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New Calibration Sources for Very Long Baseline Interferometry at 1.6 GHz

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Abstract content (Max 300 words)
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I present new 1.6 GHz VLBI observations of calibrator sources in the Southern Hemisphere. My sample contains 43 sources known to be good calibrators at 8.4 GHz. My goals were firstly to establish the suitability of the selected sources as calibrators for 1.6 GHz VLBI observations, and secondly to determine, based on the selected sample, how the properties of the sources seen at 8.4 GHz are related to those seen at 1.6 GHz. I used seven telescopes; ASKAP, ATCA, Ceduna, Hobart, Mopra and Parkes from Australia, and HartRAO from South Africa.

By evaluating the sources' radial extents, flux density at the central components of the sources and their brightness, I classified the sources into very good, good, intermediate and bad calibrators. Among the 43 sources, I found that 38 sources fell into the good or very good calibrator classes. Of the basis of my sample therefore, I can say that 88 percent of the good calibrators at 8.4 GHz are also safe to use at 1.6 GHz.

Apply to be considered for a student award (Yes / No)?

Yes

Level for award (Hons, MSc, PhD, N/A)?

MSc.

Main supervisor (name and email) and his / her institution

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No

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