



CERN Colloquium

SPEAKER: Prof. GENZEL, R. (MPI for Extraterrestrial Physics, Garching and Physics & Astronomy, University of California, Berkeley)

TITLE: **Massive Black Holes and Galaxies**

DATE: Wed 25/05/2016 16:30

PLACE: 500-1-001 - Main Auditorium

ABSTRACT

Evidence has been accumulating for several decades that many galaxies harbor central mass concentrations that may be in the form of black holes with masses between a few million to a few billion times the mass of the Sun. I will discuss measurements over the last two decades, employing adaptive optics imaging and spectroscopy on large ground-based telescopes that prove the existence of such a massive black hole in the Center of our Milky Way, beyond any reasonable doubt. These data also provide key insights into its properties and environment. Most recently, a tidally disrupting cloud of gas has been discovered on an almost radial orbit that reached its peri-distance of ~ 2000 Schwarzschild radii in 2014, promising to be a valuable tool for exploring the innermost accretion zone. Future interferometric studies of the Galactic Center Black hole promise to be able to test gravity in its strong field limit.