GMRT back-end system monitoring system

Giant Meterwave Radio Telescope (G.M.R.T) back-end system is installed in three different locations correlator room, new receiver room and Active Hydrogen Maser (A.H.M.) room there are many critical electronics components whose electronics circuits are susceptible to variations in environmental parameters such as temperature, humidity and supply voltage etc. Hence a real time 24/7 monitoring of these parameters along with warning alarm is essential the monitoring system developed also provides recording and plotting of the data on a web based interface.

A.H.M. and the related time and frequency circuits are extremely critical in ensuring proper operation of G.M.R.T. system. The proper working of these circuits depends on stable environmental parameters. We have installed comprehensive monitoring scheme for the A.H.M. which can monitor temperature, relative room humidity, and mains supply voltage along with monitoring of proper operations of air conditioners installed. For safety and security we have also included CCTV based monitoring for the room. The temperature is monitored at different locations of the room.

We have also developed web based application to monitor various internal parameters of A.H.M. and give warning, plotting program is also developed to see the performance over time. An integrated health monitoring scheme of the back-end receiver is developed which monitors the parameters of the back-end electronics and power level of received signals at different locations.

This poster presentation will describe the implementation of this monitoring scheme and plans for future development