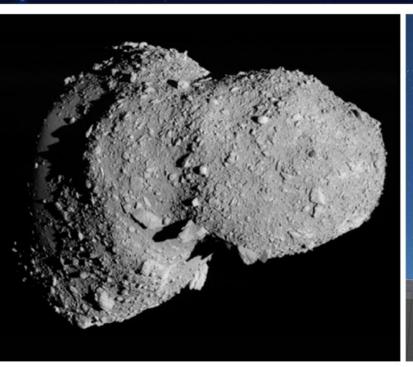
Asteroid Initiative Industry and Partner Day

Lori Garver
Deputy Administrator









Advancing U.S. leadership in space exploration and scientific discovery

Advancing Aeronautics and Space Activities for Benefit of American taxpayer

Improving life on Earth and protecting our planet

Strengthening U.S. economy through science and technology investments

Advancing U.S. leadership in space exploration and scientific discovery

Efficient and Affordable Strategies

Commercial and International Partnerships

Improving life on Earth and protecting our planet

Advancing Aeronautics and Space Activities for Benefit of American taxpayer

Technology and Innovation

World-Class Capabilities

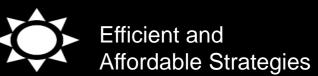
Strengthening U.S.
economy through science
and technology
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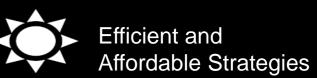










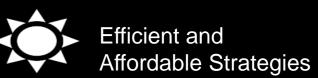










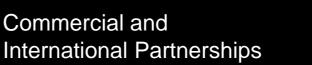


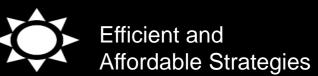










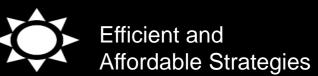










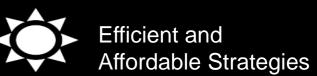










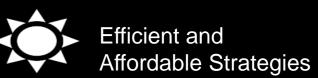










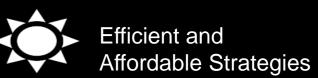




















Commercial and

International Partnerships











Commercial and

International Partnerships















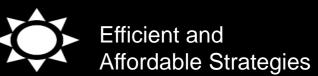






Commercial and

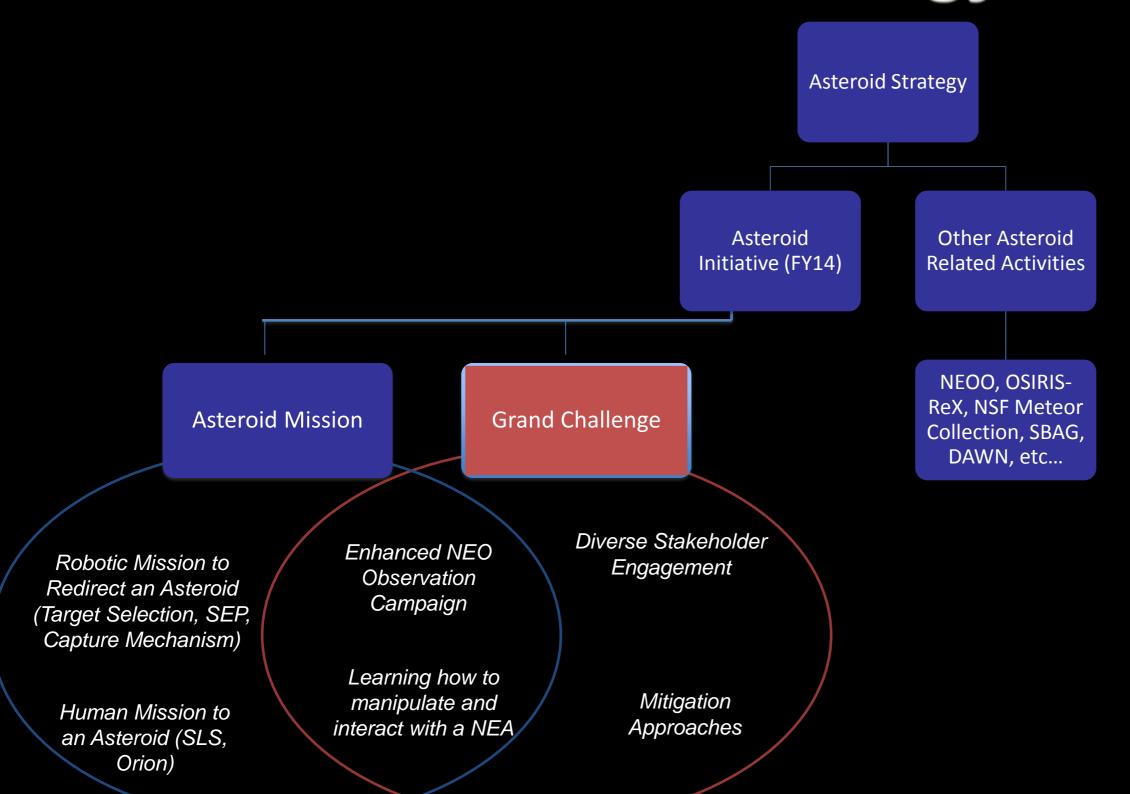




Asteroid Initiative

- NASA has a broad asteroid strategy which aligns relevant portions of NASA's science, space technology, and human exploration capabilities for a human mission, advanced technology development, efforts to protect the planet, and engages new industrial capability and partnerships
- The FY14 Asteroid Initiative consists of two mutually supporting activities, both leveraging on-going activities to:
 - Redirect a small asteroid to a stable orbit in trans-lunar space, followed by sampling by astronauts in early operations of Orion and SLS.
 - Lead an effort to find all asteroid threats to human populations and know what to about them.
- This initiative includes a parallel, forward-looking mission development approach, partnership opportunities (nationally and internationally), open innovation, and participatory engagement.

Terminology



FY14 Asteroid Initiative: What and How

Asteroid Initiative

Asteroid Mission

Robotic Mission to Redirect an Asteroid, SEP

Human Mission to an Asteroid

Enhanced NEO Observation Campaign

Learning how to manipulate and interact with a NEA **Grand Challenge**

Diverse Stakeholder Engagement

Mitigation
Approaches

Both sets of activities leverage existing NASA work while amplifying participatory engagement to accomplish their individual objectives and synergize for a greater collective purpose.

Reaction to Mission Announcement

"It really is a clever concept.
Go find your ideal candidate for an asteroid. Go get it robotically and bring it back." – Senator Bill Nelson (D-Fla.)

"Capturing and retrieving an asteroid will energize NASA's exploration efforts..."

Tom Jones, space shuttle astronaut, member of the 2012 Keck Institute for Space Studies asteroid retrieval study team

"I think that's a good direction to go. I think it recognizes the risk to our country and our world. ... I think it's another reason why we need the Space Launch System to have the capability of doing whatever needs to be done, so I see it as a hand-in-glove effort." —

Rep. Mo Brooks (R-Ala.)

"You kind of want to know how to move asteroids around – that's a good thing to be able to do. Because one day we're going to find one with our name on it." –

Neil DeGrasse Tyson

International Reaction to Mission Announcement

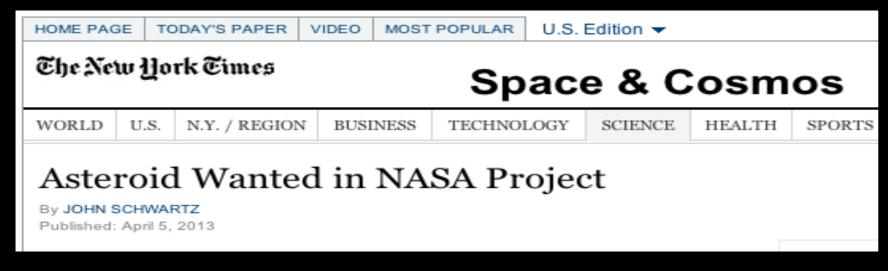
"It's a very interesting project." ESA is willing to discuss a contribution to the asteroid-capture mission "within the context of an overall exploration program, which is by definition an international program." —

Jean-Jacques Dordain, European Space Agency "It will be good if, before 2020, we will create an efficient system of monitoring asteroids. And of course, now you need to think how to deal with these space aliens. I want to emphasize that the asteroids are not dangerous for a particular country, but for the Earth. And you can only defend together, in international cooperation. Alone, it will not work." —

Vladimir Popovkin, Russian Federal Space Agency "I am excited to hear the new NASA strategy in the President's Fiscal Year 2014 budget request. I do believe this meaningful project will provide the great experience for the human space exploration." – Kiyoshi Higuchi, Vice President, JAXA

Post-Rollout Media Coverage









Why Americans must support NASA's plan to capture an asteroid



NASA touts plan to grab asteroid as 'unprecedented technological feat'



Planetary Defense Reaction

"...thanks to the discoveries NASA has made in its short history, we have known about 2012 DA14 for about a year. As the world leader in space exploration, America has made great progress for mankind. But our work is not done. We should continue to study, research, and explore space to better understand our universe and better protect our planet." — Chairman Lamar Smith (R-TX)

"Everybody is under budget constraints, so that we should be more effectively deploying world resources in this range... I hope you'll come back to us, to help us bring those forward to leadership about new opportunities, that in fact will be life saving, you know planet saving potentially. But that will allow -- will require greater collaboration. Congresswoman Elizabeth Etsy (D-CT)

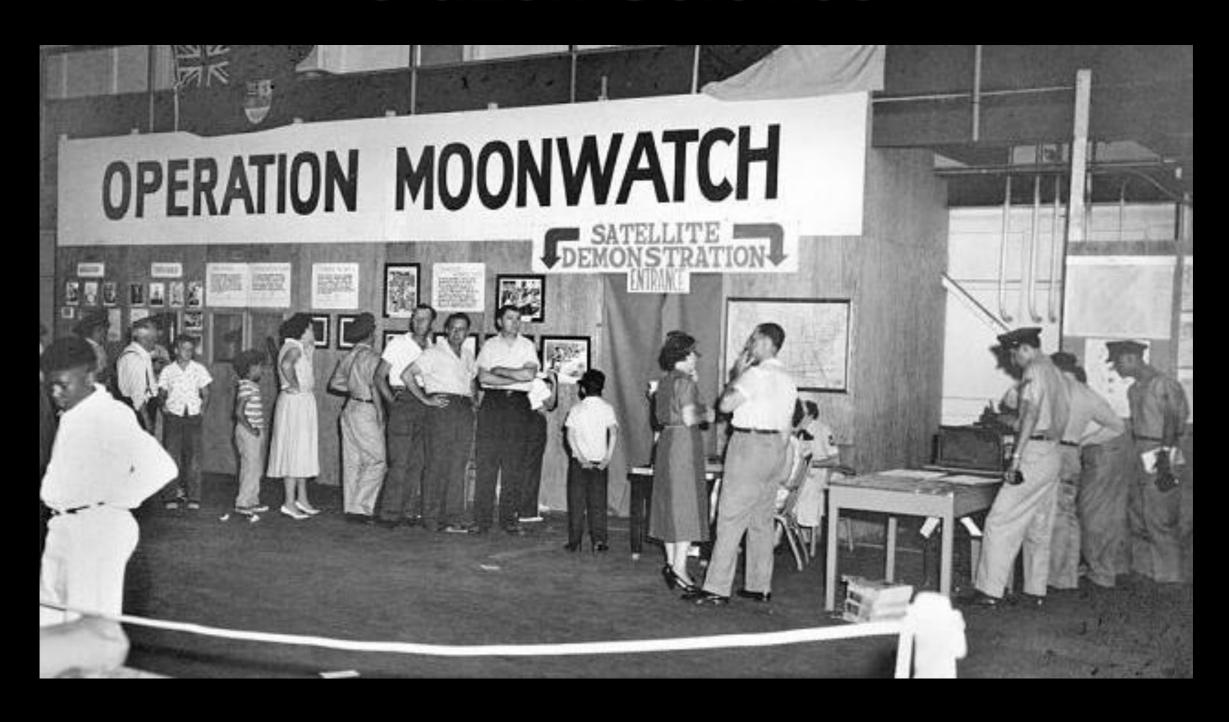
"...I would suggest that this is one area of leadership that the United States could really take a role in. And it would be good for all, and -- and it would create an international spirit of what we want to create." -- Congressman Dana Rohrbacher (R-CA)

Challenge Statement

Find all asteroid threats to human populations and know what to do about them



Citizen Science



Thank you

