



# Sommerfeld Theory Colloquium

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A Closer Look at Black Holes

Several new techniques are currently being employed to probe the strong gravitational field in the vicinity of black holes. Long baseline interferometry at sub-millimeter wavelengths sets constraints on the silhouette of the black holes in the Galactic center (SgrA\*) and M87. Stars which get tidally disrupted as they orbit too close to a single black hole are being discovered at cosmological distances. Electromagnetic counterparts of black hole binaries in galaxy mergers are being identified, and can be used to calibrate the rate of gravitational wave sources. Most interestingly, the recoil induced by the anisotropic emission of gravitational waves in the final plunge of binaries leaves unusual imprints on their host galaxies. Finally, the lecture will describe new constraints on the contribution of primordial black holes to the dark matter.

Wednesday, 18 June 2014, 16:15h, Room A348/349, Theresienstr. 37/III

Prof. V. Mukhanov, Prof. I. Sachs