

# The Astronomical League

The Nation's Largest Federation of Astronomical Societies

## It is 2012 on Planet Earth and all is well In the Celestial Neighborhood

There are fanciful stories floating on the Internet claiming that the Earth will face destruction in December 2012, more specifically on the winter solstice date of December 21. There are three general causes given, none of them have any validity and none of them make much sense.

1. The favorite reason maintains that a large, mysterious celestial body either will collide with the Earth destroying life as we know it, or will closely pass our planet causing catastrophic earthquakes.
2. A more bizarre assertion is that on the winter solstice the sun aligns with the center of the Milky Way galaxy causing the sun and the Earth to enter into a "galactic beam," possibly dragging the sun — with the Earth in tow — towards the center of the galaxy.
3. A third absurd claim is that there will be an alignment of the planets resulting in upheavals on Earth caused by either devastating gravitational or strange magnetic forces, or by massive solar flares.

There is no scientific evidence to support any of these claims.

Here is what the scientific evidence does support:

- A. No large body is approaching the Earth. No new large body has appeared in the solar system. No new body can be seen during daylight hours in the southern hemisphere — or the northern hemisphere, for that matter.
- B. The sun does not align with the center of the Milky Way on December 21, 2012. The sun's position on the celestial sphere lies closest to the direction of the galactic center on December 18, not on the winter solstice, just as it has been over the past several decades. The position of the winter solstice on

## ***Debunking the December 2012 Doomsday Claims***

the celestial dome will never come into direct alignment with that of the galactic center. While the winter solstice point and the galactic center are located in the same general area of the sky, they are still over  $6^\circ$  apart — about thirteen apparent full moon widths. In any case, the sun and the galactic center are located nowhere near each other in space with the sun on December 21 being about 91.5 million miles from Earth and the galactic center situated two billion times farther at 27,000 light-years away.

- C. There are no unusual alignments of the planets in 2012. Planets sometimes appear close to one another in the sky, but viewed in three dimensional space, they are tens of millions to hundreds of millions of miles apart. While the sun has entered one of its periodic active phases, there is no reason to expect unprecedented solar disruptions.

Furthermore, there are claims that Earth's imminent destruction by celestial agents is known to the governments of the world and that they are concealing this information for their own purposes. That assertion just doesn't hold up to scrutiny. There are well over 100 professional observatories and over 10,000 amateur astronomers located across the globe who constantly search the skies for new and unusual celestial phenomena. No large approaching body could escape their attention. No government could silence them all.

A few outspoken people contend that the end of the world on December 21, 2012 was foretold by the ancient Mayans because, according to these people, the Mayan calendar ends on that date. Some professional archeologists who specialize in studying the Mayan civilization have concluded that one of the calendar's very long counting cycles, the 144,000 day "baktun," ends on December 21, 2012. (Not all authorities agree on this date, however.) This has prompted certain purveyors of doom to link the end of the thirteenth baktun to their own unsupported predictions that the world ends in December 2012. They ignore the fact that the calendar continues, without interruption, when the fourteenth baktun begins on the very next day after the thirteenth ends.

