

Section 6. Solar Emissions and Related Terrestrial Phenomena

Section 6 was established last year and we planned to make the observations of the interplanetary scintillation (IPS) of radio sources for studying the interplanetary space.

Members of Section 6 are T. Kakinuma, T. Watanabe, H. Washimi, K. Maruyama, Y. Ishida, and Miss. M. Kawase.

We are especially interested in the solar wind disturbed by the solar activity. We are now constructing the dipole array antennas for the observations of IPS at Toyokawa and at the foot of Mt. Fuji (Fujigane, distant from Toyokawa about 100 km to the eastward) and will construct the third station next year. At present, we are planning to make the observations of IPS of quasi-stellar sources at 69.3 MHz and the observation of IPS of Jupiter at 32.1 MHz.

We investigated the polarization of radio waves propagating in the interplanetary space. Our results (to be published) show that: (1) the effect of the electron stream on the polarization is negligibly small (inconsistent with the results calculated by B. B. Lusignan, *J. G. R.* vol. 68, 5617), (2) but if there is an anisotropy of the electron temperature ($T_{\parallel} \sim 1.2 T_{\perp}$), the polarization of the radio waves (e. g. radio waves from Jupiter or Pulsars) may be changed in the interplanetary space and in some cases the effect of anisotropy may be greater than that of the magnetic field.

H. Washimi has investigated the self focusing of the whistler-mode wave in the magneto active plasma (to be published).

(Dec. 1, 1969)

—T. Kakinuma