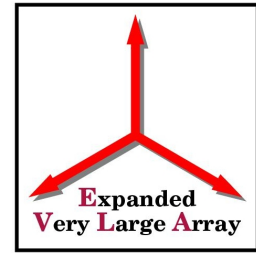


Outfitting the EVLA for Operations Below 1 GHz

A Summary of Why This is Not Easy



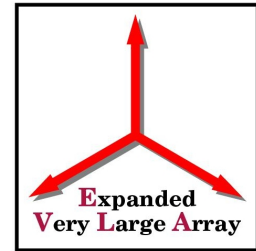
The Fundamentals of the Problem



- Our difficulties arise from two facts:
 1. The VLA's subreflector is small – subtending only 9 degrees (?) from the 2nd focus ring.
 2. The subreflector cannot be moved back far enough to allow use of the prime focus.
- Problem #1 requires feeds at the secondary focus to be $\sim 7\lambda$.
- Problem #2 prevents use of the prime focus.



Solutions to the Problem



- There are three proposed solutions:
 1. A rotating mount system to remove the subreflector and move a p.f. feed to the focus.
 2. A (much) larger subreflector, permitting Cassegrain operation to lower frequencies.
 3. A wide-band feed (e.g. 0.3 – 8 GHz).
- Each of these has significant problems.



Solution 1

