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By Eric Tegler Sep 27, 2016

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For nearly sixty years, U.S. Navy fighters have launched from aircraft carrier decks with steam-powered catapults. These catapults were created for carriers because they can safely accelerate large aircraft with big payloads. Catapult-Assisted Take-Off But Arrested Recovery (CATOBAR) operations soon became the norm for the U.S. Navy and a handful of its allies.

Now China is looking to get in on the action. Growing evidence suggests that the People's Liberation Army (PLA) Navy is mimicking the U.S. Navy's launch methods, and the change could have big ramifications for the western Pacific.

ALTHOUGH COST-EFFICIENT, CHINA CAN'T MATCH THE US NAVY'S ABILITY TO LAUNCH A RANGE OF LARGE HEAVY COMBAT AND SUPPORT AIRCRAFT.

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Although powerful, the CATOBAR system expensive. So several navies—including Britain, Russia, Spain, and India—have adopted a similar but cheaper launch system called Short Take-Off But Arrested Recovery (STOBAR) for chucking planes airborne. Britain's *Invincible*-class carriers developed in the 1970s, for instance, had a 7 to 12-degree ski-jump on the edge of the forward deck. This allowed Hawker Sea Harriers to accelerate up the ramp under their own power.

China operates a former Russian aircraft carrier (*Liaoning*, formerly *Varyag*) which it purchased in 1998. This vessel uses STOBAR, and while it's cost-effective, it means China can't match the U.S. Navy's ability to launch a range of large heavy combat and support aircraft. But fresh rumors point to the Chinese developing their own CATOBAR operations for aircraft carriers, as well as testing facilities that ape the U.S. Navy's.

Possible confirmation of China's new launch plans come from a variety of sources, including photos from mid-September of a Shenyang J-15 Flying Shark carrier-borne fighter. Attached to the fighter is what looks like a catapult "launch bar" on its nose wheel, which hooks up to the catapult during launch.

USNI News also published [airborne photos of a launch bar-equipped J-15 last week](#), sourcing a Chinese-language website. These images join others published in 2014 by *IHS Jane's 360* of a launch bar-equipped J-15 on the ground. USNI News says the J-15 may be one of six original prototypes modified with the launch bar, or it may be a new-build aircraft. The Flying Shark is based on the Russian Sukhoi Su-33 carrier fighter but equipped with Chinese radar and weapons systems.

Whether the J-15 in the photos flies with Russian or Chinese engines, however, is a matter of speculation but *USNI News* thinks that the fighter is likely one of a small group of J-15s that will be tested at China's land-based CATOBAR facility. [Satellite imagery](#) shows that the facility has been under construction at Huangdicun Airbase in Liaoning Province since late 2014 or early 2015.

Analysts also think there are two 460-foot-long catapults under construction on the northeastern corner of the same airbase. One of the catapults appears to be a conventional steam catapult, and the other an equivalent to the Navy's Electromagnetic Aircraft Launching System (EMALS). If so, China is building a rough equivalent of the U.S. Navy's land-based carrier deck testing facility at Joint Base McGuire-Dix-Lakehurst in New Jersey.

The building complements ongoing construction by China Shipbuilding Industry Corporation on the [country's second \(and first indigenously-produced\) aircraft carrier](#). The new aircraft carrier will have a ski-jump like the *Liaoning* and aircraft will takeoff under their own power. However, this design limits the carrier's options for carrying larger aircraft. So CATOBAR will likely not be present on China's upcoming carrier [but might be on its next one](#), currently called Type 002.

The Chinese PLA Navy wants these aircraft to expand the capability of its



The Nintendo Switch Was Hiding In Plain Sight All Along

carrier air wings and its status as the power in the western Pacific. A launch-bar equipped J-15, as well as CATOBAR testing facilities, demonstrates that China's goal could be coming into focus.

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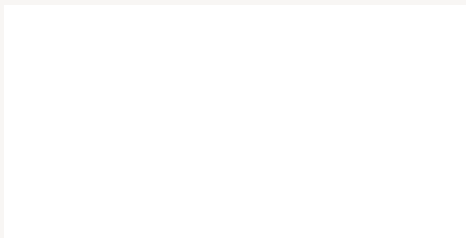
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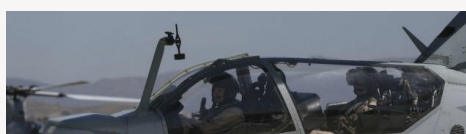
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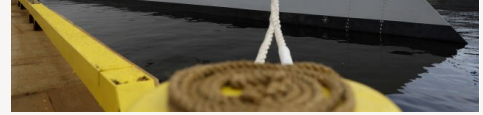




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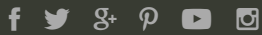
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