# Suggested cm-Wave Astronomy Program for Next Decade

1. Support the international SKA at the 20% level of an instrument for up to 3 GHz, limited in cost to $1B, and located at the selected site.

2. Complete EVLA and ATA by 2013

3. Between now and 2013 develop array technology to provide firm cost estimates of an interim SKA Hi array operating to 50 GHz with 4X the area of the VLA.

4. Complete an interim SKA Hi instrument in the US by 2018 at a cost limited to $200M. A goal is 4X more area than the VLA.

# Realistic US SKA Program

1. **International SKA Participation -** Support the international SKA at the 20% level of an instrument for up to 2 GHz, limited in cost to $1B, and located at the selected site..

2. **EVLA Expansion -** Construct an array in the US with 4 times the EVLA area for the 0.5 to 50 GHz range in the 2013-2018 interval at a cost capped at $200M..

3. **Technology Development Plan -** Between now and 2012 develop the array technology to support the above instruments at a cost cap of $20M.

# International SKA Participation

Support the international SKA at the 20% level of an instrument for up to 2 GHz, limited in cost to $1B, and located at the selected site.

**Rationale**

1) US provides the EVLA with an open-skies policy for foreign astronomers with both construction and operating costs mostly borne by the US.
2) The rest of world is becoming more economically and technically advanced and can afford a low frequency SKA with a modest US contribution.
3) US astronomers believe in the scientific value of the SKA LO, want to use the facility, and realize that locations outside of the US have much lower RFI.
4) Relieving the international SKA of the > 2 GHz requirements simplifies and expedites the project.

# EVLA Expansion: Rationale

Construct an array in the US with 4 times the EVLA area for the 0.5 to 50 GHz range in the 2013-2018 interval at a cost capped at $200M..

- The EVLA is one of the worlds premier astronomical instruments and further expansion provides a rich science return.
- The most capable team for construction and operation of a large radio array exists at NRAO in New Mexico.
- A mostly national project can be constructed much more efficiently at a lower cost than a shared-management international project.
- The altitude and topography of the southwest US is well suited to an array in this frequency range.
- Sharing of the array with NASA for deep space communications is more feasible with an all US instrument. Both construction and operating costs could be shared.