

NEW OBSERVATIONS WITH THE VLA

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(Abstract)

The VLA, now under construction in New Mexico, is an aperture synthesis array of twenty-seven 25-meter diameter antennas, with overall dimension of about 35 km. At 6-cm wavelength it will have resolution of 0.6 arcseconds and sensitivity of 0.1 mJy, and should be a superb instrument for radio studies of objects of large redshift. A more detailed description of the VLA has been given by Heeschen (1975).

At this meeting (August, 1979) the partially completed array is in use about one-third time for scientific observations, with up to 17 antennas. In this paper recent observations by a number of investigators were presented. The various programs discussed, and the investigators involved with them, are listed here:

The Structure of 3C 449: R. A. Perley, A. G. Willis and J. S. Scott

The Structure of 3C 31 and NGC 315: E. B. Fomalont

Structure and Polarization of 2349+32: J.F.C. Wardle and R. I. Potash

Structure in Some High-*z* Radio Sources: P. P. Kronberg

Asymmetric Double Sources: R. A. Perley, K. S. Johnston, and E. B. Fomalont

Radio Quiet QSO's: R. A. Sramek and D. W. Weedman

The Double QSO 1038+528: F. N. Owen, B. J. Wills, and D. Wills

The Double QSO 0957+561: D. H. Roberts, B. F. Burke, and P. E. Greenfield

Structure of the QSO 1442+101: M. J. Reid and M. S. Roberts

Results of these investigations will be published elsewhere by the authors listed.

Reference

Heeschen, D. S. 1975, Sky & Telescope, 49, 344.

G. O. Abell and P. J. E. Peebles (eds.), Objects of High Redshift, 177-178.
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DISCUSSION

Longair: What fraction of the observing time at the VLA is unusable because of tropospheric fluctuations at 21 cm, 6 cm, 2 cm and 1 cm?

Heeschen: We don't yet have enough observing experience to give a quantitative answer. My present guess is that, averaged over a year, tropospheric fluctuations make observations uncertain or impossible up to perhaps 30% of the time at 1.3- and 2-cm wavelengths, 10% at 6 cm, and essentially none at 21 cm. Much of this "unusable" time occurs during July and August, when 1.3- and 2-cm observations are generally not scheduled. The fact that the VLA can be rapidly switched from one observing wavelength to another very greatly reduces the actual time lost due to weather.