The Evolving Universe
- A collaboration between SAO and NMNH

- Jonathan McDowell
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with thanks to our NMNH colleagues

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October 2011: The Evolving Universe exhibit opens at NMNH
Response to an NMNH proposal opportunity
  telecon with B Stauffer  Apr 2009, proposal submit Jun 2009
Proposal approved early 2010?
First DC trip June 2010 – exhibit opened Oct 2011
Low budget:  $50K
Limited scope:  photo exhibit
Goals  - educational
  - Bring the story of modern astrophysics to a broader public: the
    universe outside the solar system
  - Feature images from different wavebands and explain the need for
    infrared and x-ray telescopes

Goals – institutional
  - Build links between SAO and NMNH and discover how to collaborate
  - Showcase SAO telescope images on the National Mall
  - Increase visibility of SAO on the Mall  (from ~ zero...)
Did you know that the Smithsonian is an astrophysical observatory?

The Smithsonian Astrophysical Observatory (SAO), founded in 1890, is a research bureau of the Smithsonian Institution. Located in Cambridge, Massachusetts, and affiliated with the Harvard College Observatory, SAO is part of one of the largest and most diverse astrophysical institutions in the world. The observatory and its more than 300 scientists conduct research in astronomy, astrophysics, and earth and space sciences.

Most of the images in this exhibit were taken by telescopes and cameras developed, built, and operated by the Smithsonian Astrophysical Observatory.
Take a mind-bending journey from Earth to the far reaches of space—back to the beginning of the universe about 13.6 billion years ago.

The farther we peer into space with powerful telescopes, the farther back into the history of the universe we see. The light from our Sun—a mere 93 million miles away—takes only a few minutes to reach Earth. But when we look at stars and galaxies in the night sky, we are seeing light that has traveled for millions—even billions—of years to reach us.

By looking back in time, we can observe how the universe has evolved from its beginnings.

Did you know that the Smithsonian has an astrophysical observatory?

The Smithsonian Astrophysical Observatory (SAO), founded in 1890, is a research bureau of the Smithsonian Institution. Located in Cambridge, Massachusetts, and affiliated with the Harvard College Observatory, SAO is dedicated to the advancement of astrophysics through observations, computation, and theoretical work.
**Object:** Centaurus A Galaxy - NGC 5128

**Distance:** 12 million light-years

**Types:** Optical/radio imaging

**Instruments:** Hubble Space Telescope

**Light:** The blue, infrared, radio images, and X-ray jet(s).
Our Solar System is home to planets, asteroids, moons, and one star—
A star is born. A start is born. 

INTERSTELLAR DIAMOND DUST

These tiny diamond crystals were formed in the explosion of a dying star and then later found in the outer layer of a planet. The crystals are incredibly rare and these are some of just a few in the world.
Our Galaxy: The Milky Way

Star Death