



NEWSLETTER

RITTENHOUSE ASTRONOMICAL SOCIETY

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May 2010

OPEN TO PUBLIC AND STUDENTS
Upcoming Meeting on May 12th at
7:15 PM
The Franklin
20th Street and Benjamin Franklin Parkway

May's Meeting
Dr. Julia Plummer

Assistant Professor: Arcadia University

Dr. Julia Plummer was originally scheduled to present to the Rittenhouse Astronomical Society in February of 2010. Unfortunately, the city of Philadelphia was buried under a deep blanket of snow, forcing the cancellation of our meeting. Dr. Plummer graciously agreed to reschedule her presentation for us this May.

Dr. Plummer's research is about children's understanding of the sun, moon and stars. Her dissertation entitled "Students' Development of Astronomy Concepts across Time" received an award from NARST (National Association of Research in Science Teaching) in 2007. A link to her dissertation is located on the Rittenhouse Web page. It will be an evening well worth a venture into the city.



Meeting Agenda

- 7:15 - Introduction
7:30 - Astronomy Lesson
President's Message
Sky This Month
Guest Speakers
Rooftop Observing - Weather Permitting

April's Meeting

April's meeting started off with a tour in the sky of the magical astronomical wonders that Ivin Williams wrote about in some of our past newsletters. While Ivin described the astronomical phenomenons and showed beautiful pictures, Ted Williams helped to show us where the objects are located in the sky.

Dr. Karen Vanlandingham from West Chester University presented information about Project ASTRO, a national program that creates long-term partnerships between astronomers and teachers or youth groups. She explained how the project is organized and was hopeful in finding a few astronomers or teachers in our organization to join the project.

Our meeting concluded with a rooftop observatory session. The first time that we have been able to open the observatory this year. It was a great view of planet Saturn with a few of tow of its moons in the telescope. Titan being the bigger of the two moons.

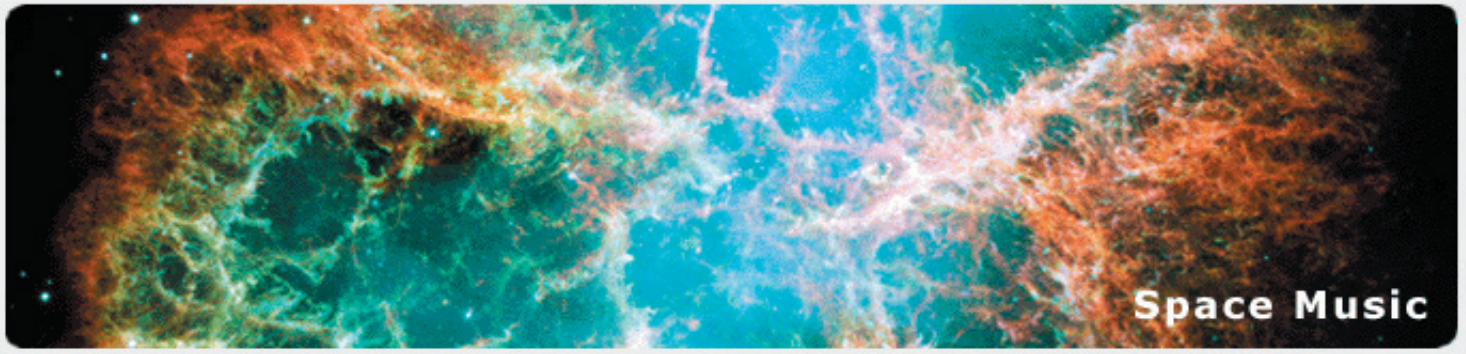


Attention: Star Party

The Summer Mason Dixon Star Party is July 9,10 and 11th. The Fall (no frills) Mason Dixon Star Party is October 8,9 and 10th. You are more than welcome to come early and stay late and just pay the camping fees for the extra days. More info is on the website at www.masondixonstarparty.org . If you would be so kind as to put this announcement on your website and/or newsletter, we are all to happy to do the same for you. Just let me know. Thanks in advance and keep looking up. ~Cindy Tavares YCAS Secretary

Visible Planets 05/12/2010

Table with 4 columns: Planet, Rises, Transit, Sets. Rows include Mercury, Venus, Mars, Jupiter, and Saturn with their respective times.



Top Ten Space-Themed Songs from the 1980's

Eric Van Osten

After enjoying the lecture at a RAS meeting a few months back on Gustav Holst's "The Planets," I was inspired to create a playlist on my MP3 player that was entirely devoted to songs about space. We've probably all read articles about the top 10 space songs of all time, and we are all very well aware of David Bowie's "Space Oddity," Elton John's "Rocket Man," and so on. Okay, we get it; can we move on now? So here I propose a new twist: space-themed songs exclusively from the '80s, chosen unscientifically by me to amuse you, the reader.

10. Adam Ant: "Apollo 9" – Poor Adam Ant. He has the worst trouble with women. In this song, his lady friend is so distraught by their relationship that she takes extreme measures to be as physically far removed from Adam as possible: "Hey hey what do you say / Had me a woman she flew away / Climbed onto the nearest star / Miss her lots, but there you are / I don't worry, things are fine / Way up there in Apollo 9." Ouch.

9. B-52's: "There's a Moon in the Sky (It's Called the Moon)" – "There's a moon in the sky / It's called 'the moon' / And everybody is there including / Saturn! Mercury! Venus! Mars! Jupiter! Neptune!" Very few other songs pay homage to so many planets in one sitting. B52's earn special recognition for their consistent blending of space exploration with music via such other notable songs as: "Planet Claire," "Cosmic Thing," and "53 Miles West of Venus."

8. Peter Schilling: "Major Tom" – A delightfully bouncy song created as a sequel (or alternate ending) to David Bowie's "Space Oddity," in which our protagonist makes a triumphant return to Earth rather than getting lost in space.

7. Bananarama: "Venus" – Bananarama – what a fun name to say! They were the Spice Girls and Pussycat Dolls of the '80s. Though definitely catchy and fun, the song was

first – and certainly better – performed by The Shocking Blue in the late '60s. But perhaps the worst performance of the song in all time was on an episode of the sitcom "Full House," when totally awesome Uncle Jesse (he has such great hair!) shows his niece DJ Tanner and her friend Kimmie Gibbler how to rock out in a band. Yes, it's as bad as it sounds. So by comparison, Bananarama's version isn't really the worst offender.

6. Devo: "Space Junk" – Though technically released in the late '70s, I'm going to allow this track to slip into my list exclusive to '80s bands because Devo was predominantly popular in the latter decade (and because Devo may very well have come from outer space). "Space Junk" tells the story of how trash left in space by man falls back to the earth and causes catastrophes worldwide, including hitting and killing the singer's girlfriend. Though this may be an unlikely consequence of space junk, Devo was definitely way ahead of its time in predicting that the accumulation of space junk would one day be problematic for mankind. Has anyone checked out on Google Earth the maps of all the debris circling Earth right now?

5. Duran Duran: "Planet Earth" – Duran Duran rose from the ashes of '70s disco and emerged in full-force as one of the most popular and inspirational new wave bands of the '80s, and this song perfectly exemplifies the transition. The beat and bass line are distinctively disco, but the spacey keyboards, thrashing guitar riffs, and strained vocals are classic new wave. Oh, and you simply must check out the video on YouTube – what was once considered to be "high tech" is such poor quality by today's standards that it insists on a good chuckle. It's hard to remember when this videographic technology was "the future."

4. Echo and the Bunnymen: "The Killing Moon" – In a word: "bliss." This beautifully composed and arranged song flows from anxious verses full of tepid vocals, tip-toe piano notes, and steady bass lines; to dramatic choruses backed up with in-your-face timpani drums, dramatic sways of chords, and creepy synth sound effects.

3. Madonna: "Lucky Star" – Okay, a stretch, I know

– but this song has all the elements of a terrific ‘80s space-themed song: crazy synthetic sound effects and thinly-veiled metaphors of space/love – or in this case, space/lust. “Shine your heavenly body tonight, ‘cause I’m gonna make everything all right.” It’s Madonna at her youngest, shrillest, and cheesiest – just how we like her.

2. Paul Simon: “Song about the Moon” – This appeared on the album “Hearts and Bones,” which was meant to be a reunion album for Simon & Garfunkle. The song couldn’t possibly get any more space-friendly: “If you want to write a song about the moon / Walk along the craters of the afternoon / When the shadows are deep / And the light is alien / And gravity leaps like a knife off the pavement / And you want to write a song about the moon”

1. The Church: “Under the Milky Way” – It will give you chills. The song’s eerily dark verses are perfectly well-balanced with its warm, comforting choruses and uplifting instrumental bridge. Though other than the usage of the words “Milky Way,” this song has nothing to offer astronomy-wise – but who cares, this song is perfect.



Easter Sunday (April 4) unveiling of Space Shuttle Discovery at the Kennedy Space Center for blast off at 6:21 AM on April 5 from Launch Pad 39 A. Credit: Ken Kremer

Discovery Launches and Lands Safely after delivering WORF to ISS

Dr. Ken Kremer

After a one day weather delay due to excessive cloud covering, Space Shuttle Discovery fired her braking rockets, plunging down from orbit and streaked across the American heartland for a picture perfect landing on Tuesday, April 20 at 9:08 AM at the Kennedy Space Center. The landing capped a lengthy 15 day assembly mission to the International Space Station by the 7 person crew.

The combined ISS and shuttle crew of 13 people marked several milestones. For the first time in history, 4 female astronauts flew together in space. In addition two Japanese astronauts flew jointly for the first time as well. The massive orbiting outpost now weighs 800,000 pounds and is 98% complete.

The journey of over 6.2 million miles ended at the Shuttle Landing Facility (SLF) as Shuttle commander Alan Poindexter guided Discovery to a centerline runway stop after 238 orbits of the Earth. The SLF is located about 3 miles NW of the iconic Vehicle Assembly Building (VAB). The astronauts departed Discovery less than an hour after landing and time critical science samples were quickly off-loaded for delivery to waiting scientists.

The STS 131 mission was extended twice and delivered over 17,000 pounds of science supplies and spare parts which were packed into the ‘Leonardo’ resupply module. The ‘Leonardo’ Multi-purpose logistics module (MPLM) was nestled inside Discovery’s cargo bay as the primary payload along with a 3800 lb Ammonia cooling tank. Leonardo weighs over 27,000 pounds and was jam packed with 16 science and stowage racks including the 3rd MELFI low temperature science freezer, the 4th crew personal quarters and the WORF science rack.

WORF is a photographic darkroom for high resolution remote sensing of the Earth from space which features Klingon inscriptions for future imperial visitors. It is named in honor of the well-liked Klingon character from the Star Trek Universe. The front surface panel on WORF sports a clever patch inscribed in the Klingon language – spelling out the name WORF in Klingon script.

Middle school students from across the world will be able to participate in an educational space outreach program with WORF. The kids will be able to remotely control the EarthKAM digital camera mounted inside WORF and act as real scientists.



'Mother of Pearl' Pastel Colored Clouds form above the Countdown clock at the Kennedy Space Center Press Site about 23 minutes after the April 5, 2010 launch of Space Shuttle Discovery, as 3 excited science journalists point out (from left, Rob van Mackelenbergh, Jacob Kuiper and Ken Kremer). Credit: Ken Kremer

Shuttle Discovery had roared to orbit on April 5 at 6:21 AM EDT in the predawn skies here at the Kennedy Space Center as I watched her turn night into day for miles around as she ascended off the pad. Sprinkles of sunlight cracked through the horizon in the last moments before liftoff.

The sights and sounds of the rumbling thunder was the loudest and most magnificent Shuttle blastoff I have witnessed from the Press Site at KSC, located some 3 miles from launch pad 39 A. Other media and NASA officials I spoke with said it was one of the best launches ever. Large crowds of onlookers witnessed the spectacular night launch from beaches and parks nearby and there were many reports of folks feeling shockwaves.

I clearly saw the twin SRB's being jettisoned after burnout about 2 minutes into the flight. Fifteen minutes before blast off, the ISS made a spectacular overhead pass directly in front of the moon.

During pre-launch operations I had the opportunity to inspect the Leonardo resupply module, inside the Space Station Processing Facility at KSC and take a quite rare and absolutely thrilling visit to witness Discovery close up from directly on top of Launch Pad 39A as her giant payload canister was delivered to the massive pad structure.

Discovery's flight included three spacewalks to swap out and install the ammonia cooling tank. This was the second of the final five planned flights until the space shuttle program is retired at the end of 2010. Only 3 launches remain.

Check out all my STS 131 stories at the Planetary Society and Universe Today websites:

<http://www.universetoday.com/author/ken-kremer/>

<http://www.planetary.org/blog/article/00002451/>

Astronomy Outreach:

Dr. Ken Kremer

Please contact me for more info or science outreach presentations by email. My upcoming Astronomy talks include:

STAR Astronomy Club: Brookdale Community College, Lincroft, NJ. May 6, 7 PM. "LRO & LCROSS: America Returns to the Moon". Website: <http://www.starastronomy.org/>

Café Scientifique: Philadelphia, PA, June 1, 6 PM, Belle Cena Restaurant. "6 Years of Mars Rovers and the Search for Life (in 3-D)" Website: <http://www.sciencecafe.phila.org/Home.html>

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