

China's People's Liberation Army Navy Modernization



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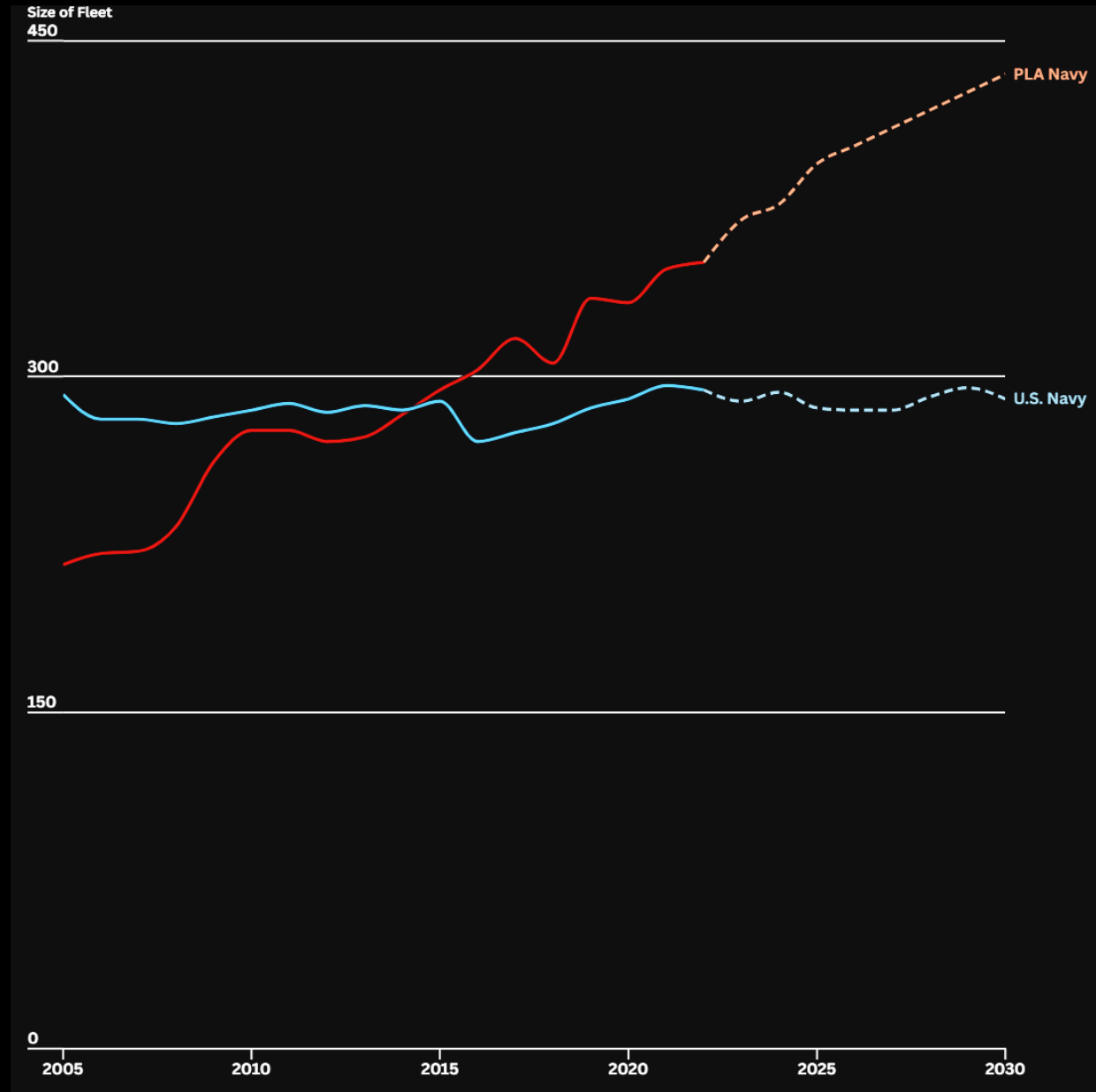


Key Take-Aways

- PLA Navy growth fueled by more shipbuilding capacity than the rest of the world combined
 - China has the largest navy in the world... and growing
 - Between 2021-2026, China produced more nuclear-powered submarines than the U.S.
- In 2026, China transitioning to production of fewer but larger, more complex, more capable combatants
- PLA Navy basing infrastructure improvements are a leading indicator of continued growth
- Volume and complexity of integrated strike weapons systems continues to grow



U.S. Navy vs. PLA Navy Fleet Size (by hulls)



Matthew P. Funaiolo et al, "Murky Waters: Navigating the Risks of China's Dual Use Shipyards," CSIS, March 25, 2025



Chinese Weapons Development, 1990-2020

Approximate dates systems became operational

Red - Soviet/Russian
Blue - Western
White - Chinese

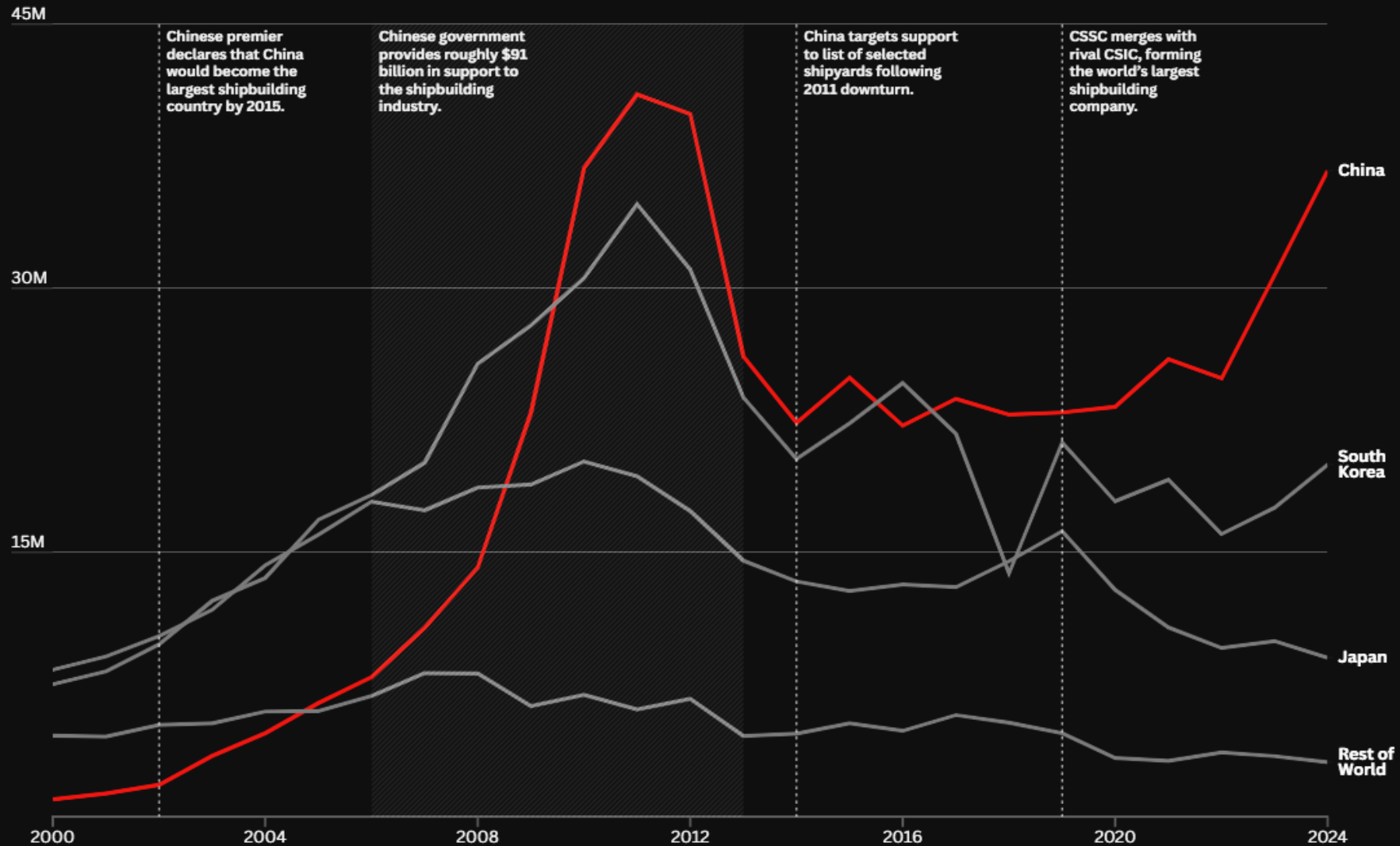
Major Chinese Weapons Systems 1990

	Gulf War 1991	2000	2010	2020
Submarines				
Type 091 (Han) SSN (4)		⊙ Project 877/636 (Kilo) SS (12)	⊙ Type 093 (Shang) SSN (2)	⊙ Type 093A/B (Shang) SSN (4)
Type 035 (Ming) SS (6)				
Type 033 (Romeo) SS (~30)		⊙ Type 039 (Song) SS (13)	⊙ Type 039A (Yuan) SSP (20)	
Surface Ships				
Type 051 (Luda) DDG (15) (Kotlin-class design)		⊙ Type 051B/C (Luhai) DDG (3)	⊙ Type 001 (Liaoning) CV	⊙ Type 002 CV
Type 053 (Jianghu) FFG (26)*		⊙ 956E/EM (Sovremenny) DDG (4)	Type 055 (Renhai) CG (1+7)	⊙
Type 065 (Jingnan) FF (5)* (*Grisha-class design)		⊙ Type 052 (Luhu) DDG (2).....	⊙ Type 052B/C (Luyang I/II) DDG (8)	⊙ Type 052D (Luyang III) DDG (16+9)
PTG (200+) (incl. Osa-class)		(Western sub-systems)	⊙ Type 054/A (Jiangkai) FFG (30)	⊙ Type 056 (Jiangdao) FFL (58+12)
PT (500+)		Type 022 (Houbei) PTG (60) ⊙	⊙ Type 071 (Yuzhao) LPD (8)	Type 075 (Yushen) LHD (+3) ⊙
Type 072 (Yukan) LST (3)		⊙ Type 908 (Fusu) AOR (1)	⊙ Type 903A (Fuchi) AOR (7) ⊙	⊙ Type 901 (Fuyu) AOE (2)
Type 905 (Fuqing) AOR (2)		Type 903 (Fuchi) AOR (2)		
Anti-Ship Cruise Missiles & Anti-Radiation Missiles				
		⊙ 3M-54E (SS-N-27B) (120 NM)	⊙ YJ-18 (290 NM)	
HY-2 / YJ-6 (SS-N-2) (54 NM)	⊙ YJ-61 (108 NM)	⊙ YJ-62 (incl. AS-15 and Tomahawk tech) (151 NM)		
YJ-8/-81/-82 (France Exocet) (23 NM)	⊙ YJ-83 (97 NM)	⊙ Kh-31P (YJ-91) (AS-17 ARM) (59 NM)		
		⊙ 3M80MVE (SS-N-22) (130 NM)	⊙ YJ-12 (250 NM)	

Over a dozen new
classes of
battle force
ships in 20 years

The Rise of China's Shipbuilding Industry

Annual Shipping Production (GT)

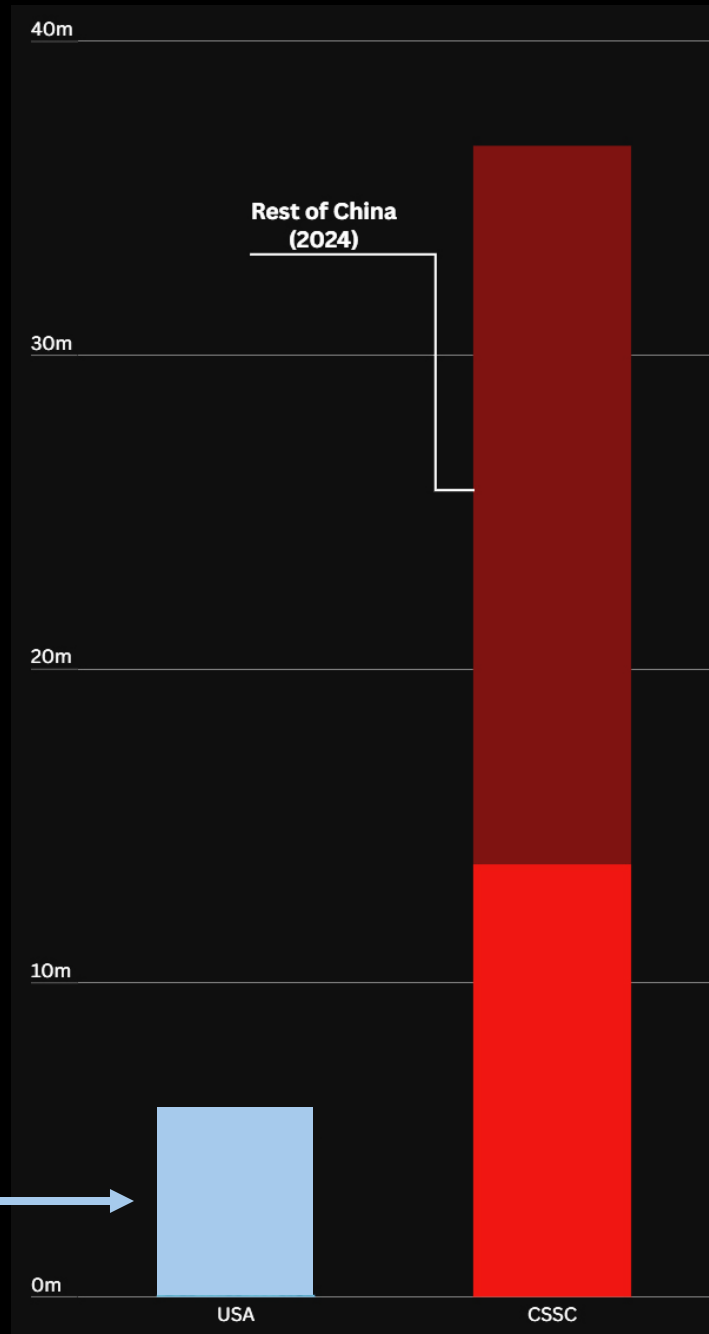


Source: Authors' research and S&P Global Sea-web.

Matthew P. Funaiolo et al, "Murky Waters: Navigating the Risks of China's Dual Use Shipyards," CSIS, March 25, 2025

U.S. vs. China Shipbuilding 2024 (Gross Tons)

U.S. shipbuilding
production since the
end of World War II



China
shipbuilding
in 2024

Matthew P. Funairole et al, "Murky Waters:
Navigating the Risks of China's Dual Use
Shipyards," CSIS, March 25, 2025
(Figures in millions of gross tons)

Global Commercial Shipbuilding in 2024

The U.S. accounts for
0.1% of global shipbuilding



Others
4.4%

Japan 13.1%

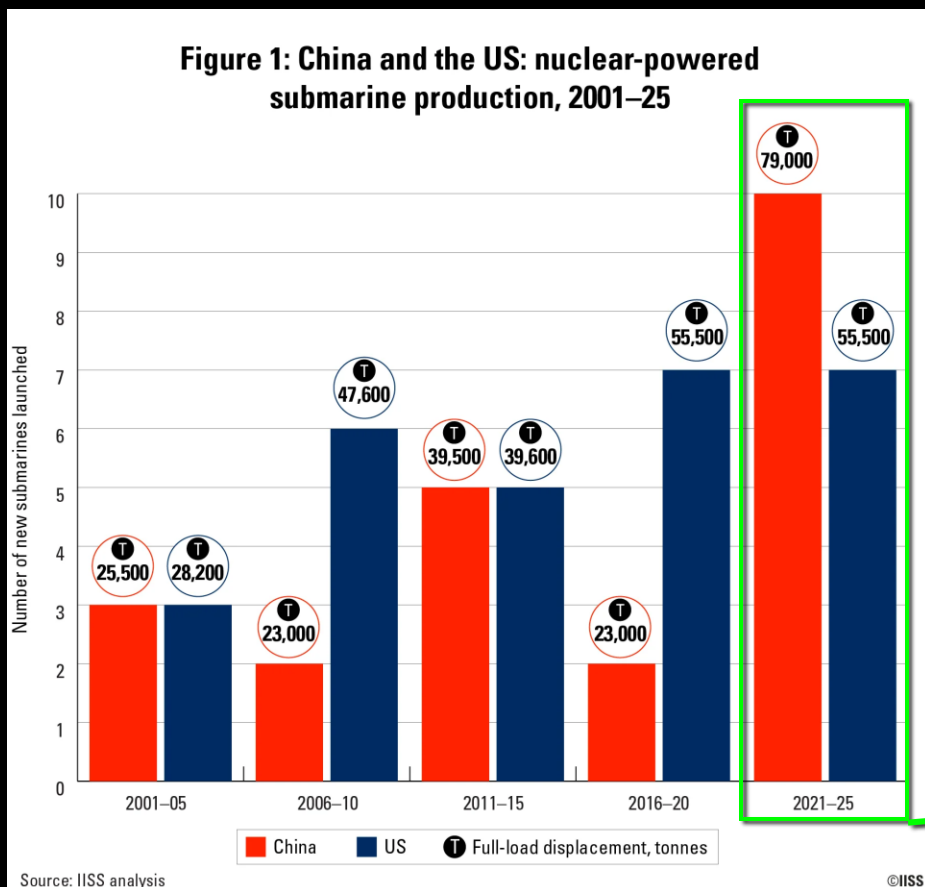
South Korea 29.1%

China 53.3%

 = ~69k gross tons

Matthew P. Funaiolo et al, "Ship Wars:
Confronting China's Dual-Use Shipbuilding
Empire," CSIS, March 2025

U.S. vs. China Submarine Construction

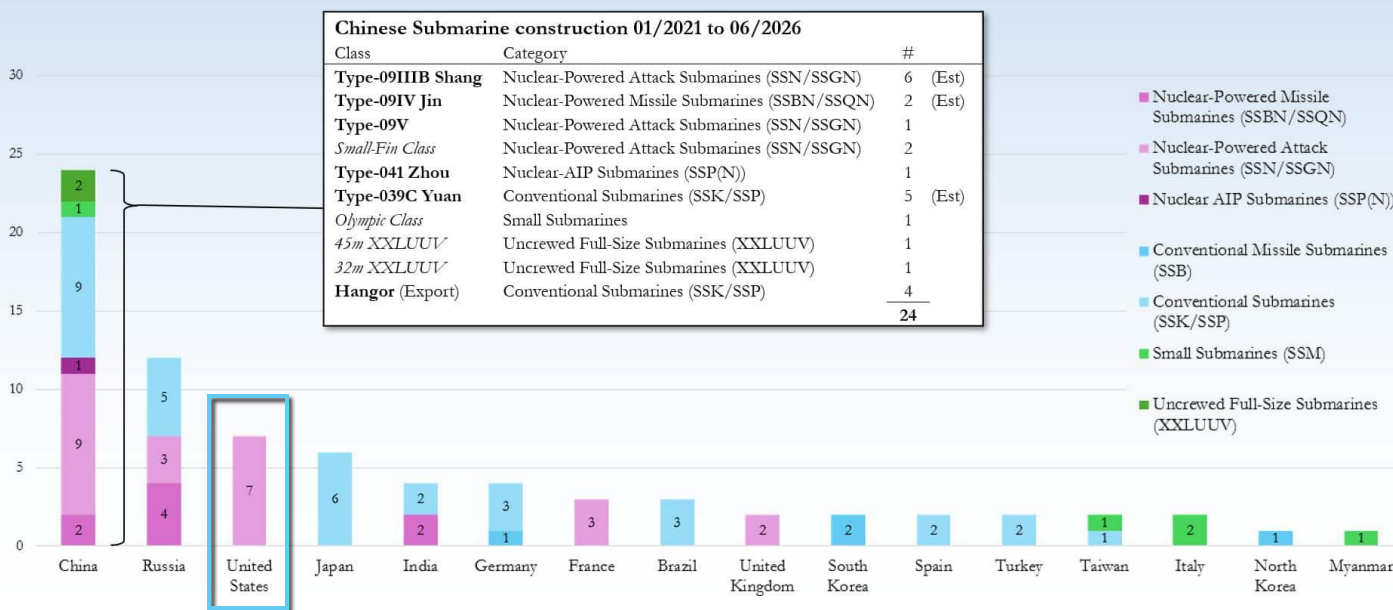


Henry Boyd, "Boomtime at Bohai: China Ramps Up Submarine Production," IISS Military Balance Blog, February 16, 2026

World Submarine Construction, past 5 years

Submarines launched from 01/2021 to 06/2026

H I Sutton, 2026



H.I. Sutton, "China Now Leads World Submarine Construction," *Naval News*, June 24, 2026

Huludao, China

40°42'54"N 120°59'51"E

15 July 2026

← Type 095 SSN

PLA Navy numbers driven by high-volume production of smaller combatants with mature designs



2026 – Transition to production of fewer but larger, more complex, and more capable combatants



Maxie Naval Base
Zhanjiang, China
21°12'13" N 110°25'41"E
01 June 2026

Type 076 LHA →

Type 075 LHD →



planet.

Longxue Shipyard
Guangzhou, China
22°42'16"N 113°38'42"E
07 August 2026



planet.

Longxue Shipyard
Guangzhou, China
22°42'16"N 113°38'42"E
07 August 2026

Type 901 AOE

CV-16
Type 001 CV

Type 901 AOE

Google Earth
Image © 2026 Airbus

planet.

Dalian Shipyard
Dalian, China
38°56'09"N 121°36'47"E
31 July 2026

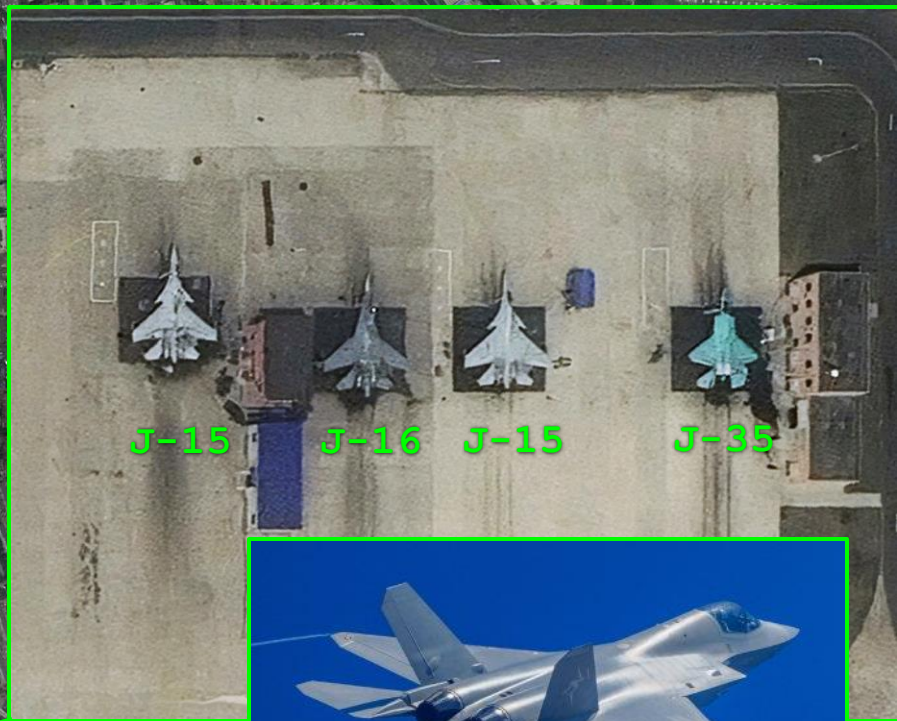
← Type 004 CV/CVN

Type 004 CV/CVN

planet

头条 @异域风趣

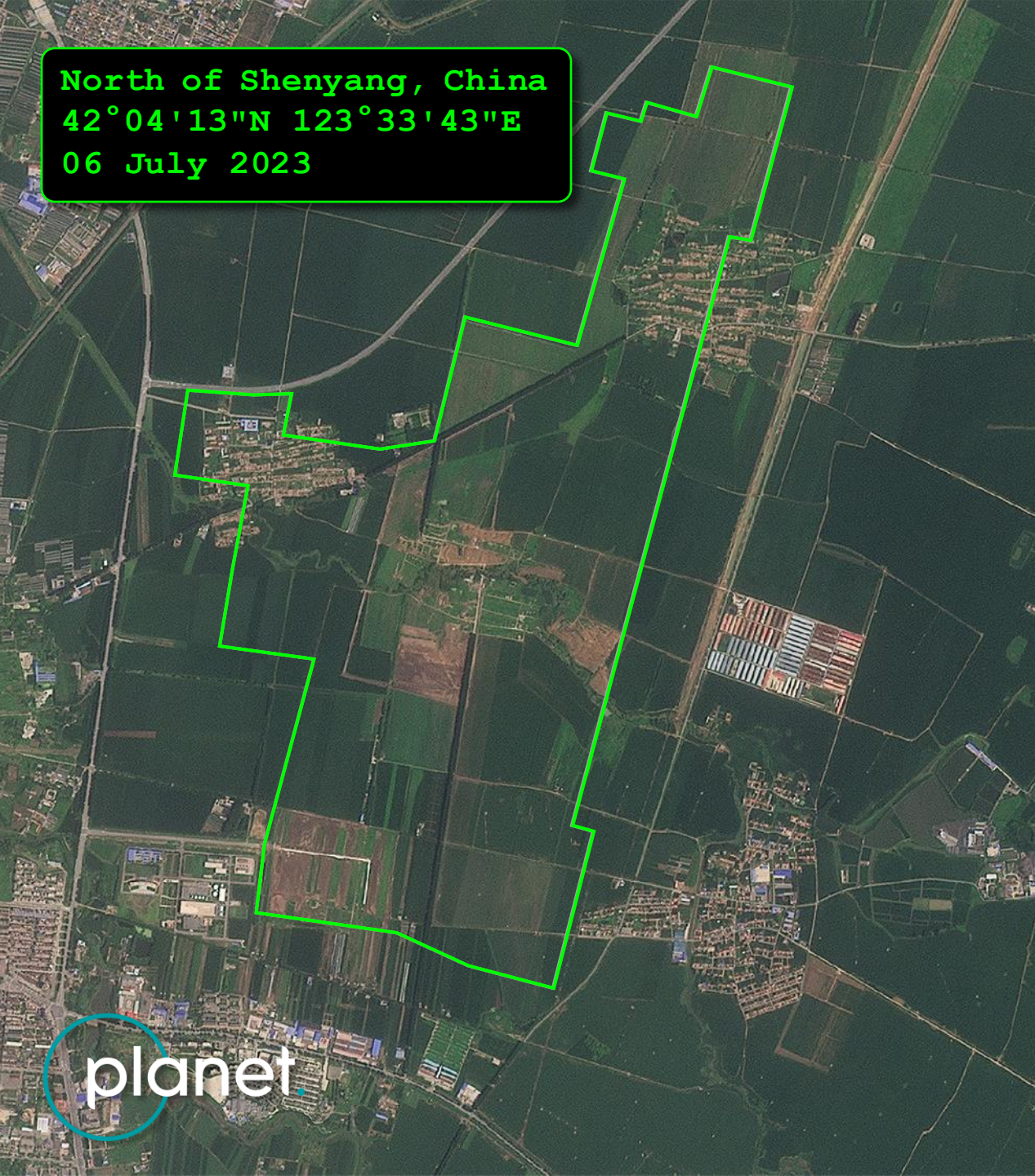
AVIC Shenyang Aircraft Corporation (SAC)
41°52'12"N 123°26'22"E



 Aircraft manufacturing space completed 2023
~500,000 sq. ft.

North of Shenyang, China
42°04'13"N 123°33'43"E
06 July 2023

planet



North of Shenyang, China
42°04'13"N 123°33'43"E
06 July 2023

The image is a satellite view of a rural landscape with a grid of agricultural fields. A green outline highlights a large, irregularly shaped area in the center-right. Within this area, there are some small clusters of buildings and a road. The surrounding area is mostly green fields with some scattered buildings and roads.

planet



8 August 2026

This is a satellite image of an industrial facility, likely an aircraft production plant. A green outline highlights the main building complex, which includes several large, white, rectangular structures. To the right of the main complex, there is a long, narrow, light-colored area that appears to be a runway or taxiway. The surrounding area is a mix of industrial buildings, roads, and some green space.

New AVIC Aircraft
Production Facility
~ 4 million sq. ft.
manufacturing space

Yuchi Naval Base
Qingdao, China
35°43'26"N 119°59'50"E
09 January 2025



Yuchi Naval Base
Qingdao, China
35°43'26"N 119°59'50"E
31 July 2026





Yulin Naval Base
Sanya, Hainan, China
18°12'01"N 109°33'08"E
December 2022

A satellite image of the Yulin Naval Base in Sanya, Hainan, China. The base is situated on a peninsula, with a large harbor area in the center. The harbor is filled with numerous ships, including several large cargo ships and smaller vessels. The base itself is a complex of various structures, including buildings, roads, and parking areas. The surrounding area is mostly green, with some residential or commercial buildings visible on the right side. The image is overlaid with a green outline that defines the base's perimeter. In the bottom left corner, there is a black box with white text providing the base's name, location, coordinates, and the date of the image.

Yulin Naval Base
Sanya, Hainan, China
18°12'01"N 109°33'08"E
22 January 2025



Yulin Naval Base
Sanya, Hainan, China
18°12'01"N 109°33'08"E
17 July 2026

Anhui, China
PLARF 611 Brigade
DF-26 Missile Base
30°41'20"N 117°54'06"E

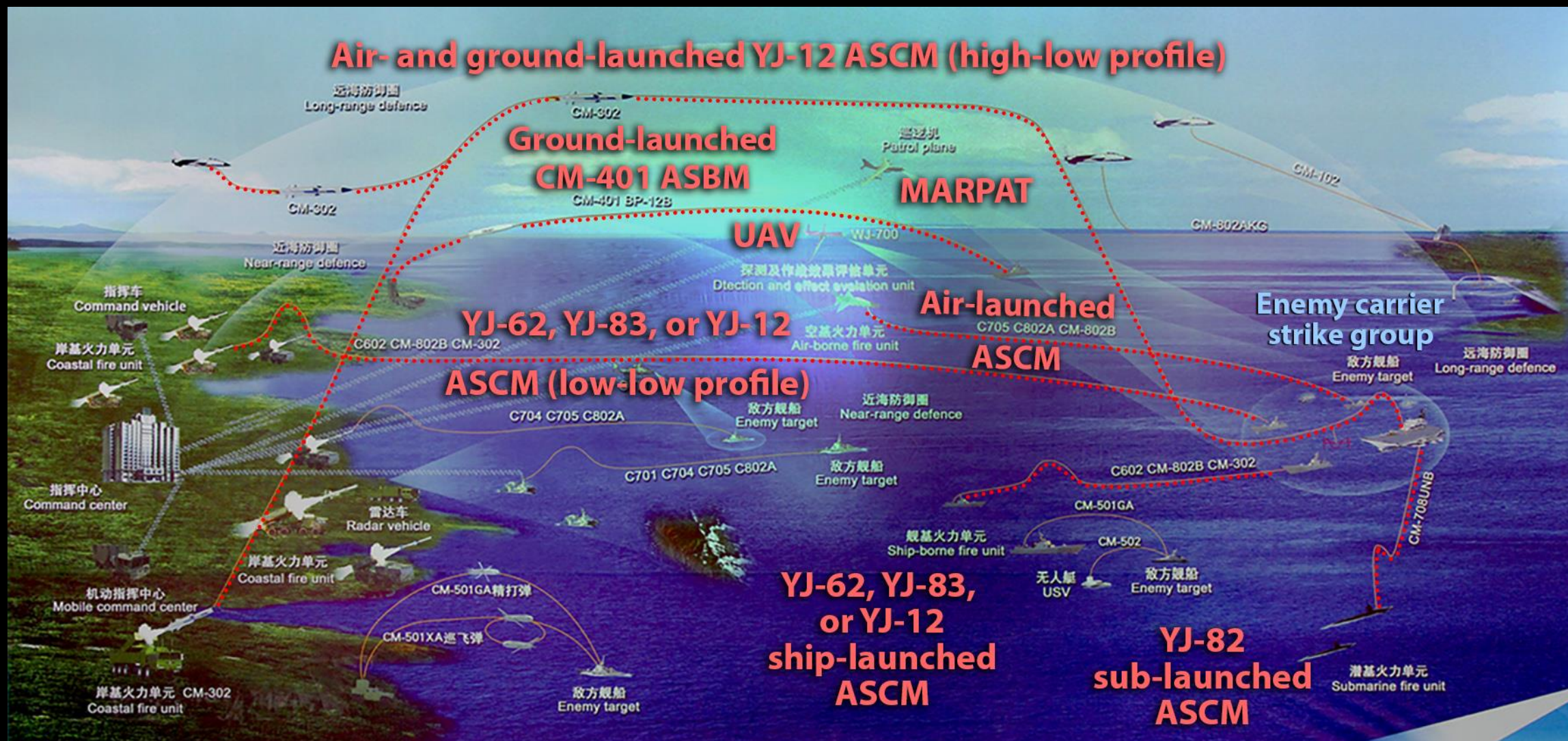


DF-26 Intermediate-Range Ballistic Missile
(Anti-Ship or Land Attack Variant)

Estimated time of flight:

- Guam - 17 minutes (+/- 2 minutes)
- Okinawa - 8-9 minutes (+/- 1 minute)

Complex Integrated Attacks



Complex integrated attacks overwhelm adversary C4ISR and countermeasures (2018 CASIC Graphic)

Ship-Launched Anti-Ship Ballistic Missile



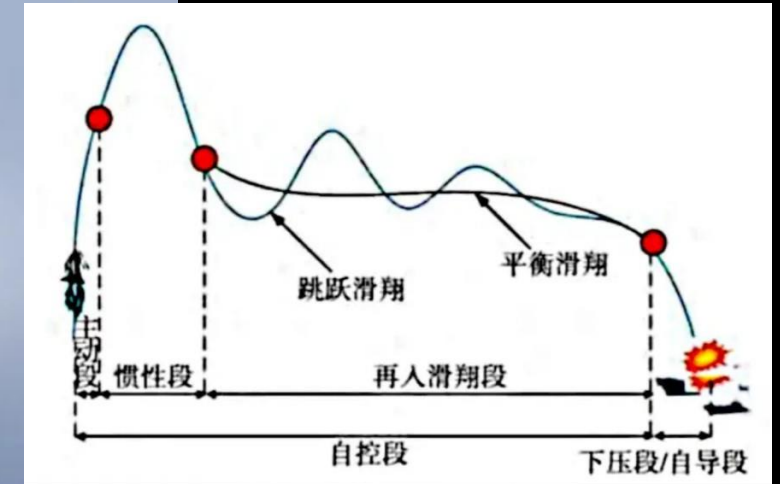
Purported ASBM launch from Type 055 Renhai CG (April 22)



YJ-20 featured in military parade (September 2025)



YJ-20 launch from Type 052D DDG (July 2026)



本图由 [tiger2004] 上传至超大军事

Maneuvering Re-entry Vehicle (MaRV)
warhead

PLARF Ruoqiang Missile Test Range
Taklamakan Desert, Xinjiang, China
38°41'49"N 87°37'48"E

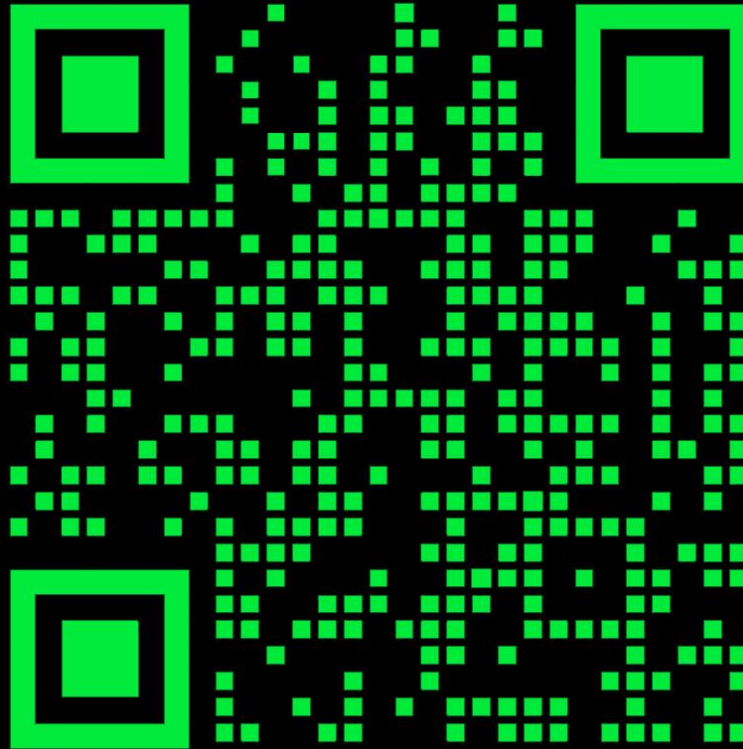


PLARF Ruoqiang Missile Test Range
Taklamakan Desert, Xinjiang, China
38°41'49"N 87°37'48"E

Full-scale 3D mock-up of
Arleigh Burke-class DDG
constructed early-2026

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<https://www.mitchellaerospacepower.org/china/>