

# Potential of Hyperspectral Thermal Infrared Spaceborne Measurements to Retrieve Ice Cloud Physical Properties: case study of IASI and IASI-NG

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Table S1: List of the 150 selected channels and associated wavenumbers ( $\nu$ ) for IASI and IASI-NG.

Selected channels			
IASI		IASI-NG	
ch. number	$\nu$ (cm <sup>-1</sup> )	ch. number	$\nu$ (cm <sup>-1</sup> )
21	650.25	356	689.500
25	651.25	373	691.625
26	651.50	378	692.250
33	653.25	379	692.375
35	653.75	405	695.625
47	656.75	442	700.250
49	657.25	453	701.625
57	659.25	460	702.500
59	659.75	474	704.250
73	663.25	475	704.375
80	665.00	479	704.875
147	681.75	480	705.000
149	682.25	484	705.500
168	687.00	490	706.250
193	693.25	492	706.500
195	693.75	513	709.125
205	696.25	517	709.625
212	698.00	518	709.750
218	699.50	560	715.000
225	701.25	562	715.250
226	701.50	583	717.875
228	702.00	593	719.125
231	702.75	607	720.875
235	703.75	610	721.250
238	704.50	705	733.125

Selected channels			
IASI		IASI-NG	
ch. number	$\nu$ (cm <sup>-1</sup> )	ch. number	$\nu$ (cm <sup>-1</sup> )
239	704.75	755	739.375
240	705.00	764	740.500
247	706.75	770	741.250
260	710.00	773	741.625
262	710.50	798	744.750
274	713.50	802	745.250
275	713.75	1144	788.000
291	717.75	1191	793.875
299	719.75	1264	803.000
302	720.50	1356	814.500
303	720.75	2111	908.875
319	724.75	2112	909.000
381	740.25	2217	922.125
388	742.00	2424	948.000
410	747.50	3377	1067.125
476	764.00	3422	1072.750
528	777.00	4230	1173.750
614	798.50	4231	1173.875
615	798.75	4309	1183.625
831	852.75	4331	1186.375
1056	909.00	4339	1187.375
1141	930.25	4347	1188.375
1152	933.00	4430	1198.750
1191	942.75	4534	1211.750
1194	943.50	4537	1212.125
1195	943.75	4545	1213.125
1213	948.25	4546	1213.250
1219	949.75	4559	1214.875
1847	1106.75	4587	1218.375
1904	1121.00	4643	1225.375
2114	1173.50	4682	1230.250
2115	1173.75	4796	1244.500
2187	1191.75	4859	1252.375
2213	1198.25	4866	1253.250
2264	1211.00	4910	1258.750
2269	1212.25	4919	1259.875
2273	1213.25	4922	1260.250
2293	1218.25	4925	1260.625
2320	1225.00	4926	1260.750
2325	1226.25	4946	1263.250
2326	1226.50	4971	1266.375
2345	1231.25	4990	1268.750
2362	1235.50	5029	1273.625
2397	1244.25	5040	1275.000
2411	1247.75	5049	1276.125
2418	1249.50	5102	1282.750
2435	1253.75	5112	1284.000
2454	1258.50	5113	1284.125

Selected channels			
IASI		IASI-NG	
ch. number	$\nu$ (cm <sup>-1</sup> )	ch. number	$\nu$ (cm <sup>-1</sup> )
2460	1260.00	5198	1294.750
2476	1264.00	5241	1300.125
2481	1265.25	5255	1301.875
2494	1268.50	5263	1302.875
2505	1271.25	5267	1303.375
2507	1271.75	5275	1304.375
2525	1276.25	5276	1304.500
2561	1285.25	5285	1305.625
2570	1287.50	5292	1306.500
2576	1289.00	5358	1314.750
2584	1291.00	5377	1317.125
2616	1299.00	5398	1319.750
2629	1302.25	5458	1327.250
2635	1303.75	5459	1327.375
2638	1304.50	5535	1336.875
2639	1304.75	5542	1337.750
2645	1306.25	5544	1338.000
2667	1311.75	5551	1338.875
2675	1313.75	5573	1341.625
2677	1314.25	5680	1355.000
2683	1315.75	5731	1361.375
2700	1320.00	5744	1363.000
2750	1332.50	5749	1363.625
2759	1334.75	5782	1367.750
2760	1335.00	5819	1372.375
2783	1340.75	5820	1372.500
2785	1341.25	5827	1373.375
2807	1346.75	5841	1375.125
2835	1353.75	5843	1375.375
2841	1355.25	5935	1386.875
2875	1363.75	5943	1387.875
2888	1367.00	5956	1389.500
2895	1368.75	6002	1395.250
2907	1371.75	6022	1397.750
2918	1374.50	6041	1400.125
2922	1375.50	6066	1403.250
2958	1384.50	6082	1405.250
2963	1385.75	6134	1411.750
2990	1392.50	6199	1419.875
2996	1394.00	6200	1420.000
3006	1396.50	6327	1435.875
3007	1396.75	6336	1437.000
3009	1397.25	6341	1437.625
3021	1400.25	6365	1440.625
3026	1401.50	6369	1441.125
3031	1402.75	6461	1452.625
3033	1403.25	6473	1454.125
3116	1424.00	6485	1455.625

Selected channels			
IASI		IASI-NG	
ch. number	$\nu$ (cm <sup>-1</sup> )	ch. number	$\nu$ (cm <sup>-1</sup> )
3231	1452.75	6494	1456.750
3276	1464.00	6554	1464.250
3298	1469.50	6600	1470.000
3311	1472.75	6605	1470.625
3317	1474.25	6646	1475.750
3444	1506.00	6665	1478.125
3452	1508.00	6669	1478.625
3579	1539.75	7077	1529.625
3658	1559.50	7176	1542.000
4714	1823.50	7320	1560.000
5381	1990.25	8449	1701.125
5382	1990.50	10777	1992.125
5422	2000.50	10967	2015.875
5438	2004.50	10977	2017.125
5481	2015.25	11028	2023.500
5508	2022.00	11132	2036.500
5516	2024.00	11157	2039.625
5527	2026.75	11168	2041.000
5535	2028.75	11170	2041.250
5546	2031.50	11173	2041.625
5552	2033.00	11176	2042.000
5576	2039.00	11215	2046.875
5581	2040.25	11269	2053.625
5582	2040.50	11273	2054.125
5585	2041.25	12786	2243.250
5587	2041.75	13937	2387.125
5590	2042.50	15706	2608.250
5606	2046.50	15949	2638.625
7908	2622.00	16917	2759.625