After Dark

MSU's Astronomy Newsletter

September 2011: No. 43

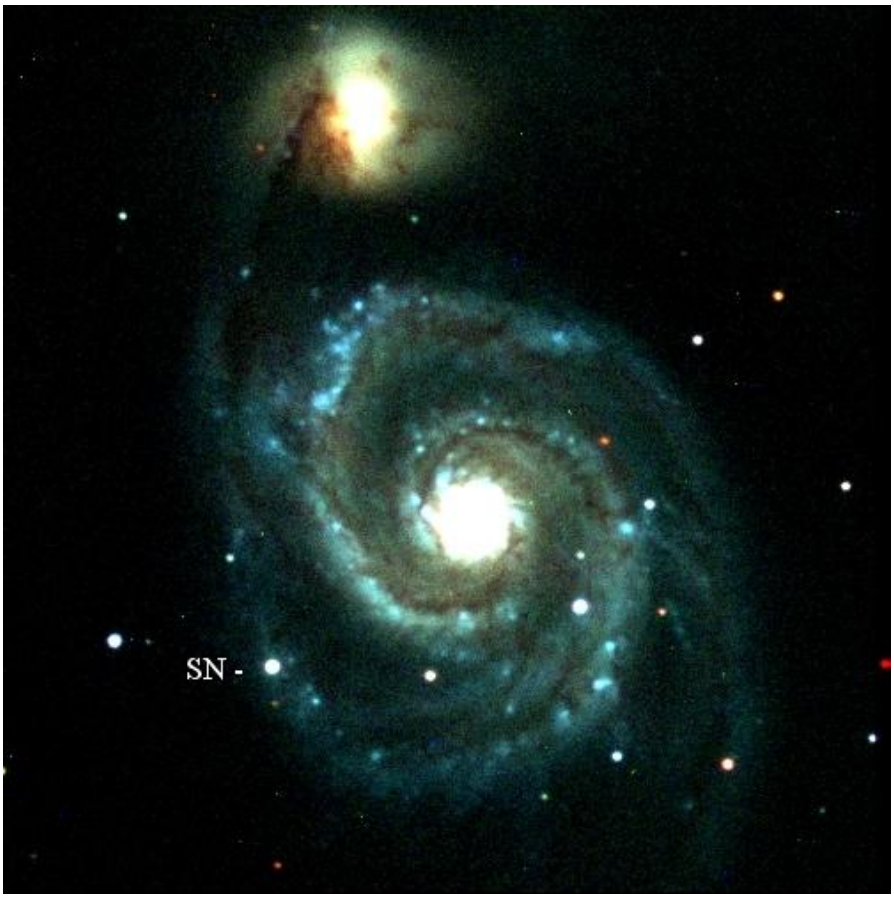
Upcoming Astronomical Horizons Lectures

All lectures are free to the public and given at Abrams Planetarium, starting at 7:30pm

September 22: EXPLODING STARS IN A WHIRLPOOL AND A PINWHEEL

Professor Horace Smith

In a supernova explosion a single exploding star can produce enough light to rival the luminosity of an entire galaxy. The summer of 2011 has been a summer of relatively nearby supernovas, with one supernova exploding in the Whirlpool Galaxy, M51, at the end of May and a second exploding in the Pinwheel Galaxy, M101, toward the end of August. Though both are supernovas, the natures of these two exploding stars are very different. The supernova in M51 may mark the death of a massive star. The supernova in M101 may mark the death of a white dwarf star in a binary star system. The discovery and origins of these two exploding stars, more than 20 million light years away, will be explored.



This image of the supernova in M51 (marked SN) was made with the digital camera on the 24-inch reflecting telescope of the MSU campus observatory. M51 is a spiral galaxy and the supernova appears to have erupted within one of the galaxy's spiral arms.

The M51 galaxy is some 23 million light years from Earth.

October 27: SAMPLE RETURN FROM COMETS AND ASTEROIDS: PROMISE, PROGRESS, AND PROSPECTS

Professor Michael Velbel

What are comets and asteroids made of? Can they tell us about the formation and history of the solar system? Spacecraft have begun to sample material from these distant astronomical objects with promise for answering these and other questions.

November 17: ASTRONOMY WITH BIG BUCKETS OF WATER: LOOKING AT THE COSMOS WITH COSMIC RAYS

Professor Jim Linnemann

What are cosmic rays and how were they discovered? How can particles of light with trillions of times the energy of the light particles from the sun be used to do astronomy and learn about the sources of cosmic rays? HAWC, a cosmic ray observatory currently under construction, will detect and measure these cosmic rays of fabulously high energy.

CAMPUS OBSERVATORY PUBLIC VIEWING NIGHTS

The MSU Campus Observatory opens its doors to the public two nights per month, *weather permitting.* This is your chance to look at planets, star clusters, and other beautiful celestial objects using the 24-inch telescope and also a number of smaller telescopes. Knowledgeable professional and amateur astronomers will be on hand. But come only if the sky is clear, and dress warmly. For a map, see www.pa.msu.edu/astro/observ.

MSU Campus Observatory Open House

Public observing nights of the fall semester will be held Friday and Saturday, Sept. 30 and October 1 from 9-11pm and Friday and Saturday, Nov. 4 and 5, from 9-11pm, weather permitting.

MICHIGAN STATE UNIVERSITY

Visit us at www.pa.msu.edu/astro

Department of Physics and Astronomy