

Calibration and data processing Chinese Spectral Radioheliograph

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Radio imaging spectroscopy is in its infancy and will open new observational windows on flares and CMEs, it will also provide coronal magnetograms. It is important to have imaging - spectroscopy over centimetric - decimetric wave range to address fundamental processes in the solar eruptive phenomena. To reach this goal, The Chinese Spectral Radioheliograph (CSRH) project has been funded and construction was completed by the end of 2013. CSRH is a solar-dedicated interferometric array with frequency from 0.4GHz to 15 GHz. There are 40 4.5m antennas with 400MHz to 2 GHz, and 60 2m antennas with 2 GHz to 15 GHz in this telescope. CSRH located at Mingantu station, which is about 400 km away from Beijing in China. CSRH-I and CSRH-II, which include antennas, receivers, and correlators have already been established. Some measurements and experiments have been carried out to test and calibrate the whole system. During the period of test observation, some radio sources were observed including stationary satellite, GPS satellites, Cygnus A, quiet sun and burst and some good images were obtained but still for further calibration and verification. This paper introduces the whole system of CSRH-I briefly, and presents delay measurements, polarization calibration, and some other results of calibration, and data processing for CSRH-I and CSRH -II