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Solar Full-disk Magnetic Field Image Receiving System and Observation Software

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Abstract

The paper introduces terminal hardware system of 10cm high resolution full-disk magnetic field telescope among solar multi-channel telescope produced by Beijing Astronomical Observatory, and its software procedure by using imaging processing as well real time data collecting. These data were processed by Sun Workstation 470/4, including doing some spectrum analysis, the system is the unique in the world now. It uses a set of CCD (1320 pixels plus 1035 pixels) of high resolution image explosion, also it has a set of fast and high resolution (1024 pixel plus 1024 pixel) image processor. Moreover, we can obtain higher time and space resolution about solar full-disk magnetic field and velocity field. This will provide excellent means in observation and studies of full-disk solar large-scale magnetic field and velocity field.