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Tucson astronomer:Media pushes fear in asteroid reporting

COURTESY CATALINA SKY SURVEY 2017

Asteroid 2024 YR4 is no longer headed for Earth, but much of the media coverage about the potential for impact created real fear that's difficult to undo, says Carson Fuls, director of Catalina Sky Survey.

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Asteroid 2024 YR4 is no longer headed for Earth, but the fear it caused has astronomers worried about scare tones in the media.

The asteroid initially had an approximate 3% chance for impact with Earth, but that recently dropped to less than 0.0017% in new calculations by NASA making it negligible.

"It's really easy to scare people, but it's hard to un-scare people," said Carson Fuls, director of Catalina Sky Survey. "That's always been a really big concern."

Fuls and his team search for objects in space. In fact, the survey finds about 40% of the new object discoveries each year. They use a process of identifying linear paths in the night sky to confirm objects and track their orbits.

But Fuls said he wishes the media reporting reduced scare tactics often used when covering new discoveries of asteroids.

"NASA really worked hard to get the most accurate information out that there is a very small probability of impact at this date in the future," Fuls said.

"We are taking more observations and will continue to until either the probability goes to zero or it doesn't, and then we'll go from there. But that's not usually the way the stories go that I see."

He said his team talks about the possibility of the media "crying wolf" when using scare as the main point in news coverage about near-earth asteroids. He said he isn't worried about any asteroids now, and it would take a very specific situation for him to be alarmed.

"I would be scared for objects with a really high impact probability that have moved far away, and we won't have another chance to observe," Fuls said.

NASA posted updates on social media on Asteroid 2024 YR4, and Fuls said they would alert the public if there was a change or increased chance of impact.

He said he would be concerned if an asteroid had a 50% to 70% chance of Earth-impact, especially if it approaches the Earth from the sun, the opposite direction from where 2024 YR4 is coming.

With the sun to its back, an asteroid is invisible to telescopes, for the same reason why telescopes are not as effective when the moon is full and bright.

This situation is extremely rare and astronomers have their eye on all the big, near-earth asteroids.

"Space is incredibly, profoundly empty," Fuls said. "We don't even check when we send probes through the asteroid belt."

Movies depict the belt as crowded and rock-filled, when in fact it is vast and spread out with millions of miles between asteroids.

The belt is located between Mars and Jupiter, and Jupiter's strong gravitational pull can sometimes change the direction of space objects, sending them away or even toward earth. But even with this uncertainty, astronomers track all possible devastating asteroids and Fuls said none are on route for Earth.

Asteroid 2024 YR4 was discovered by the NASA-funded Asteroid Terrestrial-impact Last Alert System (ATLAS) at one of their telescopes in Chile.

When a new object in space is identified, it and any observations are reported to the Minor Planet Center. From here other astronomers can help track it or provide additional observations for different telescopes.

The Cataline Sky Survey was unable to see this asteroid initially because it was moving too fast. But after ATLAS reported it to the Minor Planet Center, Fuls' team requested permission to use a larger telescope to gather more observations.

They reached out to use the Gemini South Telescope in Chile.

"They were wonderful to accept our director's discretionary time proposal, which was basically us saying, 'there's a really important time critical observation that we need you to make to disrupt your normally planned observations,'" Fuls said.

His team was able to track and record the asteroid from there, until the impact probability approached zero.

The Catalina Sky Survey found 28 new space objects last year and they hope for more discoveries as technologies advance worldwide.

The new Vera Rubin Observatory in Chile and the Near-Earth Object Surveillance Mission 2027 launch are just a couple of the upcoming advancements in space research. Fuls said that every new discovery will be reported to the public from NASA and media outlets will follow.

"I would expect there to be more objects, possibly similar to this last one, and I worry that there would be a corresponding increase in the number of misleading and maybe fear mongering articles," Fuls said.

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Carson Fuls, director of Catalina Sky Survey