

Pulsar coherent de-dispersion system of Urumqi Observatory

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Abstract: Pulsar coherent de-dispersion experiment has been carried by using the 25-m Nanshan radio telescope of Urumqi Observatory. It uses a dual polarization receiver operating at 18cm and a VLBI back-end: Mark5A. The data processing system is based on a C program on Linux and a 4-node Beowulf cluster. A high quality data acquisition system and a cluster with more processors are needed to build an on-line pulsar coherent de-dispersion system in future.

Key words: Astronomical instrument,Pulsar,Coherent de-dispersion,Parallel computing,Cluster,Mark5A