

SUDDEN IONOSPHERIC DISTURBANCES

115
Aug 02

AUGUST 2002

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	0628	0632	0654	1+	1						1	0623	C2.9	10044
01	0706	0708	0726	1	3						2	0703	C3.3	10050
01	0742	0744	0805	1	3						2	0739	C4.1	10050
01	1342	1347	1357	1-	3						2	1343	C3.7	10050
01	1353	1405	1431	1+	3						3	1400	C4.6	10050
01	1543	1553	1614	1+	3						4	1541	C3.4	
01	1702	1707	1735	1+	5						4	1704	C6.0	10044
01	1806	1817	1857	2-	3						2	1809	C4.6	10044
01	2011	2024	2055	2	1						1	2015	C4.8	
01	2125	2132	2154	1+	1						1	2126	C3.6	10050
02	0620	0626	0649	1+	5						3	0617	C4.2	10044
02	0650	0653	0710	1-	3						2	0649	C4.2	10039
02	0907	0913	0934	1+	5						2	0907	C3.1	
02	1046	1052	1126	3	5	1		1			4	1048	M1.0	10039
02	1241	1248	1315	2-	3						2	1244	C4.2	10039
02	1347	1358	1422	2	3						2	1347	C3.6	10039
02	1701	1708	1732	1+	3						7	1701	C3.1	
02	1933	1935	1952D	1	1						1	1936		10039
02	1952	1957	2029	1+	3						4	1950	C4.4	10057
02	2014	2016	2052	1+	3						2	2015		
02	2040	2042	2103D	1	1						1	*		
02	2251	2257	2340	2+	3						3	2250	C8.3	10057
03	0433	0438	0504	1+	3			1			1	0432	C7.5	10057
03	0435	0455	0515	2	1						1	0432	C7.5	10057
03	0502	0518	0532	1	1			1				0518		10057
03	0712	0718	0740	1+	3			1			2	0729		10057
03	0742	0750	0802	1	1			1				No flare		
03	0918	0922	0939	1	5						2	0915	C2.7	10050
03	1031	1035	1058	1	1			1				*		
03	1248	1305	1400	3-	5	1	1	1			8	1259	C5.3	
03	1329	1356	1439	1	1			1				*		
03	1515	1528	1600	2	1						1	1513	C2.9	
03	1652	1656	1718	1	3						4	1652	C2.7	10050
03	1900	1907	2001	2+	3						6	1859	X1.0	10039
03	1947	1948	2021	2	1						1	1949		10057
03	2114	2128	2158	2-	3						3	2111	C3.7	10040
04	0445	0448	0510	1	1						1	0444	C3.8	
04	0717	0720	0739	3-	5	1	2	1			3	0714	C7.4	
04	0901	0912	0912D	3	5	1	1	1			2	0858	M6.6	
04	0931	0941	1057	2+	5	1	2	1			3	0858	M6.6	
04	1406	1412	1436	1+	3						3	1410	C6.0	
04	1414	1420	1443	2+	5	1	2	1			10	1410	C6.0	
04	1454	1500	1525	1+	5						11	1452	C4.8	
04	1527U	1528U	1530U	1-	1						1	No flare		
04	1816	1822	1906	1	1			1				1901	C2.1	
04	2143	2147	2203	1	1						1	2139	C2.6	
05	0809	0812	0826	1	1			1				No flare		
05	1633	1636	1659	1	1			1				No flare		
05	2115	2123	2205	2-	3						5	2114	M1.0	10063
06	0137	0140	0205	1+	1						1	0133	C8.3	10057
06	0521	0524	0539	1	1						1	0514	C2.1	
06	1127	1134	1208	2	5						3	1126	C4.3	10057
06	1129	1134	1234	3-	5			2	1		4	1126	C4.3	10057
06	1229	1234	1255	1	5						2	1226	C3.3	10061
06	1256	1301	1343	3	5	1		1			8	1253	C7.9	10063
06	1459	1511	1604	1	1			1				1516	C7.6	10057
06	1519	1536	1623	3	5	1		1			9	1516	C7.6	10057
07	0122	0128	0203	2	5						2	0118	M1.1	
07	0631	0649	0730	1	1			1				0633	C1.5	10063
07	0711	0718	0755	2	3						2	0711	C2.6	
07	0832	0836U	0857	1	1			1				No flare		
07	1358	1404	1437	2	1						1	1354	C1.4	

* = no flare patrol.

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						SWF	SEA	SPA	LF-SPA	SES			
09	0839	0852	0934	2	3					2	0838	C2.0	
09	0950	1005	1014	1	1		1				*		
11	1139	1150	1236	3	5	1	2	1		10	1137	C9.5	
11	1332	1337	1354	1-	5					4	1330	C2.2	10066
11	1353	1358	1413D	1	1					1	1350	C1.9	
11	1416	1422	1438	1-	5					2	1407	C2.3	10069
11	1439	1446	1511	1+	5					4	1439	C2.3	10061
11	1646	1650	1709	1	5					5	1645	C3.0	
11	1735	1750	1833	2	3					4	1735	C7.9	
11	2021	2023	2033	1-	1					1	2022	C1.7	
11	2121	2128	2153	2-	3					2	2122	C3.6	
11	2213	2220	2252	2-	3					2	2210	C3.3	
12	0811	0825	0838	1+	1					1	0749	C2.7	10058
12	1542	1549	1554	1-	1					1	1539	C2.0	
13	0546	0549	0612	1+	1					1	0546	C2.3	
13	0706	0710	0728	1	1					1	0707	C1.9	
13	0921	0931	0943	3-	5	1	2	1		3	0921	C3.3	
13	1410	1416	1457	2	5					5	1406	C3.0	
13	1506	1509	1548	2	5	1	2	1		8	1503	C4.8	10067
13	1854	1902	2006	2+	3					5	1852	M1.8	10069
13	2207	2217	2250	2	1					1	2210	C5.0	10067
14	0903	0908	0927	2	5			1		4	0850	C5.0	10069
14	1007	1013	1048	2	5	1	2	1		4	1004	C4.9	
14	1202	1225	1255	2	5	1		1		2	1202	C2.6	10066
14	1405	1409	1440	2	5	1	2	1		10	1401	C7.5	10067
14	1805	1814	1901	2	3					6	1804	M1.4	10067
14	1906	1911	1937	1+	3					2	1907		10069
14	1959	2012	2052	2	3					3	1959		10069
14	2137	2141	2211	1+	3					4	2133	C4.7	10069
15	0603	0606	0646	2-	5					3	0601	M1.0	10066
15	0604	0632	0632	2	1		1				No flare		
15	0732	0734	0748	1-	1					1	0731	C2.3	
15	0933	0937	0949	1	1		1				*		
15	1129	1137	1216	3-	5	1	1	1		6	1127	C4.5	10078
15	1330	1336	1412	2+	5	1		1		8	1322	C3.9	10069
15	1510	1514	1541	2	5		1	1		10	1509	C6.9	10078
15	1949	1956	2037	2	3					5	1948	C7.0	10078
15	2324	2335	0022	2+	3					2	2323	M1.0	10078
16	0549	0609	0735	2+	5	1				3	0546	M2.4	10061
16	0555	0604	0707	3-	5		1	1		1	0546	M2.4	10061
16	1133	1210	1444	3	5	1		1		7	1132	M5.2	10069
16	1345	1347	1417	1+	5					3	No flare		
16	1513	1518	1540	1	5					4	1513		10069
16	1545	1552	1630	2	1					1	1513		10069
16	1808	1815	1909	2+	3					4	1804	C5.2	
16	2210	2214	2302	2	3					3	2207	M1.2	
16	2334	2337	0018	2	3					2	2329	M1.7	10069
17	0103	0109	0130	1+	1					1	0058	M1.1	10083
17	0630	0633	0651	1	1					1	0630	C4.6	10069
17	0655	0659	0719	2	5	1		1		2	0653	C5.0	10069
17	0828	0853	1003	1	1		1				0844	C2.1	10069
17	1642	1645	1708	1+	3					4	1639	C3.0	
17	1944	1953	2012	1+	3					3	1945	C4.0	
17	2038	2051	2150	2+	3					6	2039	M3.4	10069
18	0145	0147	0200	1-	1					1	0143	C3.2	10069
18	0330	0336	0420	2+	1					1	0328	C8.4	10069
18	0730	0734	0815	2-	5		1			4	0728	C8.0	10069
18	0949	1006	1114	3	5	1	2	1		6	0954	M2.3	10069
18	1207	1212	1247	2+	5	1	1	1		5	1205	C4.1	

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						SWF	SEA	SPA	LF-SPA	SES			
18	1210	1243	1317	1	1		1				1244		10079
18	1347	1350	1417	1+	3					2	1343	C4.9	10069
18	1400	1405	1430	1+	1					1	No flare		
18	1436	1441	1510	3-	5	1	2	1		7	1433	M1.9	10069
18	1646	1650	1722	2-	3					3	1642	C6.0	10083
18	1945	1955	2019	2	3					4	1935	C4.5	10079
18	2019	2023	2103	2-	3					5	2018	C8.7	10069
18	2112	2123	2222	2+	3					5	2112	M2.2	10069
18	2228	2234	2315	2+	1					1	2228	C4.3	
19	1030	1036	1102	3	5	1	2	1		7	1028	M2.0	10069
19	1300	1303	1335	2	5			1		2	1257	C3.5	10069
19	1427	1439	1507	2	3					2	1427	C9.5	10069
19	1431	1440	1512	3-	5	1	1	1		1	1427	C9.5	10069
19	2053	2102	2154	2	3					4	2056	M3.1	10069
20	0135	0142	0224	2-	5					3	0133	M5.0	10069
20	0255	0257	0320	1	1					1	0253	M1.4	10069
20	0513	0515	0530	1-	1					1	0511	C4.0	10069
20	0621	0623	0633	1-	1					1	0617	C2.7	10079
20	0826	0831	0903	3	5	1	2	1		4	0822	M3.4	10069
20	1029	1033	1055	2+	5	1		1			1026	C3.3	10079
20	1116	1120U	1158	1	1		1				1125		10069
20	1432	1437	1515	2	1					1	1429	C5.4	10083
20	1547	1551	1609	1	3					4	1547	C3.0	10081
20	1635	1639	1653	1+	3					4	1634	C3.3	10085
20	1656	1700	1717	1	5					4	1655	C5.2	10069
20	1707	1708	1737	1+	1					1	1655	C5.2	10069
20	1735	1740	1811	2-	3					3	1734	C9.9	10069
20	1800	1806	1822D	1	1					1	*		
20	1820	1827	1853	2-	3					2	1821	C3.3	
20	2107	2117	2203	2+	1					1	2053	M1.2	10085
20	2212	2214	2224D	1-	1					1	2206	C3.5	
20	2224	2232	2245D	1	1					1	2221	C6.2	10069
20	2245	2248	2313D	1+	1					1	2242	C5.4	10069
20	2313	2315	2400	2+	1					1	2308	C6.4	10069
21	0136	0142	0215	2	5					3	0135	M1.4	10069
21	0532	0536	0549	2+	5	1	2	1		2	0528	X1.0	10069
21	1133U	1158U	1222U	2+	1					1	1142E		10083
21	1147	1216	1237	2+	1					1	1142E		10083
21	1252	1301	1317	1	5					3	1258	C3.1	10069
21	1349	1352	1416	1+	5					2	1349	C2.5	
21	1437	1443	1509	2-	5					2	1436		10085
21	1602	1613	1638	1+	5					2	1609	C3.0	10069
21	1700	1706	1723D	1	1					1	1658	C3.6	10069
21	1721	1725	1745	1	3					4	1720	C4.8	10069
21	1904	1909	1943	2-	3					5	1903	C8.9	10069
22	0151	0154	0221	1+	3					2	0147	M5.4	10069
22	0516	0519	0540	1	1		1				0513	C2.8	10085
22	0605	0646	0746	2	1		1				0618	C5.6	10079
22	0733	0735	0751	1-	1					1	No flare		
22	0802	0805	0822	1	3					2	0802	C5.7	10069
22	0808	0821	0852	1	1		1				No flare		
22	1009	1018	1140	1	1		1				No flare		
22	1047	1053	1100	2	5	1		1			1044	C4.1	10085
22	1317	1321	1341	1	5					2	1317	C2.9	10069
22	1419	1423	1433	2+	5	1	1	1		9	1415	C4.8	
22	1620	1628	1650	2	5		1	1		8	1616	C7.0	10079
22	1657	1700	1724	1+	3					3	1655	C3.4	10087
22	1737	1746	1845	2+	3					2	1739	M1.2	10087
22	1739	1755	1904	3-	3					4	1739	M1.2	10087
22	1950	1953	2019	1+	3					2	1951	C3.0	
22	1952	2007	2115	2+	1					1	No flare		
22	2033	2034	2050D	1-	1					1	2033	C4.3	10069
22	2050	2052	2104	1-	1					1	2054		10079
22	2245	2252	2330	2	1					1	2209	C4.5	10069

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						SWF	SEA	SPA	LF-SPA	SES			
23	0415	0420	0445	1+	1					1	0414	C9.4	10069
23	0534	0537	0544	1-	1					1	0531	M1.7	10085
23	0548	0551	0607	1	3					2	0531	M1.7	10085
23	0808	0821	0845	3	5	1	1	1		1	0800	M1.5	10069
23	0906	0912	0939	1	1		1				0900		10069
23	0944	0949	1049	2+	5	1	2	1		3	No flare		
23	1015	1032	1117	1	1			1			No flare		
23	1141	1143	1154D	1-	1					1	1142	C8.1	10069
23	1158	1204	1241	3-	5	1	2	1		7	1156	M1.2	10069
23	1306	1317	1337	3	5	1	2	1		6	1305	M1.5	10087
23	1418	1432	1457	2-	5					6	1418		10069
23	1851	1855	1910	1	1					1	1852	C3.7	10085
23	1914	1916	1932	1-	1					1	1914	C3.8	
23	2005	2016	2124	2+	3					4	2009	M1.4	10083
24	0055	0102	0142	2	5					2	0049	X3.1	10069
24	0523	0527	0538D	1-	1					1	No flare		
24	0538	0547	0621	2	3					2	0538	M1.8	10087
24	0925	0942	0959	2	1			1			0925		10085
24	1114	1127	1209	3	5	1	2	1		8	1112	M1.5	
24	1244	1301	1319	3-	5	1	2	1		8	1242	C5.4	
24	1508	1515	1548	2-	5					4	1508	C4.6	10079
24	1739	1742	1800	1	3					2	1738	C2.9	
24	1804	1808	1828	1	3					3	No flare		
24	1832	1843	1921	2	3					4	1832	C6.0	10083
24	2102	2107	2129	1+	3					3	2103	C3.1	
25	1101	1112	1126	2+	5	1	1	1		2	1059	C3.6	
25	1547	1557	1632	2-	1			1			1538	C1.4	10080
25	1738	1742	1841	1	1		1				No flare		
25	1849	1852	1948	2+	3					4	1845	M1.1	10083
25	2338	2347	0006	1+	3					2	2338	M1.9	10083
26	0714	0729	0746	2	5		1	1			No flare		
26	0941	0947	1014	3-	5		2	1		4	0939	C4.0	10085
26	1623	1625	1642	2+	5		1	1		3	1615	C7.6	10083
26	1841	1844	1902	1	1					1	1835	C3.4	10085
26	1937	1958	2115	3	1					1	1936	C7.8	10083
27	0511	0513	0531	1-	3		1			1	0515	C1.8	
27	1228	1240	1307	3	5	1	1	1		8	1225	C9.0	
28	1058	1101	1134	3-	5	1		1		5	1057	C5.7	10083
28	1439	1449	1503	1	3					4	1440	C2.9	
28	1505	1513	1537	1+	5					6	No flare		
28	1551	1555	1623	2	5			1		8	1548	C8.1	
28	1651	1659	1722	2+	5	1	2	1		9	1645	M1.3	10083
28	1741	1748	1759	1-	3					5	1741	C4.4	10083
28	1805	1812	1827	1	3					4	1806	C6.6	
28	1824	1827	1840	1-	3					2	No flare		
28	1847	1849	1913	1+	3					2	1847		10090
28	1854	1900	1946	2-	3					4	1852	M4.6	
28	2141	2144	2244	2	3					3	2138	M1.1	
29	0247	0251	0315	1	1					1	0245	M1.6	
29	0503	0509	0528	1	3					2	0456	M1.8	
29	0645	0755	0820	2	1			1			0713	C7.2	
29	0830	0844	0856	1	1			1			No flare		
29	0919	0931	0950	1	1			1			*		
29	1035	1041	1124	2+	5	1	1	1		1	1033	C4.5	10085
29	1058	1110	1125	1+	1					1	1058	C3.8	
29	1242	1251	1349	3	5	1	2	1		11	1242	M3.2	10095
29	1322	1323	1345	1	1					1	1321	C4.9	
29	1422	1427	1439	1-	5					2	1423		10087
29	1445	1456	1523	2-	5					2	1447	C2.9	

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						SWF	SEA	SPA	LF-SPA	SES			
29	1523	1532	1555	2+	5	1	1	1		6	1522	C4.4	
29	1657	1700	1723D	1+	1					1	1655	C2.8	
29	1832	1837	1900	1+	1					1	1823		10094
29	1926	1932	1956	1+	3					4	1925	C5.2	
29	2143	2145	2215	1+	1					1	2140	C4.7	
30	0237	0240	0248	1-	1					1	0234	C8.5	
30	0428	0430	0440	1-	1					1	0427	C3.4	
30	0447	0456	0532	2	3					2	0447	C5.7	
30	0738	0741	0800	1	3					2	0735	C2.6	
30	1046	1055	1120	2+	5	1	1	1		2	1032	C4.3	10092
30	1326	1332	1353	3	5	1	2	1		13	No flare		
30	1343	1345	1415	1+	1					1	No flare		
30	1438	1441	1504	3-	5	1	2	1		12	1435	C8.4	10095
30	1818	1822	1841	1+	1					1	1822		10095
30	2007	2016	2045	2	1					1	2029		10095
31	0942	0955	1011	1	1		1				No flare		
31	1028	1034	1116	1	1		1				No flare		
31	1308	1316U	1406	1	1		1				No flare		
31	1328	1333	1346	1-	5					2	1328	C3.0	10095
31	1421	1425	1453	2	5	1	2	1		10	1418	C4.7	
31	1523	1526	1532	1-	3					2	1526	C3.8	10095
31	1532	1539	1559	1-	5		1			1	No flare		
31	1611	1618	1653	2-	5		1			10	1611	C8.8	10095
31	1925	1929	1946	1	3					7	1924	C3.4	
31	1949	1957	2034	2-	3					7	1948	C9.1	10095

* = no flare patrol.

OBSERVATORIES REPORTING FOR AUGUST 2002

Alberta, Canada	SES	Marlborough, Massachusetts, USA	SES
Bedford, Massachusetts, USA	SES	Nerja, Spain	SES
Bern, Switzerland	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Brookline, Massachusetts, USA	SES	Sussex, United Kingdom	SES
Dundas, Ontario, Canada	SES	Torrington, Connecticut, USA	SES
Edenvale, Rep of S. Africa	SES	Udine City, Italy	SES
Houston, Texas, USA	SES	Upice, Czech Republic	SEA
Isola del Gran Sasso, Italy	SES	Villiersdorp, South Africa	SES

Observations are not necessarily continuous.