Jared Jolton

Stars and Galaxies

Homework N

The Sentinel Mission:

a Public Lecture by Harold Reitsema on 12/12/12,

Summary by: Jared Jolton

Asteroids have always been hazardous to life on Earth, and whether it be the K-T impactor which wiped the dinosaurs off the planet or the lunar craters that are visible on the moon every night, it is obvious how much of a threat these objects pose. About 95% of all asteroids collide with the sun or are ejected from the solar system, but another 5% remain a threat to our planet, and for this reason the B612 Foundation set out to find ways to deflect near Earth asteroids away from our planet. It was quickly discovered that some of these near Earth asteroids could not be monitored from stationary observatories, and thus B612 launched the Sentinel Mission, which aims to send an infrared telescope into a Venus-like orbit to catalog such objects and their orbits. By learning more about these objects in our solar system, we can make preparations for asteroid deflection and avoid collision catastrophes.

By using technology from the Spitzer and Kepler space telescope missions, along with other new innovations, the Sentinel telescope is able to compare asteroid positions an hour apart and eventually plot the orbits of these objects. An estimated 6.5 years after its launch in 2018, it is predicted that this telescope will be able to find 99% of all near earth objects that are at least 140 meters in diameter, or in other words, big enough to have a huge impact on Earth in the case of a collision. All of these objects will be processed and catalogued right here at LASP in Boulder, Colorado. Harold Reitsema spoke firmly about the importance of discovering what is near our planet and the promise of success in his team’s plan to go about doing this.