



SMT IF Upgrade 2006

Engineering Minutes

Author: Robert W. Freund

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An engineering meeting was held Thursday afternoon, 21 Sep 2006, to discuss the SMT IF upgrade and the 1.3 mm side-band separating receiver. Attending the meeting were Dr. Lucy Ziurys, Gene Lauria, and George Reiland. Tom Folkers and Robert Freund participated from Kitt Peak by telephone. Project status and schedules were discussed.

Mixer/LNA Cartridge -

Gene started the meeting by stating that the 0.005" thick OFHC copper shims have been fabricated and annealed. They had been taken for gold plating Thursday and were expected back early next week. Before the final assembly, George intends on installing the LO waveguide mounting brackets within the cartridges. In the interim, Mark has been temporarily reassigned to Dave. He has been assembling cables and modifying the filter bank distributor. Even with Mark's absence, Gene's goal is to have both cartridge assemblies completed by next Friday, September 29. Mark has been authorized for overtime to maintain schedule.

Support electronics -

Starting next Monday, or Tuesday at the latest, Mark will begin working on the changes and additions to the card cage assembly. The current plan has scheduled 20 working days for this activity. It is thus expected that the work should be completed by October 27. There is, however, a large uncertainty associated with this activity. A short discussion followed in an attempt to identify the uncertainties and to solidify the schedule.

Multi-conductor cables with connectors will be needed to support a number of the electronic systems; the Gunn PLL chassis, the IF Converter system, the Interim Receiver Selector chassis, and the new card cage. Also, the Gunn LO PLL chassis and the central section of the IF Converter will need to be wired. There was a discussion on whether Teresa could assist with assembling of these cables and chassis wiring. George volunteered to contact Teresa to discuss her interest and abilities.

Gunn/multiplier LO system -

George stated that John had started fabricating custom LO waveguide sections. He reported that one of the blank Dewar vacuum flanges had been taken to the Steward shop to attach LO Gunn mounting assembly hardware. After returning, John will size the LO waveguide lengths and start bending and assembling. There was a short discussion of John's availability and schedule.

Receiver IF Processor -

George reported that all 4 to 8 GHz small signal amplifiers from Ciao Wireless had arrived.

IF Converter System -

George reported that he would be ordering a medium power amplifier for use as the LO driver for the common 15.4 GHz down converter mixers. It would be installed in the central section of the IF Converter System. The main chassis had been fabricated by the Steward shop but not without a few unexpected and unwanted extras. George reported that Precision Tool and Machine had fabricated the central section for \$ 850. He was impressed by their quality. The unit had been delivered earlier in the week.

Interim Receiver Selector -

Dave had volunteered to assemble the Interim Receiver Selector chassis.

Filter Bank Distributor -

Mark had started modifying the Filter Bank Distributor under Dave's direction.

Miscellaneous -

Gene reported that he is planning on ordering 250 feet of LMR-400 low-loss coaxial cable and 12 type "N" connectors for the cable sections. He stated that there were no problems to report.

There were no action items.

The 1 decision taken is summarized below:

1. Mark has been authorized to work overtime to maintain schedule.

Robert

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