

## Nibiru and Doomsday 2012: Questions and Answers

Stories about the fictional planet Nibiru and predictions of doomsday in December 2012 have blossomed on the Internet. There are more than 300 books listed on Amazon.com dealing with the 2012 doomsday. “Ask an Astrobiologist” has received thousands of questions about Nibiru and 2012, with more than 500 answers posted. Following is a list of the most popular “Twenty Questions” organized in a logical succession and answered in some detail.

In addition to my responses, here are some other good resources

- NASA home page story 2012: Beginning of the End or Why the World Won't End? <http://www.nasa.gov/topics/earth/features/2012.html>
- Neil de Grasse Tyson posted a nice [video clip](#) on the Nibiru-2012 issue.
- Wikipedia has several useful entries. Start with 2012 Phenomenon [http://en.wikipedia.org/wiki/2012\\_phenomenon](http://en.wikipedia.org/wiki/2012_phenomenon), [Nibiru Collision](#), then look at [Nibiru Mythology](#) and [Nibiru Sitchin](#). Also informative is the entry for 2012 doomsday predictions.
- For a detailed description of the origin of the Planet X / Nibiru cult see the discussion by Phil Plait on his Badastronomy website: <http://www.badastronomy.com/bad/misc/planetx/>.
- Detailed debunking of the Sitchin fantasies about the Sumerian god Nibiru are found at Mike Heiser's website Sitchin-is-wrong <http://www.sitchiniswrong.com/>
- The most complete and well-organized website with many links is 2012hoax <http://2012hoax.org>
- I have posted three short videos on YouTube: The Truth about 2012 <http://www.youtube.com/watch?v=LG2B9YZjr7w> The Truth about Comet Elenin <http://www.youtube.com/watch?v=AwZb-ERpY-U> The Truth about Nibiru [http://www.youtube.com/watch?v=1Tly-t48uU0&feature=youtube\\_gdata\\_player](http://www.youtube.com/watch?v=1Tly-t48uU0&feature=youtube_gdata_player)

### 1. What is the origin of the prediction that the world will end in December 2012?

The story started with claims that Nibiru, a supposed planet discovered by the Sumerians, is headed toward Earth. Zecharia Sitchin, who wrote fiction about the ancient Mesopotamian civilization of Sumer, claimed in several books (e.g., “The Twelfth Planet”, published in 1976) that he had found and translated Sumerian documents that identify the planet Nibiru, orbiting the Sun every 3600 years. These Sumerian fables include stories of “ancient astronauts” visiting Earth from a civilization of aliens called the Anunnaki <http://www.sitchiniswrong.com/>. Sitchin suggested a return of Nibiru and the Anunnaki sometime this century. Then Nancy Lieder, a self-declared psychic who claims she is channeling aliens, wrote on her website Zetatalk that the inhabitants of a fictional planet around the star Zeta Reticuli warned her that the Earth was in danger from Planet X or Nibiru <http://www.badastronomy.com/bad/misc/planetx/>. This catastrophe was initially predicted for May 2003, but when nothing happened the doomsday date was moved forward to December 2012. Then these two fables were linked to the end of the Mayan calendar long-count at the winter solstice in 2012 – hence the predicted doomsday date on December 21, 2012.

### 2. The Sumerians were the first great civilization, and they made many accurate astronomical predictions, including the existence of the planets Uranus, Neptune and Pluto. So why should we not believe their predictions about Nibiru?

Nibiru is a name in Babylonian astrology sometimes associated with the god Marduk. Nibiru appears as a minor character in the Babylonian creation poem Enuma Elish as recorded in the library of Assurbanipal, King of Assyria (668-627 BCE). Sumer flourished much earlier, from about the 23rd century to the 17th century

BCE. The claims that Nibiru is a planet and was known to the Sumerians are contradicted by scholars who (unlike Zecharia Sitchin) actually study and translate the written records of ancient Mesopotamia. Sumer was indeed a great civilization, important for the development of agriculture, water management, urban life, and especially writing. However, they left very few records dealing with astronomy. Certainly they did not know about the existence of Uranus, Neptune or Pluto. They also had no understanding that the planets orbited the Sun, an idea that first developed in ancient Greece two millennia after the end of Sumer. Claims that Sumerians had a sophisticated astronomy, or that they had a planet named Nibiru, are the product of Sitchin's imagination.

### **3. How can you deny the existence of Nibiru when NASA discovered it in 1983 and the story appeared in leading newspapers? At that time you called it Planet X, and later it was named Xena or Eris.**

IRAS (the NASA Infrared Astronomy Satellite, which carried out a sky survey for 10 months in 1983) discovered many infrared sources, but none of them was Nibiru or Planet X or any other objects in the outer solar system [spider.ipac.caltech.edu/staff/tchester/iras/no\\_tenth\\_planet\\_yet.html](http://spider.ipac.caltech.edu/staff/tchester/iras/no_tenth_planet_yet.html). Briefly, IRAS cataloged 350,000 infrared sources, and initially many of these sources were unidentified (which was the point, of course, of making such a survey). All of these observations have been followed up by subsequent studies with more powerful instruments both on the ground and in space. The rumor about a "tenth planet" erupted in 1984 after a scientific paper was published in *Astrophysical Journal Letters* titled "Unidentified point sources in the IRAS minisurvey", which discussed several infrared sources with "no counterparts". But these "mystery objects" were subsequently found to be distant galaxies (except one, which was a wisp of "infrared cirrus"), as published in 1987. No IRAS source has ever turned out to be a planet. A good discussion of this whole issue is to be found on Phil Plait's website [www.badastronomy.com/bad/misc/planetx/science.html#iras](http://www.badastronomy.com/bad/misc/planetx/science.html#iras). The bottom line is that NASA astronomers never discovered or announced a planet. To an astronomer, persistent claims about a planet that is "nearby" but "invisible" are just plain silly.

### **4. Maybe we should be asking about Planet X or Eris, not Nibiru. And what about the giant planet Tyche?**

"Planet X" is an oxymoron when applied to a real object. The term has been used by astronomers over the past century for a possible or suspected object. Once the object is found, it is given a real name, as was done with Pluto and Eris, both of which were at some time referred to as Planet X. If a new object turns out to be not real, or not a planet, then you won't hear about it again. If it is real, it is not called Planet X. Eris is one of several dwarf planets in the outer solar system, found by astronomers using conventional ground-based telescopes. All of the dwarf planets are on orbits that will never bring them near Earth. Like Pluto, Eris is smaller than our Moon. It is very far away, and its orbit never brings it within 4 billion miles. Tyche, in contrast, is supposed to be a giant planet (with several times the mass of Jupiter) in the far outer solar system <http://en.wikipedia.org/wiki/Tyche>). It was suggested in 1999 from an analysis of the orbits of comets. It has never been seen or detected, and most astronomers do not believe it exists. If it were real, even at a very great distance from the Sun, it should have been picked up in recent infrared sky surveys such as WISE [http://en.wikipedia.org/wiki/Wide-field\\_Infrared\\_Survey\\_Explorer](http://en.wikipedia.org/wiki/Wide-field_Infrared_Survey_Explorer). Even if such an object exists, it can have no effect on the planets or their orbits.

### **5. Do you deny that NASA built a South Pole Telescope to track Nibiru? Why else would they build a telescope at the South Pole? And wasn't HAARP built as part of a defense against Nibiru?**

There is a telescope at the South Pole, but it was not built by NASA and is not used to study Nibiru. The

South Pole Telescope was supported by the National Science Foundation, and it is a radio telescope, not an optical instrument. It cannot take images or photos. You can look it up on Wikipedia [http://en.wikipedia.org/wiki/South\\_Pole\\_Telescope](http://en.wikipedia.org/wiki/South_Pole_Telescope). The Antarctic is a great place for astronomical infrared and short-wave-radio observations, and it also has the advantage that objects can be observed continuously without the interference of the day-night cycle. I should add that it is impossible to imagine a geometry in which an object can be seen only from the South Pole. Even if it were due south of the Earth, it could be seen from the entire southern hemisphere. As to HAARP, that is a favorite subject on conspiracy theory websites. HAARP is an upper atmosphere research instrument operated by the University of Alaska and primarily funded by the U.S. Defense Department [http://en.wikipedia.org/wiki/High\\_Frequency\\_Active\\_Auroral\\_Research\\_Program](http://en.wikipedia.org/wiki/High_Frequency_Active_Auroral_Research_Program). The woo-woo crowd seems to think it was built to cause earthquakes. It has nothing to do with Nibiru or 2012.

## **6. There are many photos and videos of Nibiru on the Internet. Isn't that proof that it exists?**

Many of the photos and videos on the Internet that were taken two or three years ago were of some feature near the Sun (apparently supporting the claim that Nibiru was hiding behind the Sun). These are actually false images of the Sun caused by internal reflections in the lens, often called lens flare. You can identify them easily by the fact that they appear diametrically opposite the real solar image, as if reflected across the center of the image. This is especially obvious in videos, where as the camera moves, the false image dances about always exactly opposite the real image. Similar lens flare is a source of many UFO photos taken at night with strong light sources such as streetlights in the frame. I am surprised that people don't recognize this common photo artifact. There are also photos showing something nearly as large and bright as the Sun (a "second sun"). This is a crazy idea; if there were a second sun every one could see it (and we would be getting very hot!). It amazes me that people will go on at great length about a second sun without stepping outside and looking for themselves. If you can't see it yourself with your own eyes, it doesn't exist!

One widely reported telescopic photo [www.greatdreams.com/nibiru-possible.jpg](http://www.greatdreams.com/nibiru-possible.jpg) shows two views of an expanding gas cloud far beyond the solar system, which is not moving; you can see this from the fact that the stars are the same in both pictures. A sharp-eyed reader of this website identified these photos as a light shell around the star V838 Mon. Wikipedia has a nice write-up and a beautiful photo of it from Hubble [http://en.wikipedia.org/wiki/V838\\_Monocerotis](http://en.wikipedia.org/wiki/V838_Monocerotis). Another high school student was initially impressed by posted images of a red blob that were said to be of Nibiru, until he found that he could easily duplicate the photo using Photoshop. Other people see the bright planets Venus and Jupiter in the sky and think they are Nibiru. Do they think they have discovered something new that no one else is seeing? There are more than 100,000 amateur astronomers from all over the world. They are constantly watching the sky, and not one of them has reported seeing Nibiru or any other rogue object.

## **7. Can you explain the fact that the area at (5h 53m 27s, -6 10' 58") has been blackened out in Google Sky and Microsoft Telescope? People suggest that these have been blackened out because those are the co-ordinates where Nibiru is located at present.**

Several people have asked me about this blank rectangle in Orion in Google Sky, or another similar blank in Virgo <http://www.2012hoax.org/google-sky>. Google Sky and other Internet maps are compilations of astronomical photos of the sky. Many of them are photos taken more than 50 years ago in the Palomar Sky Survey; others are more recent from the Sloan Digital Survey. The problem is that many people think Google sky is a live view of the sky today. They write to me about searching Google Sky for Nibiru or other rogue objects, but even if these were real they would not be visible in these old data. The entire premise that Google Sky can be used to find images of Nibiru, or that blanks indicate that the authorities are hiding important images of Nibiru, is wrong.

**8. If the government knew about Nibiru, wouldn't they keep it a secret to avoid panic? Isn't it the government's job to keep the population at ease?**

There are many objectives of government, but they do not include keeping the population at ease. My experience is that sometimes parts of the government do just the opposite, as in the frequent references to various terrorist threats or warnings about driving accidents on long holiday weekends, which are no more dangerous than any other time. There is a long history of associating bad things with political opponents (older readers will remember the "missile gap" in the 1960 election, younger ones will note the many current references to who is or is not keeping the U.S. safe from terrorists). Further, social scientists have pointed out that many of our concepts of public panic are the product of Hollywood, while in the real world people have a good record of helping each other in a time of danger. I think everyone also recognizes that keeping bad news secret usually backfires, making the issue even worse when the facts finally come out. In the case of Nibiru, these facts would have come out years ago, if it were real.

If Nibiru were real, it would be tracked by thousands of astronomers, amateurs as well as a professional. These astronomers are spread all over the world. I know the astronomy community, and these scientists would not keep a secret even if ordered to. It is also worth remembering that most astronomers in the U.S. work for universities, and that academic organizations, not the government, run most of the big telescopes. Even the Hubble Space Telescope is operated by a consortium of universities. NASA and the government get most of their information from these outside astronomers, not the other way around.

**9. Why does the Mayan calendar say the world will end in 2012? I have heard that they have been pretty accurate in the past with other planetary predictions. How can you be sure you know more than they did?**

Calendars exist for keeping track of the passage of time, not for predicting the future. The Mayan astronomers were clever, and they developed a very complex calendar. Ancient calendars are interesting to historians, but they cannot match the ability we have today to keep track of time, or the precision of the calendars currently in use. The main point, however, is that calendars, whether contemporary or ancient, cannot predict the future of our planet or warn of things to happen on a specific date such as 2012. To further complicate matters, scholars do not agree on when the Mayan calendar long-count turns over. There is no agreed-upon synchronization between the Mayan calendar and ours, which was imported much later from Europe. This supposedly key date in the Mayan calendar may have already happened, or it may lie decades in the future.

**10. What is the polar shift theory? Is it true that the Earth's crust does a 180-degree rotation around the core in a matter of days if not hours? Does this have something to do with our solar system dipping beneath the galactic equator?**

A reversal in the rotation of Earth is impossible. It has never happened and never will. There are slow movements of the continents (for example Antarctica was near the equator hundreds of millions of years ago), but that is irrelevant to claims of reversal of the rotational poles. However, many of the disaster websites pull a bait-and-switch to fool people. They claim a relationship between the rotation and the magnetic polarity of Earth, which does change irregularly with a magnetic reversal taking place every 400,000 years on average. As far as we know, such a magnetic reversal doesn't cause any harm to life on Earth. A magnetic reversal is unlikely to happen in the next few millennia, anyway. But they falsely claim that a magnetic reversal is coming in 2012 and that this is the same as, or will trigger, a reversal of rotational poles. The bottom line is: (a) Rotation direction and magnetic polarity are not related. (b) There is no reason to expect a reversal of magnetic polarity any time soon, or to anticipate any bad effects on life when it does eventually happen. © A

sudden shift in rotational pole with disastrous consequences is impossible. Also, none of this has anything to do with the galactic equator or any of the other nonsense about alignments that appears on many of the conspiracy theory websites.

**11. When most of the planets align in 2012 and planet Earth is in the center of the Milky Way, what will the effects of this be on planet Earth? Could it cause a pole shift, and if so what could we expect?**

There is no planet alignment in 2012 or any other time in the next several years. In fact, in late 2012 the planets are scattered all over the sky! As to the Earth being in the center of the Milky Way, I don't know what this phrase means. If you are referring to the Milky Way Galaxy, we are rather far toward the edge of this spiral galaxy, some 30,000 light years from the center. We circle the galactic center in a period of 225-250 million years, always keeping approximately the same distance. Concerning a pole shift, I also don't know what this means. If it means some sudden change in the position of the rotation axis of the Earth, then that is impossible, as noted in the answer to Question 10. What many websites do discuss is the alignment of the Earth and Sun with the center of the Milky Way in the constellation of Sagittarius. This happens every December, with no bad consequences, and there is no reason to expect 2012 to be different from any other year.

**12. When the Sun and the Earth line up on the galactic plane at the same time with the black hole being in the center couldn't that cause something to happen, due to the fact that the black hole has such a strong gravitational pull.**

There is a giant black hole in the center of our Milky Way galaxy, and like any concentration of mass it exerts gravitational force on the rest of the Galaxy. However, the galactic center is very far away, approximately 30,000 light years, so it has negligible effects on the solar system or the Earth. There are no special forces from the galactic plane or the galactic center. The only important force that acts on the Earth is the gravitation of the Sun and Moon. As far as the influence of the galactic plane, there is nothing special about this location. The last time the Earth was in the galactic plane was several million years ago. Claims that we are about to cross the galactic plane are untrue.

There is a widespread misunderstanding about the gravitational influence of another object on the Earth or other planets, whether it is a distant black hole or a nearby rogue planet. One sees claims often that some object, like Nibiru or Comet Elenin, will cause a pole shift or trigger earthquakes, but that is not the way it works. The only effect of an external gravitational pull is to change the orbits of planets. If there were a massive intruder like Nibiru, it would be altering the orbits of the Earth and other planets, something astronomers would measure immediately. What it won't do is shift the rotational pole or cause earthquakes or other geological events.

**13. I have heard that the Earth's magnetic field will flip in 2012 just when the strongest level of solar storms in history is predicted to take place. Will this kill us or destroy our civilization?**

Near solar maximum (which happens every 11 years approximately), there are many more sunspots, solar flares and coronal mass ejections than near solar minimum. Flares and mass ejections are no danger for humans or other life on Earth. They could endanger astronauts in deep space or on the Moon, and this is something that NASA must learn to deal with, but it is not a problem for you or me. Large outbursts can interrupt radio transmission, cause bright displays of the aurora (Northern and Southern Lights), and damage the electronics of some satellites in space. Today many satellites are designed to protect against this possibility, for example by switching off some of their more delicate circuits and going into a "safe" mode for

a few hours. In extreme cases solar activity can also disrupt electrical transmissions on the ground, possibly leading to electrical blackouts, but this is rare.

The last solar maximum occurred in 2001, but the subsequent solar minimum was unusual, with a period of a couple of years with almost no sunspots or other solar activity. Scientists now guess that the next maximum will in 2013 not 2012. However, the details of the solar cycle remain basically unpredictable.

You are correct that the Earth's magnetic field protects us by creating a large region in space, called the Earth's magnetosphere, within which most of the material ejected from the Sun is captured or deflected, but there is no reason to expect a reversal of magnetic polarity any time soon. These magnetic reversals happen only once in 400,000 years on average.

**14. I am confused about a report on the Fox News website that in 2012 a “Powerful Solar Storm Could Shut Down U.S. for Months”. They referred to a report from the National Academy of Sciences. If nothing is going to happen as a result of the event in 2012, why would NASA allow such nonsense to be reported?**

NASA requested this study of heliophysics by the National Research Council. It had nothing to do with 2012. As you note, this report includes a worst-case analysis of what could happen if there were a repetition of the biggest solar storm ever recorded (in 1859). The problem is the way such information can be used out of context. There is no reason to expect such a large solar storm in the near future, certainly not in 2012 specifically. Your reference to “the event in 2012” illustrates this problem. There is no prediction of an “event in 2012”. We don't even expect the next solar maximum will take place in that year. The whole 2012 disaster scenario is a hoax, partly fueled by the Hollywood science-fiction disaster film “2012”, in which the Earth is nearly destroyed as the result of some sort of undefined solar outburst. I hope that most people are able to distinguish Hollywood film plots from reality. And as a matter of interest, the film “2012” was conceived and written without any reference to the 2012 date. The name was added later to take advantage of growing public concern about this year.

**15. All my school friends are telling me that we are all going to die in the year 2012 due to a meteor hitting earth. Is this true?**

Your friends are wrong. The Earth has always been subject to impacts by comets and asteroids, although big hits are very rare. The last big impact was 65 million years ago, and that led to the extinction of the dinosaurs. Today NASA astronomers are carrying out a survey called the Spaceguard Survey to find any large near-Earth asteroids long before they hit. We have already determined that there are no threatening asteroids as large as the one that killed the dinosaurs. All this work is done openly with the discoveries posted every day on the NASA NEO Program Office website <http://neo.jpl.nasa.gov>, so you can see for yourself that nothing is predicted to hit in 2012.

**16. There are many reports of shifts in the Earth's axis (pole shifts). In 2010 several U.S. airports had to be realigned because the directions had shifted. The sun appeared two days early in Greenland this year, and many people say the positions of sunrise and sunset are different from any time in the past. Fox news recently reported that a pole shift was to blame for the geese flying east. Are these warnings of coming disaster in 2012?**

When people make claims about pole shifts, you need to ask if they are talking about the rotational pole or the magnetic pole. The directions North and South (and also East and West) are defined by the rotation of the Earth. The North Pole on Earth is the projection of the axis around which the Earth rotates, and east is defined as the direction toward which the earth rotates. All this was known before Earth's magnetic field was

discovered or magnetic compasses were invented. The magnetic poles are not in the same place as the rotational poles, and they move around on the surface. A compass therefore does not point to true north. This drifting of the magnetic poles required the renaming (not the reorientation) of several runways at small airports that still use magnetic headings. If the magnetic poles moved a large amount, or even if the magnetic field reversed, we would have to recalibrate the directions on our magnetic compasses, but everything else would stay the same. GPS systems would not be affected. The Sun would still rise in the same place in the East. The other stories deal with the rotation axis, which is very stable. The supposed early sunrise in Greenland and many other claims that the Sun is rising or setting in different locations are rampant on the Internet. Think about it. If there were any shift in the Earth's rotational axis, it would be instantly detected. All the computer drives on telescopes around the world, and all of our GPS systems, depend on a stable rotation of the Earth. If it slipped even a tiny amount, telescopes wouldn't be able to point, planes would be crashing because of incorrect GPS readings, and it would be the biggest news story of the century. These claims on obscure Internet sites are obviously wrong.

**17. Comet Elenin was widely believed to be a threat when it passed by in September-October 2011. Some people on the Internet said it was on the same orbit as Nibiru, or that Nibiru was moving with it or hidden behind it. What happened to Comet Elenin?**

Comet Elenin attracted a great deal of attention from pseudo-scientists and conspiracy theorists. Discovered in December 2010, it was a small long-period comet, less than 4 km in diameter, that fell apart when it got close to the Sun. Yet during the months leading up to perihelion, the attention of many of the true believers in doomsday 2012 shifted their attention to this little comet, claiming that it endangered the Earth. The first crazy rumor was that it was not really discovered by Russian astronomer Leonid Elenin, but that the name Elenin stood for ELE=Extinction Level Event and NIN=Nibiru Is Near. Then websites announced that it triggered the giant Japanese earthquake and tsunami in March, and therefore it must be extremely massive – perhaps not a comet at all but something like a brown dwarf. Of course, scientists knew Elenin was a comet and not a massive object like a brown dwarf. First, Elenin fits the definition of a comet: It was a solar system object with an elongated (eccentric) orbit that was outgassing a tenuous atmosphere (coma) and tail as it approached the Sun. Comets are defined operationally by the presence of the visible coma and tail. Second, Elenin could not possibly be a massive object like a brown dwarf. If it were, it would not have a coma or tail, since the gas cannot escape from an object with substantial gravity. In addition, if it were massive we would by then have experienced its gravitational influence on the orbits of the planets, especially Mars and Earth (See Question 12). Finally, if it were a brown dwarf it would have been easily detected in various previous astronomical surveys, even when it was still in the far outer solar system.

During the summer of 2011, Elenin remained faint, and conspiracy websites accused NASA of a cover-up (not knowing, apparently, that it is the amateur astronomy community, not NASA, who photograph faint comets and measure their positions). Meanwhile, it was widely predicted on the Internet that Elenin would do terrible damage to the Earth when it came close in late September. (The fact is that it never came closer than a hundred times the distance to the Moon.) The usual claims were made about triggering pole shifts and huge earthquakes, this time predicted for September 26. In addition, it was claimed on many Internet sites that the comet was so large that it would block out the Sun for the three days of September 26, 27, and 28, 2011. They also said that the U.S. Military would be on full alert and that all the U.S. government leaders would be taking shelter in the (fictional) bunkers under the Denver airport. In fact, Elenin was so small that it had begun to break apart by mid-September, as it neared the Sun, and of course nothing happened on September 26-27-28. Some conspiracy sites continued to claim that the comet was accompanied by a giant invisible object and that these disasters could happen any day. Others said the comet never existed but was a false rumor spread by the government to distract attention from Nibiru. This may be a preview of what we can expect in December 2012, when many conspiracy nuts will likely continue to claim that Nibiru will destroy the Earth

right up to (or beyond) December 21.

**18. If Nibiru is not real, then why are all these terrible things happening in 2012? There must be some explanation for the earthquakes, floods, storms, solar outbursts, and rising temperatures our planet is experiencing.**

Over the four years that I have been answering questions on this topic, each of the predicted 2012 disasters has been shown to be wrong. Nibiru (or any other rogue planet) obviously does not exist, since if it were real we could see it and feel the effects of its gravity. You could not hide it from the more than 10,000 professional and 100,000 amateur astronomers. And there will be no planet alignment in 2012 — that is a plain lie. The Earth's magnetic field is not headed for a reversal, while large shifts in the rotational pole are impossible. Solar activity is below normal, and the next solar maximum will not happen until 2013. Although we had one exceptionally large earthquake in Japan this year, overall there has been no increase in earthquakes worldwide. It is interesting how many people who write to me don't seem to realize that astronomers and space scientists and geologists are constantly monitoring and recording what happens to the Earth, and any deviation would be immediately detected. The one real change is global warming, as is well documented by science. That helps explain the increase in storms and floods. And we know the cause, which is the rising concentration of carbon dioxide in the atmosphere. All we are left with for 2012 is a vague concern about the roll-over in the Mayan calendar, and scholars can't even agree on what year that happens. Doomsday is not real, but people's fear promoted by countless websites and YouTube videos is unfortunately very real, and especially harmful for children.

**19. Can you prove to me that Nibiru is a hoax? There are so many reports that something terrible will happen in 2012. I need proof because the government and NASA are keeping so much from us.**

Yes I can prove it. Remember what Nibiru is said to be: a planet as large as the Earth on an eccentric 3600-year orbit around the Sun that threatens to collide or come close to the Earth in December 2012. If it existed, it would by now (early 2012) be visible to everyone in the night sky. Obviously it is not there. You can't hide a planet that is due here in less than a year. Further, a real planet would have sufficient mass to perturb the orbits of Mars and the Earth. Some people talk about an external object changing the tilt of the Earth's axis or triggering earthquakes, which is silly, but its gravity would be distorting planetary orbits if it were real. One way we would know this is from the daily communication links between the Earth and several spacecraft orbiting Mars and operating on its surface. The radio signals measure the precise distance and relative speed between the two planets, and any deviation would be immediately recognized. Finally, we also know that no planet has been regularly passing through the inner solar system. If there had been such interlopers, the Moon would have been stripped from the Earth and the orbits of the inner planets would have high eccentricity and inclination. Not only does Nibiru not exist now, we can be sure that no rogue planets have been entering the inner solar system over the past million years.

You don't need to take my word for it. Just use common sense. Have you seen Nibiru? In 2008 many websites said it would be visible to the naked eye in spring 2009. If a large planet or brown dwarf were headed for the inner solar system in 2012, it would already be tracked by hundreds of thousands of astronomers, professional and amateur, all over the world. Do you know any amateur astronomers who are watching it? Have you seen any photos or discussion of it in the big popular astronomy magazines like Sky & Telescope? Just think about it. No one could hide Nibiru if it existed.

**20. If Nibiru is a hoax, why doesn't NASA issue a denial? How can you permit these lies to circulate and frighten people? Why doesn't the U.S. government do something about it!**

If you go to the NASA home page, nasa.gov, you will see many stories that expose the Nibiru-2012 hoax. Try searching nasa.gov under “Nibiru” or “2012”. There is not much more that NASA can do. These hoaxes have nothing to do with NASA and are not based on NASA data, so we as an agency are not directly involved. But scientists, both within NASA and outside, recognize that this hoax with its effort to frighten people is a distraction from more important science concerns, such as global warming and loss of biological diversity. We worry about the effect of this fear on impressionable children. But we live in a country where there is freedom of speech, and that includes freedom to lie. You should be glad there are no censors. But if you will just use common sense I am sure you can recognize the lies. You can find a good summary of the scientific position on 2012 doomsday at <http://2012hoax.org>.

**SOURCE:**

<http://astrobiology2.arc.nasa.gov/ask-an-astrobiologist/intro/nibiru-and-doomsday-2012-questions-and-answers>