

## Resolving blazar jets with LOFAR-VLBI

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Blazars are highly studied sources, as their relativistic jet being beamed towards Earth results in the Doppler-boosting of their emission above what can be detected for other AGNs. This allows them to benefit from significant observational coverage at high energies and radio frequencies, where VLBI techniques can study the evolution of components within their relativistic jets.

In the LOFAR bands, blazars (as selected from the BZCAT catalog) seem to show significantly divergent spectral properties compared to higher frequencies: specifically, they seem to diverge from the typical blazar “flat-spectrum” and to tend towards a spectrum more characteristically associated with radio galaxies, with greater flux densities measured at lower frequencies. This is likely an indication that a new plasma population is being observed for the first time in these objects; emission which is not necessarily resolved without the international stations.

Follow-up study with LOFAR-VLBI is therefore of great interest to investigate this behaviour in more detail: does LOFAR indeed start to see new components of blazars, heretofore un-noticed? Or is it providing a new window into the properties of currently-known features of blazar jets?

### keywords

LOFAR, blazars, VLBI, LBA

### In-person or online?

in-person

### Career level

ECR

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