

Hard Road to Commercial Space - The Past of the Chinese Commercial Launch Service

by Chen Lan

Table 1: Chinese commercial launch history

date	satellite (bus)	launcher / site	note/operator/owner
1990, 7 April	AsiaSat 1 (HS-376)	CZ-3, Xichang	Asia Satellite Telecommunications Co, Ltd.
1990, 16 July	Optus B mass simulator, Badr 1	CZ-2E, Xichang	Australia, Pakistan failure <i>Note: It is debatable whether this test launch can be considered a commercial activity. However, it was obligatory to proceed with the actual launch of Optus B1. For the sake of completeness, it is included.</i>
1992, 13 August	Optus B1 (HS-601)	CZ-2E, Xichang	Australian Optus Communications
1992, 6 October	Freja	CZ-2C, Jiuquan	Swedish Space Corporation
1992, 21 December	Optus B2 (HS-601)	CZ-2E, Xichang	failure
1994, 21 July	Apstar 1 (HS-376)(later renamed: Chinasat 5E)	CZ-3, Xichang	
1994, 27 August	Optus B3 (HS-601)	CZ-2E, Xichang	Australian Optus Communications
1995, 25 January	Apstar 2 (HS-601)	CZ-2E, Xichang	APT Satellite Company, Ltd. failure
1995, 28 November	AsiaSat 2 (LM-7000) (later renamed: AMOS 5i, AsiaSat 2)	CZ-2E, Xichang	Asia Satellite Telecommunications Company
1995, 28 December	EchoStar 1 (LM-7000)	CZ-2E, Xichang	Echostar
1996, 14 February	Intelsat 708 (SSL-1300)	CZ-3B, Xichang	Intelsat failure
1996, 3 July	Apstar 1A (later renamed: Chinasat 5D)	CZ-3, Xichang	APT Satellite Company Ltd.
1996, 18 August	ChinaSat 7 (HS-376)	CZ-3, Xichang	ChinaSat, partial failure
1997, 19 August	Agila 2 (SSL-1300)	CZ-3B, Xichang	Philippines
1997, 1 September	Iridium simulator A & B	CZ-2C, Taiyuan	Iridium <i>Note: It is debatable whether this test launch can be considered a commercial activity. However, it was obligatory in order to achieve successful launches of the following actual Iridium satellites. For the sake of completeness, the launch is included here.</i>
1997, 16 October	APStar 2R (SSL-1300)	CZ-3B, Xichang	APT Satellite Company Ltd.
1997, 8 December	Iridium 42 & 44	CZ-2C/SD, Taiyuan	Iridium
1998, 25 March	Iridium 51 & 61	CZ-2C/SD, Taiyuan	Iridium
1998, 2 May	Iridium 69 & 71	CZ-2C/SD, Taiyuan	Iridium
1998, 30 May	ChinaStar 1 (LM-2100) – later renamed: Chinasat 5A, APStar 9A)	CZ-3B, Xichang	China Orient Telecommunications Satellite Co./ ChinaSatcom
1998, 18 July	SinoSat 1 (SB-3000) (later renamed: ChinaSat 5B) → PSN 5)	CZ-3B, Xichang	SinoSat/ChinaSatcom/PSN Indonesia
1998, 19 August	Iridium 76 (Iridium 3) & 78	CZ-2C/SD, Taiyuan	Iridium
1998, 19 December	Iridium 11A & 20A	CZ-2C/SD, Taiyuan	Iridium
1999, 11 June	Iridium 92 & 93 (14A & 21A)	CZ-2C/SD, Taiyuan	Iridium

1999, 14 October	*) CBERS 1 and smallsat	CZ-4B, Taiyuan	China-Brazil
*) CBERS is a government funded programme and not a fully commercial programme. CBERS launch arrangements were also different from "standard" commercial practice. Therefore, one can debate whether the CBERS programme can be considered a commercial activity. For the sake of completeness, we are keeping it in our list.			
2003, 21 October	CBERS 2	CZ-4B, Taiyuan	China-Brazil
2005, 12 April	APStar 6 (SB-4000C2)	CZ-3B, Xichang	APT Satellite Company Ltd.
2006, 28 October	SinoSat 2 (DFH-4)	CZ-3B, Xichang	Satellite failure
2007, 13 May	NigComSat 1 (DFH-4)	CZ-3B, Xichang	Nigeria's National Space Research and Development Agency (NSRDA).
2007, 31 May	SinoSat 3 (DFH-3) (later renamed: ChinaSat 5C, Eutelsat 3A, Eutelsat 8 West D)	CZ-3A, Xichang	Sino Satellite Communications; China Satcom; Eutelsat
2007, 5 July	ChinaSat 6B (SB-4000)	CZ-3B, Xichang	China Satcom
2007, 19 September	*) CBERS 02B	CZ-4B, Taiyuan	China-Brazil
2008	Apstar 6B (DFH-4)		Launch cancelled
2008, 9 June	ChinaSat 9 (SB-4000)	CZ-3B, Xichang	China-Satcom
2008, 29 October	VeneSat 1 Simon Bolivar (DFH-4)	CZ-3B, Xichang	Venezuelan Ministry of Science and Technology
2009, 31 August	Palapa D (SB-4000B3)	CZ-3B, Xichang	Indonesia anomaly
2010, 4 September	Chinasat 6A (DFH-4) (SinoSat 6)	CZ-3B, Xichang	China Satcom
2011, 20 June	ChinaSat 10 (DFH-4) (SinoSat 5)	CZ-3B, Xichang	China Satcom
2011, 10 August	Paksat 1R (DFH-4)	CZ-3B, Xichang	Pakistan Space & Upper Atmosphere Research Commission (SUPARCO)
2011, 7 October	Eutelsat W3C (SB-4000)	CZ-3B, Xichang	Eutelsat
2011, 19 December	NigComSat 1R (DFH-4)	CZ-3B, Xichang	Nigerian Ministry of Science and Technology/ NigComSat Ltd.
2012, 9 January	Vesselsat 2	CZ-4B, Taiyuan	LuxSpace Sarl
2012, 31 March	APStar 7 (SB-4000)	CZ-3B, Xichang	APT Satellite Company Ltd.
2012, 29 September	VRSS 1 Miranda (CAST-2000)	CZ-2D, Jiuquan	Venezuela - MCT
2012, 27 November	ChinaSat 12 (SB-4000)	CZ-3B, Xichang	China Satcom
2012, 18 December	Göktürk 2	CZ-2D, Jiuquan	Turkey
2013, 26 April	TurkSat 3USat; NEE 01 Pegaso; CubeBug 1 El Capitán Beto	CZ-2D, Jiuquan	Turkey; Ecuador; Argentina
2013, 1 May	ChinaSat-11 (DFH-4)	CZ-3B, Xichang	China Satcom
2013, 9 December	*) CBERS 3	CZ-4B, Taiyuan	China-Brazil - failure
2013, 20 December	Túpac Katari 1 (DFH-4)	CZ-3B, Xichang	Bolivian Space Agency
2014, 19 August	BRITE-PL2 Heweliusz small satellite	CZ-4B, Taiyuan	Poland
2014, 4 September	Ling Qiao	CZ-2D, Jiuquan	Xinwei Telecom/Tsinghua University
2014, 23 October	4M; PS86X1	CZ-3C, Xichang	Luxembourg, UK
2014, 7 December	*) CBERS 04	CZ-4B, Taiyuan	China-Brazil
2015, 7 October	Jilin 1 (4 sat cluster)	CZ-2D, Jiuquan	Chang Guang Satellite Technology Ltd.
2015, 16 October	APStar 9 (DFH-4)	CZ-3B, Xichang	APT Satellite Company Ltd.

2015, 20 November	LaoSat 1 (DFH-3B)	CZ-3B, Xichang	APMT, Laos National Authority for Science and Technology
2016, 15 January	Belintersat 1 (DFH-4)	CZ-3B, Xichang	Belarus
2016, 30 May	ÑuSat 1 & 2 'Fresco & Batata'	CZ-4B, Taiyuan	Argentina
2016, 6 August	Tiantong 1	CZ-3B, Xichang	ChinaSatcom
2016, 15 August	3Cat-2 Cubesat	CZ-2D, Jiuquan	Spain
2016, 9 November	XiaoXiang 1; LiShui 1	CZ-11, Jiuquan	Tianyi Research Institute SpaceTY; Zhejiang LiYa Electronic Technology Co
2016, 28 December	Gaojing 1-01 & -02 (CAST-3000)	CZ-2D, Taiyuan	Siwei Star Co. Ltd./Beijing Space View Tech Co. Ltd. <i>Note: Gaojing satellites are CASC's own commercial project. It might be more correctly to call it a "semi-commercial" satellite.</i>
2017, 9 January	Jilin 1-03; Xingyun Shiyun 1; Caton 1	KZ-1A (Kuaizhou-1A), Jiuquan	Chang Guang Satellite Technology Ltd.; CASIC; Beijing Caton Universal Technology Ltd.
2017, 2 March	Tiankun 1	KT-2 (Kaituozhe 2), Jiuquan	CASIC
2017, 12 April	Shijian 13/ChinaSat 16	CZ-3B, Xichang	ChinaSatcom Shijian 13 is in the first place an experimental satellite. After the experimental phase, it will be put into commercial service. It might be more correctly to call it a "semi-commercial" satellite.
2017, 15 June	ÑuSat 3 'Milanesat'; OVS-1A; OVS-1B	CZ-4B, Jiuquan	Argentina; Orbita-China
2017, 18 June	ChinaSat 9A (DFH-4)	CZ-3B, Xichang	China Satcom – anomaly
2017, 9 October	VRSS 2 'Antonio José de Sucre' (CAST-2000)	CZ-2D, Jiuquan	Venezuela/Bolivia
2017, 14 November	HEAD 1	CZ-4C, Taiyuan	HEAD Aerospace
2017, 21 November	Jilin 1-04, -05, -06	CZ-6, Taiyuan	Chang Guang Satellite Technology Ltd.
2017, 10 December	Alcomsat 1 (DFH-4)	CZ-3B, Xichang	Algeria Space Agency (ASAL)
2018, 9 January	Gaojing 1-03 & -04 (CAST-3000)	CZ-2D, Taiyuan	Siwei Star Co. Ltd./Beijing Space View Tech Co. Ltd. <i>Note: Gaojing satellites are CASC's own commercial project. It might be more correctly to call it a "semi-commercial" satellite.</i>
2018, 19 January	Jilin 1-07 & -08; Hunan-Tianyi 2; Quan Tu Tong 1-Tianyi 6; KIPP	CZ-11, Jiuquan	Chang Guang Satellite Technology Ltd.; SpaceYT; SpaceYT/Quan Tu Tong Co; Kepler Communications - Canada
2018, 2 February	ÑuSat 4 & 5 'Ada & Maryam'; GOMX 4A & 4B; FengMaNiu 1; Juvenile-1 (piggy back to Seismo-Electromagnetic Satellite)	CZ-2D, Jiuquan	Satellogic - Argentina; GomSpace - Denmark; Link Space Aerospace Technology – China CommSat Company - China
2018, 4 May	APStar 6C (DFH-4)	CZ-3B, Xichang	APT Satellite Company Ltd.
2018, 20 May	LongJiang-1/2 Lunar Camera Payload (piggy back on Queqiao)	CZ-4C,	Harbin Institute of Technology Saudi Arabia
2018, 2 June	Luojia 1-01 (piggy back on Gaofen 6)	CZ-2D,	Wuhan University
2018, 9 July	PRSS 1 (CAST 2000) (PakTES-1A)	CZ-2C/SMA, Jiuquan	SUPARCO, Pakistan

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Mid-2018	Jilin-1 09-12	Kuaizhou 1A, Jiuquan	
Mid-2018	Jilin-1 Optical-B Xiangrikui 1A Xiangrikui 1B Ouke-Micro 1 TY 4 Zhongwei 1	Kuaizhou 11, Jiuquan	
Mid-2018	SupremeSAT 2 (DFH-4)	CZ-3B, Xichang	SupremeSAT (PVT) Ltd. - Sri Lanka
2018, September	CFOSat	CZ-2C	China-France
2019	Chinasat 18	CZ-3B, Xichang	ChinaSatcom
2019	APStar 6D (DFH-4E)	CZ-3B, Xichang	APT Satellite Company Ltd.
2019	NicaSat 1 (DFH-4)	CZ-3B, Xichang	Nicaragua
2019	Hongyan satellite constellation (DFH-4)		International Satellite Co. Ltd. Thailand
2020	Recoverable satellite		
20??	Palapa-N1 (DFH-4)	CZ-3B, Xichang	PT Palapa Satelit Nusantara Sejahtera
20??	PNS-7		Indonesia
2021	TECHO 1		Royal Group of Cambodia