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8-channel interferometer observation of FAIs with the MU radar

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It is very important to investigate spatial structures of FAIsto elucidate their physical mechanism. When radars are used for FAI observations, effects of beam broadening, side lobes, refraction etc. cannot be neglected. Interferometer observations are essential for studying spatial structures of FAIs.

The MU radar has only 4 channels which are quite insufficient for radar interferometer imaging observations. We have developed a system which records signals from the MU radar's 8 antenna groups out of 25 groups.

IF signals pass through anti-alias filters and sampled by a PC with an ADC board. Controller programs are taken from the Open Radar Initiatives (http://www.openradar.org) and modified for our observation.

At the meeting, first results of 8-channel observations will be shown. And effects of planned 25 channel system of the MU radar will be discussed.