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Music by Geodesium. (http://www.geodesium.com)

Bio: Carolyn Collins Petersen is a science writer and show producer, as well as vice-president of Loch Ness Productions, http://www.lochnessproductions.com/index2.html) a company that creates astronomy documentaries and other materials. She works with planetariums, science centers, and observatories on products that explain astronomy and space science to the public. Her most recent projects range from documentary scripts, exhibits for NASA/JPL, the Griffith Observatory and the California Academy of Sciences, to video podcasts for MIT's Haystack Observatory and podcasts for the Astronomical society of the Pacific's "Astronomy Behind the Headlines" project.

******begin transcript******

Mars

Hi, this is Carolyn Collins Petersen, the Spacewriter, and I want to talk about Mars.

You've probably heard that Mars is going to be as big as the full moon this month. It's not true, of course. If Mars were as big as the Full Moon, it would have to be incredibly close to Earth. If it was, we'd have big problems because Earth's orbit would be changed by the gravitational influence of Mars being so close, and we'd be experiencing tidal forces on our planet that could rip it apart.

But, that's not happening and it's not going to, despite what you hear or see on the Internet and the Web.

So, if you see that Mars/Full Moon hoax pop up in your mailbox, don't even bother to read it. Just send it to the bitbucket.

This "Mars as Big as the Full Moon" hoax (and that's what it is) shows up every year. People who don't know any better forward the story along to *other* people who don't know any better and the next thing you know, we have a wild Internet rumor without any factual basis.

So, Mars is never going to appear as big as the full moon in our skies. Ever. It's just too far away to look like anything more than a bright point of light in the sky. For the record, the Moon is just over 383,000 kilometers from Earth while Mars can be as much as 400 million kilometers from Earth at one point in its orbit and around 57 million at its closest. That's quite a big difference and means that the Moon appears big and Mars… will be a point of light.

Mars is starting to look quite nice in our evening skies, just after sunset this month. October 30th this year, Mars and Earth WILL be at their closest distances from each other. That means the Red Planet will be the fourth-brightest thing in the sky after the Moon, the Sun, and Venus.

Now, Mars is one of my favorite planets. When I was a little girl, a bunch of us would get together and play "Adventure to Mars". It always began with us dragging an old piece of cardboard out to a field. We'd stand on it and pretend it was our portal to the Red Planet. Then, once we got to the surface of Mars, we'd have grand adventures until it was time to go home and eat dinner.

A few years ago, I used that scenario in a planetarium show that we produced for the National Air and Space Museum's Einstein Planetarium. The show was called "SkyQuest", and we filmed a little girl playing the game that I and my siblings and cousins enjoyed when we were kids.

At the time, I was a kid I think I barely knew what Mars REALLY was. Oh, I knew it was a planet -- that was part of the whole "nine planets" memorization game that we had to learn in school. I aced THAT homework assignment right away -- back when there WERE nine official planets. Of course, now we have eight big planets and a bunch of dwarf planets, so things HAVE changed a little bit. But, little did I know at the age of 7 or so that Mars was this dusty, dry, red world that hasn't life on it for a long time, if it ever did. But, that didn't stop me from being fascinated with the place.

There's a LOT to know about the Red Planet -- like, it *may* once have had water on its surface. It was probably warmer in its early days. And, if it had water and a warmer atmosphere, it may have had life.

Just looking at Mars mission images since the 1960s, you can tell that water once flowed across the surface. There are teardrop-shaped islands, channels, dried-out riverbeds, and in some images, scientists have been able to make out what looks like evidence for ancient shorelines. The rocks and minerals on Mars also seem to point to the presence of water in the distant past.

Now, water isn't the only thing that Mars scientists hunt for. They're also intrigued by the volcanic history of the planet, and want to know more about what happened to its atmosphere. Mars was probably born with a thicker, more luxuriant atmosphere. Something happened and much of that air blanked escaped. So, what happened? Will we ever know? And what happened to dry out the Mars surface? We're sending missions to find out the answers to all these questions.

What *I'm* waiting for is the first expedition that will land HUMANS on Mars. At one time, I hoped it would be ME going to Mars, but that seems

unlikely. So, maybe one of my family members -- a niece or nephew... will some day be a Mars explorer...

I hope that it happens in my lifetime – that Mars explorers will be sending back their first impressions of its dry and dusty landscapes.

To find out more about where Mars is appearing in the sky over the next few months, and about our explorations of the Red Planet, visit my Web page at www.thespacewriter.com and click on the 365 Days of Astronomy link.

And, thanks for listening and happy Mars-watching!