
 * SATELLITE TRANSMITTING STATUS *

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The following satellites were transmitting in June 1986 and the majority should still be transmitting when you read this. I have only listed satellites monitored at my location during the status determination period.

SAT	NAME	I	P (min)	ORBIT (kms)	FREQUENCIES (MHz)
62AA1	TIROS 5	58.1	100.1	584 X 946	136.230
64083D	TRANSIT	89.8	106.2	1019 X 1080	136.650
66077B	EGRS 15	89.8	167.5	3672 X 3699	136.440
66077C	ERS 15	89.9	167.6	3680 X 3700	136.800
66110A	ATS1	11.8	1434.4	35729 X 35778	137.350
67040D	ERS 20lost	..no recent	orbital data	136.260
67048A	TRANSIT	89.6	106.8	1064 X 1094	149.988/399.968
69009A	ISIS 1	88.4	128.0	574 X 3478	136.410
69037B	EGRS 13	99.5	107.2	1069 X 1127	136.800
69046B	OV5-6lost	..no recent	orbital data	136.380
69082B	TIMATION	70.0	103.3	897 X 928	137.380
69082E	S69-4	70.0	103.3	900 X 1102	137.410
70025A	NIMBUS 4	99.6	107.1	1091 X 1102	136.500
71024A	ISIS 2	88.2	113.5	1353 X 1424	136.410
71080A	SHINSEI	32.1	113.2	873 X 1869	136.694/400.450
71093A	PROSPERO	82.1	105.3	536 X 1484	137.560
71110C	DOD	70.0	104.8	978 X 993	137.080
73081A	TRANSIT	90.1	105.4	889 X 1136	149.988/399.968
75033A	ARIABAT	50.7	95.7	537 X 569	137.440
75049B	SRET 2	...lost	..no recent	orbital data	137.530
78100A	RS 1	82.5	120.3	1684 x 1704	29.402
79047A	ARIEL 6	55.0	95.7	532 X 571	137.560
79051A	BHASKARA	50.7	94.4	483 X 497	137.230
79057A	NOAA 6	98.7	101.1	800 X 819	136.770/137.500
81044A	NOVA 1	90.0	109.0	1170 X 1187	149.988/399.968
81057A	METEOSAT	0.9	1436.2	35779 X 35797	137.080/1691.0/ 1694.5
81100B	UOSAT	97.5	94.8	504 X 510	145.825/435.025
81115A	BHASKARA2	50.6	95.1	511 X 532	137.230
81120C	RS 5	83.0	119.4	1648 X 1663	29.454/29.331
81120E	RS 7	83.0	119.1	1622 X 1656	29.500/29.341
81122A	MARECS A	1.7	1436.2	35775 X 35800	137.170/1.5GHZ
82003A	C. 1333	82.9	104.9	964 X 1014	149.940/399.842

82033A	SALYUT 7	51.6	91.4	337 X 351	19.954
83033A	ROHINI 1	46.6	95.9	388 X 829	137.400
83058B	OSCAR 10	25.7	699.6	3920 X 35535	145.810/436.020
83063A	HILAT	82.0	100.9	766 X 834	149.988
83108A	C. 1506	82.9	104.7	946 X 1012	150.000/400.000
84021B	UOSAT 2	98.2	98.4	674 X 693	145.825
84046A	C.1553	82.9	104.7	960 X 1006	150.000/400.000
84062A	C. 1574	83.0	104.8	964 X 1006	150.000/400.000
84110A	NOVA 3	90.1	109.0	1159 X 1201	149.988/399/968
84123A	NOAA 9	98.9	102.1	846 X 867	137.620/137.770
85021A	GEOSAT	108.0	100.6	758 X 812	150.015/400
85041A	C. 1655	83.0	105.0	971 X 1008	150.000/400.000
86066A	TRANSIT	89.8	107.9	1000 X 1260	149.988/399.968
86066B	TRANSIT	89.8	107.9	999 X 1261	149.988/399.968
85100A	MET 3-1	82.5	109.4	1185 X 1210	137.850
86039A	MET 2-14	82.5	104.1	941 X 960	137.300

NOTES:

The C. before a number designates COSMOS, whilst MET means METEOR.

62AA1 (ie 62 Alpha Alpha 1) was not positively confirmed as transmitting on all passes. It was only heard on two out of six tries so appears to be intermittent.

The RELAY satellites, 62 Beta Upsilon 1 and 64003A were both silent this spell. The former one frequently comes back to life and the signal is easy to identify as a "woo-woo" sound with the receiver in the CW or SSB receive mode.

64083D has increased its telemetry transmission rate considerably and no longer has its familiar sound. It also appears to be slightly intermittent but was heard every pass tried, so I expect it to die anytime. 66077B and 66077C are mislabeled by NASA. I have used their identification in this table. An EGRS satellite has always used either 136.800 or 136.840 MHz and has a very characteristic modulation pattern. NASA gives the EGRS frequency as 136.440 MHz, whereas the signal on 136.440 is a "once only" sound.

66110A. This is ATS 1 which was in geostationary orbit above the US area but station keeping fuel became depleted and the satellite is now drifting eastward around the world. The transmission heard in the only one heard, although the other stated frequencies were tried. 67040D, like 69046B and 75049B, have all been lost by the tracking agencies although their signals are easy to identify. Every time I track, I set my receiver on a specific frequency and then move the antenna around the sky until I either hear or don't hear a satellite. All three have characteristic signals so identification is easy. They are all in very high elliptical orbits, especially the first two so can sometimes be heard for hours at a time.

69037B appears to be going intermittent so could fail shortly.

69046B was heard during the period monitored.

71093A was picked up as an "unknown". A preliminary orbit derived from the times heard and the antenna bearings obtained and further

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* SOVIET SATELLITES *
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by Grant Zehr WA9TFB

137.300 MHz

Meteor 2-13 continues to transmit typical 120 line APT imagery on this frequency. It was heard here on July 26 1986 with typical imagery during orbit #836 after a northbound equator crossing at 239 degrees west longitude at 20:00 GMT, passing from north to south over the eastern part of North America at about 3:30 p.m. local time.

At that time of day interesting sun-glint effects were seen with reflections off the Great Lakes along the western edge of the image. At this time there are 16 wide white bars in the synchronizing pulses, with one of these wide white bars adjacent to the image edge.

137.850 MHz

Meteor 3-1 continues to use this frequency for daily APT transmission. This spacecraft was maneuvered into a slightly lower orbit during the past month resulting in some confusion in preparation of orbital predictions. This orbital shift was first reported by Mr. E.A. Zigoy who observed the spacecraft was not transmitting APT imagery between 29 June and 2 July 1986. After resuming transmission, times of passes indicated that an orbital change had been made. The new orbit is "lower" on the average with a shorter orbital period. The orbit is less "circular" (1187 x 1239 km vs. 1189 x 1237 km before orbital adjustment) with a larger eccentricity. Mr. Zigoy has postulated that this adjustment was made to correct the orbital plane spacing between Meteor 3-1 and Meteor 2-14.

Meteor 3-1 was heard here recently during nighttime and daytime passes. During the nighttime passes the APT transmitter remained on, resulting in a black image with the synchronizing pulses and grey scale visible. Nighttime pass # 3614 was heard here on 26 July 1986.

During orbit # 3619 On 26 July 1986 the spacecraft was heard after a northbound equator crossing at 238 degrees at 13:09 GMT. This was a daylight pass and the usual visible mode imagery was received. There are 21 white synchronizing pulses with a half width black bar seen along the image edge. Daylight passes are presently passing over North America at about 8:30 a.m. local time, passing from north to south. Nighttime passes are occurring at about 11:00 p.m. local time passing from south to north. Canada was received.

137.400

No transmissions have been heard here on this frequency during the past month

Summary:

Meteor 3-1 has shifted its orbit slightly during the past month. It continues to transmit APT imagery on 137.850 MHz. Meteor 2-14 continues to transmit on 137.300 MHz with early afternoon passes over North America from north to south.

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.....Satellite Transmitting Status continued

passes were subsequently observed with remarkable closeness - so well in fact that a weeks observations were needed before a departure of more than a few minutes had occurred. Comparison with NASA elements revealed 71093A as a candidate and precise predictions for this satellite confirmed the identity.

75049B was heard during the period monitored several times.

82003A has a faulty clock on board, so time information is wrong. It would appear that it cannot be commanded off.

82033A is transmitting by means of the COSMOS 1686 module attached to it. Transmissions are continuous on every pass.