

**U.S. House of Representatives
Committee on Science, Space, and Technology**

HEARING CHARTER

*Threats from Space:
A Review of U.S. Government Efforts
to Track and Mitigate Asteroids and Meteors, Part 1*

Tuesday, March 19, 2013
10:00 a.m. – 12:00 p.m.
2318 Rayburn House Office Building

Purpose

At 10:00 am on March 19, 2013, the Committee on Science, Space, and Technology will hold a hearing titled “Threats from Space: A Review of U.S. Government Efforts to Track and Mitigate Asteroids and Meteors, Part 1.” This is the first in a series of hearings examining the tracking, characterization and mitigation of Near Earth Objects. The hearing will provide Members of the Committee the opportunity to receive testimony regarding the ongoing work, planned efforts, and coordination procedures within the National Aeronautics and Space Administration, the Office of Science and Technology Policy, and the U.S. Air Force Space Command.

Witnesses:

- **The Honorable John P. Holdren**, Director, Office of Science and Technology Policy, Executive Office of the President
- **Gen. William L. Shelton**, Commander, U.S. Air Force Space Command
- **The Honorable Charles F. Bolden, Jr.**, Administrator, National Aeronautics and Space Administration

Overview

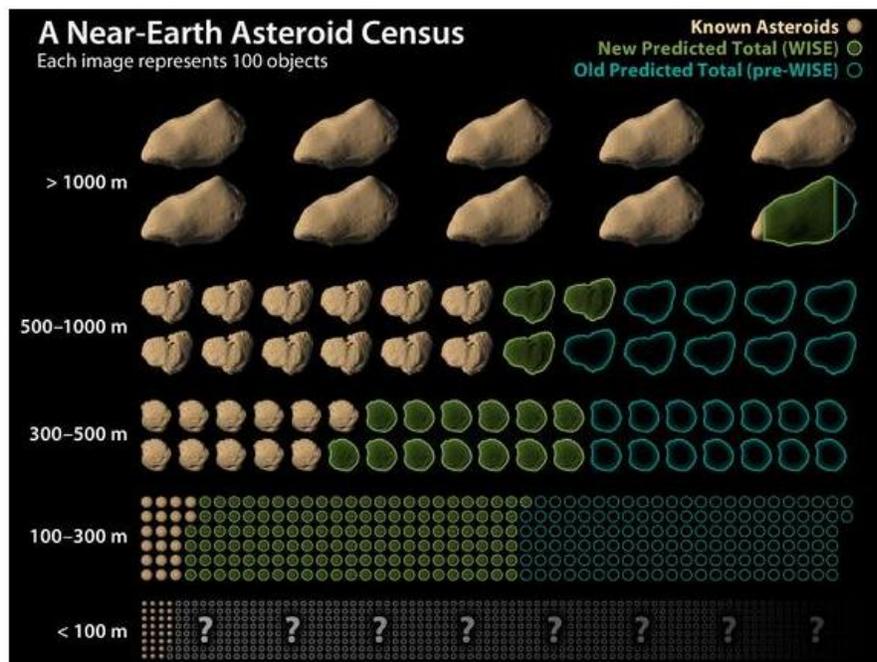
On Friday, February 15, 2013, two events occurred that received worldwide attention. An unforeseen meteor (estimated 50 feet in diameter) exploded in the sky above the Russian city of Chelyabinsk releasing the equivalent of a 300 kiloton bomb, about twenty times the explosive energy of the atomic blast used over the city of Hiroshima. This blast injured nearly 1,200 people and resulted in an estimated \$33 million in property damage. On the same day, a small asteroid (150 feet in diameter) discovered by amateur astronomers and tracked closely by NASA passed safely by the Earth, but within the orbital belt of geostationary satellites. Until it entered our atmosphere, the Russian meteor went completely undetected. According to NASA, the two

events were unrelated, but raised public awareness of the potential threat from Near Earth Objects (NEOs). Today’s hearing will cover the U.S. government’s plans and programs to track, classify, and mitigate the threat of NEOs. A second hearing is planned this month to address international, commercial private sector, and philanthropic initiatives to survey the sky for asteroids and comets.

From these two incidents, many questions arose, among them:

- Do we have the tools and technology necessary to detect and track Near Earth Objects?
- How often do we currently observe large meteors entering the atmosphere safely over the ocean?
- Are we tracking the right size objects, specifically the ones that can cause significant harm on Earth?
- Once we identify an object, what are our means of tracking it?
- What are our contingencies and mitigation capabilities if we determine there is a threat to the Earth from a NEO impact?
- What process exists amongst government agencies, both foreign and domestic, in such an instance?

The Science, Space, and Technology Committee has been on the forefront of the issues surrounding Near Earth Objects. For example, the NASA Authorization Acts of 2000 and 2005 directed NASA to conduct a survey of the population of NEOs and study mitigation plans. Astronomers estimate 20,000 potentially hazardous asteroids orbit within the vicinity of the Earth.



NASA NEO Asteroid Size Model

Credit: NASA/JPL-Caltech

This chart illustrates how infrared is used to more accurately determine an asteroid's size.