

A Death Sentence for The U.S. Space Program

by Marsha Freeman

March 9—Two years ago, President Obama proposed that this nation's manned space-exploration program, Constellation, be shut down. In response, Lyndon LaRouche called for the impeachment of the President. Since then, many more crimes have been added to Obama's portfolio, including the assassination of heads of state and American citizens, and a foreign policy whose logical end could be global thermonuclear war.

The President's attack on NASA's exploration programs is a frontal assault on the nation's future, and is understood to be so by Apollo astronauts, some in Congress, space scientists, and former NASA officials. Without an aggressive space exploration effort, which catalyzes scientific breakthroughs and the advancement of revolutionary new technology, mankind faces a bleak future. And that is the intention of the President's policy.

With the submission of the White House request for NASA's fiscal year 2013 budget in February, not only is progress in the limping manned space-exploration program virtually halted, but scientific missions to Mars that will lay the basis for mankind's move out into the Solar System are cancelled.

No Men in Space

The first target of the Obama attack was NASA's Constellation program, when, in February 2010, the White House proposed that astronauts get to the International Space Station via vehicles provided by untested fledgling private companies, subsidized by NASA. Constellation's manned lunar program was to be cancelled, and a fuzzy road-to-nowhere-in-our-lifetimes "technology development" program was to take its place.

The Congress rebelled, but after nearly two years of wrangling, compromised with the President. NASA's Orion capsule would continue its development, but

only as a back-up for the commercial companies, which were to get a slice of NASA's budget.

A heavy-lift rocket, the White House finally agreed, would be developed, first, to carry Orion to the station, and later, cargo and crew beyond Earth orbit. The law that was passed and signed authorizing this program for NASA, laid out a budget profile and timeline for the next five years.

But the President had no intention of keeping his part of the bargain. The budget that has been submitted to the Congress for FY13, with NASA funding cut slightly to \$17.7 billion, is *\$2 billion below* what the projection for the budget had been two fiscal years ago. With the prevailing fixation on the crazy idea that arbitrarily balancing the budget is the road to economic happiness, more than the manned space exploration program is now on the chopping block.

In the proposed FY13 budget for NASA, Mars and other planetary missions are under attack, either slated for cancellation, "de-scoping," or delay.

Without an increasing budget, NASA cannot move forward on new missions. If we keep cutting, and simply wait "until economic times are better," as has been tearfully proposed by White House "Science" Advisor John Holdren, a notorious depopulation advocate, while we are waiting, we will see the future of this nation disappear.

Mars Program Under Attack

From President Kennedy's May 1961 announcement of the Apollo program, manned missions to Mars were to have been the next leap after the Moon. Since the 1960s, NASA has successfully sent spacecraft on increasingly difficult unmanned missions, to fly by, then later to orbit, and finally, to land on Mars. Each mission has revolutionized our understanding of the Red Planet. Each has laid the basis for the next.



NASA

Mars is a dynamic planet, and long-lived missions have enabled scientists to observe weather, climate, atmospheric, and geological developments there over decades. Shown here: The change of seasons on Mars produces duststorms, similar to tornadoes on Earth (right). Instruments aboard Mars orbiters have observed the waxing and waning of gullies inside the rims of craters, indicating the presence of liquid water underground (above).



NASA

Until last Spring, the next major step in Mars exploration was to have been the joint U.S./European Space Agency (ESA) multiple-spacecraft ExoMars project, which includes an orbiter, to be launched in 2016, and a rover to land on the surface, to be launched in 2018. The 2016 Mars Trace Gas Orbiter is tasked to measure methane, which appears to continue to be produced on the planet, and could be a by-product of life. The 2018 ExoMars lander, complete with drill and sample collec-

tion box, is designed to collect and cache soil samples from the surface, which would await a future craft to retrieve them, and return them to laboratories on Earth.

Both of these missions are critical to bring us closer to answering the question of whether there has been, or is, life on Mars, and to prepare for the arrival of life from Earth.

But last Spring, NASA informed ESA it would probably not have the resources to meet its commitments to either of these two joint missions. This was made final in February, when Obama's proposed budget for NASA cut the Mars exploration program about 40%, by \$226.2 million. In total, the planetary exploration program was reduced by \$300 million, from the current \$1.5 billion.

To try to placate the furious scientific community, the Administration has told NASA to have a new Mars Program Planning Group try to cobble together something small to send to Mars during the 2018 launch opportunity. No longer would there be any "flagship" missions, in the more than \$1 billion range. The new mission would be capped at \$700 million.

Steve Squyres, the principal scientist on the Mars rover Opportunity program, and head of the National Research Council's Decadal Planetary Survey, responded to this sabotage by stating that "small and medium-sized missions can't address the most challenging questions about Mars." Speaking at the Feb. 27 meeting of the Mars Exploration Program Analysis Group (MEPAG) in Washington, NASA Associate Administrator, physicist, and former astronaut John Grunsfeld, described the Administration's proposed Mars program as "you can plan, but you can't go."

The damage Obama's plan creates, the scientists stressed, is that it disrupts a well-planned, multi-decade, coherent Mars exploration *program* which is not just a series of individual missions. If the goal is to eventually land people on Mars, crucial scientific questions must be answered. Dr. Grunsfeld pointed out during the MEPAG meeting that the Mars program has, indeed, been revamped twice before, first, in re-

sponse to results pertaining to science, when the mid-1970s Viking landers ostensibly observed no evidence of life on Mars (this is still being debated); and then, again, after the 1999 technical failures of two NASA Mars missions. This is the first time the Mars program is being revamped due to the budget.

Congress has already weighed in on this proposed sabotage of Mars exploration. Rep. Adam Schiff (D-Calif.) has objected to what the impact will be on the irreplaceable team of Mars scientists and mission planners at NASA's Jet Propulsion Laboratory in Pasadena, who will have to be laid off.

On Feb. 29, Rep. Frank Wolf (R-Va.), chair of the Appropriations subcommittee which determines NASA's budget, wrote a letter to NASA Administrator Charles Bolden rejecting the request to ditch the Exo-Mars missions, and reprogram the funds to "drastically scale back spending on Outer Planets Flagship missions." Describing the proposal as a "radical change" from what Congress approved for planetary exploration for FY12, Wolf said this cannot be done by simply "reprogramming" funding.

What is not being addressed is the challenge of how that planetary funding would be restored, without a substantial increase in the top line of NASA's budget, which no one has, as of yet, proposed. And within the current bankrupt system, such a proposal is unlikely, to say the least.

Robbing Peter

The ostensible reason for the cutbacks in the planetary exploration program are the cost overruns of the Webb Space Telescope, and the Mars Science Lab mission, which is now on its way to Mars. That is stupidity, or worse. As Grunsfeld pointed out, the Defense Department has "never been able to estimate its costs," so this is not unique to NASA. In fact, when a program is on the cutting edge, takes a decade to develop, and requires doing things that have never been done before, demanding accurate estimates of the projected total cost from the start is ridiculous. Now, it is proposed that the future be penalized for the past.

But it is not only the Mars and planetary programs that are slated for extinction by the White House.

When the Congress compromised, and agreed to pursue both a NASA manned program (Orion and the heavy-lift rocket), which it wanted, *and* commercial development of manned transport systems, which the President wanted, it basically agreed that *neither* would

be adequately funded. Now they will reap what they have sown.

Already in this current FY12 fiscal year, there is not enough money in NASA's budget to carry out the Congressional mandate. On Jan. 10, Orion's program manager, Mark Gever, reported that work on the new crew capsule was being slowed down. "We don't have the money every year to do [development of] every system," he said. To try to save money, earlier this year, NASA started discussions with the Europeans, to see if ESA would provide a service module, which is an integral part of Orion. The Europeans have since told NASA that they are not interested.

Now, in the proposed FY13 budget, \$362 million is to be *cut* from NASA's Orion and rocket programs, and \$330 million is to be *added* for commercial companies, to over \$800 million. It has escaped no one's attention that this is a direct trade-off. Congress will hem and haw, and likely cut the commercial crew funding by half, which it did last year, to keep more funding for Orion and the heavy-lift rocket. But, is this a solution?

The previous Congressional cuts in funding to the commercial crew programs have now pushed the expected operation of the transport system to the space station from 2016 to 2017. If funds are cut again this year, there is no telling when, or whether, such a capability will ever materialize. But wasn't the Orion capsule a back-up, in case the commercial companies are delayed, or do not come through?

In fact, at the current level of funding, the rocket to carry Orion with crew to the station is not scheduled to be ready until 2021. But the space station has only been approved to continue operations until 2020! There is no NASA back-up to commercial crew transport.

The complaint that the U.S. will be paying Russia \$450 million per year to transport our astronauts to the space station until we can do it ourselves is completely disingenuous. Neither the White House nor the Congress has provided the resources to allow NASA to develop a manned space system for Earth orbit as the replacement for the retired Space Shuttle, much less the means to explore the rest of the Solar System.

We are quickly reaching the limit of how long this sabotage can continue, before human and material capital can no longer be mobilized by the United States for any serious effort in space.

We have long ago passed the limit where keeping President Obama in the White House can be tolerated, if mankind is to have a future, at all.