

discovered by Decker Eveleth (Warrick 2021), is the furthest along out of the three silo complexes, and it is likely that the other two fields will likely follow a similar pattern and timeline.

Hami silo field

The Hami field, located in Eastern Xinjiang in the western military district, spans an area of approximately 1,028 square kilometers, roughly the same size as the

Table 2. Chinese missile brigades, 2024^a.

Base Number (Provinces)	Unit	Location ^b	Weapon Type ^c	Nuclear role	Notes	
PLARF HQ		Beijing (40.0352, 116.3197)				
Base 61 (Anhui, Fujian, Guangdong, Jiangxi, Zhejiang)	HQ	Huangshan (29.6956, 118.2997)				
	611 Brigade	Qingyang (30.6903, 117.9011)	DF-26	Yes	Previously with DF-21A.	
	612 Brigade	Leping (28.9797, 117.1205)	DF-21A (DF-31AG?) ^d	Yes	Possibly upgrading to DF-31AG.	
	613 Brigade	Shangrao (28.4745, 117.8954)	DF-15B (DF-17?) ^e	No	Possibly upgrading to new missile.	
	614 Brigade	Yongan (26.0596, 117.3151)	DF-17 ^f	No	First DF-17 brigade.	
	615 Brigade	Meizhou (24.2828, 115.9708)	DF-11A ^g	No		
	616 Brigade	Ganzhou (25.8992, 114.9587)	DF-17 ^h	No	New base added since 2020. ⁱ	
	617 Brigade	Jinhua (29.1508, 119.6153)	DF-16 ^j	No	Second DF-16 brigade.	
	618 Brigade	Nanchang (28.5004, 115.9214)?	(GLCM?)	No		
Base 62 ^k (Guangxi, Guangdong, Hainan, Sichuan, Yunnan)	HQ	Kunming (24.9888, 102.8346)			Base expansion underway.	
	621 Brigade	Yibin (28.7607, 104.7914)	DF-31AG	Yes	Upgraded from DF-21A.	
	622 Brigade	Yuxi (24.3601, 102.4942)	DF-31A	Yes	Former DF-21A brigade.	
	623 Brigade	Liuzhou (24.3856, 109.5726)	DF-10A	No	First DF-10A brigade.	
	624 Brigade	Danzhou (19.4721, 109.4570)	DF-21D	No	Possibly upgrading to new missile.	
	625 Brigade	Jianshui (23.7354, 102.8713)	DF-26	Yes	Possibly second DF-26 brigade.	
	626 Brigade	Qingyuan (23.6845, 113.1768)	DF-26 ^l	Yes	Possible third DF-26 brigade.	
	627 Brigade	Puning (23.4122, 116.1816)	DF-17 ^m	No	Base expansion underway.	
	Base 63 (Huaihua, Hubei, Hunan)	HQ	Huaihua (27.5747, 110.0250)			
631 Brigade		Jingzhou (26.5783, 109.6703)	DF-5B (DF-5C?)	Yes	6 silos, adding 6 more plus training. ⁿ	
632 Brigade		Shaoyang (27.2532, 111.3859)	DF-31AG	Yes	Upgraded from DF-31.	
633 Brigade		Huitong (26.8935, 109.7388)	DF-5A	Yes	6 silos. ^o	
634 Brigade		Yueyang (29.5882, 113.6632) ^p	(DF-5C?)	(Yes)	New 12-silo field under construction.	
635 Brigade		Yichun (27.8869, 114.3862)	DF-17?	No	Previously DF-10A.	
636 Brigade		Shaoguan (24.7579, 113.6797)	DF-16A	No	First DF-16A brigade.	
Base 64 (Gansu, Inner Mongolia, Ningxia, Qinghai, Shaanxi, Xinjiang)		HQ	Lanzhou (35.9387, 104.0159)			
		641 Brigade	Hancheng (35.4754, 110.4468)	(DF-31AG or DF-41)	(Yes)	Upgrading from DF-31.
		Hancheng (35.3876, 110.3745)	(DF-31AG)	(Yes)	New base for 641 Brigade. ^q	
	642 Brigade	Datong (36.9495, 101.6663)	DF-31AG ^r	Yes	DF-31AG seen training in 2019.	
	643 Brigade	Tianshui (34.5315, 105.9103)	DF-31AG	Yes	First DF-31AG brigade.	
	644 Brigade	Hanzhong (33.1321, 106.9361)	DF-41	Yes	First DF-41 integration base. ^s	
	645 Brigade	Yinchuan (38.5919, 106.2266)	DF-31AG (DF-41?)	Yes	Possibly second DF-41 base.	
	646 Brigade	Korla (41.6946, 86.1734)	DF-26	Yes	Previously with DF-21. ^t	
	647 Brigade	Xining (36.4444, 101.5523) ^u	(DF-26?)	(Yes)	Rumored new brigade base.	
Base 65 (Jilin, Liaoning, Shandong)	? Brigade*	Zhangye (38.8552, 100.3933) ^v	(DF-26?)	(Yes)	Possible alternative location.	
	? Brigade*	Hami (42.2806, 92.4959)	(DF-31A/DF-41?)	(Yes)	120 missile silos.	
	? Brigade*	Yumen (40.1449, 96.5518)	(DF-31A/DF-41?)	(Yes)	110 missile silos.	
	HQ	Shenyang (41.8586, 123.4514)				
	651 Brigade	Chifeng (42.2574, 118.8249)	(DF-31AG or DF-41) ^w	(Yes)	New base, almost complete.	
	652 Brigade	Jilin (43.9362, 126.4507) ^x	(DF-31AG or DF-41)	(Yes)	New base under construction.	
		Tonghua area ^y	(DF-31A?) ^z	(Yes)	DF-31A seen training in area.	
	653 Brigade	Laiwu (36.2332, 117.7154)	DF-21D	No	Possibly upgrading to new missile.	
	654 Brigade	Dengshahe (39.3028, 122.0654)	DF-26 ^{aa}	Yes		
	Dengshahe (39.2353, 122.0440)	(DF-26)	(Yes)	New base construction paused.		
	Huangling (40.8452, 122.7682) ^{bb}	(DF-26)	(Yes)	Rumored new brigade base location.		
	655 Brigade	Tonghua (41.6681, 125.9548)	(DF-17)	No	Base upgrade underway.	
	656 Brigade	Laiwu/Taian (36.246, 117.65326) ^{cc}	(CJ-100)?	No	Rumored first CJ-100 brigade.	
	657 Brigade	?	?	?	Rumored new base.	
? Brigade*	Yulin (Ordos) (40.1597, 108.1113)	(DF-31A/DF-41?)	(Yes)	90 missile silos.		
HQ	Luoyang (34.6405, 112.3823)			HQ base. ^{dd}		
Base 66 (Henan)	661 Brigade	Lushi (34.5165, 110.8620) ^{ee}	DF-5B	Yes	6 silos.	
	662 Brigade	Luanchuan (33.7927, 111.5899) ^{ff}	(DF-5C?)	(Yes)	New 12-silo field under construction. ^{gg}	
	663 Brigade	Nanyang (33.0117, 112.4145)	DF-31A	Yes	First DF-31A brigade.	
	664 Brigade	Xiangyang (31.9443, 112.1197) ^{hh}	DF-31AG	Yes		
	665 Brigade	Changzhi (36.2580, 113.1785) ⁱⁱ	(DF-26?)	(Yes)	New brigade base. ^{jj}	
	666 Brigade	Xinyang (32.1675, 114.1257)	DF-26	Yes	First DF-26 brigade base.	
	667 Brigade	Sanmenxia (34.7294, 111.1773)	Unknown ^{kk}	?	New base under construction. ^{ll}	
	Total:	45 Brigades			~30	
	Base 67 (Shaanxi)	Central nuclear weapons storage complex. Headquartered in Baoji city. Responsible for storing and handling nuclear warheads at nearby underground storage facility as well as smaller regional storage sites located in each regional base area.				

^aThis table is based on: US Department of Defense, Office of the Secretary of Defense, Military and Security Developments Involving the People's Republic of China, October 19, 2023 (and previous years), <https://media.defense.gov/2023/Oct/19/2003323409-1/-1/1/2023-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>; Decker Eveleth, *People's Liberation Army Rocket Force Order of Battle 2023*, Middlebury Institute of International Studies at Monterey, June 2023, https://nonproliferation.org/wp-content/uploads/2023/07/peoples_liberation_army_rocket_force_order_of_battle_2023.pdf; Ma Xiu, PLA Rocket Force Organization, CASI, October 2022, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/PLARF/2022-10-24%20PLARF%20Organization.pdf>; Mark Stokes, *PLA Rocket Force Leadership and Unit Reference*, Project 2049 Institute, April 9, 2018; P.W. Singer and Ma Xiu, "China's missile force is growing at an unprecedented rate," *Popular Science*, February 25, 2020; individual researchers such as Ben Reuter, Vinayak Bhat, and others who prefer to remain autonomous; and these authors' observations and estimates. The table is a work in progress and is updated as new information becomes available.

^bEach brigade has several launch battalions (up to six) and support units located in the region. Question mark indicates unknown or uncertain location. In addition, PLARF operates several training areas, such as Jilantai and Haixi/DaQaidam, where launch units visit to exercise or integrate new equipment.

^cMissiles in parenthesis indicate additional uncertainty or upgrade.

^dPossibly upgraded to DF-31AG. Ma Xiu, PLA Rocket Force Organization, CASI, October 2022, p. 62.

<https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/PLARF/2022-10-24%20PLARF%20Organization.pdf>

Conversion will require significant upgrade of base infrastructure, but visible construction appears limited. Until recently brigade was thought to have DF-21A (seen in 2021). Decker Eveleth, https://twitter.com/dex_eve/status/1355210408831795200

^ePossible conversion to unidentified system in 2021. Ma Xiu, PLA Rocket Force Organization, CASI, October 2022, p. 63. <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/PLARF/2022-10-24%20PLARF%20Organization.pdf>. Possible DF-21 TELs seen in 2022.

The 613 Brigade conducted missile test launches from Jilantai in August 2021 to a range of approximately 1,400 kilometers, significantly longer than the 800-km range of the DF-15B the brigade is normally associated with. "Uncovering the truth Behind the PLA Rocket Force's August 2021 Missile Launch," *China Aerospace Studies Institute (CASI)*, Air University, Maxwell AFB, August 2021), <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/CASI%20Articles/2021-08-30%20PLARF%20missile%20test%20Aug%202021.pdf>

^fProbably completed upgrading to DF-17 in 2022 with infrastructure upgrade. New garage complex added and DF-17 TELs visible.

^gA possible DF-17 TEL was seen in April 2022.

^hNew base under construction north of Ganzhou is larger and has highbay-garage seen at other bases upgrading to DF-17.

ⁱThe old 616 Brigade base with DF-15 is downtown Ganzhou (25.8337, 114.9098).

^jIn addition to DF-16, satellite photos occasionally show trucks that resemble DF-21C and DF-26, but they appear to be transporters.

^kBase 62 was previously an important nuclear DF-21 area.

It is possible 626 Brigade operates the DF-26B anti-ship version.

^mAppears to have achieved operational capability with new highbay garage area. Two DF-17s seen on December 9, 2022.

ⁿThe brigade has 5-6 silos (plus possibly decoy silos) and an underground missile storage facility.

^oThe brigade has 5-6 silos plus possibly decoy silos.

^pThis location was first reported by Ben Reuter. Tweet, December 31, 2022, https://twitter.com/benreuter_IMINT/status/1609136561496461313

^qUnlike the old garrison that is located downtown Hencheng, the new garrison under construction south of the city has infrastructure similar to other Brigades equipped with the DF-31A/AG.

^rDF-31 launchers were displayed in June 2011. Hans M. Kristensen, "Chinese Mobile ICBMs Seen In Central China," *FAS Strategic Security Blog*, March 1, 2012, <https://fas.org/blogs/security/2012/03/df-31deployment/>. In June 2019, a possible DF-31AG was seen at the 642 Brigade launch unit training site at Haiyan.

^sDecker Eveleth, "China's Mobile ICBM Brigades: The DF-31 and DF-41," *aboyandhis.blog*, July 2, 2020, <https://www.aboyandhis.blog/post/china-s-mobile-icbm-brigades-the-df-31-and-df-41>

^tHans M. Kristensen, "China's New DF-26 Missile Shows Up At Base In Eastern China," *FAS Strategic Security Blog*, January 21, 2019, <https://fas.org/blogs/security/2020/01/df-26deployment/>

^uThe location of 647 Brigade is unconfirmed. One source says it is "located in the western Chinese city of Xining," but the suggested facility does not resemble a PLARF brigade base. Ma Xiu, PLA Rocket Force Organization, CASI, October 2022, p. 131, <https://www.airuniversity.af.edu/Portals/10/CASI/documents/Research/PLARF/2022-10-24%20PLARF%20Organization.pdf>. Location listed in this table was suggested by Ben Reuter. DOD only lists one PLARF base in this area (presumably 642 Brigade).

^vThis base is under expansion with new highbay garages that could potentially indicate DF-26, but weapon system remains unconfirmed. Location suggested by Ben Reuter.

^wA video in late-2021 showed what appeared to be inspection of a possible DF-41 TEL. Roderick Lee, tweet, December 28, 2021, https://twitter.com/roderick_s_lee/status/1475885536254599172

^xFirst reported by Twitter account @pir34 on May 14, 2022, <https://twitter.com/pir34/status/1525473049297952769>. Location for 652 Brigade was previously rumored as Tonghua area. DOD does not list a PLARF base in Jilin but two in Tonghua (possibly 652 and 655).

^yThe 652 Brigade has long been reported to be in the Tongdao area and DF-31A launchers seen training. DOD reports two PLARF brigades in this area.

^zRumored to have been upgraded from DF-21C to DF-31/A. DF-31s have been seen training at launch unit site in 2016 (<http://news.cntv.cn/2016/02/03/VIDEW2ftUUbzNYs7rBJ7kitH160203.shtml>) and 2020 (<https://new.qq.com/omn/20200206/20200206A0JEZ000.html>). However, despite large highbay garage added, base lacks TEL garages seen at other DF-31 bases.

^{aa}Hans M. Kristensen, "China's New DF-26 Missile Shows Up At Base In Eastern China," *FAS Strategic Security Blog*, January 21, 2019, <https://fas.org/blogs/security/2020/01/df-26deployment/>. Dengshahe upgraded from DF-3A to DF-21A in 2014. Hans M. Kristensen, "Chinese Nuclear Missile Upgrade Near Dalian," *FAS Strategic Security Blog*, May 21, 2014, <https://fas.org/blogs/security/2014/05/dengshaheupgrade/>

^{bb}Rumored new location first suggested by Ben Reuter and listed by Decker Eveleth in 2023. DOD does not list a PLARF brigade base in this area but continues to list one in the Dengshahe area and added a second PLARF base north of Dalian.

^{cc}Location highly uncertain. 656 Brigade is rumored in Laiwu to the east, which already has 653 Brigade.

^{dd}The brigade probably has 4-5 silos plus possibly decoy silos.

^{ee}Some place 661 Brigade HQ in Lingbao to the north (34.5166, 110.8619), which might be training unit.

^{ff}Potential silos are located around Shecunzhen to the east.

^{gg}Major HQ upgrade began in 2020 and finished in 2022.

^{hh}664 Brigade is sometimes said to be located in Luoyang (34.5966, 112.4386), but that facility appears to be a rail transfer point without the infrastructure normally associated with a TEL brigade base. Instead, Xingyan was rumored as in 2021 to be the new 664 Brigade area. @ljsxank, tweet March 3, 2021, <https://twitter.com/ljsxank/status/1367307966794190856>. This is still unconfirmed.

ⁱⁱDOD indicate a PLARF brigade base in Weihui. A large new base was completed there in 2022 with infrastructure that could potentially indicate DF-26.

^{jj}Chanzhi was rumored in 2021 to be new location for 665 Base. @ljsxank, tweet February 11, 2021, <https://twitter.com/ljsxank/status/1359757617107591169>.

^{kk}The base includes a large highbay building and two rows of 20-meter deep garages that could potentially fit DF-26 TELs but the layout doesn't match other DF-26 bases.

^{ll}The base is located near the 661 Brigade area and could potentially be part of that unit.