



The Starry Messenger

THE BIGGEST & BEST IN THE METROPLEX!

Spring Schedule: January 18th - June 5th



Start your semester right, with our great Planetarium shows! There are lots to choose from, so come back often.

Tuesdays:
6:00 - Violent Universe

Wednesdays:
5:30 - \$2 Movie

Thursdays:
6:00 - Magnificent Sun

Fridays:
5:30 - \$2 Movie

Saturdays:
1:00 - Violent Universe
2:30 - \$2 Movie
5:30 - Magnificent Sun
7:00 - Pink Floyd

Sundays:
1:30 - Astronaut
2:30 - Spacepark 360

January \$2 Movies



Our \$2 movie series continues with these great titles. Showtimes are every Wednesday at 5:30, Friday at 5:30 and Saturday at 2:30. Join us each week so you don't miss out on the fun!

Shrek Forever After:

- January 5th, 7th and 8th

Despicable Me:

Romancing the Stars



Bring your sweetheart to the Planetarium this Valentine's Day for our special Couples Only event, *Romancing the Stars*.

This program takes a lighthearted look at the night sky and tells many stories of love and devotion that can be found there.

Tickets are just \$25/couple and include a rose and box of chocolates. Three showtimes are available to fit your schedule.

Showtimes:

- Saturday, February 12th - 5:30 pm
- Sunday, February 13th - 5:00 pm
- Monday, February 14th - 7:00 pm

To purchase your tickets contact the Planetarium at 817-272-1183 or send us an [email](#).

Dinner Under the Stars



Bring your Valentine to the Planetarium for a private 1 hour *Dinner Under the Stars* for just \$250, Italian dinner and wine service included!

Enjoy a romantic dinner under the clear dark skies of the Planetarium. Watch for meteors or the Aurora, as you eat by candlelight. And marvel at the skies as they can never be

- January 12th, 14th and 15th

Sorcerer's Apprentice:

- January 19th, 21st and 22nd

Twilight Saga - Eclipse:

- January 26th, 28th, 29th

Kepler Discovers First Rocky Planet



NASA's Kepler mission confirmed the discovery of its first rocky planet, named Kepler-10b. Measuring 1.4 times

the size of Earth, it is the smallest planet ever discovered outside our solar system.

The discovery of this so-called exoplanet is based on more than eight months of data collected by the spacecraft from May 2009 to early January 2010.

"All of Kepler's best capabilities have converged to yield the first solid evidence of a rocky planet orbiting a star other than our sun," said Natalie Batalha, Kepler's deputy science team lead at NASA's Ames Research Center in Moffett Field, Calif., and primary author of a paper on the discovery accepted by the *Astrophysical Journal*. "The Kepler team made a commitment in 2010 about finding the telltale signatures of small planets in the data, and it's beginning to pay off."

Kepler's ultra-precise photometer measures the tiny decrease in a star's brightness that occurs when a planet crosses in front of it. The size of the planet can be derived from these periodic dips in brightness. The distance between the planet and the star is calculated by measuring the time between successive dips as the planet orbits the star.

Kepler is the first NASA mission capable of finding Earth-size planets in or near the habitable zone, the region in a

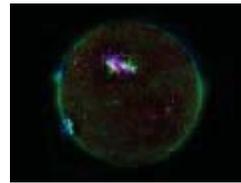
seen from the Metroplex.

Only 2 slots are available, so please book your romantic evening now!

- Monday, February 14th at 5:30 pm
- Monday, February 14th at 8:30 pm

To reserve the Planetarium for your special *Dinner Under the Stars*, please contact us at 817-272-1183 or by [email](#).

SDO Explains Solar Heating Mystery



Among the many constantly moving, appearing, disappearing and generally explosive events in the sun's atmosphere, there exist

giant plumes of gas -- as wide as a state and as long as Earth -- that zoom up from the sun's surface at 150,000 miles per hour. Known as spicules, these are one of several phenomena known to transfer energy and heat throughout the sun's magnetic atmosphere, or corona.

Thanks to NASA's Solar Dynamics Observatory (SDO) and the Japanese satellite Hinode, these spicules have recently been imaged and measured better than ever before, showing them to contain hotter gas than previously observed. Thus, they may perhaps play a key role in helping to heat the sun's corona to a staggering million degrees or more. (A number made more surprising since the sun's surface itself is only about 10,000 degrees Fahrenheit.)

Just what makes the corona so hot is a poorly understood aspect of the sun's complicated space weather system. That system can reach Earth, causing auroral lights and, if strong enough, disrupting Earth's communications and power systems. Understanding such phenomena, therefore, is an important step towards better protecting our satellites and power grids.

"The traditional view is that all heating happens higher up in the corona," says solar physicist Dean Pesnell, SDO's project

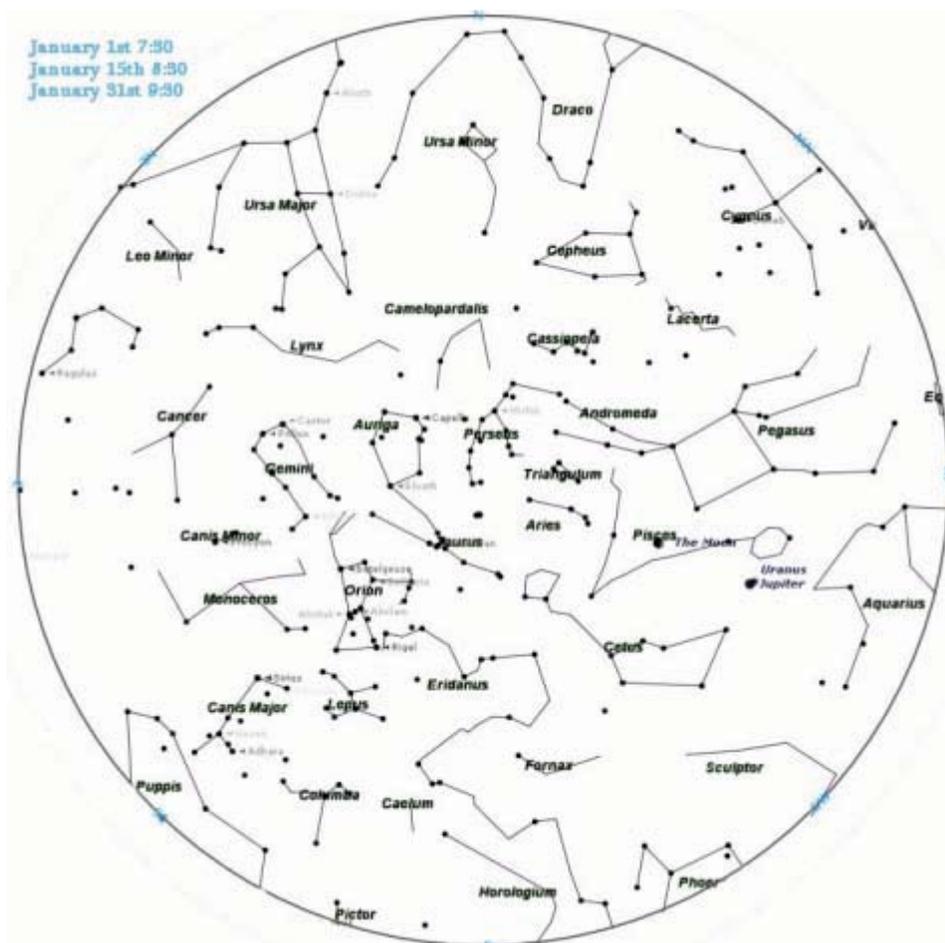
planetary system where liquid water can exist on the planet's surface. However, since it orbits once every 0.84 days, Kepler-10b is more than 20 times closer to its star than Mercury is to our sun and not in the habitable zone.

Kepler-10 was the first star identified that could potentially harbor a small transiting planet, placing it at the top of the list for ground-based observations with the W.M. Keck Observatory 10-meter telescope in Hawaii.

This article was written by the staff at NASA. Please read the rest of the article [here](#).

scientist at NASA's Goddard Space Flight Center in Greenbelt, Md. "The suggestion in this paper is that cool gas is ejected from the sun's surface in spicules and gets heated on its way to the corona. This doesn't mean the old view has been completely overturned, but this is a strong suggestion that part of the spicule material gets heated to very high temperatures and provides some coronal heating."

This article was written by the staff at NASA. Please read the rest of the article [here](#) and get your Sun questions answered with our new show, *Magnificent Sun*.



Planetarium at UT Arlington

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