

# NASA manager pitches a cheaper return-to-moon plan

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(AP) -- Like a car salesman pushing a luxury vehicle that the customer no longer can afford, NASA has pulled out of its back pocket a deal for a cheaper ride to the moon.

It won't be as powerful, and its design is a little dated. Think of it as a base-model Ford station wagon instead of a tricked-out Cadillac Escalade.

Officially, the [space](#) agency is still on track with a 4-year-old plan to spend \$35 billion to build new rockets and return astronauts to the moon in several years. However, a top NASA manager is floating a cut-rate alternative that costs around \$6.6 billion.

This cheaper option is not as powerful as NASA's current design with its fancy new rockets, the people-carrying Ares I and cargo-lifting Ares V. But the cut-rate plan would still get to the moon.

The new model calls for flying lunar vehicles on something very familiar-looking - the old [space shuttle](#) system with its gigantic orange fuel tank and twin solid-rocket boosters, minus the shuttle itself. There are two new vehicles this rocket would carry - one generic cargo container, the other an Apollo-like capsule for astronaut travel. Those new vehicles could both go to the moon or the international space station.

What's most remarkable about this idea is who it came from: NASA's shuttle program manager John Shannon. He recently presented it to an

independent panel charged with reviewing NASA's costly spaceflight plans. And he was urged to do so by a top [NASA administrator](#).

It shows that top officials in NASA, an agency of engineers who regularly make contingency plans, worry that their preferred moon plan is running into trouble, space experts said.

Shannon says he likes the present return-to-the-moon design. But he said, "I think the cost numbers are going to give us problems." So for the past three years, Shannon and a handful of others have casually tinkered with the shuttleless shuttle, an idea that has kicked around NASA for decades. The Shannon team did so with the permission of NASA and is not connected with another group of space program workers who drew up a different alternative to Ares and did so anonymously for fear of retribution from NASA officials.

"What I was doing was not a break from NASA," Shannon said in a telephone interview. "I don't care what launcher we use, I just want to go to the moon."

This is all happening while NASA's new moon program, called Constellation - as well as the entire human spaceflight program - gets a hard look from an outside board as part of President Barack Obama's science policy.

And that panel's first reaction to Shannon's presentation was positive.

"Terrific, very well done," said panel chairman Norman Augustine, a longtime aerospace executive who noted he liked a similar proposal 20 some years ago.

Both the Augustine panel's reaction and the upper-level management fingerprints on the Shannon proposal suggest to space experts that

NASA management may be shifting gears, or at least signaling its doubts about the costlier plan.

Howard McCurdy, an American University public policy professor who has written books about the space agency's decision-making, believes NASA management worries there won't be enough money for the Cadillac version.

"They are hedging their bets," agreed Keith Cowing, a former NASA engineer who runs the Nasawatch.com web site, which acts as a watchdog on the space agency. "It clearly reflects some doubts among senior agency folks in the overall veracity of their current approach."

NASA spokesman Michael Curie said Shannon was encouraged to make the presentation "in the spirit of sharing the options we've studied in the past."

But he added: "NASA believes the best plan is to fully fund the current architecture... This does not indicate a lack of confidence in or support for the current program."

Shannon said his numbers are rough and could change. The system would use hardware already built, like the engines, to save time and money. Eventually new engines would be built but from the old design.

Shannon's concept would use the same new Orion crew capsule being designed for Constellation. The only new vehicle would be the cargo container. Both would sit on the external fuel tank like the shuttle does now. When the crew capsule flies, it would be inside the cargo carrier at the top, with an emergency escape system.

And that "is the easiest part of the whole structure," Shannon said.

Another advantage of using the old shuttle system is that NASA wouldn't have to reconfigure its Kennedy Space Center launch site and use shuttle flight control systems, which would save billions of dollars, time and headaches, Shannon said. The new system could also launch a year earlier, and fewer space workers would have to be laid off because of that, he said.

The Shannon plan - called the Shuttle-Derived Heavy Lift Launch Vehicle - would only be able to carry two astronauts at a time instead of three or four. That might mean less of a moon base, Shannon said.

Whatever the final plan, Shannon said it all comes down to this: "I would like us to be in the lunar business."

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