



PHYSIKALISCHES KOLLOQUIUM

des Fachbereichs Physik
der Johann Wolfgang Goethe-Universität Frankfurt

Mittwoch, den 16.12.2015, 16 Uhr c.t.
Großer Hörsaal, Raum _0.111,
Max-von-Laue-Str. 1



Prof. Reinhard Genzel

MPI for Extraterrestrial Physics, Garching, Germany
University of California, Berkeley, USA

"Massive Black holes and the Evolution of Galaxies"

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.

Die Dozenten der Physik

local host: Prof. Luciano Rezzolla, rezzolla@th.physik.uni-frankfurt.de