SLR Satellite Information

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Satellite	Full Name	Sponsor	Primary Application	COSPAR ID	SIC	Launch Date	ILRS Tracking Status	Diameter/Size of Satellite and/or Array	Reflectors	Shape of Array
ADEOS/RIS	ADvanced Earth Observing Satellite/ Reflector In Space	NASDA	Earth Sensing	9604601	1555	17-Aug-96	Past	356 mm edge	1 corner cube	Hollow cube
ADEOS-2	ADvanced Earth Observing Satellite 2	NASDA	Earth Sensing			2003	Future	16 cm	9 corner cubes	Hemisphere array
AJISAI		NASDA	Geodynamics	8606101	1500	12-Aug-86	Current	214 cm diameter sphere	1,436 corner cubes	Sphere
ALOS	Advanced Land Observing Satellite	NASDA	Earth Sensing			2002	Future	16 cm	9 corner cubes	Hemisphere array
Apollo 11 Sea of Tranquility		NASA	Lunar Science	0000100	0100	21-Jul-69	Current	46x46 cm	100 corner cubes	Planar square array
Apollo 14 Fra Mauro		NASA	Lunar Science	0000102	0102	5-Feb-71	Current	46x46 cm	100 corner cubes	Planar square array
Apollo 15 Hadley Rille		NASA	Lunar Science	0000103	0103	31-Jul-71	Current	104x61 cm	300 corner cubes	Planar rectangular array
ATEx	Advanced Tether Experiment	U.S. Navy	Tether Science			2002	Future		43 corner cubes/end mass	
BE-C	Beacon Explorer C	NASA	Earth Sensing	6503201	0317	29-Apr-65	Current		160 corner cubes	Pyramid
CHAMP	CHAllenging Microsatellite Payload	GFZ	Geoscience	0003902	8002	15-Jul-00	Current	4x1x1.6 m	1 corner cube	Trapezoid
CryoSat		ESA	Earth Sensing			Apr-02	Future		7 corner cubes	
DIADEM-1C		CNES	Geodynamics	6701101	6703	8-Feb-67	Past	50 cm	144 corner cubes	2 flattened cones
DIADEM-1D		CNES	Geodynamics	6701401	6704	15-Feb-67	Past	50 cm	144 corner cubes	2 flattened cones
ENVISAT	ENVironmental SATellite	ESA	Earth Sensing	0200901	6179	01-Mar-02	Current	20 cm	9 corner cubes	Hemisphere array
ERS-1	Earth Remote Sensing Satellite 1	ESA	Earth Sensing	9105001	6177	17-Jul-91	Past	20 cm diameter array	9 corner cubes	Half sphere array
ERS-2	Earth Remote Sensing Satellite 2	ESA	Earth Sensing	9502101	6178	21-Apr-95	Current	20 cm diameter array	9 corner cubes	Half sphere array
ETALON-1		Russia	Geodynamics	8900103	0525	10-Jan-89	Current	1.294 m diameter sphere	2,134 corner cubes	Sphere
ETALON-2		Russia	Geodynamics	8903903	4146	31-May-89	Current	1.294 m diameter sphere	2,134 corner cubes	Sphere
ETS-VIII	Engineering Test Satellite VIII	NASDA	Space Experiments			2001	Future			
FIZEAU	METEOR 2-21	Russia	Earth Sensing	9305501	5050	31-Aug-93	Past		3 corner cubes	Linear array
GEOS-1	Geodetic Earth Orbiting Satellite 1	NASA	Earth Sensing	6508901		6-Nov-65	Past			
GEOS-2	Geodetic Earth Orbiting Satellite 2	NASA	Earth Sensing	6800201		28-Apr-68	Past			
GEOS-3	Geodetic Earth Orbiting Satellite 3	NASA	Earth Sensing	7502701	1127	9-Apr-75	Current			
GFO-1	Geosat Follow-On 1	U.S. Navy	Earth Sensing	9800701	8501	10-Feb-98	Current	3 m long	9 corner cubes	Hemisphere array
GFZ-1	GeoForschungsZentrum1	GFZ	Geodynamics	8601795	8001	19-Apr-95	Past	20 cm diameter sphere	60 corner cubes	Sphere
GLONASS-49	GLObal NAvigation Satellite System 49	Russia	Positioning	9001103	9049	8-Dec-90	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-56	GLObal NAvigation Satellite System 56	Russia	Positioning	9204701	9056	30-Jul-92	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-57	GLObal NAvigation Satellite System 57	Russia	Positioning	9204702	9057	30-Jul-92	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-62	GLObal NAvigation Satellite System 63	Russia	Positioning	9402101	9062	11-Apr-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-63	GLObal NAvigation Satellite System 63	Russia	Positioning	9402102	9063	11-Apr-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-64	GLObal NAvigation Satellite System 65	Russia	Positioning	9402103	9064	11-Apr-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-65	GLObal NAvigation Satellite System 65	Russia	Positioning	9405001	9065	11-Aug-94	Past	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-66	GLObal NAvigation Satellite System 66	Russia	Positioning	9405002	9066	11-Aug-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-67	GLObal NAvigation Satellite System 67	Russia	Positioning	9405003	9067	11-Aug-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-68	GLObal NAvigation Satellite System 68	Russia	Positioning	9407601	9068	15-Dec-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-69	GLObal NAvigation Satellite System 69	Russia	Positioning	9407602	9069	15-Dec-94	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-70	GLObal NAvigation Satellite System 70	Russia	Positioning	9407603	9070	15-Dec-94	Past	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-71	GLObal NAvigation Satellite System 71	Russia	Positioning	9500901	9071	7-Mar-95	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-72	GLObal NAvigation Satellite System 72	Russia	Positioning	9500902	9072	7-Mar-95	Past	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-74	GLObal NAvigation Satellite System 74	Russia	Positioning	9503701	9074	24-Jul-95	Past	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-75	GLObal NAvigation Satellite System 75	Russia	Positioning	9503702	9075	24-Jul-95	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-76	GLObal NAvigation Satellite System 76	Russia	Positioning	9503703	9076	24-Jul-95	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-77	GLObal NAvigation Satellite System 77	Russia	Positioning	9506801	9077	14-Dec-95	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-78	GLObal NAvigation Satellite System 78	Russia	Positioning	9506802	9078	14-Dec-95	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-79	GLObal NAvigation Satellite System 79	Russia	Positioning	9506803	9079	14-Dec-95	Past	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-80	GLObal NAvigation Satellite System 80	Russia	Positioning	9807701	9080	30-Dec-98	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-81	GLObal NAvigation Satellite System 81	Russia	Positioning	9807702	9081	30-Dec-98	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-82	GLObal NAvigation Satellite System 82	Russia	Positioning	9807703	9082	30-Dec-98	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-83	GLObal NAvigation Satellite System 83	Russia	Positioning	0006301	9083	13-Oct-00	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-84	GLObal NAvigation Satellite System 84	Russia	Positioning	0006302	9084	13-Oct-00	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-85	GLObal NAvigation Satellite System 85	Russia	Positioning	0006303	9085	13-Oct-00	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-86	GLObal NAvigation Satellite System 86	Russia	Positioning	0105303	9086	01-Dec-01	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-87	GLObal NAvigation Satellite System 87	Russia	Positioning	0105302	9087	01-Dec-01	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GLONASS-88	GLObal NAvigation Satellite System 88	Russia	Positioning	0105301	9088	01-Dec-01	Current	1.2x1.2 m array	396 corner cubes	Planar square array
GOCE	Gravity Field and Steady-State Ocean Circulation	ESA	Earth Sensing			2006	Future			
GP-B	Gravity Probe B	NASA, Stanford	Geoscience			Oct-02	Future			
GPS-35	Global Positioning System 35	U.S. DOD	Positioning	9305401	3535	30-Aug-93	Current	239x194 mm array	32 corner cubes	Planar rectangular array
GPS-36	Global Positioning System 36	U.S. DOD	Positioning	9401601	3636	10-Mar-94	Current	239x194 mm array	32 corner cubes	Planar rectangular array

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GRACE	Gravity Recovery and Climate Experiment	NASA, GFZ	Earth Sensing	0201201 (-A) 0201202 (-B)	8003 8004	16-Mar-02	Current			
H2A-LRE	Laser Retroreflector Experiment	NASDA	Satellite Testing	0103801	1577	24-Aug-01	Current	470 mm	126 corner cubes	Sphere
ICESat	Ice, Cloud, and land Elevation Satellite	NASA	Earth Sensing			Aug-02	Future	16 cm	9 corner cubes	Hemisphere array
IRS-P5	Indian Remote Sensing Satellite P5	ISRO	Earth Sensing			2001	Future			
JASON-1	TOPEX Follow-On	NASA, CNES	Earth Sensing	0105501	4378	07-Dec-01	Current			
LAGEOS-1	LAser GEOdynamics Satellite 1	NASA	Geodynamics	7603901	1155	04-May-76	Current	60 cm (24 in) diameter sphere	426 corner cubes	Sphere
LAGEOS-2	LAser GEOdynamics Satellite 2	NASA, ASI	Geodynamics	9207002	5982	22-Oct-92	Current	60 cm (24 in) diameter sphere	426 corner cubes	Sphere
Luna 17 Sea of Rains		Russia, France	Lunar Science	0000101	0101	11-Nov-70	Current		14 corner cubes	Planar rectangular array
Luna 21 Sea of Serenity		Russia, France	Lunar Science	0000104	0104	15-Jan-73	Current		14 corner cubes	Planar rectangular array
METEOR-3		Russia	Earth Sensing	9400301	0307	24-Jan-94	Past	28 cm	24 corner cubes	Annulus array
METEOR-3M		Russia	Earth Sensing	0105601	5555	10-Dec-01	Current			
MSTI-2	Miniature Sensor Technology Integration 2	U.S. Air Force	Satellite Testing	9402801	9009	08-May-94	Past	18 cm	9 corner cubes	Hemisphere array
REFLECTOR		Russia	Technology	0105604	5556	10-Dec-01	Current		32 corner cubes	
RESURS-01-3		Russia	Earth Sensing	9407401	1333	04-Nov-94	Past		2 corner cubes	Linear array
SEASAT		NASA	Earth Sensing	7806401		28-Jun-78	Past			
STARLETTE		CNES	Geodynamics	7501001	1134	06-Feb-75	Current	24 cm diameter sphere	60 corner cubes	Sphere
STARSHINE-2	Student-Tracked Atmospheric Research Satellite for Heuristic International Networking Experiment-2	NRL, NASA, U. of Utah	Geoscience			05-Dec-01	Past	18.7 in diameter sphere	20 corner cubes	Sphere
STARSHINE-3	Student-Tracked Atmospheric Research Satellite for Heuristic International Networking Experiment-3	NRL, NASA, U. of Utah	Geoscience	0104301	4903	29-Sep-01	Current	37 in diameter sphere	31 corner cubes	Sphere
STARSHINE-4	Student-Tracked Atmospheric Research Satellite for Heuristic International Networking Experiment-4	NRL, NASA, U. of Utah	Geoscience			Jan-03	Future		31 corner cubes	Sphere
STARSHINE-5	Student-Tracked Atmospheric Research Satellite for Heuristic International Networking Experiment-5	NRL, NASA, U. of Utah	Geoscience			Jan-03	Future	4 in diameter sphere	31 corner cubes	Sphere
STELLA		CNES	Geodynamics	9306102	0643	26-Sep-93	Current	24 cm diameter sphere	60 corner cubes	Sphere
SUNSAT	Stellenbosch UNiversity SATellite	South Africa	Earth Sensing	9900803	2301	23-Feb-99	Current	45x45x40 cm	8 corner cubes	Ring
TiPS	Tether Physics and Survivability Mission	U.S. Navy	Tether Science	9602901 (tether) 9602902 (Ralph) 9602903 (Norton)	6000 6001 6002	20-Jun-96	Past		18 corner cubes/end mass	
TOPEX/Poseidon	TOPography EXperiment	NASA, CNES	Earth Sensing	9205201	4377	10-Aug-92	Current	150 cm diameter array	192 corner cubes	Annulus array
VCL	Vegitation Canopy Lidar	NASA	Earth Sensing			2002	Future	16 cm	9 corner cubes	Hemisphere array
WESTPAC-1	WESTern PACific Laser Satellite 1	WPLTN	Geodynamics	9804301	8801	10-Jul-98	Current	24.5 cm	60 corner cubes	Sphere
ZEYA		Russia	Satellite Testing	9701001	8888	4-Mar-97	Past		20 corner cubes	Box array

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Satellite	Mass (kg)	Orbit	Inclination	Eccentricity	Perigee Height (km)	Apogee Height (km)	Period (min)	Npt. Bin Size (sec)	Npt. Fmt Ind.	Other Instruments	Link ?	Photo ?
ADEOS/RIS	3,500	Circular	98.6°	0.000	815	815	101	30	5	radimoeter, ozone mapping spectrometer	Y	Y
ADEOS-2	1,200	Circular	98.62°	0.000	803		101			radiometer, spectrometer, GPS	Y	Y
AJISAI	685	Circular	50°	0.001	1,485	1,505	116	30	5		Y	Y
ALOS	3,750	Circular	98°	0.001	720		99			radiometer, SAR	Y	Y
Apollo 11 Sea of Tranquility		Elliptical	5.145°	0.0549	356,400	406,700	29.53 days	1-3600 (600)	2		Y	Y
Apollo 14 Fra Mauro		Elliptical	5.145°	0.0549	356,400	406,700	29.53 days	1-3600 (600)	2		Y	Y
Apollo 15 Hadley Rille		Elliptical	5.145°	0.0549	356,400	406,700	29.53 days	1-3600 (600)	2		Y	Y
ATEx		Circular	85°	0.000	787		3 days 100.6 min				Y	Y
BE-C	32	Elliptical	41.2°	0.025	927	1,320		15	3	electrostatic probe, radiobeacon, doppler		Y
CHAMP	400	Circular	87.27°	0.00396	474		94	5	1	accelerometer, magnetometer, GPS receiver	Y	Y
CryoSat		Circular	92°	0	720					DORIS	Y	Y
DIADEM-1C	23	Elliptical	39.9°	0.037	545	1,085	101	15	3	doppler		Y
DIADEM-1D	23	Elliptical	39.5°	0.076	585	1,735	108	15	3	doppler		Y
ENVISAT	8211	Circular	98.5°	0.001	800		100.59	15	3	spectrometer, altimeter, SAR, radiometer, ozone mapper, DORIS	Y	Y
ERS-1	2,400	Circular	98.5°	0.001	780		100	15	3	SAR, altimeter, radiometer	Y	Y
ERS-2	2,516	Circular	98.6°	0.0018	800	800	101	15	3	SAR, altimeter, radiometer, PRARE	Y	Y
ETALON-1	1,415	Circular	65.3°	0.00061	19,105	19,170	676	300	9			Y
ETALON-2	1,415	Circular	65.2°	0.00066	19,135	19,135	675	300	9			Y
ETS-VIII		Circular								GPS receiver	Y	Y
FIZEAU		Circular	82.6°	0.002	950	985	104	15	3			
GEOS-1	172.5	Elliptical	59.4°	0.073	1,108	2,277	120					
GEOS-2	211.8	Elliptical	105.8°	0.033	1,077	1,569	112					
GEOS-3	345.9	Elliptical	115.0°	0.001	841	856	102	30	5	radar a_timeter, Doppler beacon		Y
GFO-1	300	Circular	107.9846°	0.001	800	800	100	15	3	altimeter, radiometer, GPS receiver	Y	Y
GFZ-1	20.63	Circular	51.6°	0.000	385	385	92	5	1		Y	Y
GLONASS-49	1,400	Circular	65.3°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-56	1,400	Circular	64.6°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-57	1,400	Circular	64.7°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-62	1,400	Circular	64.5°	0.003	19,065	19,215	676	300	9		Y	Y
GLONASS-63	1,400	Circular	64°	0.003	19,065	19,215	676	300	9		Y	Y
GLONASS-64	1,400	Circular	64.8°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-65	1,400	Circular	64.8°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-66	1,400	Circular	64.7°	0.001	19,105	19,180	676	300	9		Y	Y
GLONASS-67	1,400	Circular	64.8°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-68	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-69	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-70	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-71	1,400	Circular	64.8°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-72	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-74	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-75	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-76	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-77	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-78	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-79	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-80	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-81	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-82	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-83	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-84	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-85	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-86	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-87	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GLONASS-88	1,400	Circular	64°	0.000	19,140	19,140	676	300	9		Y	Y
GOCE	1000	Circular	96.5°		250					GPS receiver, gravimeter	Y	Y
GP-B	3334	Circular	90°		650					GPS receiver, gyroscopes	Y	Y
GPS-35	930	Circular	54.2°	0.000	20,195	20,195	718	300	9		Y	Y
GPS-36	930	Circular	55.0°	0.006	20,030	20,355	718	300	9		Y	Y

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GRACE		Circular			450	450		5	1	GPS	Y	Y
H2A-LRE	86.1	Geostationary	28.49°		251	36,198.30		15	3		Y	Y
ICESat		Circular	94°	0.001	600		101			GLAS, star tracker, GPS receiver	Y	Y
IRS-P5		Circular			619	619				high resolution panchromatic camera		
JASON-1		Circular	66°	0.000	1,336		112	15	3	microwave radiometer, altimeter, GPS receiver, DORIS	Y	Y
LAGEOS-1	411	Circular	109.84°	0.0045	5,850	5,960	225	120	7			Y
LAGEOS-2	405	Circular	52.64°	0.0135	5,625	5,960	222	120	7			Y
Luna 17 Sea of Rains		Elliptical	5.145°	0.0549	356,400	406,700	29.53 days	1-3600 (600)	2			
Luna 21 Sea of Serenity		Elliptical	5.145°	0.0549	356,400	406,700	29.53 days	1-3600 (600)	2			
METEOR-3		Circular	82.5°	0.001	1,200		109	30	5	ozone mapper, PRARE	Y	Y
METEOR-3M	76	Circular	99.64°		1,020			30	5	ozone mapper, GPS/GLONASS		Y
MSTI-2	170	Circular	97.13°	0.000	432		94	15	3		Y	Y
REFLECTOR	8	Circular	99.64°	0.0008	1,019			30	5			
RESURS-01-3	1,950	Circular	97.9°	0.000	675	675	98	15	3	multispectral scanner	Y	Y
SEASAT	2213.6	Elliptical	108°	0.001	793	805	100			radar altimeter, SAR, microwave radiometer, scatterometer, Doppler TRANET and USB beacons	Y	Y
STARLETTE	47.25	Circular	49.83°	0.0206	815	1,115	104	30	5			Y
STARSHINE-2	150 lbs	Circular	39°		360			5	1	858 student ground and polished mirrors	Y	Y
STARSHINE-3	90	Circular	67.048°	0.000066	470			5	1	1000 student ground and polished mirrors	Y	Y
STARSHINE-4		Circular						5	1	1000 student ground and polished mirrors	Y	N
STARSHINE-5		Circular	67.048°					5	1		Y	Y
STELLA	48	Circular	98.6°	0.000	815	815	101	30	5			Y
SUNSAT	60	Elliptical	96.5°	0.015	400	830	100	15	3	magnetometer, radio communications, CCD cameras, GPS receiver	Y	Y
TiPS	54	Circular	63.4°	0.001	1,025	1,045	106	30	5		Y	Y
TOPEX/Poseidon	2,400	Circular	66.0°	0.000	1,350	1,350	112	15	3	microwave radiometer, altimeter, GPS receiver, DORIS	Y	Y
VCL		Circular	65°		410					Laser altimeter	Y	Y
WESTPAC-1	23.5	Ciruclar	98°	0.0	835	835	101	15	3		Y	Y
ZEYA		Circular	97.27°	0.000	471	499	94	5	1	navigation radio equipment, GPS/GLONASS receiver		