



## DOOMSDAY 2012 FACT SHEET



**David Morrison**  
**Senior Scientist, NASA Lunar Science Institute**  
**Director, Carl Sagan Center for Study of Life in the Universe**

There is widespread and unnecessary fear of doomsday on December 21, 2012. Some people worry about a Maya prophesy of the end of the world, others fear a variety of astronomical threats such as collision with a rogue planet. Opinion polls suggest that one in ten Americans worry about whether they will survive past Dec 21 of this year, and middle-school teachers everywhere report that many of their students are fearful of a coming apocalypse. Following are brief facts that address these doomsday fears. For more comprehensive discussions and lists of resources please consult these three websites:

- 2012hoax: [<http://2012hoax.org>]
- Andrew Fraknoi's resources for educators:  
[\[http://aer.aas.org/resource/1/aerscz/v11/i1/p010301\\_s1?view=fulltext\]](http://aer.aas.org/resource/1/aerscz/v11/i1/p010301_s1?view=fulltext).
- NASA: [<http://astrobiology.nasa.gov/ask-an-astrobiologist/intro/nibiru-and-doomsday-2012-questions-and-answers>]

=====

**Mayan Calendar:** The Maya calendar, which is made up different cycles of day counts, does not end this year. Rather, one cycle of 144,000 days (394 years) ends and the next cycle begins.

**Mayan Prophecy:** The ancient Maya did not predict the end of the world or any disaster in December 2012. Such doomsday predictions are a modern hoax.

**Planet Nibiru:** Nibiru is probably the minor name of a god found in ancient Mesopotamian writing. There is no planet named Nibiru, and the fictional books by economist Zecharia Sitchin about a civilization on this planet are a hoax.

**Rogue Planet Headed for Earth.** For the past decade there have been reports of a rogue object (Planet X, or Nibiru, or Hercubolus, or even Comet Elenin) that will collide with Earth in December 2012. These claims are not true. If such a threatening world existed, it would be one of the brightest objects in the sky, and astronomers would have been tracking it for years. If it existed, its gravity would be distorting the orbits of planets, especially Mars and Earth. Astronomers know that it does not exist.

**Planet Alignments:** There is no alignment of planets in Dec 2012. There is an approximate lining up of the Earth and Sun and the center of our Galaxy in late

December, but this happens every year. In any case, planet alignments have no effect on the Earth.

**Pole Shift:** There is nothing strange this year about either the magnetic poles or the rotational poles of the Earth. The magnetic polarity changes every million years or so, but that is not happening now, and it probably takes thousands of years when it does happen. A sudden change in the rotational axis has never happened and is not possible. If there were any change in the Earth's rotation, it would be instantly apparent by failure of our GPS systems.

**Increasing Disasters.** Our planet is behaving normally in 2012, although we see more and more news stories about natural disasters. There has been no increase in earthquakes or volcanic eruptions. There has been an increase in extreme weather, including both droughts and floods, which are partly attributable to global warming, but this has nothing to do with a 2012 doomsday.

**Solar Outbursts:** The Sun's ongoing 11-year activity cycle is expected to peak in 2013, not 2012. Solar outbursts (flares and CMEs) can damage orbiting satellites but will not hurt us on the surface. The strength of the 2013 solar maximum is predicted to be lower than average, not higher.

**Bunker Conspiracy:** Accusations of a massive government cover-up are nonsense. No government could hide an incoming planet or silence hundreds of thousands of scientists. Rumors that huge bunkers have been built in the U.S. or elsewhere to shelter the elite are lies. Apparently a few people are building private shelters, but their fear of 2012 is misplaced and they are wasting their money.

**Scaring Children:** The group most vulnerable to doomsday claims is children. Teachers report that many of their students are frightened and some are even considering suicide. This is the most tragic consequence of the 2012 hoax.

**The End of the World:** The idea of the sudden end of the world by any cause is absurd. The Earth has been here for more than 4 billion years, and it will be several more billion years before the gradual brightening of the Sun makes our planet uninhabitable. Meanwhile there is no known astronomical or geological threat that could destroy the Earth.

**Cosmophobia:** Many young people write to me that they are scared of astronomy. When they read about some new discovery, the first thing they think is that it might hurt them, even if it is happening in a distant galaxy. There is no reason for such fears, which I call cosmophobia (fear of the universe). This rash of concern seems to be the result of too many conspiracy theories and sensational stories featured on the Internet and irresponsible news outlets. Astronomical objects are so distant that they cannot threaten the Earth. Please don't be afraid of the Sun or the planets or comets or asteroids. The universe is not your enemy.