High time resolution twenty six element Brazilian Decimetric (1.2 - 1.7, 2.8 , 5.6) GHz, Array

Sawant, Hanumant; **Cecatto, José**; **Fernandes, Francisco**; **Andrade, Maria**; **Madsen, Felipe**; **Silva, Jorge**; **Boas, Jose**; **Faria, Claudio**; **Stephany, Stephan**; **Ramesh, Rajaram**; **Subramanian, Koovapady**

By prototype Brazilian Decimeter Array solar observations are carried out for last two years in the frequency range of (1.2 - 1.7) GHz . So far, we have observed 300 hours. Spatial structures superimposed on one dimensional brightness maps of the sun at 1.4 GHz are investigated for its daily variation. There are daily variations in brightness temperature, up to 10- 15%. These variations are not systematic. Also are investigated brightness temperatures variations of spatial structures associated with flare. In absence of strong radio calibrators in the southern sky efforts are made to use GPS satellites for phase calibration of the array, obtained results will be presented. Presently, more 21 antennas are being added to existing 5 antennas in "T" configuration and frequency range is being increased to (1.2 - 1.7, 2.8, 5.6) GHz. Base lines are 256 x 162 m. This array is suppose to be completed latest by the middle of 2009 and is located at (longitude 45 00 W and latitude 22 41 19 S). Array configuration, UV coverage and the synthesized beam obtained with this configuration and its two dimensional imaging capability will be presented. Time resolution is 100 ms. Spatial resolution is 3‘ at 1.4 GHz and 45" at 5.6 GHz.

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