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### *China's Second Ballistic Missile Defense Test: A Search for Strategic Stability*

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On January 27, 2013, China conducted its second ground-based mid-course ballistic missile defense (BMD) test. The test involved the use of a ground-based missile to intercept a ballistic missile during its flight outside the atmosphere. The success and exact nature of the test could not be independently verified, but the Chinese Ministry of National Defense stated that it had achieved its planned goals and that the test was defensive in nature and not directed at any country.<sup>1</sup> This second test came one day after the United States conducted a similar test of its missile defense system known as Ground-Based Midcourse Defense (GMD). Although the Chinese government has released little information on its missile defense policy, Chinese commentators see China's periphery as inherently unstable, and China as surrounded by no real friends and a U.S. military able and willing to threaten Chinese interests. The commentators argue that a Chinese BMD system provides a counter to the region's numerous ballistic missile threats as well as a deterrent capability against U.S. counterspace weapons. As a result, Chinese commentators see the BMD program as a strategically stabilizing hedge against an uncertain and potentially dangerous future.

#### *Missile Defense or ASAT Test*

China's first BMD test was conducted on January 11, 2010. That test, too, was a midcourse test, and was followed by a nearly identical statement that the test was defensive in nature and was not directed at any country.<sup>2</sup> The 2010 test was preceded by China's 2007 ASAT (anti-satellite) test, which resulted in the destruction of an aging Chinese weather satellite and created more than 2,000 pieces of space debris. That test received international condemnation for polluting the space environment and caused concern over the nature of Chinese decision-making when it became apparent that the Chinese Ministry of Foreign Affairs had no knowledge of the event.<sup>3</sup>

In fact, the technologies associated with midcourse BMD technologies are so similar to direct ascent kinetic kill ASAT technologies that they provide an inherent counterspace capability. But because interceptions during the mid-course phase take place at such low altitudes outside the earth's atmosphere, any debris produced by the interception quickly returns to earth. The utility of midcourse BMD technologies for counterspace operations was demonstrated in 2008 when the United States used an SM-3 missile interceptor to destroy an errant satellite.

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1 “中国在境内进行陆基中段反导拦截技术试验” [China Conducts Ground-based Midcourse Missile Defense Interception Test Within Its Own Territory], Chinese Ministry of National Defense website, January 27, 2013, [http://www.mod.gov.cn/wqzb/2013-01/27/content\\_4430407.htm](http://www.mod.gov.cn/wqzb/2013-01/27/content_4430407.htm).

2 “我国试验陆基反导 此前仅美国进行过相关试验” [Our Country Tests Ground-based Missile Defense U.S. Conducts Similar Test Previously], January 12, 2010, <http://mil.news.sina.com.cn/2010-01-12/0247580308.html>.

3 See Kevin Pollpeter, “Motivations and Implications Behind China's ASAT Test,” China Brief, January 10, 2007.

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The January 27 test was not a complete surprise. In October the Ministry of National Defense issued a technically accurate statement denying media reports that it was planning an ASAT test in November,<sup>4</sup> and in January Gregory Kulacki, senior analyst at the Union of Concerned Scientists, reported that an announcement about an ASAT test had been circulated within the Chinese government in November.<sup>5</sup> Later in January, China appeared to admit that some sort of test was forthcoming. The English language *People's Daily Online* carried an interview with Senior Colonel Shao Yongling from the PLA Second Artillery Command College, who stated that “China has always demonstrated a responsible attitude in the field of space activities and will not recklessly carry out such tests that will injure others as well as do harm to ourselves.”<sup>6</sup>

The interception appears to have taken place over Xinjiang. Video of the night sky purportedly shot in Xinjiang on January 27 and posted on the web apparently captured the moments just after the interceptor struck the incoming warhead.<sup>7</sup> In addition, several Chinese netizens near the central Xinjiang city of Korla reported seeing an “unidentified flying object” at around 8:00 p.m. on January 27.<sup>8</sup>

The timing of the test, conducted just a day after the U.S.’s GMD test, continues a trend of coincidental Chinese weapons tests. In 2011 China made public a test flight of the J-20 fighter aircraft during a visit by Defense Secretary Robert Gates and in 2012 it unveiled the J-31 during a visit by Defense Secretary Leon Panetta. The test, if timed to the U.S. test, would serve to remind the international community, especially the United States, that China is not alone in developing BMD technologies. Some Chinese military analysts, however, state that such tests are too complicated to purposefully coincide with other events. One analyst has another take, accusing the United States of conducting its test to coincide with the Chinese test.<sup>9</sup>

Chinese commentators agree that this second test signals that China’s missile defense technologies have dramatically improved, or even achieved, their initial operational capability. Second Artillery Engineering Institute professor Song Zhongping stated that “[t]he success of this missile defense test means that China has already successfully resolved the issues of upper atmosphere target identification and tracking and terminal guidance issues and that its mid-course missile defense technology is at the forefront of world technology.” At the same time, Chinese commentators note that China has conducted just two tests and is still far behind the United States. Many more issues need to be addressed, including improving the systems accuracy and reaction time, its resistance to electromagnetic jamming, and its ability to intercept multiple warheads.<sup>10</sup> Moreover, for a mid-course interceptor system to be truly effective, it needs to be supported by a capable C4ISR (command, control, communications, computer,

4 “China Dismisses Reports About Anti-satellite Missile Test,” Xinhua, October 25, 2012, [http://news.xinhuanet.com/english/china/2012-10/25/c\\_131930383.htm](http://news.xinhuanet.com/english/china/2012-10/25/c_131930383.htm).

5 Gregory Kulacki, “Is January Chinese ASAT Testing Month?” January 4, 2013, <http://allthingsnuclear.org/is-january-chinese-asat-testing-month/>.

6 “Expert: China Not to Recklessly Carry Out ASAT Test,” *People’s Daily Online*, January 22, 2013, <http://english.peopledaily.com.cn/90786/8101596.html>.

7 “我国1月27日再度进行陆基中段反导拦截试验” [Our Country on January 27 For A Second Time Conducts a Ground-based Missile Defense Interception Test], January 28, 2013, accessed at <http://mil.news.sina.com.cn/2013-01-28/0659714051.html>; and “中美同时反导试验差距惊人:新华社消息震全球” [The U.S. and China Simultaneous Missile Defense Tests Amazes People: Xinhua News Shocks the World], January 28, 2012, [http://www.junshier.com/jssq/2013-01-28/15343\\_3.html](http://www.junshier.com/jssq/2013-01-28/15343_3.html).

8 Liu Yang, “中国成功完成陆基中段反导 仅中美具备该能力” [China Successfully Completes a Ground-based Midcourse Missile Defense Only China and the U.S. Possess this Capability], January 28, 2012, <http://mil.news.sina.com.cn/2013-01-28/0847714059.html>.

9 “中美反导交锋暗藏玄机: 出招压制周边 ‘导弹热’” [China and the U.S. Cross Swords Over Missile Defense: Attacking and Suppressing the Region’s ‘Missile Fever,’] February 1, 2013, <http://blog.huanqiu.com/dongxu/2013-02-01/2683006/>.

10 “中国反导战力快速突破 海基拦截系统也开始起步” [China Makes Breakthrough in Missile Defense Combat Effectiveness Sea-based Interception System Also Begun], January 31, 2013, [http://news.ifeng.com/mil/4/detail\\_2013\\_01/31/21820257\\_0.shtml](http://news.ifeng.com/mil/4/detail_2013_01/31/21820257_0.shtml); and “长剑倚天舞 针尖对麦芒:陆基中段反导技术面面观” [The Dance of the Heavenly Sword: A Comprehensive Analysis of Ground-based Midcourse Missile Defense Technology], *中国航天报* [China Space News], January 29, 2013, 4.

intelligence, surveillance and reconnaissance) system, especially a space-based early warning system, which China currently lacks.<sup>11</sup>

### *Strategic Stability: In the Eye of the Beholder*

China's second test was conducted even though China still ostensibly opposes missile defense. According to a June 2012 speech by the Chinese ambassador to the United Nations Conference on Disarmament, "China believes that the development of missile defense systems that disrupt global strategic balance and stability should be abandoned" and that a "multilateral negotiation process to prevent the weaponization of and an arms race in outer space should be vigorously promoted ..."<sup>12</sup> China's lack of clarity on its policy towards missile defense is in contrast to its statement after its first nuclear test, when China stated that it would not be the first to use such weapons at any time and under any circumstance.<sup>13</sup>

China's objection to undefined "strategically destabilizing" missile defenses indicates that it does not view its own program as strategically destabilizing. Chinese commentaries characterizing China's missile defense program as part of an effort to increase strategic stability appear to be consistent with the U.S. government's stated claim that "maintaining strategic stability in the U.S.-China relationship is as important to the [United States] as maintaining strategic stability with other major powers."<sup>14</sup> In practice, however, the motivations of both countries for the pursuit of effective missile defenses both overlap and diverge. Both countries cite ballistic missile threats from potentially unstable or threatening countries, such as North Korea, but Chinese commentators also refer to the use of the counterspace capabilities of BMD systems to hold the satellites of other countries at risk. Moreover, Chinese commentators describe the U.S. BMD system as strategically destabilizing due to its potential to threaten the viability of China's small nuclear force.

On the surface, China appears to gain little from developing a limited mid-course missile defense system. Neither Iran nor North Korea, whose missile programs are the primary focus of the U.S. GMD system, are hostile to China, and the large arsenals belonging to the United States and Russia can easily overwhelm a limited system. But Chinese commentators paint an increasingly complicated threat environment that requires the development of BMD. One destabilizing influence is North Korea's nuclear and missile programs. Not only do Chinese commentators implicitly cite these programs as potentially threatening to China, they also point out that North Korean activities have spurred Japan to build reconnaissance satellites. Chinese commentators also note that India, South Korea, and Pakistan have their own ballistic missile programs. Indeed, one article points out that on the same day that China conducted its missile defense test, Japan launched two intelligence satellites and India tested a submarine-launched ballistic missile.<sup>15</sup>

In response, Chinese commentators argue that China must develop missile defenses in order to cool what they call the region's "missile fever."<sup>16</sup> Missile defense in this context acts as a hedge against neighbors armed with ballistic missiles in case they become unstable or turn hostile against China. These commentators also state that missile defenses can protect China by providing a deterrent force against would-be aggressors. Indeed, some in China equate

11 Song Xiaojun, "宋晓军：陆基中段反导成军需弹道导弹预警卫星" [Song Xiaojun: Ground-based Midcourse Missile Defense Requires Ballistic Missile Warning Satellites], January 28, 2013, <http://mil.news.sina.com.cn/2013-01-28/0917714065.html>.

12 "Statement by H.E. Ambassador Wu Haitao, Permanent Representative of China to the Conference on Disarmament, on Nuclear Disarmament," June 1, 2012, <http://www.fmprc.gov.cn/eng/wjw/zjjg/jks/jkxw/t937150.shtml>.

13 "中国共产党大事记·1964年" [A Chronicle of Important Events of the Chinese Communist Party], <http://cpc.people.com.cn/GB/64162/64164/4416064.html>.

14 U.S. Department of Defense, Ballistic Missile Defense Review Report, February 2010, 34.

15 "China and the U.S. Cross Swords Over Missile Defense;" Cheng Min, "为什么是中段拦截? 解读中段反导拦截系统" [Why Midcourse Interception? Translating Midcourse Missile Defense Interception Systems], 兵器知识 [Weapons Knowledge], 2010/3, 53; and "中国反导拦截试验震惊全球" [China's Missile Defense Test Shocks the World], 幸福 [Happiness], 2010/9.

16 "The Dance of the Heavenly Sword;" and "China and the U.S. Cross Swords Over Missile Defense."

the strategic significance of China's missile defense program to the "two bombs one satellite" program, a reference to China's initial nuclear weapons, ballistic missile, and satellite programs. In this respect, one commentator sees missile defense as one way in which China is "shouldering global responsibilities to build a harmonious world" characterized by an impartial and equitable international political order.<sup>17</sup>

China's missile defense program is also directed at the United States, which it views as a destabilizing force. China believes that its BMD system will not be strategically destabilizing because it will be too small to threaten the large ICBM force of the United States. On the other hand, China fears that the U.S. system, even though limited, will be

able to negate China's much smaller ICBM force and may require China to increase its nuclear arsenal.<sup>18</sup> According to a commentary in the weekly *Liaowang* that contrasts the U.S. and Chinese missile defense programs, "to pursue the development of strategic offensive weapons and missile defense for hegemonic interests will give people tumult and painful disaster, but the pursuit of strategic defensive weapons for the pursuit of peaceful goals will increase the choices for strategic balance."<sup>19</sup>

Chinese commentators also state that China must use the inherent ASAT capabilities of its missile defense system to deter the United States from threatening to strike Chinese satellites.<sup>20</sup> According to the hawkish Chinese *Global Times*,

Against this background, it is necessary for China to have the ability to strike U.S. satellites. This deterrent can provide strategic protection to Chinese satellites and the whole country's national security. Whether China will launch new anti-satellite test is still unknown. However, China should continue substantive research on striking satellites. It can avoid the controversy of whether this action violates peaceful use of space by doing so under the aegis of developing anti-missile defense systems.<sup>21</sup>

The development of ballistic missile defenses that have inherent counterspace capabilities is not against Chinese policy. Chinese space arms control efforts have proposed banning weapons in space, but have not opposed the development, testing, and deployment of ground-based counterspace systems.<sup>22</sup> Moreover, China's missile defense program appears to be consistent with U.S. missile defense policy in regards to conducting tests that do not produce long-lasting space debris, and the European Union's draft Code of Conduct on Space, which proposes that countries "refrain from intentional destruction of any on-orbit space object or other harmful activities which may generate long-lived space debris."<sup>23</sup>

As Chinese commentators rightly point out, however, building a fully capable BMD system requires more than just the missile interceptor. It must also build a C4ISR system, perhaps consisting of over-the-horizon radar, early warning satellites, and other sensors to identify, track, and target ballistic missiles and spacecraft. The January 27 test is thus a critical, but preliminary step in China's missile defense program.

17 "Song Xiaojun: Ground-based Midcourse Missile Defense Requires Ballistic Missile Warning Satellites."

18 "China Warns of Response to U.S. Missile Defense," Global Security Newswire, 19 July 2012, <http://www.nti.org/gsn/article/china-warns-response/>.

19 "《瞭望》周刊：中国反导拦截技术试验解读" [Liaowang: Explaining China's Missile Defense Interception Test], January 18, 2010, [http://news.xinhuanet.com/mil/2010-01/18/content\\_12828435.htm](http://news.xinhuanet.com/mil/2010-01/18/content_12828435.htm).

20 "China and the U.S. Cross Swords Over Missile Defense."

21 "Satellite Test Sparks Overblown Worries," Global Times, January 6, 2013, <http://www.globaltimes.cn/content/753925.shtml>.

22 For a more in-depth discussion of China's stance on space weaponization, see Kevin Pollpeter, "The PLAAF and the Integration of Air and Space Power," in Richard P. Hallion, Roger Cliff, and Phillip C. Saunders, *The Chinese Air Force: Evolving Concepts, Roles, and Capabilities* (Washington, DC: NDU Press, 2012), 165–87.

23 Council of the European Union, "Council Conclusions on the Draft Code of Conduct for Outer Space Activities As approved by the Council on 8–9 December 2008," [http://www.stimson.org/images/uploads/research-pdfs/EU\\_Code\\_of\\_Conduct.pdf](http://www.stimson.org/images/uploads/research-pdfs/EU_Code_of_Conduct.pdf).