

## Space VLBI Studies of the Blazars 3C 454.3 and OJ287 at 22 GHz with RadioAstron

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### Content

In 2016, we conducted high-resolution VLBI observations of the blazars 3C 454.3 and OJ287 at 22 GHz, utilizing the space antenna RadioAstron simultaneously with nearly 30 ground-based antennas. These unique observations enabled us to achieve an angular resolution of  $\sim 40$  microarcseconds, resulting in unprecedented detailed images of the blazars' inner jet structures. The study of 3C 454.3 revealed intricate features in the innermost jet region, including extreme jet bending at  $\sim 0.6$  mas radial distance from the VLBI core and several distinct jet features upstream of this bending. This jet morphology is consistent with our quasi-simultaneous observations at 86 GHz with GMVA. Meanwhile, the observations of OJ287, a blazar well-known for its periodic optical outbursts believed to be triggered by a binary supermassive black hole system at its center, show a complex innermost jet structure, significantly different from the 2014 RadioAstron observations. Join me as I present these new results and discuss their implications.

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