

TESTIMONY
TO THE
SUBCOMMITTEE ON SPACE AND AERONAUTICS
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A. THOMAS YOUNG

Chairman Palazzo, Ms. Edwards and Committee members, I am pleased to have the opportunity to present my views on the challenges and opportunities facing NASA today. I recognize the importance of identifying actions that will mitigate some of these concerns.

It is appropriate to note there are many positive accomplishments of the civil space program and NASA that should be recognized. These include the completion of the International Space Station (ISS), which is a technological marvel, Kepler's library of planets in other solar systems, the landing of the Curiosity rover on Mars and the incorporation of weather satellite data in models that accurately predicted the unusual left turn of hurricane Sandy. These are but a few of the many recent accomplishments.

There are concerns about the future of the civil space program that must be addressed in the upcoming NASA Authorization Act. I recognize that this hearing is one of many that will address these concerns.

Before addressing the specific questions you cited for this hearing, I would like to offer my opinion as to some of the more significant issues facing NASA. I have been associated with the civil space program and NASA for more than five decades. I am more concerned today about its future than at any time during my involvement.

Issues requiring attention include:

- 1) Maintaining NASA as the premier space organization.
- 2) Maintaining the capabilities of the U. S. industry to be NASA's partner in implementing challenging space projects.
- 3) Achieving balance between the NASA program and the budget.
- 4) Establishing a credible human exploration program.
- 5) Recognizing the importance of projects focused upon understanding dark energy and dark matter, searching for earth-like planets in other solar systems, returning samples from the surface of Mars, expanding our climate knowledge, etc. as identified in Decadal Surveys.
- 6) Realizing the science and research potential of the ISS.
While ISS is clearly an engineering and diplomatic success, it is in danger of being a science and research failure.
- 7) Assuring sustainability of strategy and programs over

many years and political cycles. Resources in terms of money and human talent that have been wasted on cancelled projects and aborted strategy is a national embarrassment.

8) "De-politicizing NASA" must be addressed. NASA has been politicized to the extent that the capabilities of NASA and the success of the civil space program are being adversely impacted.

While others can add important concerns to my list, I believe it is adequate to begin discussion of mitigation.

I am a strong believer that a foundation of the many successes of the civil space program is the continuity of expertise maintained by NASA and the implementation expertise of industry. These capabilities are maintained and enhanced by undertaking challenging projects. Examples include Curiosity, the James Webb Space Telescope, SLS and Orion. Studies, technology pursuits and overseeing others are important but will not maintain NASA and industry as world class.

Having more program than budget is wasteful, leads to program cancellations and encourages taking excessive risk. All programs need to be budgeted to their most probable cost and

when the aggregate cost of all activities exceeds the budget, the lowest priority activities need to be terminated.

Leadership has failed to establish a credible human exploration strategy. A starting point is to recognize that the only practical destinations are the moon, the two moons of Mars and Mars. A major effort is needed to establish a "consensus" as to the U. S. strategy for human exploration. This must be followed by funding the strategy. A strategy that is not funded is not a strategy.

There are a small number of profound questions for which the civil space program is on the cusp of greatly increasing our knowledge. These include:

Are we alone?

What is dark energy and dark matter?

What is the future of our climate?

Decadal Surveys have identified projects focused upon these profound questions. The exploration of these questions should be treated as unique opportunities. I appreciate the economic challenges our country faces; however, this does not mean we should not pursue knowledge in extraordinarily important areas for which we have a leadership position.

ISS is in danger of becoming a science and research failure. A significant portion of the NASA budget is spent on ISS and its

supporting activities. This concern requires urgent attention. A Senior Review should be established near the end of this decade to determine if the return justifies the continuation of ISS beyond 2020. This will put the ISS community on notice as to what must be done with a prudent deadline.

The last two concerns on my list are the most challenging. They require leadership and a seat at the table when national issues are being discussed.

The proposed Space Leadership Act is in response to these concerns and the sponsors are to be applauded for their dedication to finding solutions. If the Act could be implemented as intended and all involved participants agreed to abide by its principals, it could have a significant positive impact. I worry that approval will be difficult and implementation is subject to too many unintended consequences.

If I were "King for a day," I would require that the NASA Administrator be someone with demonstrated superior executive leadership credentials. The Deputy Administrator would be recommended by the Administrator and be someone with demonstrated extraordinary technical and space project implementation skills. I would establish a National Space Council to oversee strategy implementation, assure program continuity, assure that the program and budget are in balance

and be an advocate for a strong NASA and space industry. I would limit the OMB responsibility to funding the approved strategy and not be responsible for the strategy or the tactics of implementation.

I believe NASA and the civil space program are on a declining trajectory. The next NASA Authorization Act must continue what was begun by the current Act of reversing this downward trend.

Great nations do great things. The U. S. is a great nation and the civil space program fits the definition of great things

Thank you.