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Warped snapshot imaging for low-frequency dipole arrays

Wednesday, 27 July 2011 08:00 (40 minutes)

I will discuss a strategy for adapting the CUDA-based, real-time, MWA calibration and imaging approach for use in an off-line iterative deconvolution system (codenamed CUWARP).
This approach is attractive for compact, low frequency arrays, since the image re-sampling required to deal with time-dependent ionospheric distortions is also used to correct for the wide-field w-term effects.
The system is being considered for the proposed Large Aperture Experiment to Detect the Dark Age (LEDA), which involves full broadband correlation of the 256 element LWA1 station.
I will also discuss potential convolutional gridding options for the system.

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