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Development of observational system for Jovian synchrotron radiation at 327MHz

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We have developed the observational system to detect short-term variations of Jupiter synchrotron radiation. Using nine antennas whose output signals are added with same phase, we could have the effective antenna aperture area of 380 square meter. The GaAs FET with lowest noise at environmental temperature is used at the front receiver to attain the low noise temperature of 77K. The estimated minimum sensitivity is 0.13Jy. From the test observation, basic function of the developed system were confirmed. The proper observational sequence was established to measure the absolute flux.