

NOTES

LINEAR POLARIZATION MEASUREMENTS OF RADIO
SOURCES AT 18-CM WAVELENGTH

A number of small-diameter sources were examined for linear polarization at a wavelength of 18 cm with the California Institute of Technology radio interferometer. The observations were undertaken primarily to investigate the effects of Faraday rotation between 10.6 cm and 21 cm at which wavelengths similar measurements were available (Seielstad, Morris, and Radhakrishnan 1963; Seielstad and Wilson 1963) from the same instrument. The measurement technique has been described previously (Morris and Radhakrishnan 1963). The measurements presented here in Table 1 were made in

TABLE 1
RESULTS OF POLARIZATION MEASUREMENTS AT 18 CM

Source	Visibility Amplitude at 340 λ E -W.	Polarization	Position Angle
3C 33	0.9	72 $\pm$ 0.6	72 $\pm$ 5°
3C 84	0.9	10 $\pm$ 7	172 $\pm$ 20
3C 98..	0.85	58 $\pm$ 6	16 $\pm$ 5
3C 111*	0.75	21 $\pm$ 4	120 $\pm$ 8
Taurus A*	0.7	175 $\pm$ 25	95 $\pm$ 5
3C 161	1	90 $\pm$ 7	122 $\pm$ 5
3C 273	1	24 $\pm$ 5	178 $\pm$ 7
3C 286	1	87 $\pm$ 7	34 $\pm$ 5
Hercules A*	0.8	21 $\pm$ 4	52 $\pm$ 4
3C 353*	0.7	38 $\pm$ 5	165 $\pm$ 6
3C 380	1	16 $\pm$ 5	34 $\pm$ 9
3C 433	1	69 $\pm$ 0.9	26 $\pm$ 7

* For these sources the single-antenna percentages might be slightly different.

October, 1962, using a superheterodyne receiver accepting both sidebands each of width 5 Mc/s spaced 10 Mc/s on either side of the local oscillator frequency of 1666 Mc/s. The sources Cas A, Cyg A, Orion A, M 17, and CTB 31 were used as instrumental calibrators. At the antenna separation of 340 λ E.-W. none of the sources in Table 1 were appreciably resolved by the interferometer, and the results are hence comparable with single-antenna measurements made elsewhere in the same frequency range. Ionospheric Faraday rotation has not been taken into account at all.

A comparison of these results with those obtained at other frequencies and a detailed discussion of the same is reserved for a separate article.

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