



## TABLE OF ARTIFICIAL SATELLITES LAUNCHED IN 1991



INTERNATIONAL TELECOMMUNICATION UNION

	<b>A</b>	Cosmos-2152	1991-48-A	Intercosmos-25	1991-86-A	<b>R</b>	
		Cosmos-2153	1991-49-A	IRS-1B	1991-61-A		
Almaz-1	1991-24-A	Cosmos-2154	1991-59-A	Italsat-1	1991-3-A	Raduga-27	1991-14-A
Anik-E1	1991-67-A	Cosmos-2155	1991-64-A			Raduga-28	1991-87-A
Anik-E2	1991-26-A	Cosmos-2156	1991-66-A	<b>L</b>		Resurs-F10	1991-35-A
Apex	1991-86-A	Cosmos-2157	1991-68-A	LOSAT-X	1991-47-B	Resurs-F11	1991-44-A
ASC-2	1991-28-A	Cosmos-2158	1991-68-B			Resurs-F12	1991-52-A
Astra-1B	1991-15-A	Cosmos-2159	1991-68-C	<b>M</b>		Resurs-F13	1991-59-A
Aurora-2	1991-37-A	Cosmos-2160	1991-68-D			REX	1991-45-A
		Cosmos-2161	1991-68-E	MAK-1	1986-17-DV		
		Cosmos-2162	1991-68-F	Meteor-3 (4)	1991-30-A		
<b>B</b>		Cosmos-2163	1991-71-A	Meteor-3 (5)	1991-56-A	<b>S</b>	
BS-3B	1991-60-A	Cosmos-2164	1991-72-A	Microsat-1	1991-51-A	SARA	1991-50-E
		Cosmos-2165	1991-77-A	Microsat-2	1991-51-B	Solar-A	1991-62-A
<b>C</b>		Cosmos-2166	1991-77-B	Microsat-3	1991-51-C	Soyuz-TM 12	1991-34-A
		Cosmos-2167	1991-77-C	Microsat-4	1991-51-D	Soyuz-TM 13	1991-69-A
Cosmos-2121	1991-4-A	Cosmos-2168	1991-77-D	Microsat-5	1991-51-E	STS-37	1991-27-A
Cosmos-2122	1991-5-A	Cosmos-2169	1991-77-E	Microsat-6	1991-51-F	STS-39	1991-31-A
Cosmos-2123	1991-7-A	Cosmos-2170	1991-77-F	Microsat-7	1991-51-G	STS-40	1991-40-A
Cosmos-2124	1991-8-A	Cosmos-2171	1991-78-A	Molnya-1 (80)	1991-12-A	STS-43	1991-54-A
Cosmos-2125	1991-9-A	Cosmos-2172	1991-79-A	Molnya-1 (81)	1991-43-A	STS-44	1991-80-A
Cosmos-2126	1991-9-B	Cosmos-2173	1991-81-A	Molnya-1 (82)	1991-53-A	STS-48	1991-63-A
Cosmos-2127	1991-9-C			Molnya-3 (40)	1991-22-A		
Cosmos-2128	1991-9-D			Molnya-3 (41)	1991-65-A	<b>T</b>	
Cosmos-2129	1991-9-E			MOP-2	1991-15-B	TDRS-5	1991-54-B
Cosmos-2130	1991-9-F	<b>E</b>				Telecom-2A	1991-84-A
Cosmos-2131	1991-9-G	ERS-1	1991-50-A			TUBSAT	1991-50-D
Cosmos-2132	1991-9-H	Eutelsat-2 F2	1991-3-B	<b>N</b>			
Cosmos-2133	1991-9-H	Eutelsat-2 F3	1991-83-A				
Cosmos-2134	1991-10-A			Nadezhda-3	1991-19-A	<b>U</b>	
Cosmos-2135	1991-11-A			Navstar 2A-02	1991-47-A		
Cosmos-2136	1991-13-A	<b>F</b>		NATO-4A	1991-1-A		
Cosmos-2137	1991-16-A	Foton-4	1991-70-A	NOAA-12	1991-32-A	UARS	1991-63-B
Cosmos-2138	1991-21-A					UOSAT-F	1991-50-B
Cosmos-2139	1991-23-A					USA-69	1991-17-A
Cosmos-2140	1991-25-A					USA-70	1991-31-C
Cosmos-2141	1991-25-B	<b>G</b>				USA-71	1991-47-A
Cosmos-2142	1991-25-C	Gorizont-23	1991-46-A			USA-72	1991-76-A
Cosmos-2143	1991-29-A	Gorizont-24	1991-74-A	Okean-3	1991-39-A	USA-73	1991-82-A
Cosmos-2144	1991-33-A	GRO	1991-27-B	Orbcomm-X	1991-50-C	USA-74	1991-76-C
Cosmos-2145	1991-33-B					USA-75	1991-80-B
Cosmos-2146	1991-33-C					USA-76	1991-76-D
Cosmos-2147	1991-33-D	<b>I</b>				USA-77	1991-76-E
Cosmos-2148	1991-33-E	IBSS	1991-31-B				
Cosmos-2149	1991-33-F	Informat-1	1991-6-A	PRC-34	1991-88-A	<b>Y</b>	
Cosmos-2150	1991-36-A	Inmarsat-2 F2	1991-18-A	Progress-M6	1991-2-A		
Cosmos-2151	1991-41-A	Inmarsat-2 F3	1991-84-B	Progress-M7	1991-20-A		
	1991-42-A	Inmarsat-6 F1	1991-75-A	Progress-M8	1991-38-A		
		Intelsat-6 F5	1991-55-A	Progress-M9	1991-57-A	Yohkoh	1991-62-A
				Progress-M10	1991-73-A	Yuri-3B	1991-60-A

Code name Spacecraft description	International number	Country Organization Site of launching	Date	Initial orbital data		Frequencies Transmitter power	Observations
				Perigee (km) Apogee (km)	Period (min) Inclination (degree)		
NATO-4A	1991-1-A	International NATO (Kennedy Space Center)	8 Jan.	736 35 463	634 25.9		
Progress-M6	1991-2-A	USSR (Baikonur)	14 Jan.	192 224	88.4 51.6		Expendable supply craft. Docked with <i>Mir-1</i> orbital complex on 16 January 1991. Decayed on 15 March 1991
Italsat-1	1991-3-A	Italy (Kourou)	15 Jan.	201 35 691	626.6 7.0		Twelve thousand telephone channels
Eutelsat-2 F2 3-axis stabilized; 2 solar panels	1991-3-B	Europe EUTELSAT (Kourou)	15 Jan.			14/12 GHz band	Sixteen 50 W transponders
				in geostationary-satellite orbit at 13° E			
Cosmos-2121	1991-4-A	USSR	17 Jan.	177 275	88.7 82.6		Decayed on 10 February 1991
Cosmos-2122	1991-5-A	USSR	18 Jan.	413 432	92.8 65		
Informator-1	1991-6-A	USSR Ministry of Geology of the USSR	29 Jan.	1000	104.8 83		Equipment to collect and transmit geological information. Placed in orbit by the <i>Cosmos</i> launcher
Cosmos-2123	1991-7-A	USSR	5 Feb.	981 1019	104.9 82.9	150; 400 MHz	Navigation
Cosmos-2124	1991-8-A	USSR	7 Feb.	175 271	89.0 62.8		Placed in orbit by the <i>Soyuz</i> launcher. Decayed on 7 April 1991
Cosmos-2125 to Cosmos-2132 40 kg each	1991-9-A to 1991-9-H	USSR (Plesetsk)	12 Feb.	1452 1495	115.1 74		Eight satellites placed in orbit by the same <i>Cosmos</i> launcher

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Cosmos-2133	1991-10-A	USSR	14 Feb.				
Cosmos-2134	1991-11-A	USSR	15 Feb.				Decayed on 1 April 1991
Molnya-1 (80) hermetically sealed cylinder with conical ends; 1000 kg; 6 solar panels	1991-12-A	USSR (Plesetsk)	15 Feb.	471 39 113	702 62.8	800 MHz band 40 W (emission) 1000 MHz band (reception) 3400-4100 MHz (retransmission of television)	Television and multichannel radiocommunications
Cosmos-2135	1991-13-A	USSR	26 Feb.	953 1034	104.5 82.8		
Raduga-27 3-axis stabilized; 5 tonnes; solar panels	1991-14-A	USSR (Baikonur)	28 Feb.	34 994	1396 1.4	5.7-6.2 GHz (reception) 3.4-3.9 GHz (emission)	Television and multichannel radiocommunications
				in geostationary-satellite orbit			
Astra-1B 3-axis stabilized; 1045 kg	1991-15-A	Luxembourg SES (Kourou)	2 March	4534 35 853	717.5 3.9	14.25-14.50 GHz (reception) 11.45-11.70 GHz (emission)	Sixteen television broadcasting channels of 45 W each plus six spares. alternate channels are horizontally and vertically polarized. Intended for direct reception although using FSS frequencies
MOP-2	1991-15-B	International EUMETSAT (Kourou)	2 March	35 433 35 963	1431.6 1.1		Meteorology
				in geostationary-satellite orbit			
Cosmos-2136	1991-16-A	USSR	6 March	257 336	90.2 62.9		Decayed on 20 March 1991
USA-69	1991-17-A	United States	8 March			6/4 GHz band	
Inmarsat-2 F2 3-axis stabilized; 690 kg; 2 solar panels (1200 W)	1991-18-A	International INMARSAT	8 March				Mobile satellite service
				in geostationary-satellite orbit at 55° W			
Nadezhda-3	1991-19-A	USSR	12 March			150; 400 MHz	Navigation system for determining the position of maritime vessels and also apparatus of the international space system for search and rescue

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Code name Spacecraft description	International number	Country Organization Site of launching	Date	Initial orbital data		Frequencies Transmitter power	Observations
				Perigee (km) Apogee (km)	Period (min) Inclination (degree)		
Progress-M7	1991-20-A	USSR (Baikonur)	19 March	190 230	88.4 51.6		Expendable supply craft. Docked with <i>Mir-1</i> orbital complex. Decayed on 7 May 1991
Cosmos-2137	1991-21-A	USSR	19 March	448 495	94.0 65.9		
Molnya-3 (40) 3-axis stabilized; 1500 kg	1991-22-A	USSR (Plesetsk)	22 March	463 39 082	701 62.8	5.9-6.2 GHz (reception) 3.6-3.9 GHz (emission)	Television and multichannel radiocommunications
Cosmos-2138	1991-23-A	USSR	26 March	175 369	89.6 67.2		Decayed on 24 May 1991
Almaz-1	1991-24-A	USSR	31 March	170 280	88.7 72.7		Filming territory of the USSR and other countries in the interest of geology, cartography, oceanography, ecology and agriculture. <i>Proton</i> launcher
Cosmos 2139 to Cosmos-2141	1991-25-A to 1991-25-C	USSR (Baikonur)	4 April	19 148	676 64.8		Space and navigation research. <i>Proton</i> launcher
Anik-E2	1991-26-A	Canada Telesat (Kourou)	5 April	21 693 35 748	1090.7 0.2		
STS-37 space shuttle <i>Atlantis</i>	1991-27-A	United States NASA (Kennedy Space Center)	5 April	449 465	93.8 28.5		Reusable spacecraft. Landed on 11 April 1991
Gro	1991-27-B	United States	5 April	449 463	93.7 28.5		<i>Gamma Ray Observatory</i>
ASC-2	1991-28-A	United States	13 April	1348 35 920	656.1 22.5		
Cosmos-2142	1991-29-A	USSR	16 April	983 1031	105 83		
Meteor-3 (4)	1991-30-A	USSR	24 April	1190 1229	109.5 82.6	137.3 MHz	Meteorology

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STS-39 space shuttle <i>Discovery</i>	1991-31-A	United States NASA (Kennedy Space Center)	28 April	249 263	89.4 56.9		Reusable manned spacecraft. Deployed the <i>IBSS</i> and <i>USA-70</i> satellites. Landed at Kennedy Space Center on 6 May 1991
IBSS 2 tonnes	1991-31-B	United States launched from <i>STS-39</i>	1 May				Infrared Background Signature Survey. Retrieved by <i>STS-39</i> on 6 May 1991
USA-70 4627 kg	1991-31-C	United States Department of Defense launched from <i>STS-39</i>					
NOAA-12	1991-32-A	United States NOAA (Western Space Center)	14 May	821 841	101.3 98.7	137.50 MHz	Meteorology. It will replace <i>NOAA-10</i>
Cosmos-2143 to Cosmos-2148	1991-33-A to 1991-33-F	USSR	16 May	1414 1444	114.2 82.6		
Soyuz-TM 12 7 tonnes at launch	1991-34-A	USSR (Baikonur)	18 May	264 333	90.2 51.6		Crew of two Soviet and one British astronauts. Docked with <i>Mir</i> on 20 May 1991. Decayed on 10 October 1991
Resurs-F10	1991-35-A	USSR	21 May	194 274	88.8 82.3		Study of Earth's natural resources. Decayed on 20 June 1991
Cosmos-2149	1991-36-A	USSR	24 May	176 377	89.7 67.2		Decayed on 4 July 1991
Aurora-2	1991-37-A	United States	29 May	34 660 35 509	1400.4 0.2		in geostationary-satellite orbit
Progress-M8	1991-38-A	USSR (Baikonur)	30 May	191 249	88.6 51.6		Expendable supply craft. Docked with <i>Mir-1</i> orbital complex on 1 June 1991. Decayed on 16 August 1991
Okean-3	1991-39-A	USSR (Plesetsk)	4 June	652 679	97.8 82.5		Optical scanning and radio-physical equipment to obtain oceanographic and polar region ice data
STS-40 space shuttle <i>Columbia</i>	1991-40-A	United States NASA (Kennedy Space Center)	5 June	276 302	90.1 39.0		Reusable spacecraft. Space biology research. Landed on 14 June 1991

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Code name Spacecraft description	International number	Country Organization Site of launching	Date	Initial orbital data		Frequencies Transmitter power	Observations
				Perigee (km) Apogee (km)	Period (min) Inclination (degree)		
Cosmos-2150	1991-41-A	USSR	11 June	785 823	100.8 74		
Cosmos-2151	1991-42-A	USSR	13 June	648 676	97.8 82.5		
MAK-1	1986-17-DV	USSR launched from 1986-17-A	17 June				Deployed from <i>Mir-1</i> orbital complex
Molnya-1 (81) hermetically sealed cylinder with conical ends; 1000 kg; 6 solar panels	1991-43-A	USSR	18 June	457 40 825	736 62.8	800 MHz band 40 W (emission) 1000 MHz band (reception) 3400-4100 MHz (retransmission of television)	Television and multichannel radiocommunications
Resurs-F11	1991-44-A	USSR	28 June	192 269	88.8 82.3		Study of Earth's natural resources. Decayed on 21 July 1991
REX	1991-45-A	United States US Air Force	29 June	770 871	101.3 89.6		
Gorizont-23 3-axis stabilized; solar panels	1991-46-A	USSR (Baikonur)	1 July	35 672	1430 1.4	5.7-6.2 GHz (reception) 3.4-3.9 GHz (emission)	Television and multichannel radiocommunications
USA-71 (Navstar 2A-02)	1991-47-A	United States	4 July	19 451 20 250	704.6 55.3	1575.42; 1227.60 MHz	
LOSAT-X	1991-47-B	United States	4 July	402 416	92.8 40.0		Decayed on 15 November 1991
Cosmos-2152	1991-48-A	USSR	10 July	188 266	88.7 82.3		Decayed on 23 July 1991
Cosmos-2153	1991-49-A	USSR	10 July	192 292	89.0 64.9		

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ERS-1	1991-50-A	(Kourou)	17 July				Carries synthetic aperture radar, wind scatterometer, radar altimeter, microwave sounder, precise range and range-rate equipment
UOSAT-F	1991-50-B	(Kourou)	17 July				Amateur radio
Orbcomm-X	1991-50-C	(Kourou)	17 July				
TUBSAT	1991-50-D	(Kourou)	17 July				
SARA	1991-50-E	(Kourou)	17 July				
Microsat-1 to Microsat-7	1991-51-A to 1991-51-G	(Kourou)	17 July				
Resurs-F12	1991-52-A	USSR	23 July	195 261	88.7 82.3		Study of Earth's natural resources. Decayed on 8 August 1991
Molnya-1(82) hermetically sealed cylinder with conical ends; 1000 kg; 6 solar panels	1991-53-A	USSR (Plesetsk)	1 August	653 40 681	737 62.9	800 MHz band 40 W (emission) 1000 MHz band (reception) 3400-4100 MHz (retransmission of television)	Television and multichannel radiocommunications
STS-43 space shuttle <i>Atlantis</i>	1991-54-A	United States NASA (Kennedy Space Center)	2 August	309 329	90.6 28.4		Reusable spacecraft. Landed on 11 August 1991
TDRS-5	1991-54-B	United States launched from <i>STS-43</i>	2 August	793 34 390 in geostationary-satellite orbit	710.3 0.0	2 and 14-15 MHz bands	Tracking and data relay satellite for the United States space programme
Intelsat-6 F5 3-axis stabilized	1991-55-A	International INTELSAT (Kourou)	14 August	36 000 in geostationary-satellite orbit at 14.5° W		6/4 and 14/11 GHz bands	Thirty-eight C-band and ten K-band transponders. Commercial telecommunications. Replaces <i>Intelsat-6 F2</i> which has been moved to 60° E

Code name Spacecraft description	International number	Country Organization Site of launching	Date	Initial orbital data		Frequencies Transmitter power	Observations
				Perigee (km) Apogee (km)	Period (min) Inclination (degree)		
Meteor-3 (5)	1991-56-A	USSR	15 August	1196 1219	109.4 82.6		Joint USSR/United States mission to study the ozone layer. Carries a US-built total ozone mapping spectrometer (TOMS)
Progress-M9	1991-57-A	USSR (Baikonur)	20 August	192 246	88.6 51.6		Expendable supply craft. Docked with <i>Mir-1</i> orbital complex. Decayed on 30 September 1991
Resurs-F13	1991-58-A	USSR	21 August	195 272	88.8 82.3		Study of Earth's natural resources. Decayed on 20 August 1991
Cosmos-2154	1991-59-A	USSR	22 August	991 1021	104.9 82.9	149.97; 388.84 MHz	
BS-3B (Yuri-3B)	1991-60-A	Japan (Tanegashima)	25 August	179 37 491	664 28.7		Broadcasting
IRS-1B	1991-61-A	India (Baikonur)	29 August	859 915	102.7 99.2		Remote sensing
Solar-A (Yohkoh)	1991-62-A	Japan Institute of Space and Astronautical Science (Kagoshima)	30 August	526 795	98.0 31.3	2256.22 MHz 0.5/0.2 W 8460.81 MHz 0.8/0.05 W	Study of solar flare with hard and soft X-ray telescopes
STS-48 space shuttle <i>Discovery</i>	1991-63-A	United States NASA (Kennedy Space Center)	12 Sept.	538 553	95.4 56.9		Reusable spacecraft. Landed on 18 September 1991
UARS	1991-63-B	United States launched from <i>STS-48</i>	15 Sept.	574 575	96.2 57.0		Upper Atmosphere Research Satellite. Systematic, detailed study of Earth's stratosphere, mesosphere and lower thermosphere
Cosmos-2155	1991-64-A	USSR	13 Sept.	35 850	1436 1.3		Communication

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Molnya-3 (41) 3-axis stabilized: 1500 kg	1991-65-A	USSR (Plesetsk)	17 Sept	464 40 859	737 62.7	5.9-6.2 GHz (reception) 3.6-3.9 GHz (emission)	Television and multichannel radiocommunications
Cosmos-2156	1991-66-A	USSR	19 Sept	176 369	89.6 68.1		Space research Recovered on 17 November 1991
Anik-E1	1991-67-A	Canada (Kourou)	26 Sept.	35 952 in geostationary-satellite orbit at 111.1° W	4.0	6/4 and 14/12 GHz bands	National telecommunications
Cosmos-2157 to Cosmos-2162	1991-68-A to 1991-68-F	USSR	28 Sept.	1401 1438	114.0 82.6		
Soyuz-TM 13 7 tonnes at launch	1991-69-A	USSR (Baikonur)	2 Oct	276 312	90.2 51.6		Spacecraft manned with Soviet and Austrian astronauts. Docked with <i>Mir-1</i> on 4 October 1991
Foton-4	1991-70-A	USSR	4 Oct.	223 417	90.6 62.8		Space research on materials technology. Production of protein crystals and semiconductor materials under microgravity conditions. Returned to Earth on 20 October 1991
Cosmos-2163	1991-71-A	USSR	9 Oct.	174 331	89.3 64.8		Recovered on 7 December 1991
Cosmos-2164	1991-72-A	USSR	10 Oct	290 720	94.5 74		
Progress-M10	1991-73-A	USSR (Baikonur)	17 Oct.	304 360	91.2 51.6		Expendable supply craft. Docked with <i>Mir-1</i> on 21 October 1991
Horizont-24 3-axis stabilized solar panels	1991-74-A	USSR (Baikonur)	23 Oct	36 003 in geostationary-satellite orbit	1447 1.4	5.7-6.2 GHz (reception) 3.4-3.9 GHz (emission)	Television and multichannel radiocommunication
Intelsat-6 F1 3-axis stabilized	1991-75-A	International INTELSAT (Kourou)	29 Oct.	4533 35 738 in geostationary-satellite orbit	716.1 4.4	6/4 and 14/11 GHz bands	Thirty-eight C-band and ten K-band transponders. Commercial telecommunications
USA-72	1991-76-A	United States	8 Nov.				
USA-74	1991-76-C	United States	8 Nov.				
USA-76	1991-76-D	United States	8 Nov.				
USA-77	1991-76-E	United States	8 Nov				

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Code name Spacecraft description	International number	Country Organization Site of launching	Date	Initial orbital data		Frequencies Transmitter power	Observations
				Perigee (km) Apogee (km)	Period (min) Inclination (degree)		
Cosmos-2165	1991-77-A	USSR	12 Nov.	1396 1436	113.9 82.6		
Cosmos-2166	1991-77-B	USSR	12 Nov.	1408 1440	114.0 82.6		
Cosmos-2167	1991-77C	USSR	12 Nov.	1402 1437	113.9 82.6		
Cosmos-2168	1991-77-D	USSR	12 Nov	1392 1434	113.8 82.6		
Cosmos-2169	1991-77-E	USSR	12 Nov.	1385 1432	113.8 82.6		
Cosmos-2170	1991-77-F	USSR	12 Nov.	1385 1432	113.8 82.6		
Cosmos-2171	1991-78-A	USSR	20 Nov.	173 335	89.6 62.8		
Cosmos-2172	1991-79-A	USSR	22 Nov.	35 779 35 793	1436.1 1.3		
				in geostationary-satellite orbit			
STS-44 space shuttle <i>Atlantis</i>	1991-80-A	United States NASA (Kennedy Space Center)	24 Nov.				Reusable spacecraft. Returned to Earth on 1 December 1991
USA-75	1991-80-B	United States Department of Defense launched from STS-44	24 Nov.				
Cosmos-2173	1991-81-A	USSR	27 Nov.	965 1030	104.8 82.9		
USA-73	1991-82-A	United States	26 Nov	846 870	101.9 98.9		Defense Meteorological Satellite <i>Program F-11</i>

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Eutelsat-2 F3 3-axis stabilized; 2 solar panels	1991-83-A	Europe EUTELSAT Cape Canaveral	7 Dec.			14/12 GHz	Sixteen transponders
				in geostationary-satellite orbit at 16° E			
Telecom-2A 3-axis stabilized; 718 kg; 2 solar panels	1991-84-A	France FRANCE TELECOM (Kourou)	16 Dec.			14/12, 6/4, 8/7 and 4/2 GHz	Commercial communications
Inmarsat-2 F3 3-axis stabilized; 690 kg; 2 solar panels (1200 W)	1991-84-B	International INMARSAT (Kourou)	16 Dec			6/4 GHz band	Mobile satellite service. Two hundred and fifty simultaneous voice circuits
				in geostationary-satellite orbit at 8° W			
				in geostationary-satellite orbit at 178° E			
No name	1991-85-A	USSR	17 Dec.				
Intercosmos-25 (Apex)	1991-86-A	International	18 Dec.	440 3080	121.7 82.5		Carries Czech sub-satellite <i>Magion-3</i>
Magion-3	1991-86-E	Czech and Slovak Fed. Rep. separated from orbiting <i>Intercosmos-25</i>	28 Dec.				The implementation of a comprehensive scientific program with the use of these two spacecraft and network of geophysical observatories in various countries began after the separation
Raduga-28 3-axis stabilized, 5 tonnes; solar panels	1991-87-A	USSR (Baikonur)	19 Dec.	36 500	1472 1.5	5.7-6.2 GHz (reception) 3.4-3.9 GHz (emission)	Television and multichannel radiocommunications
				in geostationary-satellite orbit			
PRC-34	1991-88-A	China (Jiuquan)	28 Dec.	35 087 212	617.8 31.6		

The following satellites have decayed since the preparation of the  
 "Table of artificial satellites launched in 1990" published in June 1991

satellite	international number	decay
Cosmos-151	1967-27-A	6 May 1991
Meteor-1	1971-59-A	27 August 1991
Cosmos-476	1972-11-A	25 October 1991
Cosmos-665	1974-50-A	6 July 1990
Cosmos-673	1974-66-A	1 June 1991
Cosmos-744	1975-56-A	12 October 1991
Tip-2	1975-99-A	26 May 1991
Molnya-1 (33)	1976-21-A	10 October 1990
Molnya-2 (16)	1976-116-A	21 February 1991
Molnya-3 (6)	1976-127-A	6 February 1990
Molnya-1 (47)	1980-53-A	1 April 1991
Hinotori	1981-17-A	11 July 1991
Progress-M7	1981-20-A	7 May 1991
Molnya-1 (50)	1981-60-A	14 December 1991
SME	1981-100-A	5 March 1991
Bhaskara-2	1981-115-A	30 November 1991

satellite	international number	decay
Salyut-7	1982-33-A	7 February 1991
Cosmos-1686	1985-86-A	7 February 1991
Mak-1	1986-17-DV	18 October 1991
Astro-3 (C)	1987-12-A	1 November 1991
Cosmos-1838	1987-36-A	15 May 1991
Cosmos-1839	1987-36-B	8 May 1991
Cosmos-2033	1988-38-A	6 January 1991
Cosmos-2046	1989-79-A	16 April 1991
Cosmos-2060	1990-22-A	1 September 1991
PRC-31	1990-81-B	11 March 1991
PRC-32	1990-81-C	24 July 1991
Cosmos-2103	1990-96-A	3 April 1991
Soyuz-TM 11	1990-107-A	26 May 1991
Cosmos-2108	1990-109-A	26 January 1991
Cosmos-2113	1991-113-A	11 June 1991

EUMETSAT = European Organization for the Exploitation of  
 Meteorological Satellites  
 EUTELSAT = European Telecommunications Satellite Organization  
 INMARSAT = International Maritime Satellite Organization  
 INTELSAT = International Telecommunications Satellite  
 Organization

NASA = National Aeronautics and Space Administration  
 (United States)  
 NOAA = National Oceanic and Atmospheric Administration  
 (United States)  
 SES = Société européenne des satellites