eous Population I star is obtained that lies on the initial main sequence. It satisfies a mass-luminosity relationship based on a few relatively well established stellar masses. Its surface characteristics are $M=1.48M_{\odot}$, $R=1.16R_{\odot}$, $L=4.46L_{\odot}$, and $T_e=7750^{\circ}\text{K}$. Its interior characteristics are $T_c=18.2\times 10^6\text{ }^{\circ}\text{K}$, $P_c=2.17\times 10^{17}\text{ dyn/cm}^2$ and $\rho_c=87.3\text{ g/cm}^3$. Ninety percent of its energy is generated by the proton-proton cycle. Its central convective core accounts for 8% of its radius, and its outer convective layer for 4% of its radius.

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Search for Faint OB Stars in the Southern Milky Way. BART J. BOK AND JANE M. BASINSKI, *Mount Stromlo Observatory*.—The new 40-in. reflector for Siding Spring Observatory arrived in Sydney late in January and has been in full operation at the Observatory since early in March. One of its first projects has been the photography of six southern Milky Way fields as a part of a search program for faint early-type stars in the range of apparent magnitude 10 to 15.

The search technique is basically that employed earlier at Tonantzintla Observatory. Each photograph on a 103aD emulsion contains three (or more) successive exposures, through a UG2, a GG 13 and a GG 14 filter. Thus are reproduced stellar images on a color system approximating U , B , and V . The O , B , and A stars are readily located from these plates and their U , B , and V magnitudes and colors are then measured with the aid of single-image 103aO and 103aD plates obtained with the appropriate filters. All of the six are fields for which B. J. Bok and P. F. Bok have now available standard UBV photoelectric sequences to $V=14$ or 15, and these sequences permit us to determine precise magnitudes and colors photographically.

One of the problems encountered in the rich southern Milky Way fields is that of excessive crowding of the multiple image plates. To supplement the 103aD plates, we have therefore taken on each field a 103aO search plate with two images only, one a 20-min exposure through a UG2 filter, the other a 5-min exposure through a GG 13 filter. Stars with $U-B=0.00$ show two images of roughly equal size, stars with $U-B<0.00$ have a larger U image than a B image. It should be possible to extend the search without much difficulty to $V=17$, provided good standard photoelectric sequences are available.

Linear Polarization of Discrete Sources at 2.07 cm Wavelength. J. W. BOLAND, J. P. HOLLINGER, C. H. MAYER, AND T. P. MCCULLOUGH, *E. O.*

Hulburt Center for Space Research, U. S. Naval Research Laboratory.—The linear polarization of five discrete sources has been measured at 2.07-cm wavelength using the 60-ft reflector of the Department of Terrestrial Magnetism, Carnegie Institution of Washington. No polarization was observed for the Orion Nebula or the Omega Nebula, and the result for Cassiopeia A was marginal, $1.2\%\pm 0.5\%$ at $41^{\circ}\pm 11^{\circ}$. The observed linear polarization for Taurus A, $8.6\%\pm 0.3\%$ at $146^{\circ}\pm 2^{\circ}$, falls in line with the results of observations made at other wavelengths. The observed linear polarization of Cygnus A, $3.9\%\pm 0.6\%$ at $173^{\circ}\pm 6^{\circ}$, is only about half that to be expected from simple interpretations of the longer-wavelength observations. This is further evidence for a complex distribution of polarization over Cygnus A and a large amount of Faraday rotation in the source region. Check observations made using the 85-ft reflector at the National Radio Astronomy Observatory gave similar results.

Observations of the Effective Linear Polarization of Discrete Radio Sources at 21.2 cm Wavelength.

J. M. BOLOGNA, E. F. MCCLAIN, W. K. ROSE (presently at Princeton University Observatory, Princeton, New Jersey), AND R. M. SLOANAKER, *E. O. Hulburt Center for Space Research, U. S. Naval Research Laboratory*.—The effective linear polarization of 90 discrete radio sources has been determined at 21.2-cm wavelength from measurements made with the National Radio Astronomy Observatory, 300-ft diameter, transit reflector during May and June 1963. Simultaneous measurements of antenna temperature were made at orthogonal polarizations with two identical radiometers connected to orthogonal, linearly polarized outputs of a circular-waveguide feed antenna mounted at the focus. The feed antenna could be rotated about its axis through 340 deg.

Except for the source CTA 102 (Harris, D. E., and Roberts, J. A., *Publ. Astron. Soc. Pacific* **72**, 237, 1960), the sources were selected from the 3C catalogues (Edge, D. O., Shakeshaft, J. R., McAdam, W. B., Baldwin, J. E., and Archer, S., *Mem. Roy. Astron. Soc.* **68**, 37, 1959; Bennett, A. S., *Mem. Roy. Astron. Soc.* **68**, 1963, 1962). The measured degree of linear polarization was less than 1% for about one-fourth of the sources, and ranged from 1% to 9.0% for the rest of the sources, with a mean estimated standard measurement error of about 1%.

When the degree of polarization of the radio sources is plotted against galactic latitude or sine of the galactic latitude there is a strong indication that the degree of polarization increases away from the galactic plane. In most cases the sources used for this correlation are stated by others to be