

**SUDDEN IONOSPHERIC DISTURBANCES
JULY 2004**

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Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF- SPA	SES			
01	1000	1010	1031	1	1		1				*		
04	0508	0544	0650	2	1		1				No flare		
04	1038	1052	1128	1	1		1				*		
04	1456	1528	1618	1	1		1				1503	B4.5	10641
05	0742	0756	0806	1	1		1				No flare		
05	0826	0836	0948	1	1		1				No flare		
05	1531	1541	1615	1	1		1				1550	B2.6	10639
06	0625	0638	0705	1	1		1				*		
07	1706	1712	1815	1	1		1				1709	B4.9	10641
08	0709	0719	0737	1	1		1				0654	B3.6	10642
10	1234	1248	1256	1	1		1				No flare		
10	1319	1331	1342	1	1		1				No flare		
10	1504	1514	1550	1	1		1				No flare		
11	0608	0627U	0652	1	1		1				0603	C3.6	
11	0700	0704U	0739D	1	1		1				0603	C3.6	
11	0734	0753	0827	2	5	1	1	1		3	0603	C3.6	
11	0939	0946	1005	2	5	1	1	1		3	0937	C4.2	
11	1321	1332	1410	3-	5	1	2	1		6	1316	C4.2	
11	1651	1659	1719	1	5		1			6	1649	C2.8	
11	1725	1734	1817	2	5		1			7	1724	C3.3	
11	1942	1950	2033	2	3					6	1940	C3.2	
11	2105	2113	2151	2	3					4	2104	C2.5	
11	2253	2259	2319D	1+	1					1	2251	C1.7	
11	2319	2328	2340D	1	1					1	2317	C3.0	
11	2340	2347	2408	1+	1					1	2317	C3.0	
12	0103	0110	0126	1	1					1	0057	C3.2	
12	0704	0729U	0740	1	1		1				0711	C2.8	
12	0746	0811	0908	3	5	1	1	1		1	0736	M1.6	
12	1258	1308	1319	2	5	1	1	1		1	1249	C3.4	10649
12	1549	1559	1630	2	5	1	1	1		3	1550	C3.2	10649
12	1822	1844	1937	2+	3					2	1831	C4.5	10649
12	2002	2020	2100	2+	1					1	No flare		
12	2119	2127	2146	1+	3					2	2119	C1.7	10649
12	2146	2151	2224	2	3					2	2146	C2.5	10649
13	0011	0016	0110	2	5					3	0009	M6.7	10646
13	0525	0616U	0625	1	1		1				0521	C6.7	10646
13	0630	0634	0708	1	1		1				0626	C4.1	10649
13	0803	0836	0836	1	1		1				0825	C1.5	10649
13	0844	0848	1004	3	5	1	2	1		4	0840	M5.4	10646
13	1204	1211	1218U	3-	5	1	2	1		9	1159	M2.9	10649
13	1243	1248	1311	2	5	1		1		1	1245	C5.0	10649
13	1834	1840	1919	2	3					4	1833	M1.1	10649
13	1926	1932	2025	2+	5					5	1924	M6.2	10646
13	2118	2123	2139	1	3					2	2117	C2.2	10646
13	2205	2209	2221	1-	3					2	2201	C5.1	10649
13	2222	2227	2255	2	1					1	No flare		
13	2304	2311	2328D	1	1					1	2304	C2.8	10646
13	2335	2341	2353	1-	1					1	2327	C3.2	10646
14	0518	0525	0648	2+	3		1			2	0502	M6.2	10646
14	0810	0817	0904	1	1		1				0811	C1.9	10646
14	1747	1751	1809	1	5					5	1739	C5.8	10649
14	1816	1819	1855	1+	3					5	1812	M1.0	10649
14	1951	1956	2010	1-	3					2	1950	C2.0	10646
14	2012	2021	2038D	1+	1					1	2010	C3.6	10646
14	2047	2050	2107	1	3					2	2036	C3.5	10646

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						SWF	SEA	SPA	LF- SPA	SES			
15	0135	0141	0226	2-	3					2	0130	X1.8	10649
15	0940	0950	1054	2+	5	1	2	1		1	No flare		
15	1818	1826	1916	2-	5		1			8	1815	X1.6	10649
15	2137	2146	2150	1-	1					1	2125	C3.9	10649
15	2157	2203	2226D	1+	1					1	2125	C3.9	10649
15	2224	2232	2329	2+	3					4	2224	C7.9	
16	0201	0205	0256	2	5					3	0143	X1.3	10649
16	1032	1043	1156	3	5	1	2	1		7	1032	X1.1	10649
16	1219	1226	1254	2	1					1	1232	C8.2	
16	1250	1259	1318	3-	5	1	1	1		9	1232	C8.2	
16	1318	1319	1430	2+	1					1	No flare		
16	1335	1343	1509	1+	5					6	1349	X3.6	10649
16	1353	1415	1518	3	5	1	1	1		4	1349	X3.6	10649
16	1624	1629	1701	2-	5		1			8	1622	M1.2	10649
16	2031	2041	2145	2+	3					4	2029	C9.0	10649
17	0754	0758	0824	3-	5	1	1	1		5	0756	X1.0	10649
17	0854	0903	0922	1+	1					1	No flare		
17	0941	0952	1013	1+	5					3	0946	C5.0	10649
17	1130	1139	1153	3	5	1		1		6	1124	C7.2	10649
17	1252	1258	1353	3-	5	1	1	1		9	1231	C8.8	10649
17	1551	1557	1621	1+	3					4	1548	C2.6	10649
17	1650	1654	1714	2	5			1		8	1645	M2.5	10649
17	1651	1704	1747	1+	5		1			1	1645	M2.5	10649
17	1825	1828	1846	1	3					3	1821	C2.2	
17	1914	1917	1953	2-	5					4	1915	C5.3	10652
17	2040	2046	2056	1-	3					3	2036	C3.4	10649
17	2056	2103	2126	1+	3					4	2054	C5.7	10649
17	2127	2132	2202	1+	5					5	2124	M2.0	10649
17	2232	2241	2256	1	1					1	2228	C5.7	10649
17	2256	2303	2334	2-	3					2	2254	M1.1	10649
18	0009	0012	0028D	1	1					1	0005	M2.0	10649
18	0028	0036	0120	2+	1					1	0005	M2.0	10649
18	0253	0256	0325	1+	1					1	0251	M1.5	10649
18	1032	1035	1100	1+	1					1	No flare		
18	1145	1152	1205	2+	5	1		1		7	1147		10649
18	1226	1234	1314	2-	5					4	1225	C2.9	10649
18	1338	1349	1411	2	3					6	1337	C4.0	10649
18	1411	1416	1453	2	5	1		1		11	1409	C9.4	10649
18	1626	1632	1643	1-	1					1	1625	C1.4	10649
18	1644	1648	1701	1-	3					2	1643	C1.6	10649
18	1708	1713	1755	2	5					8	1704	M1.9	10649
18	1715	1740	1830	2+	1					1	1717	C4.1	10649
18	1808	1810	1817	1-	1					1	1805	C1.7	10649
18	1846	1849	1905	1-	3					2	1843	C2.3	10649
18	2142	2144	2154	1-	1					1	2139	C1.3	10649
19	1049	1052	1126	2	1					1	1047	C2.9	10652
19	2057	2101	2116	1	1					1	2054	C1.8	10652
19	2141	2148	2209	1+	1					1	2137	C1.7	10652
20	0104	0106	0110	1-	1					1	0055	C3.3	10649
20	1015	1018	1024	1-	1					1	No flare		
20	1104	1116	1146	3-	5	1		1		3	1101	C6.0	10652
20	1224	1237	1329	3	5	1	1	1		9	1222	M8.6	10652
20	1815	1821	1851	1+	3					6	1815	C3.8	10652
20	2113	2121	2208	2	5					6	2109	C8.1	10652
21	0032	0035	0101	1+	3					2	0029	C6.6	10649
21	0515	0526	0654	1+	1					1	0505	C8.9	10652
22	0018	0030	0124	2+	1					1	0014	M9.1	10652
22	0752	0800	0826	2	5	1		1		2	0741	C5.3	10652
22	1103	1116	1205	3-	5	1		1		4	1102	C5.8	10652

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Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
22	1524	1531	1537D	1-	1						1	No flare	
22	1539	1544	1600	1	3						5	1537	C2.3 10652
22	1719	1726	1820	2	3						4	1717	C3.2 10652
22	1903	1911	1923	1	1						1	No flare	
22	2206	2211	2226	1	1						1	2201	C4.1 10652
22	2244	2253	2351	2	3						2	2240	M1.6 10652
23	0718	0725	0814	2	5	1	1	1				0717	C4.1 10652
23	1714	1724	1803	2-	5						9	1707	M2.2 10652
23	1803	1808	1838	1+	3						5	1802	C4.1 10652
23	2118	2125	2209	2	5						5	2115	M1.7 10652
24	0603	0607	0703	2-	5						2	0601	M1.0 10652
24	0805	0820	0844	2	1						1	0807	C2.5 10652
24	1017	1024	1119	2+	5	1		1			4	1014	C3.5 10652
24	1309	1318U	1335	1	1			1				No flare	
24	1334	1342	1420	3-	5	1	1	1			10	1331	C4.8 10652
24	1444	1450	1501	1-	5						2	1446	B9.7 10652
24	1815	1816	1920	2+	1						1	1823	C1.1 10652
24	1842	1847	1931	2	5						6	1840	M2.5 10652
24	2137	2139	2154	1-	1						1	2134	C1.2 10652
24	2201	2209	2228	1+	1						1	2159	C1.4 10652
24	2315	2325	2403	2+	1						1	2311	C2.7 10652
25	0029	0034	0113	2	1						1	0025	C7.4 10652
25	0544	0554	0650	3	5	1	2	1			4	0539	M7.1 10652
25	0634	0641	0716	1+	5						2	0630	M1.0 10652
25	1320	1327	1339	1-	5						2	1318	C2.1 10652
25	1340	1350	1516	3	5	1	1	1			13	1337	M2.2 10652
25	1433	1450	1530	2+	1						1	1419	M1.1 10652
25	1439	1505	1706	3	5						3	1419	M1.1 10652
25	1954	2001	2048	2	3						2	*	
26	0542	0553	0643	2-	5						3	0536	M1.3 10652
26	0550	0624U	0714	2	1		1					No flare	
26	1653	1701	1725	2-	3						2	1650	C4.7 10652
26	1725	1732	1814	2+	3						2	1723	M1.1 10652
26	2204	2207	2239	2	1						1	2200	C1.0 10652
26	2247	2253	2318	1+	1						1	2245	C1.8 10652
26	2351	2356	0029	1+	1						1	2346	M1.2 10652
27	0542	0549	0653	3-	5		1				1	0541	M1.1 10652
27	0705	0718	0750	3+	1						1	No flare	
27	1015	1022	1032	2	5	1		1				0914	C3.7 10652
27	1453	1505	1510	2+	5	1		1				1501	C3.0 10652
27	1714	1719	1749	2-	3						2	No flare	
27	1854	1901	1919	1+	1						1	No flare	
27	2010	2018	2132	2+	3						3	1959	M1.5 10652
27	2230	2235	2314	2	1						1	2227	C2.9 10652
27	2250	2252	2304	1-	1						1	2252	C1.1 10652
28	0805	0817	0847	2+	5	1	2	1				0803	C6.3 10652
28	1144	1150	1213	3-	5		1	1			2	1141	C3.0 10652
28	1346	1419U	1441	1	1		1					No flare	
28	1530	1535	1606	2+	5	1	2	1			3	1528	C3.6 10652
28	1615	1623	1637	1	5						3	1608	C3.3 10652
28	2352	2403	2506	2+	1						1	2345	M2.0 10652
29	1624	1632	1700	1	5		1				2	1628	C2.8 10652
29	1907	1912	1935	1+	1						1	No flare	
31	0051	0059	0137	2+	1						1	0046	C2.8 10652
31	1038	1042	1159	3	5		1	1			3	1035	C5.3 10652
31	1517	1520	1530	3-	1			1				No flare	

* = no flare patrol.

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OBSERVATORIES REPORTING FOR JULY 2004

Alberta, Canada	SES	Isola del Gran Sasso, Italy	SES
Athens, Greece	SES	Marlborough, Massachusetts, USA	SES
Bedford, Massachusetts, USA	SES	Neerpelt, Belgium	SES
Bern, Switzerland	SES	Nerja, Spain	SES
Brookline, Massachusetts, USA	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Calcutta, India	SES	Sofia, Bulgaria	SES
Edenvale, Rep of S. Africa	SES	Sussex, United Kingdom	SES
Hoogstraten, Belgium	SES	Tucson, Arizona, USA	SES
Houston, Texas, USA	SES	Upice, Czech Republic	SEA

Observations are not necessarily continuous.