

Circumzenithal sky region survey at the frequency of 30 GHz with 32-element radiometer matrix of the RATAN-600

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Abstract

We report the preliminary results of a deep sky survey in the field of $00^{\text{h}} < \text{RA} < 24^{\text{h}}$, $40.^{\circ} 5 < \text{Dec} < 42.^{\circ} 5$ with the RATAN-600 and its new focal 32-feed receiver matrix at the limiting radio frequency of 30 GHz, with the resolution up to $5''$ in right ascension and $30''$ in declination. The first results, including new estimates of the anisotropy of background radiation at the scales of ($l > 3000$) and noise from discrete radio sources in the wavelength range between the NVSS and IRAS catalogs are listed. © 2013 Pleiades Publishing, Ltd.

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Keywords

cosmic background radiation