

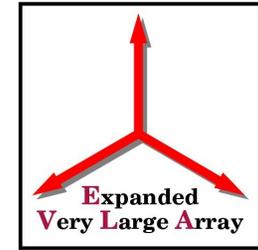
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# Outfitting the EVLA for Operations Below 1 GHz

A Summary of Why This is Not Easy



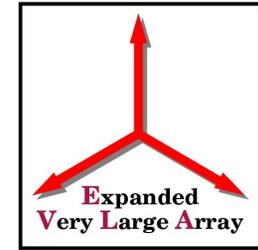
# The Fundamentals of the Problem



- Our difficulties arise from two facts:
  1. The VLA's subreflector is small – subtending only 9 degrees (?) from the 2<sup>nd</sup> 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

