

# **Solar observations with the prototype of the Brazilian Decimetric Array**

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The prototype of the Brazilian Decimetric Array (BDA) consists of 5 element alt-az mounted parabolic mesh type dishes of 4-meter diameter, having base lines up to 220 meters in the E–W direction. The array was put into regular operation at Cachoeira Paulista, Brazil (longitude  $45^{\circ} 00' 20''$  W and latitude  $22^{\circ} 41' 19''$  S). This array operates in the frequency range of (1.2 – 1.7) GHz. Solar observations are carried at  $\sim 1.4$  GHz in transit and tracking modes. Spatial fine structures superimposed on the one dimensional brightness map of the sun associated with active regions and/or with solar activity and their time evolution will be presented. In the second phase of the project, the frequency range will be increased to 1.2 - 1.7, 2.8 and 5.6 GHz. Central part of the array will consist of 26 antennas, with 4-meter diameter, laid out randomly in the square of 256 by 256 meter with minimum and maximum base lines of 8 and 256 meters, respectively. Details of this array with imaging capabilities in snap shot mode for solar observations and procedure of the phase and amplitude calibrations will be presented. The development of instrument will be completed by the beginning of 2008.