

BLACK HOLES IN DENSE STAR CLUSTERS
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TITLE: Sgr A* and the G2 Object: The X-Ray and Radio Perspective

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Sagittarius A* is the closest example of a supermassive black hole buried within a dense, massive stellar cluster. The much anticipated close approach between the G2 object (is it a gas cloud or a star?) and Sgr A* has now come and gone. High-energy emission from the collision was expected to rise toward pericenter (Spring 2014) and continue over several years as the material circularized, but no clear changes in Sgr A*'s X-ray or radio emission have been detected. In the meantime, rich multiwavelength data sets continue to probe the physical processes that underlie rapid flares originating near the black hole's event horizon, and we have detected the brightest-ever X-ray flare in our Chandra and VLA observations. The appearance of a new magnetar (SGR J174540.2-290029, 2.4 arcsec from Sgr A*) and an outburst from a very faint X-ray binary (CXO J174540.0-290005) are also yielding new Galactic Center science. I will give an update on our Chandra and VLA Galactic Center campaigns and discuss the constraints these data place on theoretical models for the Sgr A*/G2 encounter as well as Sgr A*'s X-ray flares.