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To: VLBA Correlator Group
From: A.R. Whitney and A.E.E. Rogers
Subject: Archiving of Correlator Data

We suggest that serious consideration should be given to routinely archiving all correlator data, including the raw correlation coefficients from the individual correlator modules in the same form that they were sent to the fringe processor 'box'. Although the amount of data is potentially large (typically on order of several Gbytes/day), technologies currently available or under development, particularly optical discs, should easily be able to record this amount of data by the time the VLBA correlator is on-line.

Complete archiving of correlator data has several advantages:

1. The full delay/delay rate field-of-view is available for reprocessing at any time. This may be particularly valuable in looking for multiple sources in the beam at a later date.

2. The raw VLBA data tapes may be confidently released soon after correlation, and any later fringe-search processing or re-processing may take place later at will. This is particularly valuable for dealing with problems that may be discovered after the raw data tapes have been released, such as failed or misbehaving components in one channel, or a bug in fringe searching software.

3. Full archiving of correlator data will be required in any event for some operations, such as global-fringe fitting or other special-purpose fringe-search operations.

Unless the design philosophy of the VLBA correlator, from the beginning, reflects the intention to routinely archive correlator data in this fashion, the capability to do so at a later date may be compromised.