

Cosmic X-Files

Halloween - Fall 2018

Studying mysteries of the universe, pushing the limits for knowledge has always made astronomy fertile ground for conspiracy and fanaticism. Yet, this very vulnerability often provides new and fantastic learning and insight. With today's proliferation of, and reliance on, alternative and social media however, the obstacles are far greater and the results are often more controversial. Near real-time data, and the startling degree to which we abandon our skepticism and sensibilities, can make even the most outrageous and unrealistic assertions appear all too real, and go all too unchallenged.

Perhaps you were recently listening to a favorite radio or streamed program, watching a news telecast, scanning your Facebook pages, or checking Twitter. Then you were interrupted; a news flash, a "friend's" update, or an emergency radio alert blasted from your screen, your phone, or speakers. Astronomers at "**Kitt's Peak**" have announced that bright and unexplained flashes have been detected by mountain-based telescopes and confirmed by our many probes on and above the "**Red Planet**". Local astronomers and state university space science experts have confirmed that these "flashes" are rocket launches. We do not yet know the purpose or nature of these launches – whether weaponry, exploratory, or "manned" vehicles. What we do know at this time is that the launch parameters have been analyzed, and they are coming here. The Earth will never be the same.

Or, you got a phone call just after dinner, "Chuck, go outside! Look in the northwest, there's something just a little up in the sky. What can it be, Chuck? There are two of them, and I've never seen anything like it." Maybe, you've experienced far worse yourself on the way to work. At 7am, your eyes are still blurry, and then, there it is, screaming across the sky and glaring like the sun. A sonic blast knocks you off the road and glass from surrounding buildings falls to the streets like shrapnel. Is this an attack? From where? What in the world...or out of this world...can it be?

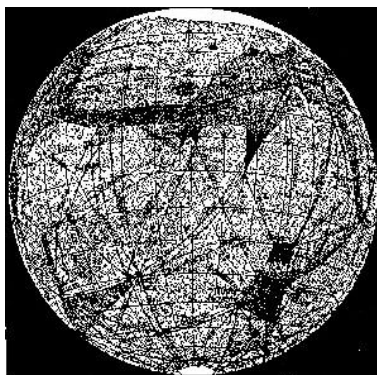
At times, these revelations even show up in print media, where there is no sense of urgency. Magazines and papers may take weeks to come out, and we have all the time we need to evaluate, research, and confirm the authenticity of their claims. We should at least be able to apply a modicum of healthy reservation to consider the motivation of the subject, the reporter, or even the organization. Take for example this headline, "**Planet X Confirmed!** We have finally determined that slight perturbations in the orbits of the outer planets, **Uranus and Neptune**, coupled with the motions of other small bodies, leave no doubt that this object, be it **Nemesis, Nibiru, or Pluto** has been found."

In some cases, information (or the lack thereof) festers for decades. Over time, the story is built, changed, embellished, and exaggerated until the final version is unrecognizable. We know for example that the United States government has recovered a crashed spacecraft of extraterrestrial origin. Furthermore, the deceased alien pilots have been kept frozen at a super-secret government facility – to be studied either to protect ourselves from alien invasion or to further our knowledge of space travel. Everyone knows this, but things get worse year after year, as information remains hidden.

The latest example of a "shoot ourselves in the foot and reload" mentality is the government closure of the **National Solar Observatory**. On September 6, 2018, the FBI showed up, and "for security reasons", closed down and evacuated the Solar Observatory and the small town of **Sunspot, New Mexico**. Nobody was told why, no date for reopening was set, and guards were posted to keep anyone from accessing the buildings and equipment. Was a secret government space operation uncovered? Is Earth at risk from new and powerful solar storms? This level of secrecy and severe action caused waves of conjecture and speculation about just what the Solar Observatory may have discovered.

These are just a few relatively recent examples. For this Halloween Edition of my newsletter, let's take a quick look and see what astronomy has taught us!

The first case is one of the great Halloween Ghost Stories of all time! On October 30, 1938, **Orson Welles** suddenly broke in to the evening's dance music being broadcast over the Columbia Broadcasting System. In feverish "news flashes", he reported objects landing, aliens emerging, and defenders of Earth vaporized by death rays. The reports were intentionally "realistic", imitating news bulletins to heighten believability and fear. Over the course of an hour, "on-site reporting" from various civilian and military first-responders, detailed the battle for our planet. The broadcast succeeded...



Above left, **Orson Welles** deals with the aftermath of his "hoax" Martian broadcast. To be fair, a disclaimer precluded the show, and several interruptions during the broadcast noted that this was a dramatization of *H.G. Wells's "War of the Worlds"*. The extent of the "panic" is still debated to this day, but it is clear that many listeners took the "news bulletins" at face value, ignoring or missing the disclaimers, and chaos ensued.

At the time, "**Mars-mania**" was still in its heyday. A Martian civilization capable of constructing "**canals**" to move water from the poles to the arid central regions, could be excused for lusting after the vast liquid resources of Earth! Notice the recent image at far right shows no indication of the civilized and stylized irrigation systems in the drawing at center.

Next up, we have the all-too-common and still misunderstood **UFO**. I've seen UFO's, I've photographed them, and I'm **STILL** the only person I know to have watched one visually through a telescope. A UFO is an **Unidentified Flying Object**...there is nothing sinister here; it's just an object that couldn't be identified at the time. A UFO could end up being **Venus**, a satellite, or an airplane – but they are seldom "flying saucers", or anything from another world. The problem is that observers often jump to conclusions, and there are times when that can be a very dangerous reaction. For example...



Above left, is an object seen by a friend in January 2018. Confused about what she was seeing, she called me for confirmation. The next day, I turned the **UFO** into an IFO...an IDENTIFIED Flying Object! It was a rocket launch From California's Vandenberg base. You can even see the first stage after separation, to the lower right in the image. The sun, still shining in the west, illuminated the exhaust, giving an otherworldly glow. Thousands reported the sight.

The object at right was natural, and far more dangerous. Early morning of February 15, 2013 saw a large meteorite – **a bolide** – enter the atmosphere above **Chelyabinsk, Russia**. Leaving a long “**con-trail**” in the sky, it exploded before hitting the Earth. The shock wave knocked people to the ground, and flying glass and damaged buildings resulted in hundreds of injuries. But for some cooler heads that did not assume the worst, this could have been mistaken for a missile attack. The consequences could have been global and devastating.

Finally, there are the long running controversies that still bubble up repeatedly to inflame passions on all sides. **Roswell, Area-51**, and even **Pluto** are perfect examples. Originally, **Clyde Tombaugh's** 1930 discovery was classified as a planet, though as instruments improved, and other discoveries were made, Pluto's status was under constant scrutiny. Then, the **International Astronomical Union**, in 2006 controversially reclassified the diminutive one as a “**dwarf**”. No, my input was not requested. Still, the battle rages, and Clyde Tombaugh may yet be vindicated! The search for **Planet X** (pronounced Planet EX) continues today, whether it be a new planet number 9, or a planet 10, 11, 12, or whatever. Even this year, scientific papers have “confirmed” a large **Kuiper Belt Body** with a highly eccentric and distant orbit, though none has yet been discovered. This back-and-forth continues to fuel the conspiracy and prophecy that the Earth might yet suffer destruction by Nemesis or Nibiru!

Speaking of conspiracy, the Solar Observatory at Sunspot is open for business once again. Seems that “someone” in or around the facility was using a computer for child pornography, and the federal authorities didn't want the evidence tampered with, or destroyed. While no one has yet been charged, there certainly was no alien conspiracy and no dark-star secret. It was just that the way the officials handled it made it **appear** spooky! This kind of thing happens in astronomy all the time. Or, maybe it really is a cover up after all, and everyone is on “**Double Secret Probation**”.

So, “Trick or Treat”, and now let's look at a couple REAL astronomy highlights!

First up, don't forget that Fall is the start of the best Meteor Shower Season. The next one coming up is one of the best of the year – then again, ALL the Fall Showers are among the year's best! If you check this year's calendar (I sent it to you at the beginning of the year!) you'll see that **October's Orionid** shower, the **Leonid shower of November**, and **December's Geminid** meteors are all around the first quarter moon – a little before or after, but around that time. This means that the moon will set a bit before or a bit after midnight, and the best meteor viewing should actually be in the pre-dawn hours. The Orionids peak on the night of **October 20-21**, so get up before dawn to catch the best display. Still, all three of the fall showers are gaudy, so even if you prefer to watch in the 9pm to 12midnight window, you should get some great streakers! The nice thing about the 2018 Orionids is that they peak on the weekend, so stay up late or get up early, you're free to choose. Remember, for viewing October's shower, look all AROUND the constellation of Orion, and not directly AT Orion!

Next, the planetary parade of 2018 is still going on. **Jupiter** is about to enter the western sunset at the head of the **Scorpion**, but you can still get **Saturn** near its best early in the evening. Sitting at the top of the **Sagittarius Teapot**, the ringed beauty is almost dead to the south after sunset. Then, spend a

last couple of observing sessions on **Mars**. It is still high in the southeastern sky at sunset. Look for the red beast in **Capricorn**, while it is still showing well.



Now for a couple updates about what is going on in the Public Outreach arena. **Project ASTRO** is a national program that partners teachers with local astronomers for the year. In Tucson, it is organized by **Rob Sparks** at the **National Optical Astronomy Observatory**. We are underway for 2018, and I have started working with my teacher partners already. The solar viewing activity with three classes at **Twin Peaks Elementary** in September was a huge success. I am also looking at several classroom activities all around Tucson over the next few months. If you would like an event at your school, or if you would like to volunteer to help at one of our upcoming star parties, please call or send me an email.

Finally, as this is the **Halloween – Fall Newsletter**, it must be time for the **Astronomy Adventures Arizona Fall Star Party**. This year's event is at my home on **Saturday, October 27, from 6:30pm until 9pm**. It is free for all, and all of my newsletter readers are invited – as is everyone in the neighborhood. If you want to come in costume, you can, but it isn't required. We'll have snacks, hot beverages, and telescopes set up to view the beautiful Fall Night Skies in Tucson, Arizona. If you'd like to come, you can call me or send me an email and request the flier – I'll send it out right away. But don't wait long, the 27th is just around the corner, and it's going to be a fun night!

I Hope You All Have a Great Fall!

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