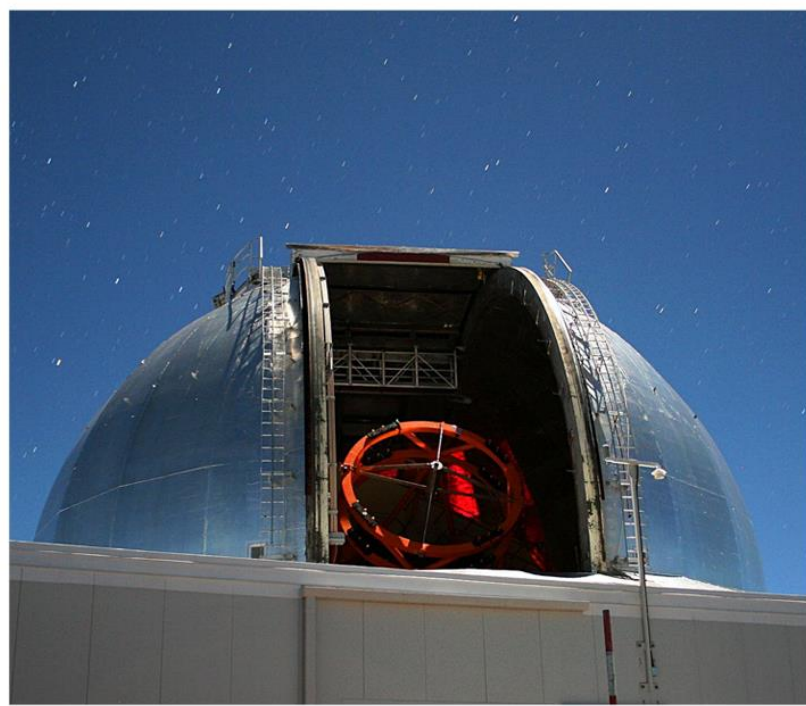
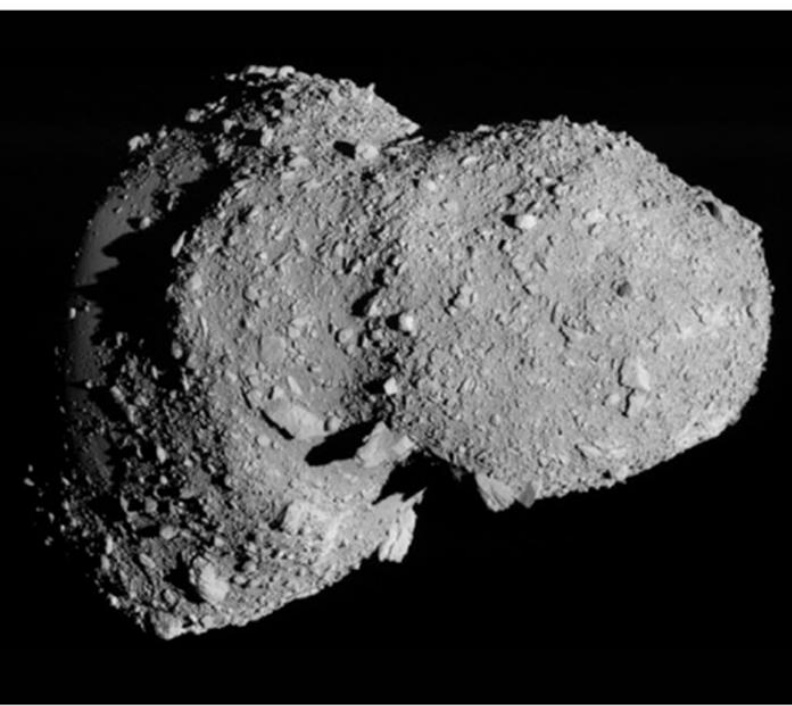


Grand Challenge

Jason L Kessler



Challenge Statement

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



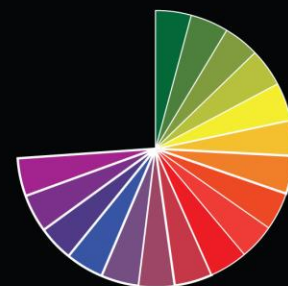
Contributors to the Cause



Current Contributors



Potential Contributors

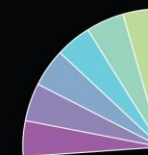


NASA Contributors

- NEOO (SMD) Program
- NEO Program Office at JPL
- Minor Planet Center (Smithsonian Astrophysical Observatory)
- JRP (HEO) Program
- Asteroid Redirect Mission: Identify, Redirect, and Explore
- STMD (Research Grants, Centennial Challenges)

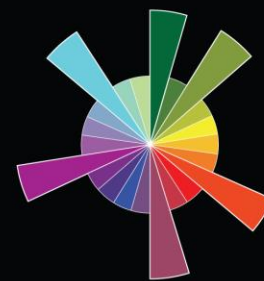
External Contributors

- Other U.S. Government Agencies
- International Governments (Space Agencies, IWAN, SMPAG)
- European Space Agency (ESA) Space Situational Awareness Initiate NEO element
- Global Coordination Bodies (UN COPUOS)
- Observatories
- Amateur Astronomers
- Universities/Academia
- Non-Profits/Foundations (B612)
- Commercial Space Industry
- Emerging Space Industry
- Space Advocacy



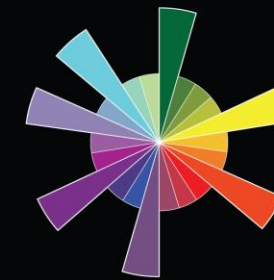
- Entrepreneurs/Small Businesses
- Investing Community/Venture Capitalists
- Maker Community
- Citizen Science
- Media
- Hollywood

Some Examples of Potential Contribution



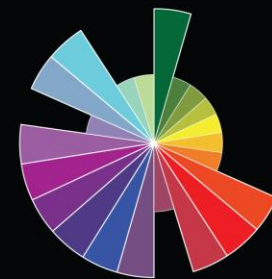
Light curve Analysis

- NEOO (SMD) Program
- Minor Planet Center (Smithsonian Astrophysical Observatory)
- International Governments
- Amateur Astronomers
- Space Advocacy
- Citizen Science



Shape Model Analysis

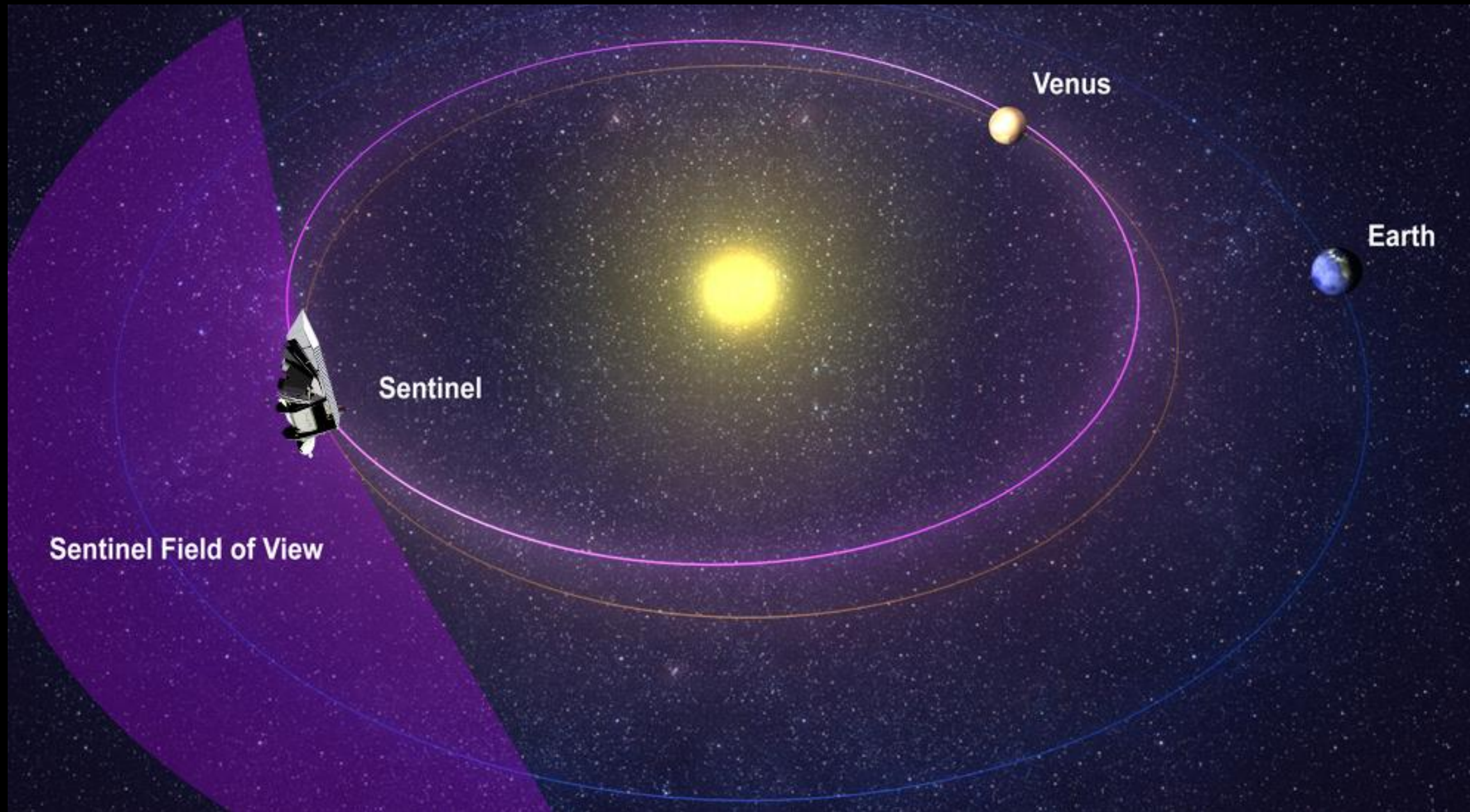
- NEOO (SMD) Program
- Asteroid Redirect Mission
- International Governments
- Universities/Academia
- Emerging Space Industry
- Investing Community
- Citizen Science



Space Based Observation

- NEOO (SMD) Program
- International Governments
- Global Coordination Bodies
- Observatories
- Universities/Academia
- Non-Profits/Foundations (B612)
- Commercial Space Industry
- Emerging Space Industry
- Space Advocacy
- Entrepreneurs/Small Businesses
- Maker Community
- Citizen Science

Public Private Partnership- Space Act Agreement with B612



Prizes- Robot Sample Return



Crowdsourcing- GalaxyZoo



Citizen Science



**We want to hear from you and
the world needs your leadership**

www.nasa.gov/asteroidinitiative

