 10084 0 9951 0 0 10051 0 0 9737 0 0 9799 0 9742 0 0 9810 0 0 9554 0 0 9734 0 9673 0 0  
9535 0 0 9591 0 0 9685 0 9558 0 0 9381 0 0 9507 0 0 9667 0 0 9404 0 9369 0 0 9399 0 0 9311 0 0  
9289 0 9420 0 0 9494 0 0 9344 0 0 9475 0 9413 0 0 9250 0 0 9103 0 0 9230 0 9383 0 0 9130 0 0 9353  
0 0 9325 0 9329 0 0 9347 0 0 9333 0 0 9320 0 9449 0 0 9399 0 0 9307 0 0 9495 0 0 9690 0 9391 0 0  
9547 0 0 9617 0 0 9631 0 9694 0 0 9670 0 0 9656 0 0 9820 0 9758 0 0 9840 0 0 10038 0 0 9888 0 9889  
0 0 10016 0 0 10042 0 0 10098 0 10132 0 0 10135 0 0 10255 0 0 10236 0 0 10165 0 10218 0 0 10115 0

0 10368 0 0 10190 0 10383 0 0 10482 0 0 10174 0 0 10470 0 10628 0 0 10754 0 0 10651 0 0 10634 0  
 10476 0 0 10599 0 0 10619 0 0 10698 0 10725 0 0 10852 0 0 10734 0 0 10891 0 0 10849 0 10925 0 0  
 11065 0 0 10934 0 0 11092 0 11000 0 0 10794 0 0 11013 0 0 10788 0 11042 0 0 10930 0 0 10889 0 0  
 11103 0 11017 0 0 10884 0 0 11041 0 0 10830 0 10788 0 0 10586 0 0 10807 0 0 10768 0 0 10662 0  
 10599 0 0 10762 0 0 10690 0 0 10650 0 10566 0 0 10702 0 0 10777 0 0 10497 0 10509 0 0 10573 0 0  
 10504 0 0 10447 0 10462 0 0 10289 0 0 10449 0 0 10571 0 10303 0 0 10656 0 0 10511 0 0 10440 0 0  
 10428 0 10587 0 0 10312 0 0 10220 0 0 10334 0 10444 0 0 10239 0 0 10411 0 0 10557 0 10399 0 0  
 10284 0 0 10306 0 0 10333 0 10080 0 0 10407 0 0 10149 0 0 10218 0 10231 0 0 10158 0 0 10210 0 0  
 10293 0 0 10145 0 10159 0 0 10081 0 0 10051 0 0 10140 0 10045 0 0 10082 0 0 10045 0 0 10022 0  
 9970 0 0 10039 0 0 9822 0 0 9653 0 9730 0 0 9653 0 0 9794 0 0 9584 0 9843 0 0 9724 0 0 9559 0 0  
 9532 0 0 9848 0 9486 0 0 9594 0 0 9626 0 0 9418 0 9640 0 0 9437 0 0 9454 0 0 9366 0 9287 0 0 9442  
 0 0 9517 0 0 9166 0 9297 0 0 9318 0 0 9309 0 0 9185 0 9226 0 0 9300 0 0 9242 0 0 9265 0 0 9019 0  
 9136 0 0 9206 0 0 9253 0 0 9174 0 9240 0 0 9216 0 0 8909 0 0 9036 0 9218 0 0 9194 0 0 9101 0 0  
 9102 0 9047 0 0 9200 0 0 8957 0 0 9042 0 9190 0 0 9047 0 0 9101 0 0 8937 0 0 9070 0 9113 0 0 9049  
 0 0 8942 0 0 9047 0 8784 0 0 8979 0 0 9090 0 0 8792 0 8945 0 0 8770 0 0 8909 0 0 8935 0 8925 0 0  
 8746 0 0 8854 0 0 8680 0 8795 0 0 8861 0 0 8895 0 0 8769 0 0 8747 0 8818 0 0 8717 0 0 8752 0 0  
 8746 0 8780 0 0 8552 0 0 8700 0 0 8697 0 8646 0 0 8571 0 0 8733 0 0 8583 0 8675 0 0 8619 0 0 8616  
 0 0 8641 0 8577 0 0 8535 0 0 8457 0 0 8464 0 0 8676 0 8510 0 0 8526 0 0 8645 0 0 8460 0 8253 0 0  
 8353 0 0 8337 0 0 8468 0 8422 0 0 8292 0 0 8547 0 0 8368 0 8399 0 0 8475 0 0 8429 0 0 8240 0 8055  
 0 0 8341 0 0 8361 0 0 8260 0 8204 0 0 8069 0 0 8109 0 0 8280 0 0 8147 0 7948 0 0 8165 0 0 7958 0 0  
 8276 0 8216 0 0 8071 0 0 8129 0 0 8063 0 7900 0 0 7924 0 0 8014 0 0 7802 0 7828 0 0 7682 0 0 7787  
 0 0 7631 0 7636 0 0 7669 0 0 7648 0 0 7696 0 0 7457 0 7403 0 0 7507 0 0 7311 0 0 7382 0 7360 0 0  
 7317 0 0 7298 0 0 7288 0 7280 0 0 7251 0 0 7282 0 0 7221 0 7215 0 0 7308 0 0 7229 0 0 7091 0 7041  
 0 0 7068 0 0 6937 0 0 7070 0 0 7107 0 6978 0 0 7004 0 0 7042 0 0 7123 0 6887 0 0 6952 0 0 6983 0 0  
 6890 0 6877 0 0 7033 0 0 6917 0 0 6858 0 6764 0 0 6650 0 0 6804 0 0 6872 0 6709 0 0 6851 0 0 6717  
 0 0 6812 0 0 6896 0 6763 0 0 6822 0 0 6610 0 0 6645 0 6796 0 0 6552 0 0 6511 0 0 6585 0 6566 0 0  
 6424 0 0 6404 0 0 6561 0 6489 0 0 6503 0 0 6515 0 0 6441 0 6455 0 0 6472 0 0 6505 0 0 6308 0 0  
 6365 0 6307 0 0 6317 0 0 6310 0 0 6309 0 6182 0 0 6266 0 0 6183 0 0 6100 0 6225 0 0 6028 0 0 6058  
 0 0 6101 0 6033 0 0 6087 0 0 6019 0 0 6120 0 6130 0 0 6030 0 0 5984 0 0 6068 0 0 6082 0 5933 0 0  
 5909 0 0 5968 0 0 5971 0 5958 0 0 6039 0 0 6133 0 0 5975 0 5937 0 0 6073 0 0 5945 0 0 6003 0 5926  
 0 0 5955 0 0 5923 0 0 5813 0 5879 0 0 5958 0 0 5901 0 0 5909 0 0 5815 0 5852 0 0 5839 0 0 5785 0 0  
 5805 0 5732 0 0 5750 0 0 5726 0 0 5759 0 5806 0 0 5848 0 0 5570 0 0 5801 0 5707 0 0 5698 0 0 5724  
 0 0 5649 0 5678 0 0 5612 0 0 5728 0 0 5641 0 0 5705 0 5606 0 0 5570 0 0 5516 0 0 5480 0 5579 0 0  
 5394 0 0 5605 0 0 5337 0 5396 0 0 5360 0 0 5412 0 0 5414 0 5309 0 0 5453 0 0 5208 0 0 5264 0 5199  
 0 0 5301 0 0 5317 0 0 5264 0 0 5235 0 5176 0 0 5328 0 0 5270 0 0 5142 0 5084 0 0 5159 0 0 5153 0 0  
 5074 0 4979 0 0 4980 0 0 5072 0 0 5009 0 5140 0 0 5174 0 0 5064 0 0 5105 0 5118 0 0 5170 0 0 4925  
 0 0 5018 0 0 5126 0 5000 0 0 5024 0 0 5019 0 0 5000 0 5047 0 0 5147 0 0 5028 0 0 5010 0 4921 0 0  
 4919 0 0 4813 0 0 5069 0 5057 0 0 4809 0 0 5011 0 0 4860 0 4994 0 0 5082 0 0 4907 0 0 4911 0 0  
 4907 0 4823 0 0 4921 0 0 4863 0 0 4959 0 4984 0 0 5025 0 0 5025 0 0 4839 0 4962 0 0 4887 0 0 4862  
 0 0 4852 0 4928 0 0 4835 0 0 4933 0 0 4850 0 4946 0 0 4960 0 0 4803 0 0 4916 0 4831 0 0 4880 0 0  
 4771 0 0 4836 0 0 4773 0 4725 0 0 4921 0 0 4925 0 0 4868 0 4839 0 0 4798 0 0 4928 0 0 4695 0 4951  
 0 0 4755 0 0 4810 0 0 4874 0 4751 0 0 4765 0 0 4836 0 0 4891 0 4713 0 0 4867 0 0 4816 0 0 4556 0 0

4700 0 4688 0 0 4753 0 0 4822 0 0 4799 0 4610 0 0 4634 0 0 4607 0 0 4638 0 4604 0 0 4683 0 0 4690  
0 0 4661 0 4522 0 0 4455 0 0 4613 0 0 4558 0 4636 0 0 4489 0 0 4623 0 0 4538 0 0 4479 0 4455 0 0  
4479 0 0 4349 0 0 4461 0 4479 0 0 4445 0 0 4593 0 0 4338 0 4384 0 0 4466 0 0 4363 0 0 4415 0 4277  
0 0 4385 0 0 4444 0 0 4337 0 4290 0 0 4302 0 0 4400 0 0 4237 0 0 4318 0 4272 0 0 4214 0 0 4339 0 0  
4312 0 4190 0 0 4224 0 0 4263 0 0 4223 0 4158 0 0 4180 0 0 4200 0 0 4210 0 4171 0 0 4100 0 0 4175  
0 0 4252 0 4173 0 0 4128 0 0 4114 0 0 4174 0 0 4058 0 4166 0 0 4162 0 0 4047 0 0 4020 0 3997 0 0  
4167 0 0 4054 0 0 4126 0 4058 0 0 4203 0 0 4161 0 0 4025 0 4197 0 0 4097 0 0 4048 0 0 3940 0 4036  
0 0 4072 0 0 3970 0 0 3994 0 0 3994 0 3984 0 0 4047 0 0 3928 0 0 4088 0 3971 0 0 3955 0 0 3986 0 0  
4049 0 3993 0 0 3965 0 0 3942 0 0 3923 0 3911 0 0 4012 0 0 3945 0 0 3896 0 3863 0 0 3904 0 0 3833  
0 0 4072 0 0 3800 0 3926 0 0 3834 0 0 3827 0 0 3886 0 3948 0 0 3896 0 0 3814 0 0 3826 0 3788 0 0  
3921 0 0 3903 0 0 3908 0 3827 0 0 3970 0 0 3820 0 0 3770 0 3890 0 0 3875 0 0 3788 0 0 3828 0 0  
3869 0 3908 0 0 3815 0 0 3790 0 0 3721 0 3772 0 0 3688 0 0 3825 0 0 3848 0 3835 0 0 3822 0 0 3786  
0 0 3870 0 3789 0 0 3752 0 0 3863 0 0 3722 0 3741 0 0 3868 0 0 3816 0 0 3748 0 0 3775 0 3802 0 0  
3719 0 0 3741 0 0 3800 0 3678 0 0 3706 0 0 3703 0 0 3770 0 3676 0 0 3697 0 0 3640 0 0 3605 0 3643  
0 0 3723 0 0 3681 0 0 3650 0 3667 0 0 3602 0 0 3460 0 0 3640 0 0 3683 0 3533 0 0 3563 0 0 3610 0 0  
3579 0 3591 0 0 3501 0 0 3635 0 0 3539 0 3494 0 0 3478 0 0 3550 0 0 3427 0 3616 0 0 3356 0 0 3557  
0 0 3485 0 3423 0 0 3545 0 0 3437 0 0 3536 0 0 3465 0 3478 0 0 3531 0 0 3427 0 0 3376 0 3435 0 0  
3500 0 0 3342 0 0 3376 0 3400 0 0 3289 0 0 3451 0 0 3331 0 3341 0 0 3282 0 0 3361 0 0 3380 0 3299  
0 0 3315 0 0 3202 0 0 3220 0 3355 0 0 3208 0 0 3294 0 0 3188 0 0 3207 0 3242 0 0 3084 0 0 3130 0 0  
3122 0 3074 0 0 3162 0 0 3058 0 0 2982 0 2916 0 0 2993 0 0 2981 0 0 2893 0 2970 0 0 2896 0 0 2856  
0 0 2957 0 2881 0 0 2786 0 0 2735 0 0 2740 0 0 2724 0 2868 0 0 2735 0 0 2672 0 0 2775 0 2682 0 0  
2698 0 0 2662 0 0 2641 0 2558 0 0 2551 0 0 2544 0 0 2528 0 2481 0 0 2492 0 0 2539 0 0 2493 0 2409  
0 0 2378 0 0 2452 0 0 2478 0 0 2461 0 2384 0 0 2370 0 0 2370 0 0 2330 0 2276 0 0 2261 0 0 2217 0 0  
2261 0 2162 0 0 2158 0 0 2276 0 0 2190 0 2201 0 0 2193 0 0 2220 0 0 2111 0 2037 0 0 2096 0 0 2049  
0 0 2128 0 0 1994 0 2014 0 0 2081 0 0 2061 0 0 1954 0 1984 0 0 2128 0 0 1953 0 0 1983 0 2034 0 0  
1876 0 0 1963 0 0 1905 0 1928 0 0 1922 0 0 1911 0 0 1931 0 1961 0 0 1864 0 0 2006 0 0 1822 0 0  
1880 0 1815 0 0 1898 0 0 1813 0 0 1790 0 1830 0 0 1731 0 0 1742 0 0 1826 0 1729 0 0 1755 0 0 1778  
0 0 1753 0 1821 0 0 1728 0 0 1680 0 0 1723 0 1682 0 0 1759 0 0 1785 0 0 1704 0 0 1664 0 1719 0 0  
1705 0 0 1698 0 0 1699 0 1649 0 0 1671 0 0 1657 0 0 1679 0 1558 0 0 1590 0 0 1636 0 0 1615 0 1655  
0 0 1590 0 0 1530 0 0 1532 0 1601 0 0 1543 0 0 1578 0 0 1510 0 0 1531 0 1519 0 0 1492 0 0 1497 0 0  
1492 0 1490 0 0 1443 0 0 1490 0 0 1445 0 1381 0 0 1367 0 0 1349 0 0 1425 0 1467 0 0 1366 0 0 1347  
0 0 1280 0 1303 0 0 1381 0 0 1374 0 0 1372 0 0 1346 0 1281 0 0 1317 0 0 1232 0 0 1226 0 1244 0 0  
1240 0 0 1238 0 0 1174 0 1233 0 0 1227 0 0 1209 0 0 1199 0 1131 0 0 1107 0 0 1181 0 0 1140 0 1077  
0 0 1107 0 0 1118 0 0 1085 0 0 1091 0 1019 0 0 1044 0 0 1015 0 0 995 0 952 0 0 929 0 0 992 0 0 875 0  
895 0 0 889 0 0 877 0 0 815 0 880 0 0 799 0 0 814 0 0 766 0 840 0 0 865 0 0 779 0 0 733 0 0 733 0 711  
0 0 728 0 0 738 0 0 727 0 737 0 0 653 0 0 693 0 0 620 0 666 0 0 709 0 0 658 0 0 641 0 573 0 0 614 0 0  
569 0 0 579 0 520 0 0 575 0 0 543 0 0 491 0 0 502 0 492 0 0 507 0 0 510 0 0 501 0 454 0 0 477 0 0 420  
0 0 455 0 431 0 0 414 0 0 398 0 0 397 0 417 0 0 397 0 0 379 0 0 395 0 381 0 0 387 0 0 361 0 0 348 0  
352 0 0 302 0 0 305 0 0 294 0 0 315 0 278 0 0 288 0 0 294 0 0 285 0 263 0 0 276 0 0 252 0 0 258 0 240  
0 0 228 0 0 243 0 0 254 0 221 0 0 207 0 0 205 0 0 204 0 195 0 0 222 0 0 205 0 0 189 0 0 188 0 203 0 0  
192 0 0 172 0 0 175 0 180 0 0 184 0 0 181 0 0 152 0 154 0 0 139 0 0 190 0 0 175 0 152 0 0 159 0 0 144  
0 0 160 0 141 0 0 137 0 0 133 0 0 162 0 0 123 0 127 0 0 146 0 0 108 0 0 128 0 143 0 0 122 0 0 121 0 0









<MEASURE\_DESC>Spectral range value of raw radiometric Band</MEASURE\_DESC>  
<MEASURE\_UNIT>micrometers</MEASURE\_UNIT>  
<MEASURE\_UNCERTAINTY>Specification accuracy value</MEASURE\_UNCERTAINTY>  
<MIN>0.74</MIN>  
<MAX>0.94</MAX>  
</Band\_Spectral\_Range>  
<Band\_Reflectance>  
<BAND\_ID>B0</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T05:44:52Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae  
RHO=RHO'/GAIN+BIAS</MEASURE\_DESC>  
<MEASURE\_UNIT/>  
<MEASURE\_UNCERTAINTY/>  
<GAIN>10000</GAIN>  
<BIAS>0</BIAS>  
</Band\_Reflectance>  
<Band\_Reflectance>  
<BAND\_ID>B1</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T05:44:52Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae  
RHO=RHO'/GAIN+BIAS</MEASURE\_DESC>  
<MEASURE\_UNIT/>  
<MEASURE\_UNCERTAINTY/>  
<GAIN>10000</GAIN>  
<BIAS>0</BIAS>  
</Band\_Reflectance>  
<Band\_Reflectance>  
<BAND\_ID>B2</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T05:44:52Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae  
RHO=RHO'/GAIN+BIAS</MEASURE\_DESC>  
<MEASURE\_UNIT/>  
<MEASURE\_UNCERTAINTY/>  
<GAIN>10000</GAIN>  
<BIAS>0</BIAS>  
</Band\_Reflectance>  
<Band\_Reflectance>  
<BAND\_ID>B3</BAND\_ID>  
<CALIBRATION\_DATE>2019-08-30T05:44:52Z</CALIBRATION\_DATE>  
<MEASURE\_DESC>Reflectance gained value (RHO') to Reflectance (RHO). Formulae  
RHO=RHO'/GAIN+BIAS</MEASURE\_DESC>  
<MEASURE\_UNIT/>

```
<MEASURE_UNCERTAINTY/>
<GAIN>10000</GAIN>
<BIAS>0</BIAS>
</Band_Reflectance>
<Band_Radiance>
  <BAND_ID>B0</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>396.9415767453532</GAIN>
  <BIAS>18.828421303464804</BIAS>
</Band_Radiance>
<Band_Radiance>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>377.0917529482975</GAIN>
  <BIAS>10.634002306001765</BIAS>
</Band_Radiance>
<Band_Radiance>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>341.55304105669586</GAIN>
  <BIAS>5.134249501283666</BIAS>
</Band_Radiance>
<Band_Radiance>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>Reflectance (RHO) to TOA Radiance (L). Formulae
L=RHO/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/steradians/micrometers</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification accuracy value</MEASURE_UNCERTAINTY>
  <GAIN>236.50914989678918</GAIN>
```

---

```
<BIAS>1.2861163659209105</BIAS>
</Band_Radiance>
<Band_Digital_Number>
  <BAND_ID>B0</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.11160714285714285</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.11098779134295228</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.09930486593843098</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
<Band_Digital_Number>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2019-08-30T05:44:52Z</CALIBRATION_DATE>
  <MEASURE_DESC>TOA Radiance (L) to Raw radiometric count (DN). Formulae
DN=L/GAIN+BIAS</MEASURE_DESC>
  <MEASURE_UNIT/>
  <MEASURE_UNCERTAINTY/>
  <GAIN>0.06531678641410843</GAIN>
  <BIAS>-0.0</BIAS>
</Band_Digital_Number>
```

```
<Band_Solar_Irradiance>
  <BAND_ID>B0</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1915.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B1</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1831.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B2</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1594.0</VALUE>
</Band_Solar_Irradiance>
<Band_Solar_Irradiance>
  <BAND_ID>B3</BAND_ID>
  <CALIBRATION_DATE>2011-12-17T00:00:00.000Z</CALIBRATION_DATE>
  <MEASURE_DESC>Solar irradiance value of raw radiometric Band</MEASURE_DESC>
  <MEASURE_UNIT>watt/m2/micron</MEASURE_UNIT>
  <MEASURE_UNCERTAINTY>Specification</MEASURE_UNCERTAINTY>
  <VALUE>1060.0</VALUE>
</Band_Solar_Irradiance>
</Band_Measurement_List>
</Instrument_Calibration>
</Radiometric_Calibration>
</Radiometric_Data>
<Geometric_Data>
  <Use_Area>
    <Located_Geometric_Values>
      <LOCATION_TYPE>Top Center</LOCATION_TYPE>
      <TIME>2019-08-26T14:52:37.781Z</TIME>
      <GEOMETRIC_GLIDING>0.01626171552036726</GEOMETRIC_GLIDING>
```

```
<Acquisition_Angles>
  <AZIMUTH_ANGLE>179.9591260923428</AZIMUTH_ANGLE>
  <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">4.886056701696601</VIEWING_ANGLE_ACROSS_TRACK>
  <VIEWING_ANGLE_ALONG_TRACK unit="deg">-
0.598292793686801</VIEWING_ANGLE_ALONG_TRACK>
  <VIEWING_ANGLE unit="deg">4.92219929033685</VIEWING_ANGLE>
  <INCIDENCE_ANGLE_ALONG_TRACK>-
0.3097463933661643</INCIDENCE_ANGLE_ALONG_TRACK>
  <INCIDENCE_ANGLE_ACROSS_TRACK>-
5.51910629473164</INCIDENCE_ANGLE_ACROSS_TRACK>
  <INCIDENCE_ANGLE>5.527684458245139</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
  <SUN_AZIMUTH unit="deg">39.44032993162254</SUN_AZIMUTH>
  <SUN_ELEVATION unit="deg">47.74571401378435</SUN_ELEVATION>
</Solar_Incidences>
<Ground_Sample_Distance>
  <GSD_ACROSS_TRACK unit="m">0.7025259874125456</GSD_ACROSS_TRACK>
  <GSD_ALONG_TRACK unit="m">0.7018587945819615</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
<Located_Geometric_Values>
  <LOCATION_TYPE>Center</LOCATION_TYPE>
  <TIME>2019-08-26T14:52:38.531Z</TIME>
  <GEOMETRIC_GLIDING>0.0173551854112266</GEOMETRIC_GLIDING>
<Acquisition_Angles>
  <AZIMUTH_ANGLE>179.9370993031759</AZIMUTH_ANGLE>
  <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">4.973436955752982</VIEWING_ANGLE_ACROSS_TRACK>
  <VIEWING_ANGLE_ALONG_TRACK unit="deg">-
0.6056227884072035</VIEWING_ANGLE_ALONG_TRACK>
  <VIEWING_ANGLE unit="deg">5.009808672283182</VIEWING_ANGLE>
  <INCIDENCE_ANGLE_ALONG_TRACK>-
0.318776865661158</INCIDENCE_ANGLE_ALONG_TRACK>
  <INCIDENCE_ANGLE_ACROSS_TRACK>-
5.616242563790548</INCIDENCE_ANGLE_ACROSS_TRACK>
  <INCIDENCE_ANGLE>5.625166969492191</INCIDENCE_ANGLE>
</Acquisition_Angles>
<Solar_Incidences>
  <SUN_AZIMUTH unit="deg">39.40834336959652</SUN_AZIMUTH>
  <SUN_ELEVATION unit="deg">47.71043997386462</SUN_ELEVATION>
```

```
</Solar_Incidences>
<Ground_Sample_Distance>
  <GSD_ACROSS_TRACK unit="m">0.7008035551808436</GSD_ACROSS_TRACK>
  <GSD_ALONG_TRACK unit="m">0.7021160328046936</GSD_ALONG_TRACK>
</Ground_Sample_Distance>
</Located_Geometric_Values>
<Located_Geometric_Values>
  <LOCATION_TYPE>Bottom Center</LOCATION_TYPE>
  <TIME>2019-08-26T14:52:39.406Z</TIME>
  <GEOMETRIC_GLIDING>0.01744230860434071</GEOMETRIC_GLIDING>
  <Acquisition_Angles>
    <AZIMUTH_ANGLE>179.9803966030896</AZIMUTH_ANGLE>
    <VIEWING_ANGLE_ACROSS_TRACK
unit="deg">5.075161852338978</VIEWING_ANGLE_ACROSS_TRACK>
    <VIEWING_ANGLE_ALONG_TRACK unit="deg">-
0.6141970693389095</VIEWING_ANGLE_ALONG_TRACK>
    <VIEWING_ANGLE unit="deg">5.111807366853969</VIEWING_ANGLE>
    <INCIDENCE_ANGLE_ALONG_TRACK>-
0.3224211188561995</INCIDENCE_ANGLE_ALONG_TRACK>
    <INCIDENCE_ANGLE_ACROSS_TRACK>-
5.729717433474166</INCIDENCE_ANGLE_ACROSS_TRACK>
    <INCIDENCE_ANGLE>5.738661674375637</INCIDENCE_ANGLE>
  </Acquisition_Angles>
  <Solar_Incidences>
    <SUN_AZIMUTH unit="deg">39.37112692529102</SUN_AZIMUTH>
    <SUN_ELEVATION unit="deg">47.66926023161938</SUN_ELEVATION>
  </Solar_Incidences>
  <Ground_Sample_Distance>
    <GSD_ACROSS_TRACK unit="m">0.7013142134407707</GSD_ACROSS_TRACK>
    <GSD_ALONG_TRACK unit="m">0.702420630999505</GSD_ALONG_TRACK>
  </Ground_Sample_Distance>
  </Located_Geometric_Values>
</Use_Area>
</Geometric_Data>
<Quality_Assessment>
  <Planimetric_Accuracy_Measurement>
    <QUALITY_TABLES>DTED2</QUALITY_TABLES>
    <MEASURE_ID>AHA</MEASURE_ID>
    <MEASURE_NAME>Absolute Horizontal Accuracy</MEASURE_NAME>
    <MEASURE_TYPE>MATCHING</MEASURE_TYPE>
    <MEASURE_UNIT>m</MEASURE_UNIT>
  <Quality_Values>
```



```
<ACCURACY_MEAN>0.0283811669460577</ACCURACY_MEAN>
<ACCURACY_STDV>1.059181786165623</ACCURACY_STDV>
<ACCURACY_CE90>1.631344429667521</ACCURACY_CE90>
</Quality_Values>
</Planimetric_Accuracy_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Area_Of_Interest (ROI)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Area_Of_Interest Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/ROI_PHR1A_MS_201908261452376_ORT_4461568101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Detector_Quality (DET)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Detector_Quality Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/DET_PHR1A_MS_201908261452376_ORT_4461568101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Saturation_Cotation (SLT)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Saturation_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
```

```
<COMPONENT_PATH href="MASKS/SLT_PHR1A_MS_201908261452376_ORT_4461568101-
2_MSK.GML"/>
  </Component>
</Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Visibility_Cotation (VIS)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Visibility_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/VIS_PHR1A_MS_201908261452376_ORT_4461568101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Snow_Cotation (SNW)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Snow_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/SNW_PHR1A_MS_201908261452376_ORT_4461568101-
2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Cloud_Cotation (CLD)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Cloud_Cotation Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
```

```
<COMPONENT_PATH href="MASKS/CLD_PHR1A_MS_201908261452376_ORT_4461568101-2_MSK.GML"/>
  </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
<Imaging_Quality_Measurement>
  <QUALITY_TABLES>PHR</QUALITY_TABLES>
  <MEASURE_NAME>Technical_Index (QTE)</MEASURE_NAME>
  <MEASURE_TYPE>AUTOMATIC</MEASURE_TYPE>
  <Quality_Mask>
    <Component>
      <COMPONENT_TITLE>Technical_Index Mask</COMPONENT_TITLE>
      <COMPONENT_CONTENT>GML MASK</COMPONENT_CONTENT>
      <COMPONENT_TYPE>ENCAPSULATED</COMPONENT_TYPE>
      <COMPONENT_PATH href="MASKS/QTE_PHR1A_MS_201908261452376_ORT_4461568101-2_MSK.GML"/>
    </Component>
  </Quality_Mask>
</Imaging_Quality_Measurement>
</Quality_Assessment>
<Dataset_Sources>
  <Source_Identification>
    <SOURCE_ID>DS_PHR1A_201908261452376_FR1_PX_W069S24_0806_01124</SOURCE_ID>
    <SOURCE_TYPE>Strip_Source</SOURCE_TYPE>
    <SOURCE_DESCRIPTION>PHR1A Data Strip</SOURCE_DESCRIPTION>
    <Strip_Source>
      <MISSION>PHR</MISSION>
      <MISSION_INDEX>1A</MISSION_INDEX>
      <INSTRUMENT>PHR</INSTRUMENT>
      <INSTRUMENT_INDEX>1A</INSTRUMENT_INDEX>
      <IMAGING_DATE>2019-08-26</IMAGING_DATE>
      <IMAGING_TIME>14:52:37.6Z</IMAGING_TIME>
      <BAND_MODE>PX</BAND_MODE>
    </Strip_Source>
  <Component>
    <COMPONENT_TITLE>Strip Source</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH
href="LINEAGE/STRIP_DS_PHR1A_201908261452376_FR1_PX_W069S24_0806_01124_DIM.XML"/>
  </Component>
</Source_Identification>
```

```

<Source_Identification>
  <SOURCE_TYPE>Ground_Source</SOURCE_TYPE>
  <SOURCE_DESCRIPTION>Reference3D ORTHO Layer</SOURCE_DESCRIPTION>
  <Component>
    <COMPONENT_TITLE>Source for Ground reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/GROUND_R3D_OR_SPOTView_S24W069_DIM.XML"/>
  </Component>
</Source_Identification>
<Source_Identification>
  <SOURCE_TYPE>Height_Source</SOURCE_TYPE>
  <SOURCE_DESCRIPTION>Reference3D DTED2 Layer</SOURCE_DESCRIPTION>
  <Component>
    <COMPONENT_TITLE>Source for Vertical reset</COMPONENT_TITLE>
    <COMPONENT_CONTENT>Lineage Information</COMPONENT_CONTENT>
    <COMPONENT_TYPE>DIMAP</COMPONENT_TYPE>
    <COMPONENT_PATH href="LINEAGE/HEIGHT_R3D_DT2_S24W069_DIM.XML"/>
  </Component>
</Source_Identification>
</Dataset_Sources>
</Dimap_Document>

```

## 1.7 Metadata de Imágenes de media resolución INV19 – Landsat 8

```

GROUP = L1_METADATA_FILE
GROUP = METADATA_FILE_INFO
ORIGIN = "Image courtesy of the U.S. Geological Survey"
REQUEST_ID = "0501909048560_00008"
LANDSAT_SCENE_ID = "LC82330762019247LGN00"
LANDSAT_PRODUCT_ID = "LC08_L1TP_233076_20190904_20190904_01_RT"
COLLECTION_NUMBER = 01
FILE_DATE = 2019-09-04T22:00:23Z
STATION_ID = "LGN"
PROCESSING_SOFTWARE_VERSION = "LPGS_13.1.0"
END_GROUP = METADATA_FILE_INFO
GROUP = PRODUCT_METADATA
DATA_TYPE = "L1TP"
COLLECTION_CATEGORY = "RT"
ELEVATION_SOURCE = "GLS2000"
OUTPUT_FORMAT = "GEOTIFF"
SPACECRAFT_ID = "LANDSAT_8"
SENSOR_ID = "OLI_TIRS"

```

WRS\_PATH = 233  
WRS\_ROW = 76  
NADIR\_OFFNADIR = "NADIR"  
TARGET\_WRS\_PATH = 233  
TARGET\_WRS\_ROW = 76  
DATE\_ACQUIRED = 2019-09-04  
SCENE\_CENTER\_TIME = "14:31:05.4256539Z"  
CORNER\_UL\_LAT\_PRODUCT = -22.06100  
CORNER\_UL\_LON\_PRODUCT = -69.24909  
CORNER\_UR\_LAT\_PRODUCT = -22.04910  
CORNER\_UR\_LON\_PRODUCT = -67.01066  
CORNER\_LL\_LAT\_PRODUCT = -24.17477  
CORNER\_LL\_LON\_PRODUCT = -69.25302  
CORNER\_LR\_LAT\_PRODUCT = -24.16160  
CORNER\_LR\_LON\_PRODUCT = -66.97929  
CORNER\_UL\_PROJECTION\_X\_PRODUCT = 474300.000  
CORNER\_UL\_PROJECTION\_Y\_PRODUCT = -2439600.000  
CORNER\_UR\_PROJECTION\_X\_PRODUCT = 705300.000  
CORNER\_UR\_PROJECTION\_Y\_PRODUCT = -2439600.000  
CORNER\_LL\_PROJECTION\_X\_PRODUCT = 474300.000  
CORNER\_LL\_PROJECTION\_Y\_PRODUCT = -2673600.000  
CORNER\_LR\_PROJECTION\_X\_PRODUCT = 705300.000  
CORNER\_LR\_PROJECTION\_Y\_PRODUCT = -2673600.000  
PANCHROMATIC\_LINES = 15601  
PANCHROMATIC\_SAMPLES = 15401  
REFLECTIVE\_LINES = 7801  
REFLECTIVE\_SAMPLES = 7701  
THERMAL\_LINES = 7801  
THERMAL\_SAMPLES = 7701  
FILE\_NAME\_BAND\_1 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B1.TIF"  
FILE\_NAME\_BAND\_2 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B2.TIF"  
FILE\_NAME\_BAND\_3 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B3.TIF"  
FILE\_NAME\_BAND\_4 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B4.TIF"  
FILE\_NAME\_BAND\_5 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B5.TIF"  
FILE\_NAME\_BAND\_6 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B6.TIF"  
FILE\_NAME\_BAND\_7 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B7.TIF"  
FILE\_NAME\_BAND\_8 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B8.TIF"  
FILE\_NAME\_BAND\_9 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B9.TIF"  
FILE\_NAME\_BAND\_10 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B10.TIF"  
FILE\_NAME\_BAND\_11 = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_B11.TIF"  
FILE\_NAME\_BAND\_QUALITY = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_BQA.TIF"  
ANGLE\_COEFFICIENT\_FILE\_NAME = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_ANG.txt"  
METADATA\_FILE\_NAME = "LC08\_L1TP\_233076\_20190904\_20190904\_01\_RT\_MTL.txt"  
CPF\_NAME = "LC08CPF\_20190701\_20190930\_01.02"  
BPF\_NAME\_OLI = "LO8BPF20190904135747\_20190904153617.01"  
BPF\_NAME\_TIRS = "LT8BPF20190830113009\_20190830113825.01"

---

RLUT\_FILE\_NAME = "LC08RLUT\_20150303\_20431231\_01\_12.h5"  
END\_GROUP = PRODUCT\_METADATA  
GROUP = IMAGE\_ATTRIBUTES  
CLOUD\_COVER = 8.14  
CLOUD\_COVER\_LAND = 8.14  
IMAGE\_QUALITY\_OLI = 9  
IMAGE\_QUALITY\_TIRS = 7  
TIRS\_SSM\_MODEL = "PRELIMINARY"  
TIRS\_SSM\_POSITION\_STATUS = "ESTIMATED"  
TIRS\_STRAY\_LIGHT\_CORRECTION\_SOURCE = "TIRS"  
ROLL\_ANGLE = -0.001  
SUN\_AZIMUTH = 47.81120962  
SUN\_ELEVATION = 47.77700338  
EARTH\_SUN\_DISTANCE = 1.0085634  
SATURATION\_BAND\_1 = "Y"  
SATURATION\_BAND\_2 = "N"  
SATURATION\_BAND\_3 = "N"  
SATURATION\_BAND\_4 = "N"  
SATURATION\_BAND\_5 = "N"  
SATURATION\_BAND\_6 = "N"  
SATURATION\_BAND\_7 = "Y"  
SATURATION\_BAND\_8 = "N"  
SATURATION\_BAND\_9 = "N"  
GROUND\_CONTROL\_POINTS\_VERSION = 4  
GROUND\_CONTROL\_POINTS\_MODEL = 394  
GEOMETRIC\_RMSE\_MODEL = 5.585  
GEOMETRIC\_RMSE\_MODEL\_Y = 3.600  
GEOMETRIC\_RMSE\_MODEL\_X = 4.271  
GROUND\_CONTROL\_POINTS\_VERIFY = 139  
GEOMETRIC\_RMSE\_VERIFY = 2.755  
TRUNCATION\_OLI = "UPPER"  
END\_GROUP = IMAGE\_ATTRIBUTES  
GROUP = MIN\_MAX\_RADIANCE  
RADIANCE\_MAXIMUM\_BAND\_1 = 747.21057  
RADIANCE\_MINIMUM\_BAND\_1 = -61.70490  
RADIANCE\_MAXIMUM\_BAND\_2 = 765.15277  
RADIANCE\_MINIMUM\_BAND\_2 = -63.18657  
RADIANCE\_MAXIMUM\_BAND\_3 = 705.08173  
RADIANCE\_MINIMUM\_BAND\_3 = -58.22588  
RADIANCE\_MAXIMUM\_BAND\_4 = 594.56464  
RADIANCE\_MINIMUM\_BAND\_4 = -49.09934  
RADIANCE\_MAXIMUM\_BAND\_5 = 363.84390  
RADIANCE\_MINIMUM\_BAND\_5 = -30.04635  
RADIANCE\_MAXIMUM\_BAND\_6 = 90.48467  
RADIANCE\_MINIMUM\_BAND\_6 = -7.47225  
RADIANCE\_MAXIMUM\_BAND\_7 = 30.49818

---

RADIANCE\_MINIMUM\_BAND\_7 = -2.51855  
RADIANCE\_MAXIMUM\_BAND\_8 = 672.88354  
RADIANCE\_MINIMUM\_BAND\_8 = -55.56694  
RADIANCE\_MAXIMUM\_BAND\_9 = 142.19844  
RADIANCE\_MINIMUM\_BAND\_9 = -11.74279  
RADIANCE\_MAXIMUM\_BAND\_10 = 22.00180  
RADIANCE\_MINIMUM\_BAND\_10 = 0.10033  
RADIANCE\_MAXIMUM\_BAND\_11 = 22.00180  
RADIANCE\_MINIMUM\_BAND\_11 = 0.10033  
END\_GROUP = MIN\_MAX\_RADIANCE  
GROUP = MIN\_MAX\_REFLECTANCE  
REFLECTANCE\_MAXIMUM\_BAND\_1 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_1 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_2 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_2 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_3 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_3 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_4 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_4 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_5 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_5 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_6 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_6 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_7 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_7 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_8 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_8 = -0.099980  
REFLECTANCE\_MAXIMUM\_BAND\_9 = 1.210700  
REFLECTANCE\_MINIMUM\_BAND\_9 = -0.099980  
END\_GROUP = MIN\_MAX\_REFLECTANCE  
GROUP = MIN\_MAX\_PIXEL\_VALUE  
QUANTIZE\_CAL\_MAX\_BAND\_1 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_1 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_2 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_2 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_3 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_3 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_4 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_4 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_5 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_5 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_6 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_6 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_7 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_7 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_8 = 65535

---

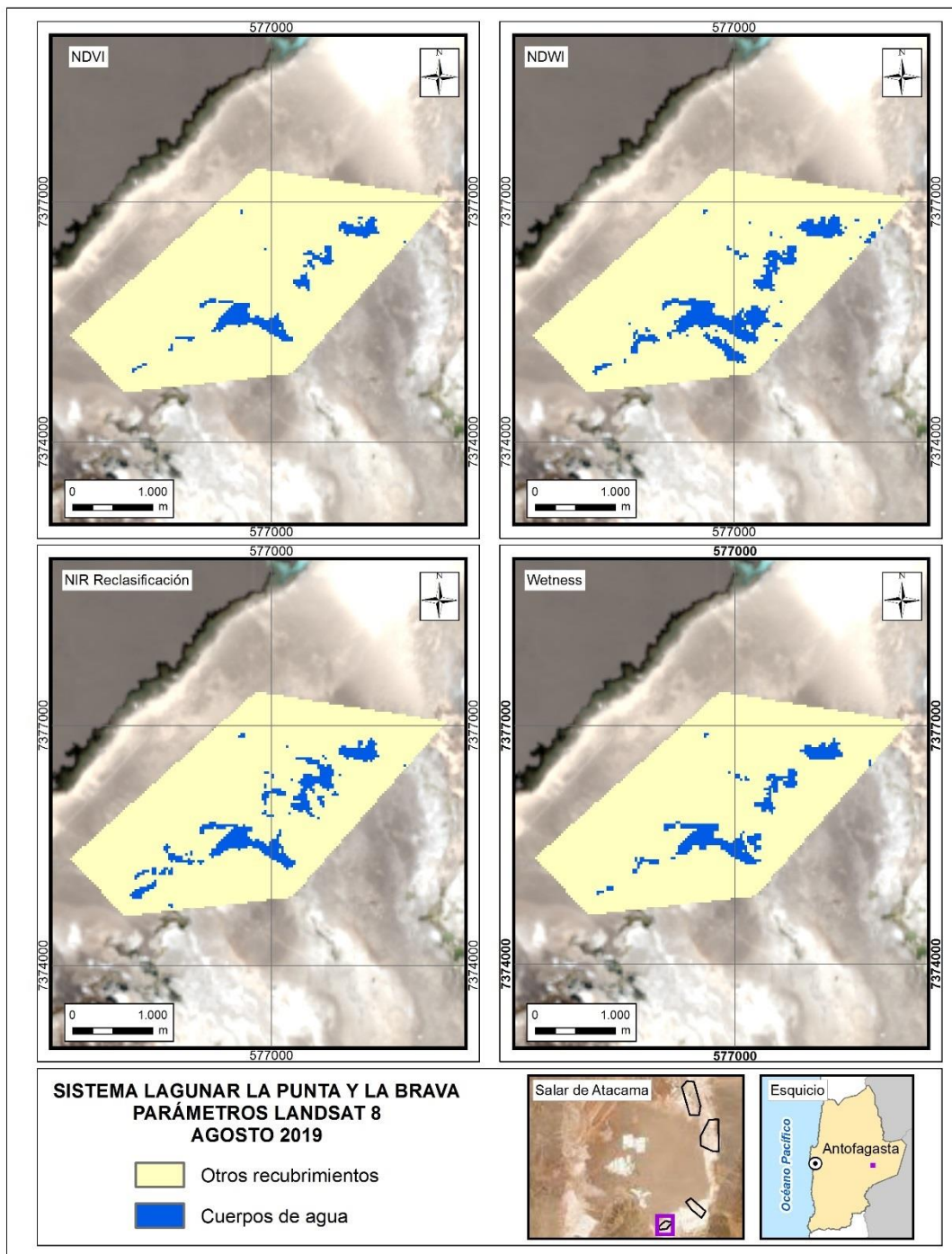
QUANTIZE\_CAL\_MIN\_BAND\_8 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_9 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_9 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_10 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_10 = 1  
QUANTIZE\_CAL\_MAX\_BAND\_11 = 65535  
QUANTIZE\_CAL\_MIN\_BAND\_11 = 1  
END\_GROUP = MIN\_MAX\_PIXEL\_VALUE  
GROUP = RADIOMETRIC\_RESCALING  
RADIANCE\_MULT\_BAND\_1 = 1.2343E-02  
RADIANCE\_MULT\_BAND\_2 = 1.2640E-02  
RADIANCE\_MULT\_BAND\_3 = 1.1648E-02  
RADIANCE\_MULT\_BAND\_4 = 9.8218E-03  
RADIANCE\_MULT\_BAND\_5 = 6.0105E-03  
RADIANCE\_MULT\_BAND\_6 = 1.4947E-03  
RADIANCE\_MULT\_BAND\_7 = 5.0381E-04  
RADIANCE\_MULT\_BAND\_8 = 1.1116E-02  
RADIANCE\_MULT\_BAND\_9 = 2.3490E-03  
RADIANCE\_MULT\_BAND\_10 = 3.3420E-04  
RADIANCE\_MULT\_BAND\_11 = 3.3420E-04  
RADIANCE\_ADD\_BAND\_1 = -61.71724  
RADIANCE\_ADD\_BAND\_2 = -63.19920  
RADIANCE\_ADD\_BAND\_3 = -58.23753  
RADIANCE\_ADD\_BAND\_4 = -49.10916  
RADIANCE\_ADD\_BAND\_5 = -30.05236  
RADIANCE\_ADD\_BAND\_6 = -7.47375  
RADIANCE\_ADD\_BAND\_7 = -2.51905  
RADIANCE\_ADD\_BAND\_8 = -55.57806  
RADIANCE\_ADD\_BAND\_9 = -11.74514  
RADIANCE\_ADD\_BAND\_10 = 0.10000  
RADIANCE\_ADD\_BAND\_11 = 0.10000  
REFLECTANCE\_MULT\_BAND\_1 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_2 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_3 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_4 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_5 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_6 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_7 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_8 = 2.0000E-05  
REFLECTANCE\_MULT\_BAND\_9 = 2.0000E-05  
REFLECTANCE\_ADD\_BAND\_1 = -0.10000  
REFLECTANCE\_ADD\_BAND\_2 = -0.10000  
REFLECTANCE\_ADD\_BAND\_3 = -0.10000  
REFLECTANCE\_ADD\_BAND\_4 = -0.10000  
REFLECTANCE\_ADD\_BAND\_5 = -0.10000  
REFLECTANCE\_ADD\_BAND\_6 = -0.10000



---

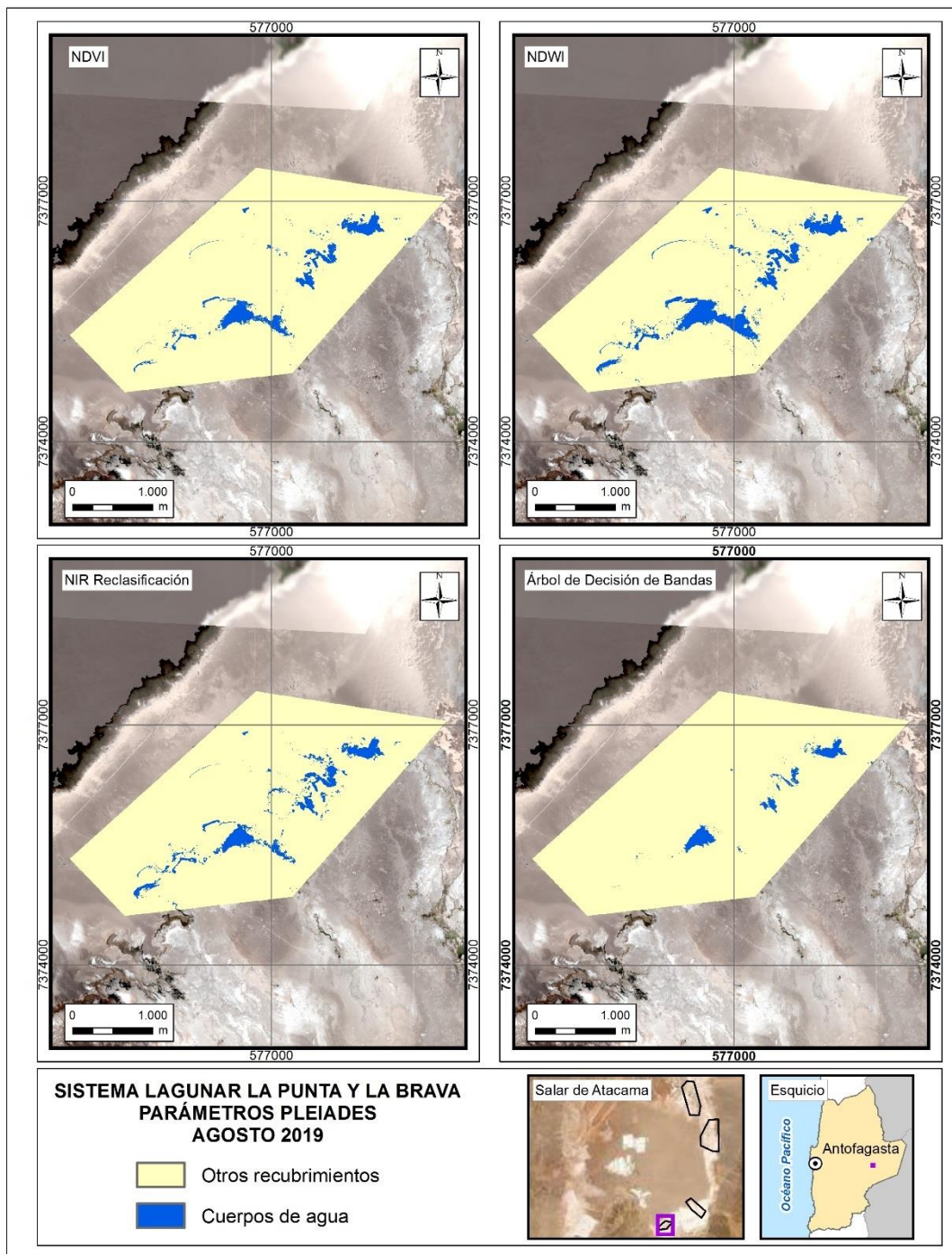
```
REFLECTANCE_ADD_BAND_7 = -0.100000
REFLECTANCE_ADD_BAND_8 = -0.100000
REFLECTANCE_ADD_BAND_9 = -0.100000
END_GROUP = RADIOMETRIC_RESCALING
GROUP = TIRS_THERMAL_CONSTANTS
K1_CONSTANT_BAND_10 = 774.8853
K2_CONSTANT_BAND_10 = 1321.0789
K1_CONSTANT_BAND_11 = 480.8883
K2_CONSTANT_BAND_11 = 1201.1442
END_GROUP = TIRS_THERMAL_CONSTANTS
GROUP = PROJECTION_PARAMETERS
MAP_PROJECTION = "UTM"
DATUM = "WGS84"
ELLIPSOID = "WGS84"
UTM_ZONE = 19
GRID_CELL_SIZE_PANCHROMATIC = 15.00
GRID_CELL_SIZE_REFLECTIVE = 30.00
GRID_CELL_SIZE_THERMAL = 30.00
ORIENTATION = "NORTH_UP"
RESAMPLING_OPTION = "CUBIC_CONVOLUTION"
END_GROUP = PROJECTION_PARAMETERS
END_GROUP = L1_METADATA_FILE
END
```

**1.8 Parámetros espectrales para el sistema lagunar La Punta y La Brava, imágenes LANDSAT 8, invierno 2019.**



Fuente: Elaboración propia

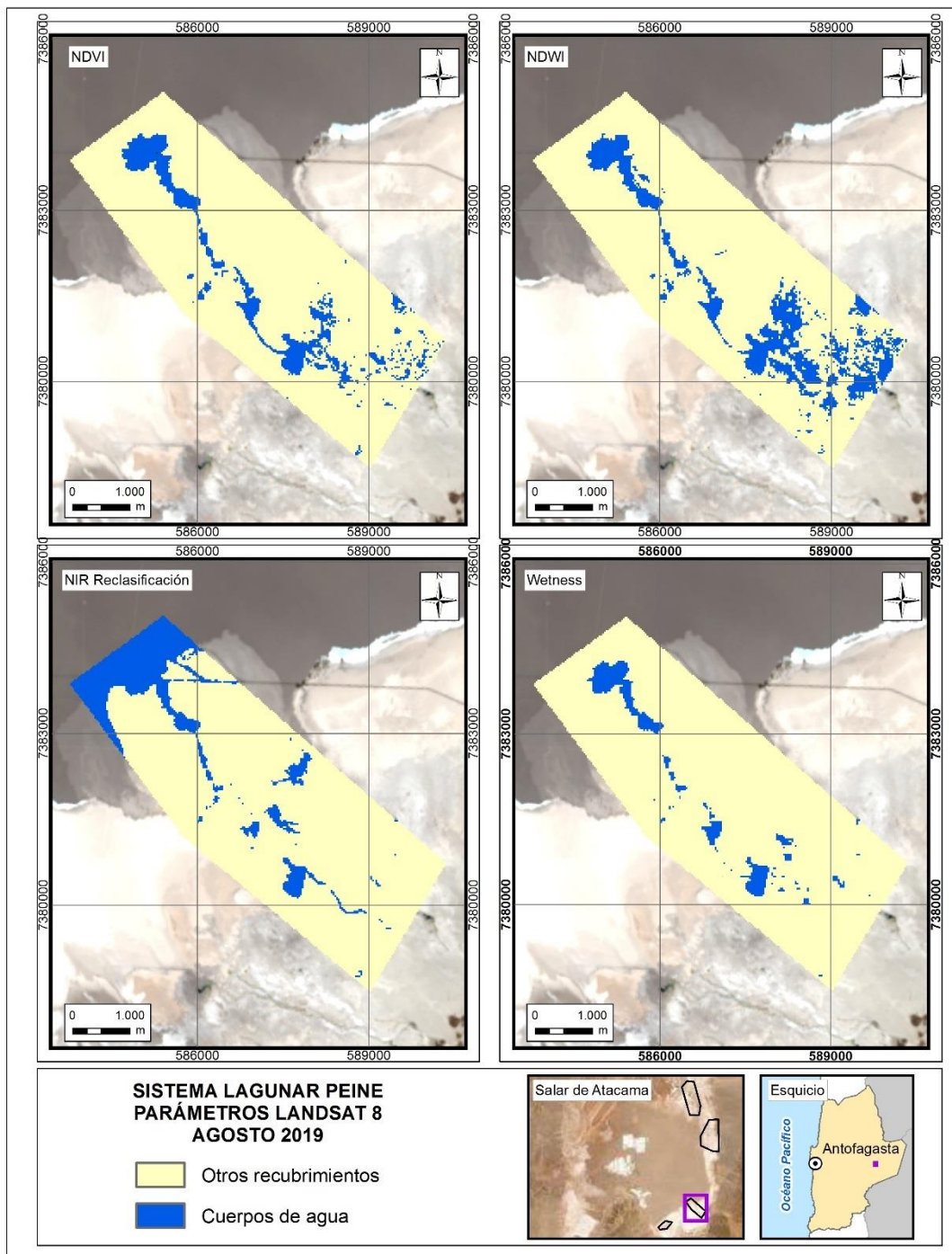
**1.9 Parámetros espectrales para el sistema lagunar La Punta y La Brava, imágenes PLEIADES 1A, invierno 2019.**



Fuente: Elaboración propia

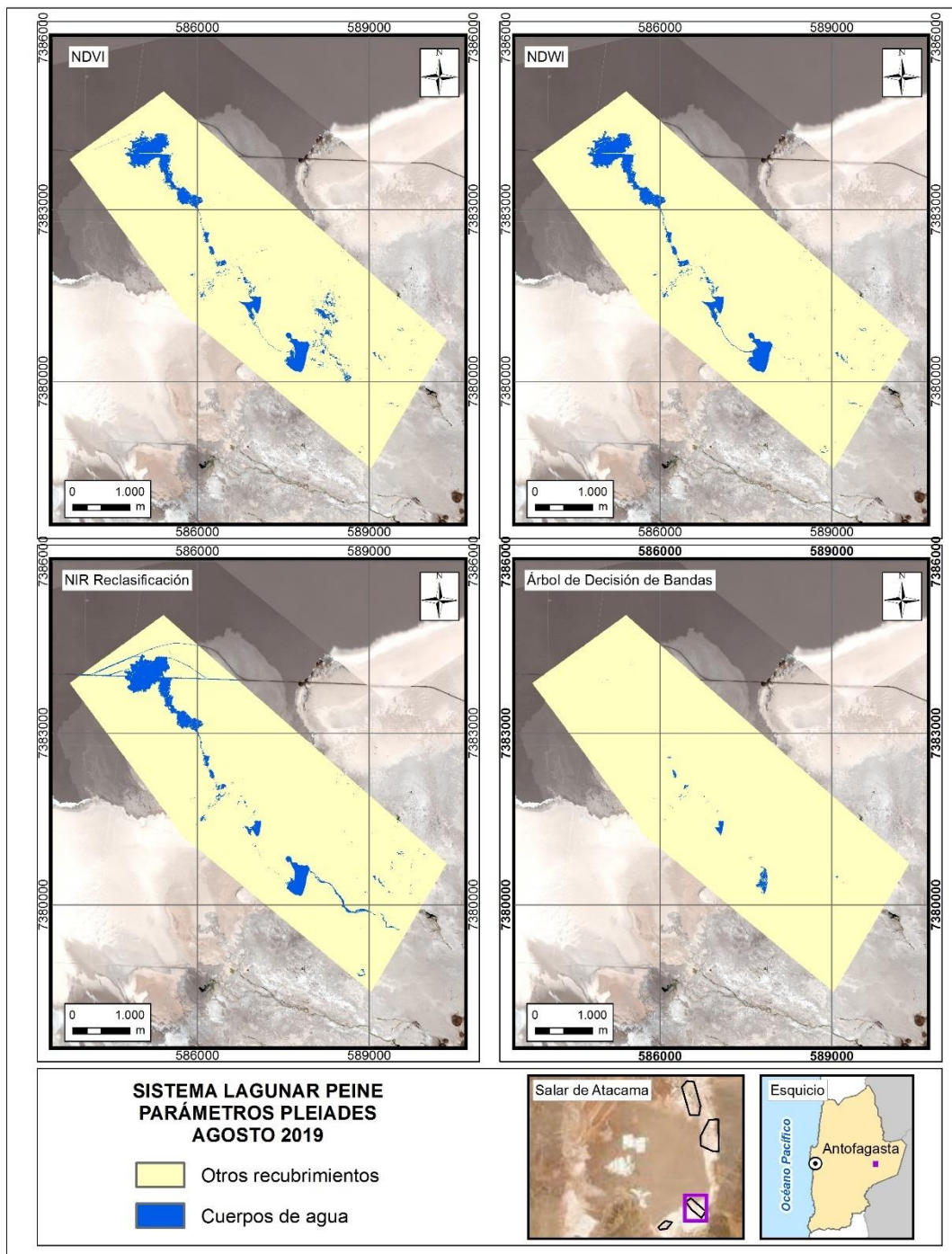


**1.10 Parámetros espectrales para el sistema lagunar Peine, imágenes LANDSAT 8, invierno 2019.**



Fuente: Elaboración propia

**1.11 Parámetros espectrales para el sistema lagunar Peine, imágenes PLEIADES 1A, invierno 2019.**



Fuente: Elaboración propia