

Busy Schedule for Rocket Obama Wants Scrapped

By KENNETH CHANG

The rocket that President Obama wants to kill is not dead yet.



A prototype of the Ares I, known as the Ares I-X, was launched last October, and plans call for testing it again three

NASA managers in charge of the rocket, the Ares I, which is part of the program to send astronauts back to the moon, have put together an ambitious testing program to accelerate its development, including a flight in November 2014 with astronauts aboard.

That would be four months earlier than NASA's current schedule, which calls for the first manned flight in March 2015, and much faster than the

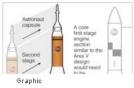
2017 date predicted by a blue-ribbon panel that reviewed NASA's <u>human spaceflight</u> program last year.



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A Scaled-Down Heavy Lifter

Delays and rising costs are the primary reasons the Obama administration cites for its desire to kill the moon mission and turn over to private companies the business of launching astronauts.

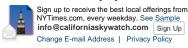
But loud objections have come from some members of Congress, particularly those in Texas, Florida and Alabama, the homes of the NASA centers undertaking most of the development work for the moon program, known as Constellation.

Last month, in a speech at the Kennedy Space Center, President Obama modified his proposal, originally unveiled in February, and called for continuing the development of the Orion crew capsule that was to ride on top of the Ares I, but only as a stripped-down lifeboat for the International Space Station. The Ares program would still be canceled.

Jeffrey M. Hanley, the Constellation program manager, said in an interview that given the uncertainty of what might emerge in the final budget, "we felt it prudent to continue to operate in the program as if the program were to continue." He described that possibility as "the unlikely case."

Douglas R. Cooke, NASA's associate administrator for exploration systems, said Mr.

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Hanley was not subverting the White House and NASA leadership.

"Until Congress passes the president's proposed 2011 fiscal year budget that restructures the Constellation program," Mr. Cooke said in a statement, "Mr. Hanley is obligated by law to comply with the fiscal year 2010 Appropriations Act, which requires planning for the future of the Constellation program."

Mr. Hanley described the proposal, first reported last week by the Web site NASASpaceFlight.com, as "a fairly rigorous planning exercise" that would be refined through the summer. The plan also outlines how the Ares I could evolve into a heavy-lift rocket by around 2018.

The Ares I is to be a two-stage rocket, with the first stage consisting of a stretched version of the solid rocket boosters used to launch the space shuttles, and the second stage powered by an updated version of the engines from the second and third stages of gigantic Saturn V rockets. The Orion crew capsule is to sit on top of the second stage.

A prototype of the Ares I, called Ares I-X, flew last October, but critics dismissed it as a public relations sham, because the first stage consisted of a standard shuttle booster rather than the stretched version, and the second stage and the crew capsule were hollow mock-

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The testing plan is similar to what has been advocated by Senator Bill Nelson, Democrat of Florida. On Friday, Mr. Nelson, who was attending the launching of the <u>space shuttle Atlantis</u>, said, "If I had to guess right now, I'd say that the Senate is going to come out with some continued testing for an Ares I-X vehicle, to keep the options alive."

In the latest version of the plan, a second flight test, with a fully developed first stage but still a dummy second stage, would launch in March 2013. Mr. Hanley said that flight could include a high-altitude test of the launching abort system that is designed to pull the crew capsule away from the rocket in case of trouble.

The abort system was successfully tested this month at the Army's White Sands Missile Range in New Mexico.

"The test article last week came back so clean that we are studying whether or not we could possibly reuse it," Mr. Hanley said. "That would save us some money and some time."

A year later, in March 2014, a third flight test with a powered second stage would send a functional but empty Orion capsule into orbit. The Orion would circle the <u>Earth</u> for five days before splashing down in the Pacific.

Eight months later, a fourth flight with astronauts aboard would launch and dock with the space station.

"We have not settled or finalized any of those plans," Mr. Hanley said. "This is still a study we're doing."

Mr. Hanley said the schedule could be sped up by reducing some of the ground testing of pieces like the second-stage engine and by simplifying somewhat the Orion capsule.

"We felt that accepting perhaps a little more risk, but certainly getting flying and getting real flight experience with this hardware, was going to be a more effective approach in the long run," Mr. Hanley said.

The plan gives nods to the priorities outlined in the proposed Obama administration space policy.



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After the three additional fight tests, the Ares I would be used only "if needed" to take astronauts to the space station, according to a presentation last month. The plan also casts the flight tests as a progression leading to heavy-lift rocket for missions beyond Earth orbit, and it de-emphasizes the original goal of landing on the moon.

Instead of building the behemoth Ares V envisioned by the current Constellation program, the plan looks to develop a smaller heavy lifter that uses the same second stage as the Ares I. The first stage would consist of two of the stretched solid rocket boosters strapped to a core cylinder with additional engines, similar to what was planned for the Ares V.

Although the simplified heavy-lift rocket would not be as powerful, "That system could lob the Orion around the moon," Mr. Hanley said.

Mr. Hanley said he did not yet have estimates for how much this test program would cost. "That's what's going on through the summer," he said.

He acknowledged that his efforts were somewhat at cross-purposes with those of his bosses, who are trying to convince Congress that Constellation is unworkable.

"I really have to leave it to them to sort out with the national leadership," he said.

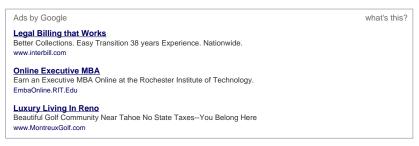
William Harwood contributed reporting from the Kennedy Space Center in Florida.

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