Press Conference: February 6, 2024
Nuclear Explosive Device Detonated Near Asteroid; 2017 PDC Successfully Deflected Away from Earth

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EXERCISE ONLY!!
Nuclear Device Used, Deflection Successful

• 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

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**Day 1**
Inject

**Day 2**
Inject

**Day 3**
Inject

**Day 4**
Inject

**Day 5**
Inject

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**LAUNCH**

**ARRIVAL**

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1. **Build Flyby Recon Option 1**
   - Flight To Asteroid

2. **Build Rendezvous Option 1**
   - Flight To Asteroid
   - Rendezvous Spacecraft Remains With Asteroid

3. **Build Rendezvous Option 2**
   - Flight To Asteroid
   - Rendezvous Spacecraft Remains With Asteroid

4. **Build Kinetic Impactor Option 1 (KI-E)**
   - Flight To Asteroid

5. **Build Kinetic Impactor Option 2 (KI-W)**
   - Flight To Asteroid

6. **Build Kinetic Impactor Option 3 (KI-W)**
   - Flight To Asteroid

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**2017**

**2018**

**2019**

**2020**

**2021**

**2022**

**2023**

**2024**

**2025**

**2026**

**2027**

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**NEO Perihelion**

**NEO Perihelion**

**NEO Perihelion**

**NEO Perihelion**

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**Potential Impact**

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Courtesy of Brent Barbee (NASA/GSFC)