ICL2_Lindstrom.jpg
The IceCube Lab in the moonlight at the Amundsen-Scott South Pole Station in Antarctica on April 6, 2012. Data from IceCube is analyzed by the international IceCube Collaboration, over 200 scientists from 11 countries. (Credit: NSF/S. Lindstrom)

ICL_Lindstrom.jpg
The IceCube Lab in the setting sun at the Amundsen-Scott South Pole Station in Antarctica in late March, 2012. IceCube uses a cubic kilometer of ice to house over 5,000 optical modules that are connected via cable to the lab. (Credit: NSF/S. Lindstrom)

CosmicRay.jpg
Little is know about the ultra high-energy cosmic rays that penetrate that regularly the atmosphere. Recent IceCube research rules out the leading theory that they come from Gamma Ray Bursts. (Credit: NSF/J. Yang)

grb050709_ill_300dpi.jpg
Illustration of a gamma ray burst. (Credit: NASA/D.Berry)

IceCube_optical_module.jpg
The IceCube Neutrino Observatory is located deep in the dark, clear ice at the South Pole. It uses thousands of digital optical modules to record the brief flash of blue cherenkov light that accompanies particle interactions in the ice. (Credit: NSF/J. Yang)

Particle_reconstruction.jpg
This illustration shows the path of a particle as it travels "up" through the IceCube detector, meaning that the particle traveled all the way through the Earth before it interacted with the ice. Neutrinos, tiny sub-atomic particles with almost no mass and no electrical charge, are the only known particle that can travel through an entire planet.