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Nature of the black hole in the center of the Milky Way

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Recently, mm-VBLI observations capable of resolving sub-horizon structure in the emission from Sgr A*, the supermassive black hole at the center of the Milky Way, have become possible. These promise to open a new window upon the physics of black hole accretion, jet formation and gravity itself. Already, when combined with existing observations at other wavelengths, it is possible to place extraordinary constraints upon the existence of a horizon in Sgr A*, subject only to the assumption that gravity is a metric theory admitting stationary solutions. I will describe what we expect to see, how this will inform our understanding of gas dynamics near black holes, and what we've learned about the fundamental nature Sgr A* already.