

FLIGHT TESTS FOR GROUND-BASED MIDCOURSE DEFENSE (GMD) SYSTEM

** The matrix below is a summary of the major flight tests in the Missile Defense Agency (MDA)'s Ground-based Midcourse Defense (GMD) system. Over the years, in MDA's hurry to deploy an initial GMD capability, tests have been delayed, had their objectives changed, or skipped entirely. In the process, MDA has gone through at least three different nomenclatures for its flight tests, which leads to confusion when trying to determine what is happening in the program. As such, this matrix will include the most recent information known about the latest flight tests, but it will also keep old flight test names so to show the evolving expectations and schedules that MDA has had for the GMD system. By any measure, the GMD system still has not undergone anything approaching operationally-realistic testing under challenging circumstances that adequately simulate a war-fighting environment. The system has made eight intercepts out of fourteen attempts. The latest test was called "FTG-05;" held on Dec. 5, 2008, it resulted in an intercept, although the countermeasures that were to be used for the test failed to deploy. The tests now are ranging in cost from \$115 million to \$160 million for each one.**

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Test No.	Date	Intercept?	Notes	Decoys
IFT-1A	June 24, 1997	n/a	Non-intercept fly-by to assess the performance of the Boeing-built EKV seeker, collect target phenomenological data, and evaluate (post-test) target-modeling and discrimination algorithms. The target cluster consisted of 10 objects: one mock warhead, one bus (the stage of the missile which releases the warhead and decoys), and eight decoys. Boeing was not chosen as the NMD EKV contractor.	Eight decoys: three that were conical in shape, like the warhead, and five spherical balloons. One balloon was large – 2.2 meters in diameter – and had a brighter IR signature than the mock warhead. The two medium-sized balloons were about as bright as the mock warhead; they did not deploy as expected and were not reliable parts of the testing program. The two small balloons were

				released via a canister and were much dimmer than the mock warhead.
IFT-2	Jan. 16, 1998	n/a	Non-intercept fly-by to assess the performance of the Raytheon-built EKV seeker, collect target phenomenological data, and evaluate (post-test) target-modeling and discrimination algorithms. The target cluster consisted of 10 objects: one mock warhead, the bus (the stage of the missile which releases the warhead and decoys), and eight decoys. Raytheon was chosen as the NMD EKV contractor.	The same decoy set used in IFT-1A was also used in IFT-2.
IFT-3	Oct. 2, 1999	Yes	Element test of the EKV, not an end-to-end system test, which relied on a surrogate booster vehicle and range assets to define the “deployment basket” and deliver the EKV to that location. Once deployed, the EKV operated autonomously to intercept the mock RV. Due to a malfunctioning Inertial Measurement Unit (IMU), which normally is used to position the EKV for the intercept, a backup method of locating the target had to be exercised. The EKV called upon its “step-stare” capabilities	The only decoy used in IFT-3 was the large balloon from IFT-1A and IFT-2. It had an IR signature six times higher than that of the mock warhead. Because the decoy was so much brighter than the mock warhead, the EKV saw it first. Once the EKV realized that the balloon’s IR signature did not match up with the target data it had received prior to the test, the interceptor shifted to the nearby target.

			<p>(which are used only during off-nominal circumstances) to extend its field of view since the target was not where anticipated. After executing that procedure, the EKV acquired its target. In a background test parallel with the EKV flight test, the BMC3 and other elements functioned as planned. The XBR is still in development, so a Ground Based Radar Prototype (GBR-P) is used in its stead. Because the radar is in a position where it cannot completely track the missiles, a Global Positioning System (GPS) receiver on the mock warhead emitted location data; a C-band transponder beacon was used as a backup.</p>	
IFT-4	Jan. 18, 2000	No	<p>First end-to-end system test (intercept attempt) using NMD prototype elements (except the IFICS) and range assets to approximate the objective system. The EKV was again successfully delivered by a surrogate booster and separated into the deployment basket. The failure to intercept is directly traceable to the cryogenic cooling system of the EKV, which failed to cool the IR sensors down to their</p>	<p>The only decoy used was the single large balloon from the previous tests. Smaller balloons originally had been planned to be a part of IFT-4, but were dropped in an attempt to simplify the test (partially because of the Welch panel recommendations).</p>

			operating temperatures in time because of an obstructed cooling line. Again, because of the GBR-P's limited tracking abilities, a GPS receiver and a backup C-band radar beacon on the mock warhead emitted location data.	
IFT-5	July 8, 2000	No	Second end-to-end system test (intercept attempt) using NMD prototype elements and range assets to approximate the objective system. The IFICS served as the communication link between the BMC3 and EKV. The failure to intercept was the direct result of the EKV not separating from the surrogate booster due to an apparent failure in the 1553 data bus in the booster. A C-band transponder on the mock warhead gave off location information; its data was compared against its GPS receiver to determine its accuracy.	The only decoy used was the large balloon from previous tests. It did not inflate properly, causing MDA officials to decide to use a different decoy in the future.
IFT-6	July 14, 2001	Yes	This test was a repeat of IFT-5. The prototype X-Band radar (XBR) used in IFT-6 could not process all the information it was receiving quickly enough, causing it to falsely report that the interceptor had missed its target. If that had	One large decoy balloon was used. This one was 1.7 meters in diameter, so it was slightly smaller than the large balloon used earlier as a decoy. This new decoy still had an IR signature much brighter

			<p>happened in a non-test situation, more interceptors would have been needlessly launched at the target to ensure a hit. The kill was confirmed by sensors on a satellite, a 747 jet, and ground stations – backups that will not be available to the fully-developed XBR. A C-band beacon on the mock warhead produced most of the target location data. Starting in IFT-6, a glitch was identified in the GMD's exoatmospheric kill vehicle (EKV)'s target position estimation data, which is used to monitor and track the target during its flight so that the EKV can make an intercept. According to MDA spokesperson Lt. Col. Rick Lehner, the recurring glitch "never interfered with the effectiveness of the EKV," and could have been attributed to "degraded EKV inertial measurement unit output data." MDA believed the anomaly to have been caused by electromagnetic interference into test-unique cabling. This cabling was also used in IFT-7, IFT-8, and IFT-9</p>	(approximately three times) than that of the mock warhead.
IFT-7	Dec. 3, 2001	Yes	The only variable changed from IFT-6 was	There was only one decoy in IFT-7, and

			<p>the target booster: instead of Lockheed Martin's Multi-Service Launch System, Orbital's Target Launch Vehicle was used. The target set, a modified Minuteman ICBM carrying a mock warhead and a single decoy, did not change. It was not a substantive modification of the test configuration. Again, as in IFT-5 and IFT-6, the mock warhead's C-band beacon produced most of the target location data. IFT-7 was designed to see how well the systems elements would integrate, in addition to attempting to intercept the target missile. Critics noted that interceptor received a wealth of targeting information prior to the test and questioned its operational realism.</p>	<p>it was the same one that was used in IFT-6.</p>
IFT-8	March 15, 2002	Yes	<p>Again, the kill vehicle was given prior information to guide it to the target, which may well have been appropriate for an early level of testing but certainly does not indicate a realistic operational test. The system still depends on a C-band transponder beacon emitting location data in order to find the mock warhead. At the</p>	<p>Three decoy balloons (one large, two small) were used to increase the difficulty of determining the target's location; however, critics pointed out that the infrared signals of the balloons differed from that of the mock warhead. The large balloon had a much larger infrared</p>

			time of IFT-8, the Pentagon had planned on holding at least 20 more tests which were to be completed at a pace of roughly one every four months. This has not happened as promised.	signature than that of the mock warhead, whereas the two small balloons had much smaller signatures.
IFT-9	Oct. 14, 2002	Yes	The Aegis SPY-1 radar was used for the first time in a national missile defense capacity. It tracked the target missile in-flight, and the information it gathered was passed to the GMD's battle management system but was not used to achieve the intercept. Also, a C-band transponder on the mock warhead provided early flight trajectory and location data. IFT-9 was originally planned to take place in August 2002, but was twice delayed. First it was postponed for about a week while program officials scrambled to fix a leak in the kill vehicle's helium tank. Then it was delayed because of problems with the seals of an engine nozzle on the booster rocket.	IFT-9 is said to have included the same three decoy balloons (one large, two small) in its target cluster as were used in IFT-8, but the specifics are unknown as MDA classified decoy details in May 2002.
IFT-10	Dec. 11, 2002	No	IFT-10 failed when the Raytheon-built exoatmospheric kill vehicle (EKV) did not separate from its booster rocket, a modified Minuteman ICBM that	The increase in target complexity over the entire GMD flight test program has been much slighter than originally planned;

		<p>was being used as a surrogate until a more advanced booster rocket could be developed. The problem was created when a pin broke that should have activated a laser to release the boost vehicle's restraining units, causing the boost vehicle to remain with the EKV. The failure to separate precluded the EKV from attempting an intercept of the target missile. The pin came apart from excessive vibrations related to the removal of a piece of insulating foam by the subcontractor to make monitoring the system easier. IFT-10's failure caused Boeing and Raytheon to forfeit much of the award fees. This was the first night test of the GMD flight test program, but because the intercept failed, the objective of IFT-10 to demonstrate the ability to intercept a target at night was not achieved. Also incorporated into the test process for the first time were the radars of the Theater High Altitude Area Defense system and the Airborne Laser, both of which were used to track the target missile after its launch. IFT-10 was the last flight test with the</p>	<p>for example, IFT-7 initially was to include a tumbling RV, but problems with the GMD technology have prevented that target type from being a part of any test target clusters so far. This lag in target complexity, especially when combined with the test delays after IFT-10, has hindered MDA's ability to demonstrate the GMD technology's targeting discrimination capabilities in more realistic test scenarios.</p>
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			<p>surrogate booster rocket. A nearly year-long pause was given to the testing program so that a new booster could be brought into the program and new hardware could be installed in the Ft. Greely site.</p>	
IFT-11 and IFT-12	Cancelled	N/A	<p>The MDA announced in January 2003 that it would cancel these tests so that it could instead focus on developing the GMD system's booster rocket. At the time of that announcement, MDA had cancelled nine out of 20 flight tests that had been scheduled from that time through the next five years so it could meet the Bush administration's deadline of starting an initial missile defense deployment in 2004. These cancellations prompted a report from the non-partisan General Accounting Office warning that the MDA is "in danger of getting off track early and impairing the effort over the long-term."</p>	
IFT-13	Cancelled	N/A	<p>The MDA cancelled IFT-13 – a flight intercept test – so that it could focus on developing a new booster rocket for the GMD system. Instead, the test has been split</p>	

			into three booster development tests, IFT-13A, -13B, and -13C.	
IFT-13A	N/A	N/A	Lockheed Martin's test, IFT-13A, has been cancelled due to explosions at its rocket fuel mixing plant in the summer and fall of 2003. MDA will use only the Orbital version of the booster rocket for the GMD system.	
IFT-13B	Jan. 26, 2004	N/A	This system-level test of the Orbital Sciences' boost vehicle launched the rocket carrying a simulated EKV from Kwajalein Atoll against a simulated target coming from Vandenberg AFB, Calif. IFT-13B was not an intercept attempt. Included in this test was the latest version of the GMD program's fire control software, which is being built by Northrop Grumman and which performed as expected in this test. IFT-13B was the second test of Orbital Sciences' booster; the first was Booster-Verification (BV)-6, successfully held in August 2003.	
IFT-13C	Dec. 15, 2004	No. The interceptor failed to leave the silo.	In this test, the new Orbital Sciences booster was supposed to fly from Kwajalein and hit a target coming out of Kodiak, Alaska. While the target flew as planned, the booster	

			<p>failed to leave the ground. The system shut itself down 23 seconds before launch. According to Lt. Gen. Trey Obering, the head of the MDA, this was due to a “very minor glitch” in the software. He stated that the failure arose when a routine pre-flight test showed that there were too many electronic messages being missed in the interceptor’s communications bus, but that this was the designers’ fault for having set the bar too high for an acceptable level of missed messages. However, there are many other problems with the 1553 communications bus being used for the GMD system, which is regarded by some as being incapable of processing messages at a rate that is fast enough for the GMD system to work effectively. IFT-13C officially was slated to be a target “fly-by,” but program officials had hoped that an intercept would occur since both a live target and live EKV were used. IFT-13C was originally supposed to have been held in December 2003, but a pre-flight ground-</p>	
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			inspection determined that there were serious flaws in the EKV's circuitry that could affect the divert and attitude control system. This pushed back the test several times so that the electronic unit in question could be replaced.	
IFT-14	Feb. 13, 2005	No. The interceptor failed to leave the silo.	This test was a planned intercept attempt. As in IFT-13C, Orbital Sciences' booster, carrying Raytheon's production kill vehicle, was supposed to fly from Kwajalein and hit a target coming out of Kodiak, Alaska. And, also as in IFT-13C, while the target flew as planned, the booster failed to leave the ground. This time, however, the system shut itself down just a few seconds before launch. This failure has been traced to the arms that hold the interceptor up in the silo: apparently, they did not contract all the way, so the software that monitors the launch's progress aborted the mission. Since then, MDA has realized it must remove the arms entirely and put in new components that can work in the silo environment. The faulty performance of the silo	

			arms has been found by outside investigation teams to be due to faulty quality control. The other GMD interceptors that have already been fielded will need to be fixed as well.	
IFT-15	May be cancelled? Unknown (had been planned for fall or winter 2004)	N/A	This test may have been cancelled. If it is held, it should not be confused with IFT-15A, which is simply a radar characterization flight. In IFT-15A, the target missile would be launched from Kodiak, Alaska. IFT-15, as planned by MDA officials, was supposed to have been a fully integrated flight intercept test with the target coming from Kodiak and the interceptor from Kwajalein.	
Medium-range air-launch target	April 8, 2005	N/A	In this test, a medium-range target was dropped from the rear of a C-17 aircraft about 800 northwest of the Pacific Missile Test Facility in Hawaii. According to MDA, ““The missile's rocket motor then ignited, sending it on a planned trajectory over the Pacific Ocean.” The Cobra Dane radar was not used as planned.	

FT 04-5	September 2005	N/A	In this test, the Cobra Dane radar was used to track a long-range air-launched target. According to a GAO report, "Cobra Dane performed as expected in these test events, but officials in the office of the Director, Operational Test and Evaluation (DOT&E) are concerned that the radar's software, as currently written, could cause the GMD element to waste inventory."	
FT-1 (formerly FTG 04-1/BV+RRF/13a/16b/IFT-1/b). As of spring 2006, this is the newest nomenclature for the flight tests.	Dec. 14, 2005	N/A	The interceptor was launched against a simulated test target flown on a trajectory from Kodiak, AK. Unlike the previous two flight tests, the operationally configured warhead and its booster did leave the ground. Originally, when it was still called IFT-13a, the test was to include the Lockheed Martin boost rocket. However, since then, that booster has had a multitude of problems during development and the Orbital Sciences booster is now the program's primary boost vehicle.	
FTX-01 (formerly FT 04-1/IFT-16a)	2QFY06	N/A	Originally intercept attempt IFT-16, then changed to radar characterization flight test IFT-16A, then FT 04-1, now FTX-01.	
FT 04-2	2QFY06	TBD		

FTG 04-2 (IFT 1/c)	2QFY06	TBD		
FTC-02B (formerly CMCM-1/FT 04-2)	April 13, 2006 (originally scheduled for 4QFY05)	N/A	In FTC-02B, a missile system powered by a two-stage SR19 rocket was flown from the Kauai Test Facility in the Pacific Missile Range Facility. According to an MDA press release, the payload included the “deployment of complex countermeasures, a mock reentry vehicle, an on-board sensor package.” This series of radar certification flight was initially part of the Block 2004 effort. CMCM means that it’s a critical measurements and countermeasures test. According to MDA, "Test data from these missions, including lessons learned about complex countermeasures, will be used in the design of missile defense interceptor and sensor elements across the Ballistic Missile Defense System." CMCM-5, -6, -7, and -9 have been cancelled.	
CMCM-2 (formerly FT 04-4)	April 28, 2006 (originally to be held 4QFY05)	N/A	This countermeasures test was a repeat of the one held on April 13, 2006. MDA tested its radars in the Pacific Missile Test Facility in Hawaii against a target missile that carried countermeasures, a mock warhead, and an on-board sensor	

			package. No interceptor missiles were used.	
FTC-03 (formerly FT 06-3/CMCM-3)	3QFY06	N/A	Cancelled.	
FTG-2 (formerly FT-2/FT 04-3 (MRT))	Sept. 1, 2006 (had been planned to be held March-May 2006)	Yes	An interceptor launched out of VAFB intercepted a target launched out of Kodiak, Alaska. This was the first time that an operational radar (Beale AFB, Calif.) was used to capture targeting information. This was not officially an intercept attempt. Originally, the purpose of the test was to collect data on the phenomenology of the intercept and had been designated a radar certification test. The Sea-based X-band Radar (SBX) was not used in this test, as it was still undergoing repairs in Hawaii. It watched the test but did not provide any data for the interception. As for the target, MDA said only that a “threat representative target” was used.	No countermeasures were used.
FTX-2 (Flight Test Other-2) (formerly FT 06-1 GMD RCF3)	Originally to be held 3QFY06; held March 2007	N/A	This test flew a long-range ballistic missile target across the “radar viewing volumes” (per the DOT&E’s 2007 annual report) of the SBX and two Aegis BMD SPY-1 radars. It had been intended to be a “risk reduction path for FTG-04.” The SBX radar was to be in	

			<p>“shadow mode.” The primary test objective was tracking the target – an intercept was not attempted. Also according to the DOT&E, “data from the FTX-2 demonstrated that SBX needed software modifications to improve discrimination performance during tracking scenarios.” Because of the “unanticipated, undesirable performance” in FTX-2, MDA “is modifying the radar software.”</p>	
FT-3 (formerly FTG-3)	May 25, 2007 (originally scheduled for December 2006)	No	<p>This had the same scenario as the successful intercept on Sept. 1, 2006: the only difference was that FT-3 was officially scheduled to be an intercept attempt. However, the test target did not fly out the way it was supposed to, so the interceptor was never launched and an intercept did not occur. This test was supposed to be held the day before, but due to weather considerations on May 24, 2007, had been delayed. In general, the was supposed to use the upgraded radar at Beale AFB for all guidance functions, while the SBX was supposed to have been used to</p>	No countermeasures were planned to be used.

			collect data “in shadow mode for post msn playback.”	
FTG-03A	Sept. 28, 2007	Yes	This test was scheduled in response to the failure of FT-3, and was a repeat of FT-3 in terms of its objectives. A target missile was launched from Kodiak, Alaska and a GMD interceptor was fired from Vandenberg Air Force Base, Calif., destroying the target missile several minutes later. The Beale Early Warning Radar was used in the test, as was an operational crew from U.S. Northern Command. This makes the seventh intercept out of thirteen attempts for the GMD program. No countermeasures were used in the test, but are expected for the next one. According to DOT&E, “Several aspects of the engagement were representative of an unsophisticated threat, such as lacking certain target suite dynamic features and intercept geometry. Several other aspects were realistic of a particular engagement, but relatively unchallenging, such as closing velocity and fly out range.”	
FTG-04 (formerly FT-4)	Originally 1QFY07;	N/A	According to the FY 09 budget justification	This was to have been the first test

	cancelled in spring 2008.		documents, this test was supposed to have “[d]emonstrate[d] the functionality of the GBI engage on UEWB or AN/TPY-2 ESG for a GBI launched from Vandenberg AFB performing all functions through acquisition, discrimination, transition to terminal, and intercepting the lethal object from a live target complex launched from Kodiak using a more complex target scene than previous tests.” To be included in the test was a forward-based X-band (AN/TPY-2) radar temporarily placed in Juneau, Alaska. Also to be tested was another AN/TPY-2 radar stationed in Shariki, Japan, which was supposed to be used to track and pass off information about the target throughout its entire flight. However, the test was delayed because of the failure of FTG-3 and the consequently unexpected injection of FTG-03a into the testing schedule. If FTG-04 had been kept in the official test schedule, its delay would have had a domino effect on the rest of the testing program. In the spring	with countermeasures since 2002.
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			<p>of 2008, it was cancelled. The reason given was a recurring problem with the EKV's telemetry unit that had been showing up in GMD tests since 2001. This cancellation was done so not to put the whole program completely off-schedule and particularly so it would not affect developmental tests for the two-stage variant of the GMD interceptor that would be deployed in Poland. It is one in a long series of moves by MDA wherein a troublesome test is cancelled.</p>	
FTX-03	July 18, 2008	N/A	<p>The FTX series tests for the GMD program have been radar characterization flight tests (i.e., not intercept attempts), where a real target but no interceptor is used. A missile target was launched from the Kodiak, Alaska, launch facility, and monitored by an AN-TPY radar temporarily brought to Juneau, Alaska, the SBX (which was in the Pacific Ocean), an upgraded early warning radar at Beale AFB, Calif., and a SPY-1 radar on an Aegis destroyer. FTX-03 had been part of the FY 08 budget request but had been cancelled in the FY</p>	<p>Countermeasures were supposed to have been deployed from the target but they did not work as planned: the decoys didn't deploy properly.</p>

			09 budget documents with the following explanation: "Test event was cancelled due to the feasibility of the test event."	
FTG-05 (formerly FTG 06-1/IFT-20/21)	Held on Dec. 5, 2008. Originally to be held 4QFY06. It was delayed because of FTG-03a's injection into the testing program and MDA's push to get to BVT-1, the developmental test of the interceptor that would go into Poland.	Yes, but there were problems with the test (see the next columns)	The range of this test was roughly one-third that of the distance from North Korea, and with about half the intercept velocity. MDA also used a highly lofted trajectory. Combine these two characteristics with the fact that the decoys didn't deploy and it would seem that MDA's claim of a successful test was greatly exaggerated. According to the FY 09 budget justification documents, this test was part of the FY 08 planned program and intended to: "[d]emonstrate BMDS functionality of the GBI engage on SBX, with multi-sensor integration, for GBI launched from Vandenberg AFB to perform all functions through acquisition, discrimination, transition to terminal, and interception."	While an intercept occurred, the countermeasures that were to be used (two balloons) failed to deploy. And even if they had, the decoys were reported by MDA to be "less sophisticated than the countermeasures flown in 2002," so the interceptor would have been less challenged than with decoys in tests six years prior to FTG-05. The decoys had failed to deploy also in FTX-03, which meant that MDA had five months to fix the problem yet could not.
FTG-06; originally intended to be FTG-7-1a/b (salvo mission)	Originally scheduled for 4QFY0, now summer 2009. Also delayed because of the injection of FTG-03a into	TBD	This test calls for the intercept of a medium-velocity lethal object.	

	the testing program and MDA's push to get to BVT-1, the developmental test of the interceptor that would go into Poland.			
BVT-1	4QFY09	TBD	This appears to be a new test. In it, the two-stage booster will attempt an "engagement flyout with energy management maneuvers." This will be the first test of the two-stage GMD interceptor variant that MDA wishes to field in Poland as part of its European missile defense site.	
FTG-07	2QFY10	TBD	The test will again attempt to intercept a medium-velocity lethal object launched from Vandenberg AFB, using a AN/SPY-1 radar for engagement.	
FTG-08	4QFY10	TBD		
FTG-09	2QFY11	TBD		
FTG-10	4QFY11	TBD		
FTG-11	2QFY12	TBD		
FTG-12	4QFY12	TBD		
FTG-13	2QFY13	TBD		
FTG-14	4QFY13	TBD		
FTG-15	2QFY14	TBD		
*****From here on, the names use the older nomenclature and the dates are based on what MDA was expecting at the time the tests were set.*****				
FTG-X	3Q FY 09	TBD	"Test objectives are under review"	
FTG-X (2)	1Q FY 10	TBD	FY 08 budget documents list a FTG-X series and give dates for	

			each test but no additional information.	
FTG-X (3)	3Q FY 10	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FTG-X (4)	1Q FY 11	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FTG-X (5)	3Q FY 11	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FTG-X (6)	1Q FY 12	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FTG-X (7)	3Q FY 12	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FTG-X (8)	1Q FY 13	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FTG-X (9)	3Q FY 13	TBD	FY 08 budget documents list a FTG-X series and give dates for each test but no additional information.	
FT 06-6 (GMD RCF-4)	1QFY07	TBD		
FTG 06-2	1QFY07	TBD		
FTG 06-3a/b (formerly IFT-23/24)	2QFY07	TBD	In this test, the GMD interceptor is supposed to be cued via the FBX-T.	
FT-5	2QFY07	TBD		
FT-6	3QFY07	TBD		
FTG 06-4	3QFY07	TBD		

FT 06-4 (CMCM-4)	3QFY07	N/A	This will be a risk reduction flight for the MKV program.	
FTG 06-4 (formerly IFT-25)	3QFY07	TBD	IFT-25 had been cancelled in earlier MDA flight test schedules.	
FTG 06-2 (formerly IFT-22)	1QFY08 (slipped one calendar year from the FY 06 budget documents)	TBD	The SBX will be tested in this.	
FT-7a/b (Salvo)	1QFY08	TBD		
FTS-01 (formerly FT 06-7/TMDD-1)	1QFY08	TBD	This will include a test of the STSS.	
FTS-02 (formerly FT 06-8 (SMDD-1)	1QFY08	TBD	This will include a test of the STSS.	
FT 08-1 (RDC)	1QFY08	TBD		
FTG 06-5	1QFY08	TBD		
FTG 06-5 (BV+RRF/16b)	1QFY08	TBD	This will be a risk reduction flight of the BV+ booster.	
FTG 06-2	2QFY08	TBD		
FTG 06-3	2QFY08	TBD		
FT 06-4 (CMCM-4)	2QFY08	TBD		
FT 08-2 (CMCM-6) (TMDD-2)	2QFY08	TBD	According to the 2006 budget documents, this series of radar certification flight tests, as planned at that time, was supposed to support the Block 2008 BMDS system's development.	
FT-8	3QFY08	TBD		
FT 08-3 (SMDD-2)	3QFY08	TBD		
FTG 08-1 (formerly IFT-26)	3QFY08	TBD		
FTG 08-2	3QFY08-2QFY09	TBD	May have been cut.	
FT 08-4 (RDC)	4QFY08	TBD		
FTG 08-3	1QFY09	TBD	Was a salvo launch in the 2006 budget documents.	
FTG 08-4	1QFY09	TBD		
FT 08-6 (RDC)	2QFY09	TBD		

FTG 08-5	4QFY09	TBD	Was a salvo launch in the 2006 budget documents.	
FT 08-7 (RDC)	4QFY09	TBD		
FTG 08-5	4QFY09	TBD		
FTG 08-6	4QFY09	TBD		
FT 08-8 (STSS)	1QFY10	TBD		
FTG 10-1	2QFY10	TBD	According to the 2006 budget documents, this series of intercept flight intercept tests, as planned at that time, was supposed to support the Block 2010 BMDS system's development.	
FT 08-5 (CMCM-8)	2QFY10	TBD		
FTG 10-1	2QFY10	TBD		
FTG 10-2a/b (Salvo)	2QFY10	TBD		
FT 10-1 (RDC)	3QFY10	TBD		
FT 10-2 (STSS)	3QFY10	TBD		
FTG 10-3	1QFY11	TBD		
FT 10-4 (STSS)	2QFY11	TBD		
FTG 10-4	3QFY11	TBD		
FTG 10-5a/b (Salvo)	3QFY11	TBD		
FT 10-5 (RDC)	4QFY11	TBD		
FTG 10-6	4QFY11	TBD		
FTG 04-3 (IFT 2/a)	Unknown	TBD	This test was mentioned in the 2006/2007 budget documents, but not the 2007 budget documents.	
FTG 04-4a/b (formerly IFT-17/18)	4QFY06	TBD	This test was mentioned in the 2006/2007 budget documents, but not the 2007 budget documents.	
IFT-27	Cancelled		This cancellation dates back to earlier MDA flight test schedules.	
IFT-28	Cancelled		This cancellation dates back to earlier MDA flight test schedules.	
IFT-29	Fall 2007	TBD	Unclear which flight test this is under the new naming system.	

IFT-30	Fall 2008	TBD	Unclear which flight test this is under the new naming system.	
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