

Stefanie Wachter wrote:

Hi, I'll be going to the AAS meeting in Seattle in January. Below is my abstract (for a talk I'm giving) which will have to go through document review.

The Search for the IR counterpart of the Soft Gamma-Ray Repeater SGR 1627-41

S. Wachter (SIRTF Science Center/Caltech), S. Eikenberry (Cornell University), C. Kouveliotou, S. K. Patel, P. M. Woods (NSSTC/NASA-MSFC)

Soft gamma-ray repeaters (SGRs) are a small class of high-energy transients characterized by the emission of repetitive, brief bursts of hard X-rays and soft gamma-rays. The SGR sky distribution (four are located very close to the Galactic plane, one is in the Large Magellanic Cloud) and the discovery of X-ray pulsations indicates that they are young neutron stars, an inference currently supported by the potential association of two SGRs with massive star clusters. The currently favored model attributes the various SGR properties to neutron stars with superstrong ($>10^{14-15}$ G) magnetic fields, so-called magnetars. Recently, however, a number of models involving accretion from a circumstellar disk were also proposed to explain the persistent behavior of the SGRs. Unraveling the nature of these objects has been hampered by the lack of optical/IR counterparts to SGRs which could potentially distinguish between the two models. We recently obtained Chandra observation of the field of SGR 1627-41, which provide the first precise localization of the source. We also present near-IR observations of the field acquired with the CTIO 4m telescope and will report on the search for the IR counterpart of SGR 1627-41.