

item	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
With UT	very minor activation	Activation of aurora which might be related to substorm (or pseudo) onset	Expansion of aurora which most likely indicates substorm onset within 20 minutes	UT when the cloud coverage is more than half
Without UT	quiet arc or diffuse only	Just a minor activation of aurora both intensity and motion.		
() default		through/over cloud + weak case	through/over cloud + weak case	
(UT only)		Strong activation but less likely related to substorm onset	weak case	

* through cloud = aurora is seen between (patchy) cloud

* over cloud = aurora is beyond continuous cloud

* far north = arc/activity at northern limb

* north = expansion/activation start from north to expand south

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2003-09-01	data problem			~ 2230 / ~ no data
2003-09-02				no data
2003-09-03			2057(=2157), 2351=omega	
2003-09-04		(2020=north through cloud)		2200 ~
2003-09-05	(no aurora)			
2003-09-06	yes			
2003-09-07	(no aurora)			2100 ~
2003-09-08		(2140=north through cloud)	(2312 over cloud)	2230 ~
2003-09-09			2018, 2327	
2003-09-10			2030, 2323	
2003-09-11			(2105=north)	
2003-09-12	omega	(2310=north through cloud)		2200 ~ 2300
2003-09-13	unvisible			2030 ~
2003-09-14	(unvisible)	(over cloud)		0000 ~
2003-09-15		2106=far north, 2208=omega, (0124=omega through cloud)		2230 ~
2003-09-16		2310=omega	(0117=omega)	~ 2230
2003-09-17	unvisible			all night
2003-09-18	unvisible			all night
2003-09-19		0123=north omega	2321	~ 2000
2003-09-20		1947=north, (0049=omega through cloud)	(2026=north through cloud)	2030 ~
2003-09-21	unvisible			all night
2003-09-22			(1855=north through cloud)	~ 2330
2003-09-23			(2355 through cloud)	~ 2340 / 0200 ~
2003-09-24			1826, 1902, (2236, 0005 through cloud)	1930 ~ 0140
2003-09-25			1816, 1922, 2121	
2003-09-26	unvisible			all night
2003-09-27		2111=far north		
2003-09-28	yes			
2003-09-29		(2127=north through cloud)		1900 ~
2003-09-30		2232=north, 2352=omega		

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2003-10-01			(2023 through cloud), 2209, 2352	~ 2050 / 0100 ~
2003-10-02	unvisible			all night
2003-10-03		2151=north through cloud		all night
2003-10-04	unvisible			~ 2220 / 2300 ~ 0000 / 0130 ~
2003-10-05	unvisible	(2242=over cloud)		
2003-10-06		yes	2102, 2204, (2204=omega)	0200 ~
2003-10-07	unvisible			all night
2003-10-08	unvisible			all night
2003-10-09	unvisible			all night
2003-10-10	unvisible			all night
2003-10-11	yes			0050 ~
2003-10-12			2343=north	
2003-10-13		2012, 2320=omega	2215	0000 ~ 0300
2003-10-14			o 1824, 2041, 2136, 2243	
2003-10-15		(0038=north through cloud)	(1801 through cloud), (2147 over cloud)	all night
2003-10-16		1659 =far north through cloud, (2004=north through cloud)	(2250 over cloud)	~ 0000
2003-10-17		(1900)	1950, (2151=north)	0000 ~ 0130
2003-10-18			(1921, 2007, 2250 through cloud), (2147 over cloud)	~ 2230
2003-10-19	unvisible	(1700=north, 2118, both over cloud)	(1822, over cloud)	~ 0230
2003-10-20			1803, 1925, 2116= north, 2325, 0100= omega	
2003-10-21			o 1656, 1828, 2142	0230 ~
2003-10-22	unvisible	(1856=north over cloud)		~ 2230 / 0200 ~
2003-10-23	unvisible			~ 1800 / 2230 ~
2003-10-24			2127	~ 1930 / 0050 ~
2003-10-25		1743=far north through cloud, (0211=north omega through cloud)		~1700 / 1900 ~ 0130
2003-10-26			2035	2040 ~
2003-10-27		1651=far north, (0307=omega through cloud)		1900 ~2000
2003-10-28		1620=north, 1953 & 2059 & 2200=pseudo	(2259 through cloud)	2300 ~
2003-10-29		1932	1704, o 2226, o 0125	
2003-10-30	(2-flame over cloud)			all night
2003-10-31	unvisible			all night

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2003-11-01	unvisible			all night
2003-11-02	unvisible			all night
2003-11-03	unvisible			all night
2003-11-04	diffuse	(through cloud)		~ 2330
2003-11-05		(through cloud)		1900 ~
2003-11-06		1945=north	(2200=omega), 2256=omega	no data after 2350
2003-11-07				no data
2003-11-08				no data
2003-11-09				no data
2003-11-10			1736=north, o 2027, 2127=north, 2236	0030 ~
2003-11-11			1516=north, 1729, (1955, 0032 through cloud)	1800 ~
2003-11-12			1615=north, o 1853, (2242=north)	
2003-11-13		(1502), (1755 over cloud)	(1624=pseudo? through cloud),	1620 ~
2003-11-14	diffuse		(0210=omega)	~ 2330
2003-11-15		(1752 over cloud), (2228 through cloud)	1628, (1937=through cloud)	1700 ~ 2020 / 2200 ~ 0030 / 0200 ~
2003-11-16		2359=north, 0108=omega	1656, 1749, (2041 over cloud)	1900 ~ 2330
2003-11-17		(1455 & 1800 & 2144=north over cloud)	(1727 & 2019 over cloud), 0110	~ 2200
2003-11-18			o 1716, 2016	0030 ~
2003-11-19				no data
2003-11-20			oo 1449, many	0200 ~ 0445
2003-11-21			(1708=north), 2041, 0030	
2003-11-22		1501=north, 1903, 2201	o 1635, (2023 over cloud), 2245, 0329=north	1920 ~ 2110
2003-11-23	unvisible			all night
2003-11-24			(2153 through cloud), 0011=north omega	~ 2230
2003-11-25		1925=far north	2258=north	0300 ~
2003-11-26	unvisible			all night
2003-11-27	unvisible			all night
2003-11-28	(north over cloud)			~ 2000 / 2100 ~ 0120
2003-11-29		(2055 & 0114=far north through cloud)		0120 ~
2003-11-30		yes, 2136=pseudo	(1842 though cloud)	~ 2030 / 2200 ~

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2003-12-01	unvisible			~ 1830 / 2140 ~ 0310
2003-12-02	no aurora			
2003-12-03	yes			1640 ~ 2110 / 0150 ~
2003-12-04		(2005=north, 2235, both through cloud)	0159=omega	~ 1545 / 2010 ~ 0020
2003-12-05		(1849, 0057=omega, both through cloud)	1430, 2106	1700 ~ 2110 / 2215 ~ 0145
2003-12-06		(2114=north through cloud)		all night
2003-12-07		yes, 2021=pseudo, (2214= north through cloud)	(2105=north through cloud)	~ 1530 / 1630 ~ 1800 / ~ mostly cloudy rest night
2003-12-08		yes	(1924 through cloud)	~ 1600 / 1900 ~ 2200 / 2315 ~ mostly cloudy
2003-12-09	unvisible	(over cloud)		all night
2003-12-10		(1527=north over cloud)	(1636=north through cloud), 1822	~1800 / 1940 ~ 0130
2003-12-11		1538=far north, (1659= 1928= north over cloud)		no data till 1537 / 1550 ~
2003-12-12				no data
2003-12-13				no data
2003-12-14				no data
2003-12-15		yes	(2021=north through cloud)	~ 1930
2003-12-16	unvisible			1700 ~
2003-12-17	yes			1930 ~ 2230 / 0140 ~
2003-12-18	unvisible			~ 2040 / 2230 ~ 2350 / 0100 ~
2003-12-19	(no aurora)			2210 ~ 2320
2003-12-20			(1658 through cloud), o 2222, 0130=north	~ 1930
2003-12-21		0030=omega	1714, o 2001= north, o 2326= omega,	
2003-12-22		2258=north	1628=north, 1919, 2058	
2003-12-23		yes, (2227=north)		0300 ~
2003-12-24	unvisible			all night
2003-12-25		yes,	(0011=far north)	
2003-12-26		(2222=north, through cloud)		2050 ~2250 / 0130 ~0300
2003-12-27	unvisible			all night
2003-12-28		(over cloud), 2003= pseudo? through cloud, 2239=north	<= ?	~1700 / 0330 ~
2003-12-29	unvisible			~ 2330 / 0030 ~ 0300
2003-12-30			(2151 over cloud), 2354=north	~ 2355
2003-12-31		2340=0148= omega	1620=north, o 1826, 2014, 2131=north	

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-01-01		0041=omega, (0141=omega)	2025	~ 1600
2004-01-02		1950=pseudo, 0140=omega	2018	~ 1830
2004-01-03	(faint over cloud)			1830 ~
2004-01-04		2124=north	1900	~ 1745 / 2300 ~
2004-01-05		2151=pseudo	1621=north, 1737=north, 1830=north, 2204	
2004-01-06	unvisible			all night
2004-01-07		(1722=north), (1842), 1947=north through cloud)		~ 1700
2004-01-08		(1923=north)		2130 ~ 0030
2004-01-09		yes, 1924=north, (0004=omega)	1834, (2317=omega)	~ 1630 / 0100 ~
2004-01-10			1739=north, 1913	2140 ~
2004-01-11	north over cloud			all night
2004-01-12	(faint over cloud)			all night
2004-01-13	unvisible			all night
2004-01-14		(1740=far north, 2125 & 2218=north, 2325=omega, all through cloud), (through cloud)		1800 ~ 2030 / 2315 ~ 0030
2004-01-15		1451 and many, 2106=north, 0007=omega	o 1704=north, o 2318	
2004-01-16	unvisible	(1707 & 1858=north over cloud)	(1947, 2015 over cloud)	al night
2004-01-17		(2106)		~ 2000 / 2330 ~
2004-01-18	unvisible			all night
2004-01-19	unvisible			all night
2004-01-20		(through cloud), (0024=omega)	2027, (2134 through cloud)	~ 2000
2004-01-21		1827=1902=far north,	2243, (0048=omega)	
2004-01-22			(1844 through cloud)	1840 ~ 0420
2004-01-23			o 1828=north, 1938(=2000 through cloud), (0041 over cloud)	~ 1840 / 1940 ~
2004-01-24		(0037 & 0202 & 0323=omega over cloud), (0337=omega through cloud)		all night
2004-01-25		yes		~ 1710 / 1850 ~ 0400
2004-01-26		yes, (0245=omega)	(0112 through cloud)	~ 0130 / 0240 ~
2004-01-27		(over cloud)	(2305=2316 through cloud)	all night
2004-01-28	unvisible	(1917 faint over cloud)		all night
2004-01-29	unvisible			all night
2004-01-30			(2045=far north), (2153=north)	
2004-01-31	unvisible			all night

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-02-01		(though cloud)		all night
2004-02-02	unvisible			1700 ~
2004-02-03		yes		2220 ~
2004-02-04	unvisible			all night
2004-02-05	unvisible			all night
2004-02-06			1827	0130 ~ 0300
2004-02-07	yes			2030 ~
2004-02-08		yes	(2146= north through cloud)	2200 ~ 0100
2004-02-09			(1916=north), 2142	
2004-02-10		(2153~2325)		
2004-02-11		(1615 & 2213=north over cloud), (through cloud 0210~)	(1736=north over cloud)	~ 0210 / 0220 ~
2004-02-12		yes=1556~	(1930 through cloud)	1630 ~
2004-02-13			(1821, 2116, 2245, all through cloud)	1700 ~ 0300
2004-02-14			o 1923, 2058	~ 1750 / 2330 ~
2004-02-15		(1835=far north through cloud)		~ 1700 / 1730 ~
2004-02-16	unvisible			all night
2004-02-17		(many far north through cloud)		
2004-02-18	(over cloud)			all night
2004-02-19		?? =>	(2150=far north)	
2004-02-20		1637 & many far north		
2004-02-21		yes, 0005=omega	0128=north	1840 ~ 1950
2004-02-22			2048=north	
2004-02-23		2117=far north		
2004-02-24	unvisible	(over cloud)		all night
2004-02-25		2223=far north	<= ?	~ 1900 / 0130 ~
2004-02-26	unvisible			all night
2004-02-27			1937, 2132= north	
2004-02-28		1942=far north	o=2024, (=2111 north), 2353	0230 ~
2004-02-29	unvisible			~ 0300

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-03-01		(through cloud)	1845	2120 ~ 0240
2004-03-02		2038= north, 2122= north	<= ?	
2004-03-03	yes			
2004-03-04	unvisible			all night
2004-03-05	unvisible			all night
2004-03-06	unvisible			all night
2004-03-07		yes		0020 ~ 0150
2004-03-08	unvisible			2330 ~
2004-03-09			(2022, 2214, 0110 all through cloud)	~ 0220
2004-03-10			(1910=north), o 2328	
2004-03-11			(1750=north), o 1931+1953, 0004	0040 ~
2004-03-12	unvisible			all night
2004-03-13		yes,	(2133 & 2025=north, 2315=north omega), 0010	
2004-03-14	(faint pulsation)			~ 0230 / 0300 ~
2004-03-15	unvisible			all night
2004-03-16		2006=far north, 2333=omega	(2147= north)	
2004-03-17		(through cloud)		all night
2004-03-18	unvisible			all night
2004-03-19	unvisible			all night
2004-03-20	unvisible			all night
2004-03-21	unvisible			all night
2004-03-22	unvisible	(over cloud)		all night
2004-03-23	unvisible			all night
2004-03-24	unvisible			all night
2004-03-25	unvisible			~ 2120
2004-03-26			2021	~ 2245 / 0000 ~
2004-03-27		1941= north	2144	~ 1945 / 2150 ~
2004-03-28	yes			
2004-03-29	no aurora			2100 ~
2004-03-30		far north		~ 1930
2004-03-31	yes			

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-04-01		far north		
2004-04-02	no aurora			
2004-04-03			o 2000, 2143	
2004-04-04	(no aurora)			2050 ~ 2350
2004-04-05			2149, 2301	
2004-04-06			2158	
2004-04-07			1933, (=2032), 2254	
2004-04-08	unvisible			all night
2004-04-09				no data
2004-04-10				no data
2004-04-11				no data
2004-04-12				no data
2004-04-13	unvisible			all night
2004-04-14	far north			
2004-04-15			2053 (=2123)	2130 ~ 2330

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With UT	very minor activation	Activation of aurora which might be related to substorm (or pseudo) onset	Expansion of aurora which most likely indicates substorm onset within 20 minutes	UT when the cloud coverage is more than half
Without UT	quiet arc or diffuse only	Just a minor activation of aurora both intensity and motion.		
() default		through/over cloud + weak case	through/over cloud + weak case	
(UT only)		Strong activation but less likely related to substorm onset	weak case	

- * through cloud = aurora is seen between (patchy) cloud
- * over cloud = aurora is beyond continuous cloud
- * far north = arc/activity at northern limn
- * north = expansion/activation start from north to expand south

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-08-20	unvisible			all night
2004-08-21	unvisible			all night
2004-08-22	unvisible			all night
2004-08-23	unvisible			all night
2004-08-24	no aurora			
2004-08-25	unvisible			~ 2330 / 0000 ~ = all night
2004-08-26		2245=north	<=?	
2004-08-27	far north 2150			~ 2210 / 0010 ~
2004-08-28	unvisible			all night
2004-08-29		yes		
2004-08-30		2046=north	(0010=north)	2100 ~ 2330
2004-08-31			(2245=through cloud)	

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-09-01	unvisible			all night
2004-09-02	unvisible			all night
2004-09-03	no aurora			2340 ~
2004-09-04	unvisible			~ 2220
2004-09-05		yes		
2004-09-06		(2126 & 2355 over cloud), yes=omega		~ 0015
2004-09-07		yes	(1932=north)	
2004-09-08	unvisible			all night
2004-09-09	unvisible			all night
2004-09-10	no aurora			
2004-09-11		(2056=north)		0000 ~
2004-09-12	unvisible			all night
2004-09-13		(2100=far north), 2118=north	o 2240, 0102=omega	
2004-09-14		2023=north, (2151=north)	o 2242, (0041=omega)	
2004-09-15		1935=north, 2122=omega, 2232=omega, 2342=omega	(1959=north), (0016=omega)	
2004-09-16		2134=omega	o 1913, 2223=omega, (0114=omega)	
2004-09-17	unvisible	(2159 over cloud)		all night
2004-09-18	unvisible			all night
2004-09-19	diffuse unvisible	(0022 over cloud)		~ 0115
2004-09-20	unvisible			1910 ~
2004-09-21	unvisible			all night
2004-09-22	unvisible			all night
2004-09-23	unvisible			all night
2004-09-24	unvisible			all night
2004-09-25	unvisible			all night
2004-09-26	unvisible			all night
2004-09-27	unvisible			all night
2004-09-28	unvisible			all night
2004-09-29		far north, (far north through cloud)		~ 1850 / 2200 ~
2004-09-30		(1929=far north)		

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-10-01		many far north (1850-2110)		
2004-10-02		many far north, 2247=omega		1930 ~ 2250
2004-10-03			1756, o 2055, 2343=omega	0020 ~ 0120 / 0220 ~
2004-10-04		(2017 through cloud)	(1851 through cloud)	~ 1900 / 1930 ~ = all night
2004-10-05		(far north through cloud)		~ 2200
2004-10-06	far north			~ 1840 / 1940 ~
2004-10-07	unvisible			all night
2004-10-08	unvisible	(2056 over cloud)		1845 ~ 0210
2004-10-09		(2224 & 2345=north), 0155=omega		
2004-10-10		0123=omega	2144=north	~ 2110
2004-10-11		(north through cloud), 0230=omega	(2303=north through cloud)	1950 ~ 0030
2004-10-12		2127=north	2236=north, (0113 over cloud), (0152 & 0234=omega through cloud)	2300 ~ 0140
2004-10-13		(1730=north, through cloud)	(1745 over cloud), 2230, (2332=north)	~ 1850 / 0300 ~
2004-10-14		(1814 & 1916=far north)	1845=north	2100 ~
2004-10-15		(0125=omega)		~ 2315
2004-10-16		(far north)		
2004-10-17	no aurora			
2004-10-18	unvisible			all night
2004-10-19	unvisible			all night
2004-10-20	unvisible			all night
2004-10-21	unvisible			all night
2004-10-22	unvisible			all night
2004-10-23	unvisible			all night
2004-10-24	unvisible			all night
2004-10-25	unvisible			all night
2004-10-26	unvisible			all night
2004-10-27	(no aurora)			2010 ~ 2330 / 0010 ~ 0200
2004-10-28		far north		~ 2120
2004-10-29		2358 & 0102=omega	1903=north,	
2004-10-30	unvisible			all night
2004-10-31		2347=omega	(1955 & 2110=north through cloud)	1930 ~ 2120

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2004-11-01		2210=far north		2350 ~
2004-11-02		yes		~ 2140
2004-11-03		2301=omega	1750=north, (2006 over cloud), o 2146=2203	1820 ~ 2110 / 0200 ~
2004-11-04	(over cloud)			all night
2004-11-05	unvisible			~ 0040 / 0120 ~
2004-11-06	no aurora			
2004-11-07		2113=2148=pseudo	(1830 & 2220 though cloud), o 0059, 0243=omega, 0358=omega	~ 1800 / 1830 ~ 2050 / 2220 ~ 0100
2004-11-08		(2226 & many=omega through cloud)	(1840=north, 1929, both through cloud), 2103, 2144=north, (0026=omega through cloud)	1830 ~ 2050 / 2145 ~ 2245 / patchy / 0250 ~
2004-11-09		o 1853 & 1944=pseudo	(o 1712 & o 2013 through cloud), (0111=omega), 0230=north	patchy / 0230 ~
2004-11-10			(1524 over cloud), (1706 through cloud), 2015	~ 1800
2004-11-11		(2242=north, through cloud), 0052 =omega	o 0209=omega	~ 1830 / 2050 ~ 2310
2004-11-12			o 1705=1721, 1746, (2006 through cloud), 2045	1930 ~ 2040
2004-11-13		0030=omega, (0210= omega over cloud)		1900 ~ 2300
2004-11-14	unvisible			all night
2004-11-15	(no aurora)			0330 ~
2004-11-16		(2055 & 2156=far north)		
2004-11-17	?=>	(2304=omega)		2140 ~ 2220 / 2330 ~ 0130
2004-11-18	(no aurora)			1950 ~ 0100 / 0330 ~
2004-11-19		(2344=north through cloud)		all night
2004-11-20			1837, 2233	
2004-11-21		(1501=far north through cloud), 1748=far north, (2305=north)	(1923=far north)	1630 ~ 1700
2004-11-22		2355=north	(2235=north)	
2004-11-23			2252=north	0000 ~ 0120
2004-11-24		0109=omega	0215=north	~ 1620 / 1750 ~ 2300
2004-11-25		1807=north, 2204 & 0112=omega	2051	
2004-11-26			1931=north, 2103=north	
2004-11-27		1536 & 1846=far north, 2127 & 0022=omega	1642=north, (2346=omega)	
2004-11-28		1436 & many far north, 0202=north	o 1923=north, 2334=north	
2004-11-29		(1533=far north), (0204=far north omega)		1700 ~ 0045
2004-11-30		(1841 over cloud), 2136=pseudo	(2225=north)	~ 2000 / 0040 ~

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2004-12-01			(2041=far north)	~ 2030
2004-12-02	unvisible			1720 ~
2004-12-03	unvisible			~ 0420
2004-12-04	far north			2020 ~ 0120 / 0230 ~
2004-12-05		2250=north		
2004-12-06		(1702=through cloud)	(1513=1537=north through cloud)	1730 ~
2004-12-07		1745=far north, (2223=far north)	2148=north	1740 ~ 2030 / 0200 ~
2004-12-08		1713=1739=far north, (2346=omega)	(2042=north)	0330 ~
2004-12-09	far north	(over cloud)		1700 ~
2004-12-10	far north		(2014=north through cloud)	~ 2140
2004-12-11	far north		(1920 & 2133=far north over cloud)	1720 ~ 0340
2004-12-12		2151=north, 0132=omega	(1425=far north), o 1527=north, (2338=0001)	
2004-12-13	unvisible			~ 2300 / 0150 ~
2004-12-14	far north	yes		~ 2340 / 0210 ~ 0300
2004-12-15		2030=north through cloud, 2132 & 2156 =pseudo	(2213 through cloud)	1650 ~ 1820 / patchy / 2200 ~ 0140
2004-12-16			(2032 through cloud)	~ 1930 / 2030 ~ 2220 / 2310 ~
2004-12-17		yes		~ 1810 / 1930 ~
2004-12-18	unvisible			~ 1940 / 2000 ~ = all night
2004-12-19	unvisible			all night
2004-12-20	far north	(0117=north omega)		0140 ~
2004-12-21		(1849 & 1938=far north through cloud), (2355=north over cloud)	(2232 through cloud)	thin cloud ~ 2020 ~ cloud ~ 0140 / 0230 -
2004-12-22	unvisible			all night
2004-12-23	unvisible			1740 ~
2004-12-24	unvisible			all night
2004-12-25	unvisible			~ 0145
2004-12-26	no aurora			
2004-12-27	unvisible			all night
2004-12-28	unvisible			all night
2004-12-29	unvisible			~ 0150 / 0210 ~ = all night
2004-12-30		many far north		~ 2010 / 2120 ~ 0040
2004-12-31		many far north, 2203=north		2130 ~ 2210

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2005-01-01		(1742=north through cloud), 2043=pseudo, 0134=omega	(1813=north), (2231=omega north) (0020=omega through cloud)	~ 1800 / 0220 ~
2005-01-02	unvisible	(1716 over cloud)		all night
2005-01-03	unvisible			~ 2200 / 2220 ~ = all night
2005-01-04	unvisible			all night
2005-01-05		(2044=2127=far north), (2212=north through cloud)	((1935=)2011=north)	2210 ~ 2240 / 2320 ~ 2350 / 0040 ~
2005-01-06	unvisible			all night
2005-01-07	unvisible			all night
2005-01-08	unvisible			all night
2005-01-09	(no aurora)			1940 ~ 0030
2005-01-10	unvisible			all night
2005-01-11		2220=pseudo,	(2048 through cloud), o 2303, o 0252=omega	~ 1940 / 2040 ~ 2100
2005-01-12	unvisible			all night
2005-01-13			(1648=north through cloud), 1933=north, 2149	~ 1750
2005-01-14		2356 & 0321=north omega	2021=north, o 2242	
2005-01-15		far north, 1949=far north, (0005=north omega)		0010 ~
2005-01-16		(0020 through cloud), 0216 & 0258 & 0405=omega		~ 0020 / 0120 ~ 0210
2005-01-17	unvisible			all night
2005-01-18	unvisible	(2029 over cloud)		all night
2005-01-19		(1653=far north through cloud)		~ 1645 / 1915 ~
2005-01-20	unvisible			all night
2005-01-21		(0513=north omega through cloud)		~ 0400
2005-01-22	unvisible			all night
2005-01-23		(2148=far north)	(2006=north)	0130 ~
2005-01-24		yes		~ 1920
2005-01-25	unvisible			~ 2140 / 2350 ~ 0240
2005-01-26	unvisible			all night
2005-01-27	unvisible			~ 0010 / 0050 ~ = all night
2005-01-28	unvisible			all night
2005-01-29		(1933=far north through cloud)	(1824=north through cloud), (2128=)2137, (2229=north through cloud)	1640 ~ 2010 / 2220 ~
2005-01-30		0204=north omega		1750 ~ 0100
2005-01-31		1923=far north		~ 1940 / 2020 ~ 2220 / 2350 ~ 0250 / 0320 ~ 0440

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2005-02-01	no aurora			2200 ~
2005-02-02	far north			1850 ~ 0430
2005-02-03	(no aurora)			~ 1850 / 2210 ~ 2240 / 0120 ~
2005-02-04	(no aurora)			1740 ~ 1840 / 1930 ~ 2030
2005-02-05		(1908 & 1944 & 0213=far north)		~ 1830
2005-02-06		yes, 0116=omega	(1905=)1920=north, (2229=north over cloud), 0253=omega	1940 ~ 2320
2005-02-07		(0040=omega)	(1709=north), o 1831, (2214 through cloud), 0259=omega	1920 ~ 2230
2005-02-08		0350=omega	1745, 2108, 0040=omega	
2005-02-09	unvisible			all night
2005-02-10	unvisible			all night
2005-02-11		1951=far north, 0016=north	2044=north, (2123)	1830 ~ 1950
2005-02-12	far north 1750-1850	<= ?		
2005-02-13	(far north over cloud)			2010 ~ 0410
2005-02-14		2045=pseudo, 2230=omega	(2002=pseudo?)	
2005-02-15		2000=far north, (0117=north omega)		2220 ~
2005-02-16		(1641 & 2002=through cloud)	(2057 over cloud)	~ 0300
2005-02-17		2052=north, 2214 & 2337=pseudo	2251, 2352, o 0044=omega, (0300=omega)	2100 ~ 2210
2005-02-18	unvisible			all night
2005-02-19	unvisible			all night
2005-02-20	unvisible			all night
2005-02-21	unvisible			~ 0110
2005-02-22		yes		2112 ~ camera stopped
2005-02-23	(no aurora)			~ 1900 / 0400 ~
2005-02-24		through cloud	(2252=omega though cloud)	1750 ~ 1850 / 1910 ~ 2210 / 2240 ~ 2310 / 0100 ~ 0230
2005-02-25		(2003=pseudo through cloud), 2333 & 0040=omega	(1706=)1754=north, (2045 & 2128=pseudo?)	1940 ~ 2030
2005-02-26		far north		2200 ~ 2240 / 2340 ~ 0130
2005-02-27		2009=far north, (2318=omega north)		
2005-02-28		many far north, 2209=north		2340 ~

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2005-03-01		(2111 & 2154=north)	2132=north	
2005-03-02		(2035=far north), 2254=north		2010 ~ 2100
2005-03-03	unvisible			~ 0000 / 0040 ~ 0220
2005-03-04		far north		2300 ~
2005-03-05		1907=pseudo,	(1920=pseudo=)1952, (2139 through cloud)	~ 1830 / 2020 ~
2005-03-06		0007=omega	o (1804=)1820, (2126 & 2254 through cloud), (0127=omega through cloud),(0150=through cloud	2120 ~ 2300 / 0130 ~ 0230
2005-03-07		1939=pseudo north, 2018=pseudo	1749, 2038	~ 1740 / 2240 ~
2005-03-08		1824 & 1856=north, 2317=omega north,	(1939=pseudo=)2011, 2221, (0244=omega, over cloud)	0050 ~
2005-03-09	unvisible	(2226 over cloud)		all night
2005-03-10	unvisible			all night
2005-03-11		2204=far north		
2005-03-12	far north	(2322=far north through cloud)		
2005-03-13		2025=north, 0153=omega	(2059 or 2123=north), o 2211, 0014=omega	
2005-03-14		1814=north	2230	
2005-03-15		2105=far north, (2317=north omega)	(2222=north)	
2005-03-16		1849=far north, (2010), (2157 over cloud)	(2256 through cloud)	2040 ~ 2230 / 0010 ~
2005-03-17		(2145=north through cloud)		all night
2005-03-18				no data
2005-03-19				no data
2005-03-20				no data
2005-03-21		(2012 & 2149=far north)	(2058=north)	~ 2000 / 2230 ~ 2350
2005-03-22	unvisible			all night
2005-03-23	unvisible			all night
2005-03-24	unvisible			all night
2005-03-25		1833=north, 2020=far north	1908=north, 2128	
2005-03-26	unvisible			all night
2005-03-27	unvisible	(2031 over cloud)		all night
2005-03-28		(through cloud=2045)		~ 1930 / 2030 ~
2005-03-29		(2114=far north through cloud), 2245=2316=far north through cloud		2100 ~
2005-03-30		1954=far north		
2005-03-31		2111=far north through cloud	(2012=north through cloud)	2120 ~

date	aurora (UT)	activation (UT)	expansion (UT)	cloudy UT
2005-04-01		(2004=far north through cloud)		all night
2005-04-02		many far north		
2005-04-03	(over cloud=2240)			~ 0030
2005-04-04	unvisible	(2323=omega over cloud)	(2007= 2035=2101 over cloud)	all night
2005-04-05			(2031=)2037, (2250=)2303	~ 2030 / 2140 ~ 2230
2005-04-06		(2323=north omega)	(1930=1938=north), 2144	
2005-04-07	unvisible			all night
2005-04-08	unvisible			all night
2005-04-09	unvisible			all night
2005-04-10	unvisible			all night
2005-04-11			(1950), 2056=2120=2147, 2236	
2005-04-12	unvisible			all night
2005-04-13	unvisible	(2200 over cloud)		all night
2005-04-14		2013 & 2210=far north		
2005-04-15		(2315=north through cloud)		all night