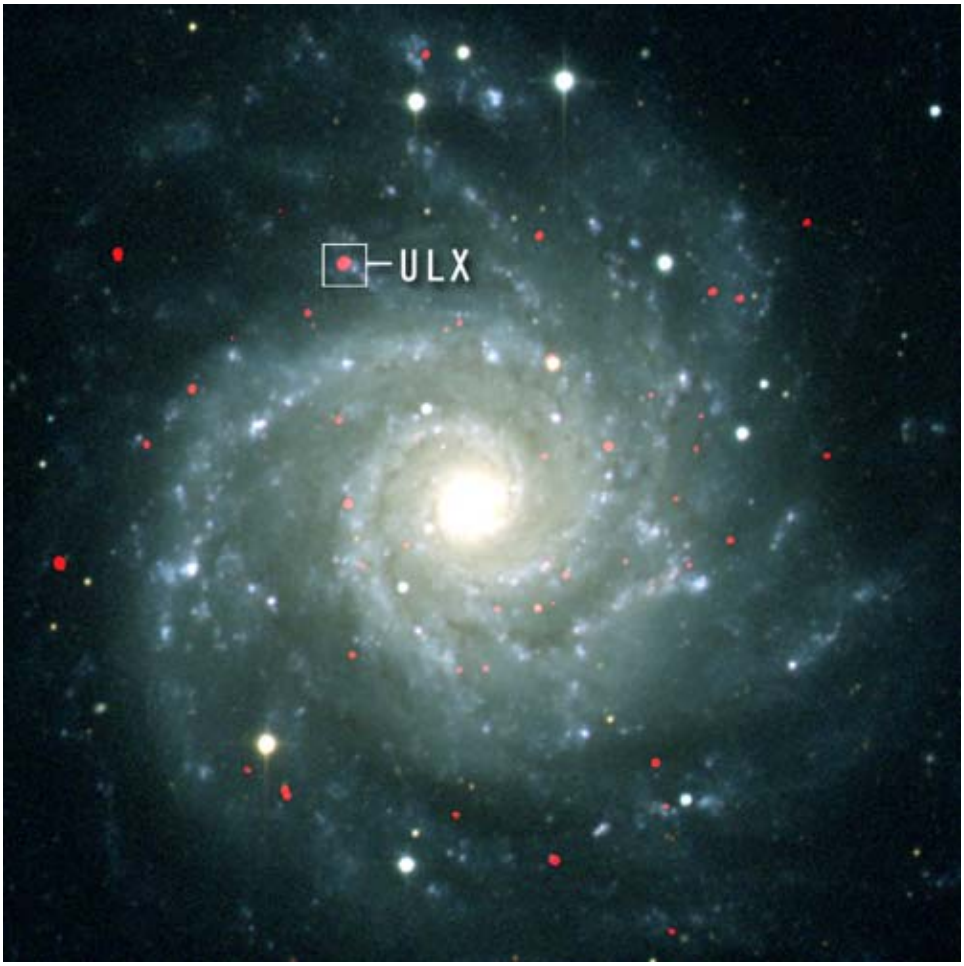

Chandra X-ray Observatory Center

Harvard-Smithsonian Center for Astrophysics
60 Garden St. Cambridge, MA 02138 USA
http://chandra.harvard.edu

ULX in M74: An Ultraluminous X-ray Source in the Spiral Galaxy M74
(Credit: X-ray: NASA/CXC/U. of Michigan/J.Liu et al.; Optical: NOAO/AURA/NSF/T.Boroson)

Caption: This composite X-ray (red)/optical (blue & white) image of M74 highlights an unusually bright X-ray source called a ULX (see box). The ULX produces strong, nearly periodic variations in its X-ray brightness every two hours. These variations are likely produced by changes in a disk of hot gas around a black hole. More massive black holes have larger disks, which are expected to vary over longer periods. The observed two-hour variation suggests that this black hole has a mass of about 10,000 Suns, which would indicate that it belongs to a possible new class of black holes intermediate mass black holes. These black holes have masses well above known stellar-mass black holes of about 10 solar masses, and well below the multimillion solar mass black holes in the centers of galaxies.

Scale: X-ray image is 9 arcmin per side.

Chandra X-ray Observatory ACIS Image

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