

Invited Speaker

Name: Frederic Vincent

Affiliation: Paris Observatory / LESIA

Title: Probing the vicinity of the supermassive black hole at the center of the Galaxy with GRAVITY

Abstract: The Very Large Telescope (VLT) Interferometer instrument GRAVITY is able to combine the infrared light from the four 8-meter telescopes of the VLT. With the help of adaptive optics and fringe tracking for correcting the atmospheric turbulence, GRAVITY is able to follow astrometric motion close to the supermassive black hole at the heart of the Milky Way with the exquisite precision of few 10s of microarcseconds only (the size of a grapefruit on the Moon!). In this talk, I will review the main results of GRAVITY at the Galactic center, focusing on the detection of gravitational redshift and Schwarzschild precession of the innermost star S2, as well as on the detection of orbital motion very close to the black hole's event horizon.