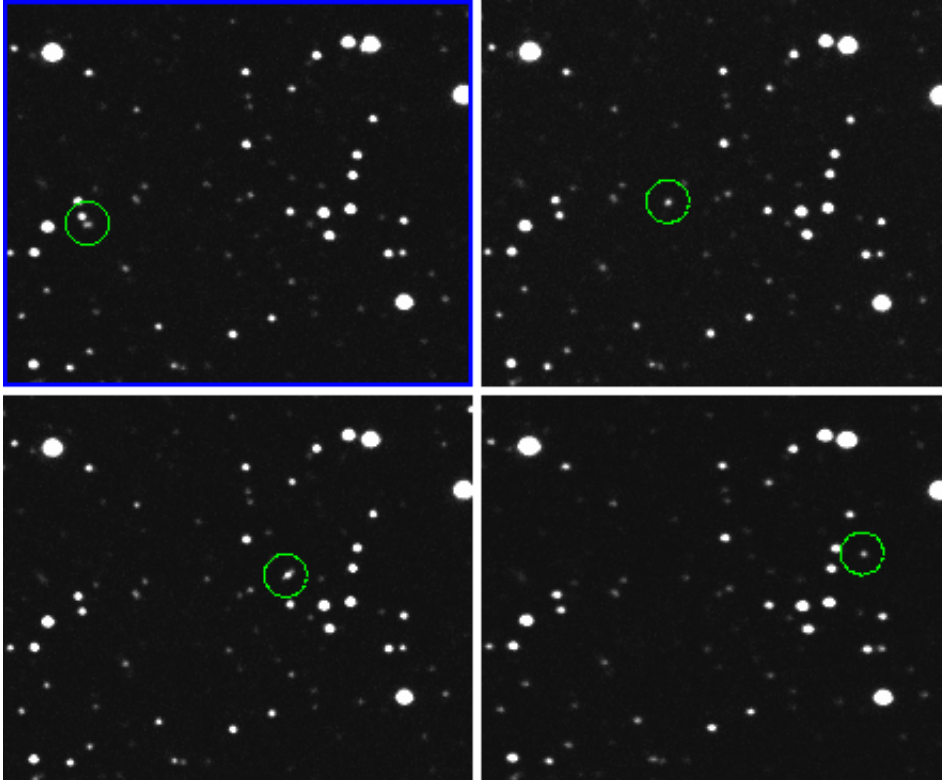


Newly found asteroid buzzes Earth

May 29 2012, By Nancy Atkinson



Discovery images of asteroid KT42. Credit: Catalina Sky Survey/Mt. Lemmon Observatory

A newly found space rock will give Earth a close shave on May 29, passing by at a distance of just 14,440 kilometers (8,950 miles). That distance puts the small asteroid, named 2012 KT42, in the top ten list of closest asteroid approaches. In fact, this is the sixth closest approach to date. The close pass will occur at about 07:00 UTC (03:00 EDT, midnight PDT in the US) on May 29. 2012 KT42 is estimated to be

between 3-10 meters in size, and while there is no possibility this asteroid will hit Earth, even if it did, it would surely burn up in the atmosphere.

The sequence of images above were sent to us by Alex Gibbs from the [Catalina Sky Survey](#), who made the discovery of 2012 KT42 with the 1.5 meter telescope on Mt. Lemmon, Arizona. Gibbs also discovered a similar sized [asteroid](#) earlier this year, 2012 BX34, and shared with Universe Today [the behind the scenes activities](#) in the discovery of a near-Earth asteroid.

Below is an animation of images of 2012 KT42 taken by Ernesto Guido, Nick Howes and Giovanni Sostero from the Remanzacco Observatory.



An animation showing the motion of 2012 KT42. Each frame is a 5-second exposure through a 2.0-m telescope. Credit: Ernesto Guido, Nick Howes and Giovanni Sostero from the Remanzacco Observatory.

The team said that at the time they took the images on May 28, 2012 KT42 was moving at about $\sim 3.63''/\text{min}$ and its magnitude was ~ 17.5 . The images were taken with the Siding Spring-Faulkes Telescope South through a 2.0-m f/10.0 Ritchey-Chretien telescope.

An interesting note pointed out by the Remanzacco team is that on May 29 at about 10:10 UT, 2012 KT42 will transit across the face of the Sun, and this could be seen from Africa, the Middle East, Asia. But it will be hard to see, if the diameter is about 5m, then the object would only appear about 0.006 of a degree against the solar disk.

In our article about Gibbs' earlier discovery, he noted that when astronomers look through telescopes, asteroids don't look much different from stars – they are just points of light. But asteroids are points of light are moving; however they are moving slow enough that to detect the motion, astronomers take a series of images, usually four images spaced 10-12 minutes apart.

Then, the observers run specialized software to examine their images for any star-like objects that are moving from one image to the next. The software removes any candidates that correspond to known objects or main-belt asteroids. Gibbs said the software has a low detection threshold to avoid missing anything, so the observer looks over what the software found and determines which are real. The remaining objects that the software determines could be interesting are then sent in to the Minor Planet Center (MPC) at the Smithsonian Astrophysical [Observatory](#) in Cambridge, Massachusetts, for the team or others to follow up.

Thanks to Alex Gibbs and the Remanzacco team for sharing their images.

You can see more info about 2012 KT42 at [JPL's Small Body Database](#)

[website](#), or at the [Minor Planet Center](#).

Source: [Universe Today](#)

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