



RESEARCH

EHT: A LOOK INTO THE HEART OF THE CENTAURUS A GALAXY

An international team of scientists from the Event Horizon Telescope (EHT) collaboration has combined observations from several radio telescopes around the world, using the same technique that produced the famous image of the black hole at the centre of the M87 galaxy, to photograph the heart of the nearby Centaurus A radio galaxy in unprecedented detail at a wavelength of 1.3 mm. The team, including researchers from the INFN, the National Institute for Astrophysics (INAF), and the University of Naples Federico II, identified the position of the central supermassive black hole revealing the birth of a giant jet. Surprisingly, the experts found that only the outer edges of the jet appear to be emitting radiation. This observation challenges the predictions of current theoretical models. The study was published today in the *Nature Astronomy* journal. The EHT data originates from the 2017 observation campaign. Compared to all previous high-resolution observations, the jet launched from Centaurus A was observed in radio band at a frequency 10 times higher, providing images with 16 times sharper resolution than those available so far. Thanks to the EHT's resolution power, researchers are able to locate the source of the radio signal that extends far beyond the galaxy, in a portion of the sky equal to 16 times the apparent diameter of the Moon.

The article on *Nature Astronomy* [*“Event Horizon Telescope observations of the jet launching and collimation zone in Centaurus A”*](#) ■