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### **CMSI Note #12: Finally, A PLA Navy Missile Gap?**

Ian Easton

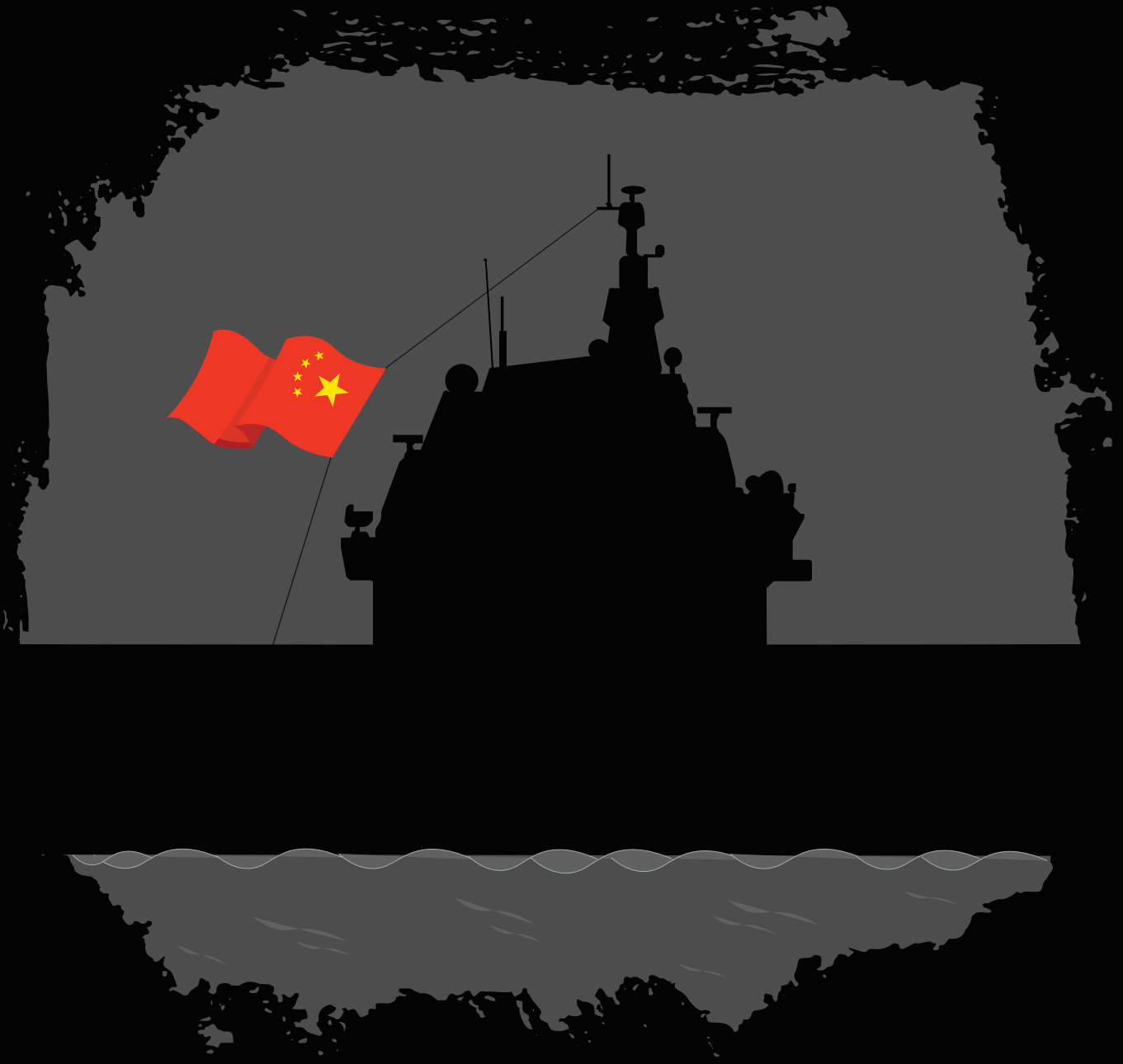
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# NOTES: 12



Finally, A PLA Navy Missile Gap?



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## CMSI NOTE #12 /// 20 February 2025

### Finally, A PLA Navy Missile Gap?

Ian Easton<sup>1</sup>

This month a PRC government-owned defense magazine published a special report on one of the U.S. Navy's newer missiles, calling it a "huge threat" and predicting it will "massively change" the future of naval warfare. The missile? The AIM-174B, an air launched variant of the Navy's Standard Missile 6 (SM-6).<sup>2</sup> What is it about this weapon that warranted a special report by PRC experts?

#### CMSI's Perspectives and Key Takeaways:

- A PRC government-owned defense magazine has called the U.S. Navy's AIM-174B missile a "huge threat" and game-changer for the future of naval warfare.
- The PRC source says the American missile could shoot down high-value assets at "a shocking distance", possibly causing the PLA's operational system to "verge on collapse."
- Some defense experts in China believe the U.S. Navy fielded a weapon system that could undermine the PLA Navy's ability to achieve air and sea control.

#### Background:

In February 2025, a PRC government-owned defense publication, *Weapons Magazine* [兵器], published a 23-page article on the U.S. Navy's SM-6 missile system.<sup>3</sup> The special report, entitled "The World's First All-Purpose Missile: The SM-6 Brings a Total Transformation to the U.S. Navy's Operational System," analyzes in detail the history of the SM-6 missile, noting how specialized variants of the weapon can conduct air defense, ballistic missile defense, anti-ship, and land-attack missions.<sup>4</sup> Most notably, the report focuses on the AIM-174B, an air launched variant of the "all purpose" SM-6 missile, which the author predicts is going to be a game-changer for the future of naval warfare.<sup>5</sup>

The *Weapons Magazine* special report comes amid a raft of PRC articles examining this new weapon system. On July 5, 2024, a U.S. Navy spokesperson first acknowledged the existence of the AIM-174B missile and revealed it was already operational and in the fleet.<sup>6</sup> The revelation triggered a strong reaction by China's highly-censored media, with some online commentators debating the future survivability of the PLA Navy's J-16 fighter, the PLA Air Force's KJ-500 airborne early-warning and control aircraft, and even the PLA Rocket Force's "assassin mace" weapons.<sup>7</sup>

What follows are selected excerpts of the special report:

"The AIM-174B designator means that the U.S. military will use it as an air-to-air missile. This indicates the U.S. Navy's carrier-based fighters have once again acquired super long-ranged air-to-air firepower after previously decommissioning the F-14 *Tomcat* fighter plus the AIM-54 *Phoenix* air-to-air missile combo. Even more importantly, the AIM-174 air-launched *Standard-6*

missile could now very well be the longest-range air-to-air missile in the world. This special capability, when combined with its other multiple purposes and multiple applications, will massively change the current attack-defense model of war at sea. And in the future, it will very naturally influence the state of air warfare—There’s reason to believe the U.S. Air Force has a very strong interest in the AIM-174. If this type of air-to-air missile soon appears under the wings of their F-15s and F-16s, and in the weapons bays of their B-2s, B-21s, B-1Bs and B-52s, it will not be surprising in the least...”<sup>8</sup>

“Originally, F/A-18E fighters could stay on patrol for 125 minutes up to 270 kilometers from their carriers, carrying 3 external fuel tanks and 6 AIM-120 “AMRAAM” missiles. If they were refueled once, this range could be extended out to 370 kilometers. A fighter radius of 370 kilometers plus the AIM-120 missile’s range of 160 kilometers equals 530 kilometers. If that fighter is instead armed with the air-launched variant of the SM-6, its effective radius goes up to 870 kilometers or more. This is a shocking distance. Basically, it allows them to shoot down the other side’s [bombers] before they can launch their anti-ship missiles.”<sup>9</sup>

“Even more importantly, by using ... this super long-range air-to-air missile, they can pose a huge threat to the other side’s high value targets flying in rear areas, such as early-warning planes, aerial refueling tankers, and bombers. Because the ability of these targets to maneuver is limited, once an SM-6 is locked on them, it will be very difficult to escape. If these critical targets are destroyed, the other side’s operational system will verge on collapse.”<sup>10</sup>

### **Implications:**

While this PRC publication is not authoritative, it suggests that some defense experts in China believe the U.S. Navy has fielded a weapon system that could undermine the PLA Navy’s ability to achieve air and sea control. Could Xi Jinping’s intelligence services have been surprised by the sudden appearance of the AIM-174B and troubled by its implications?<sup>11</sup> Such an embarrassment might make thoughtful minds in the PLA wonder: Could previously unknown American weapons suddenly emerge on a future Western Pacific battlefield?

### **Conclusions:**

For the past two decades, the PRC has built up its military with an unwavering focus on attaining the ability to successfully invade and occupy Taiwan, while concurrently deterring, delaying, or defeating the United States in that scenario. China’s aggressive buildup has produced a series of technological breakthroughs. These included (but were certainly not limited to), the PLA’s successful development of anti-satellite weapons, anti-ship ballistic missiles, and hypersonic missiles. Simply put, the PLA has been fielding state-of-the-art weapons systems that have the potential to destabilize the Indo-Pacific region. When combined, the PLA’s growing surface fleet, carrier-killing kill webs, and anti-access bubbles appeared to presage an attempt to attain air and sea control. Now, thanks to this “all purpose” American missile, Beijing’s confidence might have been shaken.<sup>12</sup>

*The views expressed or implied within are solely those of the author and do not necessarily represent the views of the U.S. Naval War College, the Department of the Navy, the Department of Defense, or any other U.S. Government entity.*

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<sup>1</sup> Ian Easton is an associate professor at CMSI. The author thanks Chris Sharman, Ryan Martinson, Chris Carlson, and Dan Leonard for invaluable inputs. Special thanks are owed to Dan Caldwell, who discovered the special report, flagged it for further analysis, and reviewed this note.

<sup>2</sup> “世界首款全能导弹 – “标准“-6 带来的美国海军作战体系全面变革” [The World’s First All-Purpose Missile: The SM-6 Brings a Total Transformation to the U.S. Navy’s Operational System], 兵器 [Weapons Magazine], February 2025 (No. 309), pp. 69-92.

<sup>3</sup> This article is a special edition cover story focused on the SM-6, and especially its AIM-174 air-to-air variant. The source is a PRC defense industry publication managed by 中国兵器工业集团公司 [China Ordnance Industries Group Corporation, also known internationally as NORINCO Group]. This state-owned company is one of the largest defense contractors in the world. It conducts defense projects and manufactures weapons for the PLA and conducts international arms deals for the PRC government. The author is writing under the English pen name, Walker. He signs each article “W”.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid., p. 71.

<sup>6</sup> Carter Johnston, “U.S. Navy Confirms SM-6 Air Launched Configuration is ‘Operationally Deployed,’” *Naval News*, July 5, 2024, at <https://www.navalnews.com/naval-news/2024/07/u-s-navy-confirms-sm-6-air-launched-configuration-is-operationally-deployed/>.

<sup>7</sup> 王笑梦 [Wang Xiaomeng], “新弹亮相” [New Missile Revealed], 中国解放军报 [PLA Daily], July 9, 2024, at [http://www.81.cn/szb\\_223187/gfbszbxq/index.html?paperName=zggfb&paperDate=2024-07-09&paperNumber=04&articleid=934794](http://www.81.cn/szb_223187/gfbszbxq/index.html?paperName=zggfb&paperDate=2024-07-09&paperNumber=04&articleid=934794); 解放军的杀手锏失效？美媒称美军研制新导弹，会让中国大吃一惊 [Has the PLA’s Assassin’s Mace Failed? U.S. Press Says American Military Has Developed New Missile, Will Shock China], 搜狐 [Sohu News], August 4, 2024, at [https://www.sohu.com/a/798419016\\_121738288](https://www.sohu.com/a/798419016_121738288); 邵丰顺 [Tai Fengshun], “不死鸟”的后代：漫谈美海军列装新超远程空空导弹 [Next Generation “Phoenix”: A Long Discussion on the U.S. Navy’s Deployment of New Super Long-Range Air-to-Air Missile], 澎湃新闻 [The Paper], August 21, 2024, [https://www.thepaper.cn/newsDetail\\_forward\\_28465119](https://www.thepaper.cn/newsDetail_forward_28465119); and 邵丰顺 [Tai Fengshun], “不死鸟”的后代：漫谈美海军列装新超远程空空导弹（下） [Next Generation “Phoenix”: A Long Discussion on the U.S. Navy’s Deployment of New Super Long-Range Air-to-Air Missile, Part Two], 澎湃新闻 [The Paper], August 22, 2024, at [https://www.thepaper.cn/newsDetail\\_forward\\_28465286](https://www.thepaper.cn/newsDetail_forward_28465286); and 乐乐 [Le Le], “美军又整狠活！一机挂 9 枚空空导弹，还有 AIM-174，歼-16 能行吗？” [The U.S. Military is Totally Ruthless Again! One Jet Carries 9 Air-To-Air Missiles, Plus AIM-174, Can the J-16 Work?], 腾讯网 [Tencent News], September 19, 2024, at <https://news.qq.com/rain/a/20240919A02GZY00>.

<sup>8</sup> “The World’s First All-Purpose Missile: The SM-6 Brings U.S. Navy Totally Transformative Operational System,” p. 71.

<sup>9</sup> Ibid., p. 90.

<sup>10</sup> Ibid.

<sup>11</sup> This is likely an unknowable question and certainly one we cannot answer based on the limited sources available. We can, of course, still speculate that PRC intelligence didn’t know the missile was being developed, or that they knew and were surprised it was fielded more rapidly than they had believed it would be. If so, they may be seeking ways to return American development timelines back to what they perceived to be an acceptable pace.

<sup>12</sup> Tyler Rogoway, “AIM-174 Missile Brings Navy’s Future Counter-China Air Combat Strategy Into Focus,” *The War Zone*, July 9, 2024, at <https://www.twz.com/air/disclosure-of-new-aim-174b-missile-brings-navys-future-air-to-air-strategy-into-focus>.