Launch Records of Satellites

(As of end-Jan, 2009)

◇Main Satellites launched in Japan

Year	Satellite		Mission	Rocket
1970		(Osumi)	Japan's first artificial Satellite	L-4S
1971	MS-T1	(Tansei)	Experimental Satellite	〃
	MS-F2	(Shinsei)	Solar system Observation Satellite	〃
1972	REXS	(Denpa)	〃	〃
1974	MS-T2	(Tansei-2)	Experimental Satellite	M-3C
1975	SRATS	(Taiyo)	Solar X-ray Observation Satellite	〃
	ETS-I	(Kiku)	Experimental Satellite	N-I
1976	ISS	(Ume)	Ionoshere Sounding Satellite	〃
1977	MS-T3	(Tansei-3)	Experimental Satellite	M-3H
	ETS-II	(Kiku-2)	Experimental Satellite	N-I
1978	EXOS-A	(Kyokko)	Aurora and Space Plasma Observation Satellite	M-3H
	EXOS-B	(Jikiken)	〃	〃
	ISS-b	(Ume-2)	Ionoshere Sounding Satellite	N-I
1979	CORSA-b	(Hakucho)	X-ray Astronomy Satellite	M-3C
1980	MS-T4	(Tansei-4)	Experimental Satellite	M-3S
1981	ASTRO-A	(Hinotori)	Solar X-ray Observation Satellite	〃
	ETS-IV	(Kiku-3)	Experimental Satellite	N-II
	GMS-2	(Himawari-2)	Geostationary Weather Satellite	〃
1982	ETS-III	(Kiku-4)	Experimental Satellite	N-I
1983	ASTRO-B	(Tenma)	X-ray Astronomy Satellite	M-3S
	CS-2a	(Sakura-2a)	Communications Satellite	N-II
	CS-2b	(Skura-2b)	Communications Satellite	〃
1984	EXOS-C	(Ohzora)	Atmospheric Observation Satellite	M-3S
	BS-2a	(Yuri-2a)	Broadcast Satellite	N-II
	GMS-3	(Himawari-3)	Geostationary Weather Satellite	〃
1985	MS-T5	(Sakigake)	Halley's Comet Observation Satellite	M-3S II
	PLANET-A	(Suisei)	Halley's Comet Explorer	〃
1986	EGS	(Ajisai)	Experimental Geodetic Satellite	H-I
	MABES		Magnetic Bearing Flywheel Experimental System	〃
	BS-2b	(Yuri-2b)	Broadcast Satellite	N-II
	JAS-1	(Fuji)	Satellite for Amateur Radio	H-I
1987	ASTRO-C	(Ginga)	X-ray Astronomy Satellite	M-3S II
	ETS-V	(Kiku-5)	Experimental Satellite	H-I
	MOS-1	(Momo-1)	Marine Observation Satellite	N-II
1988	CS-3a	(Sakura-3a)	Stationary Communications Satellite	H-I
	CS-3b	(Skura-3b)	Stationary Communications Satellite	〃
1989	EXOS-D	(Akebono)	Aurora Observation Satellite	M-3S II
	GMS-4	(Himawari-4)	Geostationary Weather Satellite	H-I
1990	MUSES-A	(Hiten)	Lunar Explorer	M-3S II
	Lunar Orbiter	(Hagoromo)	Lunar Orbiter	〃
	DEBUT	(Orizuru)	Deployable Boom & Umbrella Test Satellite	H-I
	MOS-1b	(Momo-1b)	Marine Observation Satellite	〃
	JAS-1b	(Fuji-1b)	Satellite for Amateur Radio	〃
	BS-3a	(Yuri-3a)	Broadcast Satellite	〃
1991	SOLAR-A	(Yohkoh)	Solar Observation Satellite	M-3S II
	BS-3b	(Yuri-3b)	Broadcast Satellite	H-I
1992	JERS-1	(Fuyo-1)	Earth Resources Satellite	〃
1993	ASTRO-D	(Asuka)	X-ray Astronomy Satellite	M-3S II
1994	VEP	(Myojo)	Vehicle Evaluation Payload	H-II
	OREX	(Ryusei)	Orbital Re-entry Experiment	〃
	ETS-VI	(Kiku-6)	Experimental satellites	〃
1995	SFU		Space Experimental Satellite	H-II
	GMS-5	(Himawari-5)	Geostationary Weather Satellite	〃
1996	ADEOS	(Midori)	Advanced Earth Observing Satellite	〃
	JAS-2	(Fuji-3)	Satellite for Amateur Radio	〃
1997	MUSES-B	(Halca)	Radio-Astronomical Satellite	M-V
	ETS-VII	(Orihime/Hikoboshi)	Engineering Test Satellite	〃
1998	PLANET-B	(Nozomi)	Mars Explorer	〃
	COMETS	(Kakehashi)	Communications and Broadcasting Engineering Test Satellite	H-II
2001	LRE (VEP-2)		Laser Ranging Equipment	H-IIA
2002	USERS		Next Generation of Unmanned Space Experiment Recovery System	〃
	MDS-1	(Tsubasa)	Mission Demonstration test Satellite	〃
	DRTS	(Kodama)	Data Relay Test Satellite	〃
	ADEOS-II	(Midori-II)	Advanced Earth Observing Satellite	〃
2003	MUSES-C	(Hayabusa)	Asteroid Explorer	M-V
	IGS		Information Gathering Satellite	H-IIA
2005	ASTRO-EII	(Suzaku)	X-ray Astronomy Satellite	M-V
	MTSAT-1R	(Himawari-6)	Multi-Transport Satellite	H-IIA
2006	ALOS	(Daichi)	Advanced Land Observing Satellite	〃
	MTSAT-2	(Himawari-7)	Multi-Transport Satellite	〃
	ASTRO-F	(Akari)	Infrared Imaging Satellite	M-V
	IGS		Information Gathering Satellite	H-IIA
	SOLAR-B	(Hinode)	Solar Observation Satellite	M-V
	ETS-VIII	(Kiku-8)	Engineering Test Satellite	H-IIA
2007	IGS		Information Gathering Satellite	〃
	SELENE	(Kaguya)	SELenological and ENgineering Explorer	〃
2008	WINDS	(Kizuna)	Wideband InterNetworking engineering test and Demonstration Satellite	〃
2009	GOSAT	(Ibuki)	Greenhouse gas Observation SATellite	〃
	IGS		Information Gathering Satellite	〃
2010	PLANET-C	(Akatsuki)	Venus Explorer	〃

Planned Satellite Launch Programs

(As of end-Jan, 2009)

◇Scientific Satellites

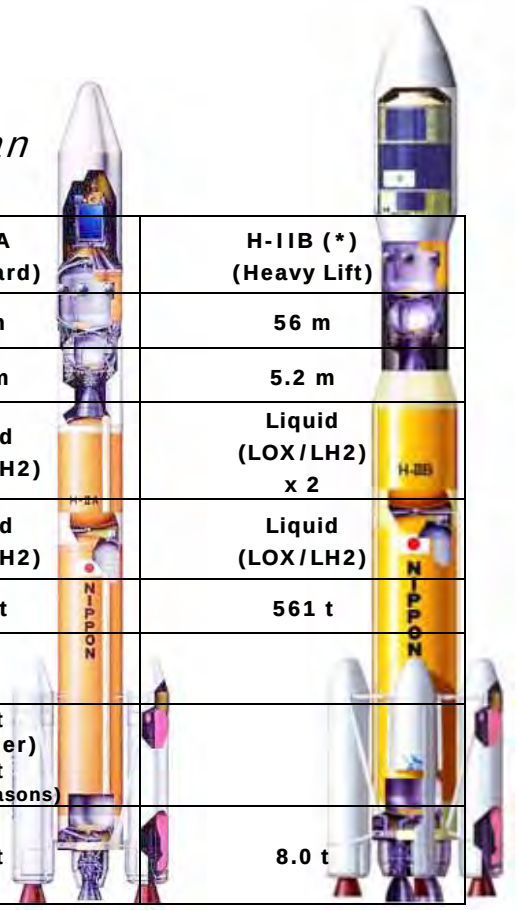
Satellite	Primary Mission	Weight	Orbit	Launch by	Launch Schedule
PLANET-C	･Venus Exploration/Venus Climate Orbiter	approx. 480kg	300 to 80,000 km away from Venus's surface (Elliptical orbit)	H-IIA	2010 (fiscal year)
ASTRO-G	･VLBI Space Observation (VLBI: Very Long Baseline Interferometry)	approx. 910kg	1,000 to 25,000Km (Earth orbit)		2012 (fiscal year)

◇Application and Engineering Test Satellites

Satellite	Primary Mission	Weight	Orbit	Launch by	Launch Schedule
QZSS (Quasi-Zenith Satellite System)	to enable high-speed communications & high precision pinpointing in Japan	approx. 1,800kg	32,000 to 40,000Km (Earth orbit)	H-IIA	2010 (fiscal year)
GCOM (Global Change Observation Mission)	to elucidate global climate change and water circulation mechanisms	approx. 1,800kg	approx. 700Km (Sun-Synchronous Sub-Recurrent Orbit)	H-IIA	2011 ～ (fiscal year)

◇*Major Launch Vehicles in Japan*

Specification		H-IIA (Standard)	H-IIB (*) (Heavy Lift)
Length		53 m	56 m
Diameter		4.0 m	5.2 m
Engine	1st stage	Liquid (LOX/LH2)	Liquid (LOX/LH2) x 2
	2nd stage	Liquid (LOX/LH2)	Liquid (LOX/LH2)
Gross Weight		289 t	561 t
LEO Launch Capability (Low earth orbit)		10 t	
SSO Launch Capability (Sun synchronous orbit)		3.6 t (Summer) 4.4 t (Other Seasons)	
GTO Launch Capability (Geostationary transfer orbit)		4.0 t	8.0 t



(*) under development