Skip's Talking Points for LO Meeting October 12, 2000

1. Options for LO Source packaging
   - Eric give URL for writeup
   - Basic description of the options
   - Our recommendation are 1 or 2
     - think about tradeoffs between these two
   - Conversations with Andre Barashev, also Victor Belinsky wrt packaging and interface
2. Request for feedback on draft of section 7.2 of the Project Book
   - General request also the following specifics:
     - noise spec 10K/microwatt with goal of 3K/microwatt
       - Is the ALMA design really balanced mixers for all priority 1 Bands
     - power levels required
       - Note that plots provided by Andre and Victor all show power requirements increasing at the edges of the band.
     - URL for project book offer to email if don't have readily
3. Comments on Phase Drift--latest results

Based on our preliminary measurements, we are proceeding on the assumption that the final power amplifier of the LO source can be outside the loop and still maintain phase drift spec. It is however planned to make more measurements with the Level 1 source to confirm this plan.

4. Schedule for ALMA zero baseline LO test

Point out that we will need money in 2001 to make stuff if you want to use anything in the first half of 2002.

- things that I would like to see tested (separate means two preferably three)
  - common reference generator
  - common master laser
  - above driven from atomic frequency standard
  - separate slave lasers
  - separate fibers
  - separate LO sources
  - separate fringe rotation synthesizers and antenna reference generator
  - separate multiplier chains
- the ability to vary the temperature of each part of the system
- long term drift
- short term phase noise
- not necessary to do amplitude ie 3K/microwatt

5. Miscellaneous questions and comments:
   - Master Laser Stability: either locked or matched line lengths
   - When will Bill Shilue be done with the Spacek W-Band Mixer?
   - When will he be ready for us to come out?
   - How is the broadband with lock coming?
   - Do you have a low noise reference yet?