

40,155

 Near-Earth Asteroids have been discovered as
 of Dec. 2025

NASA Dec. 2025

STEM Career Highlights

YOUR Career in STEM...Starts Right Now


Megan Harwell

Planetary Defender

Originating from Los Angeles, Dr. Megan Harwell ventured to the midwest where she earned a degree in Applied Physics and Planetary Science from Purdue University. During college, Megan enjoyed volunteering and even served as a Science Ambassador for the College of Science. Today, she works hard to literally save the world! She is a Planetary Defender at the Los Alamos National Laboratory. You might

be wondering "what is planetary defense?" Planetary defense is a coordinated global effort to detect, track, and, if necessary, deflect the impact of asteroids and comets that could strike Earth. Unlike many natural disasters, an

asteroid impact is a hazard that can be predicted and potentially prevented with the right technology. NEOs are asteroids and comets that come close to or pass across Earth's orbit around the Sun. They range in size from small "meteoroids" measuring a few meters across, to much

larger bodies measuring several kilometers wide.

Just the facts:

Planetary Defense = **Protecting** Earth from asteroids.

It's the only "preventable" natural disaster: Unlike earthquakes or hurricanes, we have the **technology** to predict an **asteroid** impact decades in advance and physically move the threat out of Earth's way.

We are currently **tracking** over 37,000 objects: As of 2026, there are more than 37,000 known Near-Earth Objects (**NEOs**). Of these, over 2,300 are classified as "Potentially Hazardous" because of their size and how close they get to Earth's orbit.

In 2022, NASA conducted the Double Asteroid Redirection Test (**DART**). This was the first real-world test of planetary **defense** technology. A spacecraft intentionally crashed into a small asteroid moon called Dimorphos, successfully changing its orbital period.

NEO Surveyor (NASA): A space-based infrared telescope designed to find 90% of the "city-killer" sized asteroids that are currently hidden from ground-based telescopes.

Q: What are your hobbies?

I enjoy hiking, skiing, and knitting.

Q: Where did you grow up?

Los Angeles, CA

Q: What do you like the most about being a planetary materials scientist?

How interdisciplinary the field is! The field spans many regimes of physics and science, and we all need to work in a collaborative way together.

I N D O M T H F D I U U O V R C Z O A O S S W L
 U E F H R T F W I K O F H S E L J R X W Q H A H
 K O O Q D S G U O N A G E M I H X B X H P N J Z
 C E Y O L F W F R T N E X I F E O N J T L U E D
 D H C R L D O Q E Z N D D N L E T B L G P X U K
 J E F X B D R T T M M D E P J E P T A D I K I S
 E J F O K J X C S X B O A T L D R O Y E V R U S
 P S Q E I T P Q A X F U M E B S U M K T K Q X O
 B G U M N L X B N P O W S Z A A T E T X D I I Z
 C H N N T S D G K P R C V N P V H R O L B U B E
 E R Z I G Y E Z X V O W P Q V N G Y R A E Q K D
 F V G P T A H P G P H L F F T O U H I U M Y H T
 N L T H X C M L E H A D E V K Y W E D F R A I E
 R V D Q W P E S O N U G N I K C A R T O N L E C
 T O I B W A M T E K Y M K N W P U D Q Y V L B H
 R K A Z F O S T O D S W R Z N P Z N I V D H W N
 M F C S W O A A K R S T P Q A D I I Z Y C K T O
 Z Y O I L R P M S Z P K W F R H J C Z X G K Y L
 Q P L V Y C T J U Y V H E W Z V D D E T H Q M O
 K R Z X B R F W L Z R E N D Z B V B X C E E R G
 Y U P O A A A V B I L W S P V U A E S Z R C Z Y
 V B S D R L V X Y T Q F G I D C D C Z Z Z E N A
 B E B E B C I Z O D M J W J J C X O C G E Y A S
 Y Y W T K W F M Z Q P T K P W U G C C M T H X M