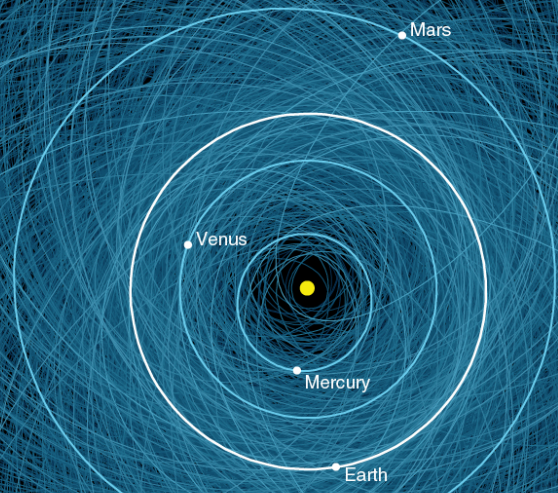


Press Conference: February 6, 2024

Nuclear Explosive Device Detonated Near Asteroid; 2017 PDC Successfully Deflected Away from Earth

Paul Chodas (Jet Propulsion Laboratory/California Institute of Technology)

2017 Planetary Defense Conference, Tokyo, Japan

EXERCISE ONLY!!

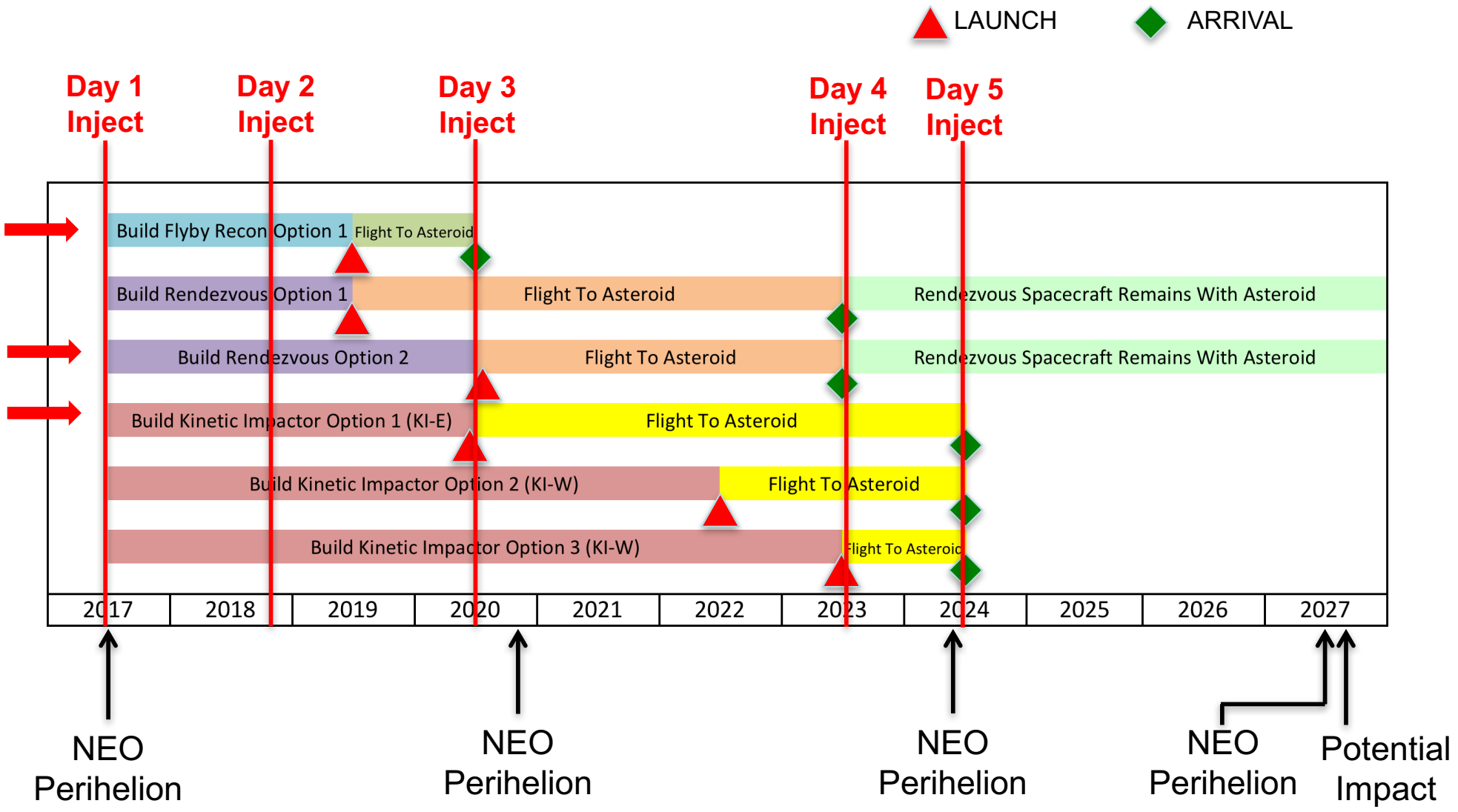
Nuclear Device Used, Deflection Successful

Jet Propulsion Laboratory
California Institute of Technology

- Decision makers decided to deploy the nuclear explosive device from the rendezvous/observer spacecraft, and detonate it at a standoff distance of about 1 km from both the primary and secondary components
- The observer spacecraft itself was stationed behind the primary at the time of the explosion
- The primary component received a delta-v velocity change of at least 1 cm/s, sufficient to move it away from its Earth-impacting trajectory
- The asteroid will now miss the Earth by about 1000 km on July 21, 2027; the possibility that the asteroid passed through a keyhole during this close approach is being assessed using the tracking data from the rendezvous/observer as well as Earth-based radar
- The secondary component was completely destroyed
- For more info: **https://cneos.jpl.nasa.gov/pd/cs/pdc17/day5.html**

EXERCISE ONLY!!

Summary of Key Dates



Courtesy of Brent Barbee (NASA/GSFC)