

Talk at Splinter Meeting

Splinter B

TECHNOLOGY FOR MM-VLBI

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In a cooperation between many institutes, millimetre VLBI capabilities are being improved rapidly to attempt to resolve the event horizon in the Galactic centre and M 87 and to study the formation of AGN jets at their base. These observations require resolution better than $50 \mu\text{as}$ by using frequencies of 230 GHz or above and global baselines. As frequencies get higher everything gets harder - atmospheric coherence times shorten, telescope apertures have been small and system temperatures higher compared to cm-wavelength telescopes, and sources are generally weaker due to optically-thin synchrotron spectra. To recover some badly needed sensitivity, sampled bandwidths are being expanded presently at 16 Gbps and a path to 64 Gbps, aperture is being massively expanded with phased ALMA, LMT, and NOEMA upgrade at Plateau de Bure. I will take a look at the present state of the art hardware and performance and future trends.