ICRC2015

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Victor Hess Lecture

Monday, 3 August 2015 20:00 (1 hour)

BlackHoleCam: The first image of a super massive black hole.

Gravity is successfully described by Einstein's theory of general relativity.
One of its most fundamental predictions are black holes.
Their defining, but as yet unproven, feature is the event horizon -
the point of no return where not even light can escape the grip of gravity.
Supermassive black holes, with masses of millions to billions of suns,
are suspected to lurk in the hearts of almost every major galaxy.
They make themselves known as sources of intense radiation,
ultra-fast plasma streams, and high-energy particles.
The best place to study black holes is in the center of our own Milky Way.
Due to its proximity of "only" 30.000 light years this is as close as
we can get to a supermassive black hole.
Using a global network of radio telescope it should be possible to image
the shadow of the black hole's event horizon for the first time ever.
This would prove one of Einstein's most fundamental predictions and
shed light on what happens to matter falling into the abyss.
This talk will take the audience on a trip into the center of the Milky Way,
explain our current understanding of how black holes work,
and describe the ongoing attempts to image them.

Collaboration

– not specified –

Registration number following "ICRC2015-I/"

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