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## **The 2023 Herschel Medal is awarded to Professor Heino Falcke**

Professor Heino Falcke has been awarded the Herschel Medal for his crucial role in the capture of the first images of the shadows of black holes in the centres of the galaxies M87 and the Milky Way. Black holes are the most enigmatic objects in existence, the most extreme manifestations of the theory of Gravity and, when accreting, the most powerful sources of energy in the Universe. They literally shape the observable structure of galaxies through their feedback. They are fundamentally impossible to image. However, Professor Falcke and his colleagues have made it possible to capture an image of the shadow of a black hole, using millimetre interferometry, which is a truly outstanding observational achievement.

Professor Falcke also played a major role in bringing groups from around the world together that could undertake such an ambitious project. As managing Principal Investigator of a European Research Council synergy grant Professor Falcke made significant contributions to the technical developments that ensured all cooperating telescopes were equipped with custom-made equipment that was needed to carry out the observations.

Professor Falcke and his team also played a crucial role in the data analysis by developing an independent imaging pipeline. Finally, he ensured that the theoretical models that are used to interpret the data were fully developed and ready to use.

For these reasons, Professor Falcke is awarded the Herschel Medal.