Summer

Schedule 2014

Get ready to beat the summer heat with a great selection of shows at the Planetarium! We have shows for all ages and interests, so come see more than one!

Tuesdays:
2:00 – Texas Stargazing
3:30 – Spacepark 360

Wednesdays:
2:00 – Back to the Moon for Good
3:30 – Spacepark 360

Thursdays:
2:00 – One World, One Sky: Big Bird's Adventure
3:30 – Spacepark 360

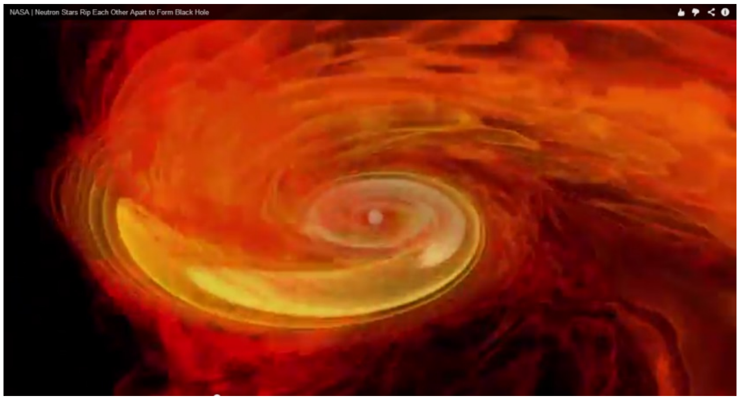
Fridays:
2:00 – Astronaut
3:30 – Spacepark 360

Saturdays:
1:00 – One World, One Sky: Big Bird's Adventure
2:30 – Astronaut
5:30 – Stars of the Pharaohs
7:00 – Pink Floyd

Sundays:
1:30 – Secret of the Cardboard Rocket
3:00 – Spacepark 360

*There will be no public shows July 22nd – 25th due to a professional conference.

Watch 2 Neutron Stars Rip Themselves Apart

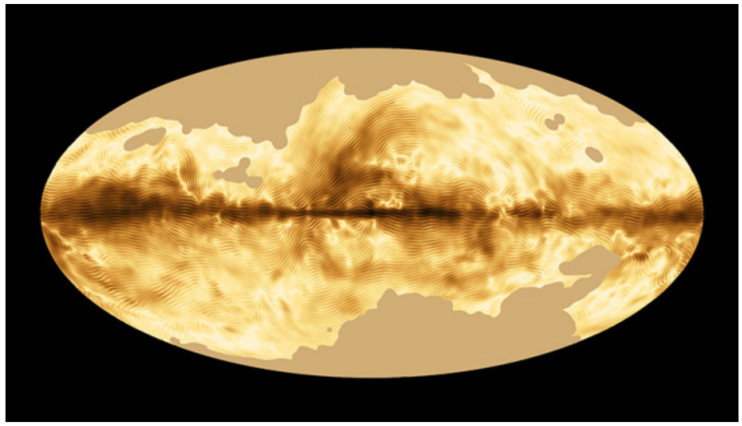


This supercomputer simulation shows one of the most violent events in the universe: a pair of neutron stars colliding, merging and forming a black hole. A neutron star is the compressed core left behind when a star born with between eight and 30 times the sun's mass explodes as a supernova. Neutron stars pack about 1.5 times the mass of the sun — equivalent to about half a million Earths — into a ball just 12 miles (20 km) across.
As the simulation begins, we view an unequally matched pair of neutron stars weighing 1.4 and 1.7 solar masses. They are separated by only about 11 miles, slightly less distance than their own diameters. Redder colors show regions of progressively lower density.

As the stars spiral toward each other, intense tides begin to deform them, possibly cracking their crusts. Neutron stars possess incredible density, but their surfaces are comparatively thin, with densities about a million times greater than gold. Their interiors crush matter to a much greater degree densities rise by 100 million times in their centers. To begin to imagine such mind-boggling densities, consider that a cubic centimeter of neutron star matter outweighs Mount Everest.

By 7 milliseconds, tidal forces overwhelm and shatter the lesser star. Its superdense contents erupt into the system and curl a spiral arm of incredibly hot material. At 13 milliseconds, the more massive star has accumulated too much mass to support it against gravity and collapses, and a new black hole is born. The black hole's event horizon — its point of no return — is shown by the gray sphere. While most of the matter

Most Detailed View Yet of Milky Way's Magnetic Fields



A new map of the entire sky offers a remarkably detailed picture of the magnetic fields that shape the Milky Way, including field lines that run parallel to the plane of the galaxy and great loops and whorls associated with nearby clouds of gas and dust.

Researchers created the map using data from the Planck Space Telescope, which since 2009 has charted the light from the universe shortly after the Big Bang known as the cosmic microwave background (CMB).
But Planck also observes light from much closer than the farthest reaches of time and space. With an instrument called the high frequency instrument (HFI), Planck detects light from microscopic dust particles within our galaxy. The density of the dust is incredibly low; a volume of space equal to a large sports stadium or arena would contain one grain.

Planck's HFI identifies the non-random direction in which the light waves vibrate—known as polarization. It is this polarized light that indicates the orientation of the field lines.

"Just as the Earth has a magnetic field, our galaxy has a large-scale magnetic field—albeit 100,000 times weaker than the magnetic field at the Earth's surface," says team member Douglas Scott, a professor at the University of British Columbia. "And just as the Earth's magnetic field generates phenomena such as the aurorae, our galaxy's magnetic field is important for many phenomena within it."

from both neutron stars will fall into the black hole, some of the less dense, faster moving matter manages to orbit around it, quickly forming a large and rapidly rotating torus. This torus extends for about 124 miles (200 km) and contains the equivalent of 1/5th the mass of our sun. Find out why NASA is so interested in the merger of neutron stars here.	For example, the magnetic field governs the coupling of the motions of gas and dust between stars, and so plays a role in star formation and the dynamics of cosmic rays. "And now," says Scott, "Planck has given us the most detailed picture of it yet." The "fingerprint" and other results are described in four papers published in the journal Astronomy & Astrophysics. Read more about this discovery and see a high resolution photo here.