

## Tasks Updated between Wed 15 Oct and Wed 22 Oct 2008

### Effland

#### Hire Software Engineer (Task # 1013, Project Management)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1013>

**Completed on: 2008-02-12 17:11:32**

Effland (Mon 20 Oct @ 14:02): From: John Effland (39 kB) Sent: Monday, October 20, 2008 2:02 PM To: Dee Boyd cc: Fonda Hamric; \Mike Shannon (mshannon@nrao.edu)'; Roy Norville Subj: RE: Status Updates SW Engineer II, CV3703 Dee, Attached is the listing for CV3703. John

#### Hire OMT Tech Specialist (Task # 1320, Project Management)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1320>

**Completed on: 2008-10-01 10:38:28**

Effland (Mon 20 Oct @ 13:53): From: John Effland (63 kB) Sent: Monday, October 20, 2008 1:53 PM To: Dee Boyd cc: Fonda Hamric; Mike Shannon (mshannon@nrao.edu) Subj: RE: Status Update Needed - CV4204 and CV4651 Dee, Attached are two of the reports requested. I'm

#### Hire a Deputy Project Manager (Task # 1456, Project Management)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1456>

**Completed on: 2008-09-10 16:04:37**

Effland (Mon 20 Oct @ 13:53): From: John Effland (63 kB) Sent: Monday, October 20, 2008 1:53 PM To: Dee Boyd cc: Fonda Hamric; Mike Shannon (mshannon@nrao.edu) Subj: RE: Status Update Needed - CV4204 and CV4651 Dee, Attached are two of the reports requested. I'm

#### Analyze Power Density Slope Results (Task # 1640, Project Cartridge Test (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1640>

Effland (Mon 20 Oct @ 15:51): From: John Effland (652 kB) Sent: Monday, October 20, 2008 3:51 PM To: mmayo@nrao.edu cc: Matt Morgan (mmorgan2@nrao.edu) Subj: FW: Band 6 slope analysis Writeup Mary, Attached are Matt's figures and a template I created with the proper ALMA number and

Matt (Fri 17 Oct @ 15:04): Hi everyone, I have completed a statistical analysis of the Band 6 Mixer-Preamp gain slopes. As you recall, I previously concluded that you can predict the cartridge power density slope fairly accurately simply by looking at the mixer-preamp gain and adding about 6 dB positive

### Groves

#### Dip Test Temperature Sensors (Task # 1611, Project Cartridge Assembly (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1611>

Groves (Fri 17 Oct @ 15:56): 6 additional temperature assemblies were dip tested. This brings the total to 52% complete or 27 out of 52.

#### prep preamp bodies 246-261 for gold plating & ACC (Task # 1625, Project Mixer Assembly)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1625>

**Completed on: 2008-10-16 14:21:48**

Groves (Thu 16 Oct @ 14:25):

Groves (Thu 16 Oct @ 14:25): The preamp bodies had screws driven down into the bodie cavaties to eliminate the tightness with the gold plating on the threads. They were inspected 100%, and blown clean 100%, before getting packaged and shipped to ACC. The PO # is 315739, and the account number is

### Horner

#### Fabricate Waveguide Windows (Old Design) (Task # 1021, Project Cartridge Assembly (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1021>

horner (Tue 21 Oct @ 14:41): Processing the next 6 5 mil windows. The first one work fine.

#### General Tasks (Task # 1088, Project Miscellaneous Tasks)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1088>

## Tasks Updated between Wed 15 Oct and Wed 22 Oct 2008

### Horner

#### General Tasks (Task # 1088, Project Miscellaneous Tasks)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1088>

horner (Thu 16 Oct @ 15:36): Six new windows look good so far. Bake and test next week.

#### Cartridge 013 (Task # 1642, Project Cartridge Assembly (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1642>

Effland (Thu 16 Oct @ 10:09): From: Tomkins, J (Jenny) [mailto: jenny.tomkins@stfc.ac.uk] (29 kB) Sent: Thursday, October 16, 2008 10:09 AM To: John Effland; Orlowska, AH (Anna) cc: dschmitt@nrao.edu; Michael Shannon; chaupt@eso.org; Green, B (Ben) Subj: RE: Band 6 Acceptance of

#### Cartridge 014 (Task # 1643, Project Cartridge Assembly (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1643>

Effland (Thu 16 Oct @ 10:09): From: Tomkins, J (Jenny) [mailto: jenny.tomkins@stfc.ac.uk] (29 kB) Sent: Thursday, October 16, 2008 10:09 AM To: John Effland; Orlowska, AH (Anna) cc: dschmitt@nrao.edu; Michael Shannon; chaupt@eso.org; Green, B (Ben) Subj: RE: Band 6 Acceptance of

#### Cartridge 015 (Task # 1644, Project Cartridge Assembly (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1644>

Effland (Thu 16 Oct @ 10:09): From: Tomkins, J (Jenny) [mailto: jenny.tomkins@stfc.ac.uk] (29 kB) Sent: Thursday, October 16, 2008 10:09 AM To: John Effland; Orlowska, AH (Anna) cc: dschmitt@nrao.edu; Michael Shannon; chaupt@eso.org; Green, B (Ben) Subj: RE: Band 6 Acceptance of

### Johnson

#### General Tasks (Task # 1089, Project Miscellaneous Tasks)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1089>

johnson (Wed 22 Oct @ 07:48): Built 5 more sets of pigtail harnesses up to MDM connectors. Diced .1pF caps for CDL.

johnson (Thu 16 Oct @ 15:35): Working on quartz stand-offs and 5 more pigtail harnesses

### koller

#### Band 6 OMTs SN023-038 (Task # 1597, Project OMTs)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1597>

Daniel Koller (Tue 21 Oct @ 16:57): Began assembly of 4 good and 5 questionable OMTs from the recent batch (023-038) of Band 6 OMTs.

Daniel Koller (Tue 21 Oct @ 16:57): To attempt to get a handle on why certain OMTs fail irreparably, measured septum recess depth on all OMTs of the current batch 3 (SN023-038) that will be built. Depth will be compared with septum thickness and is tracked as an appendix to the report in: \\cvfiler\cv-cdl-

Daniel Koller (Tue 21 Oct @ 16:57): Received four new Band 6 OMT bodies from J&E to partially replace the bad OMTs from the recent batch (023-038), 7 of which were returned.

### Lacasse

#### Give Dave Phase Drift AVAR SW (Task # 1034, Project Cartridge Test (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1034>

**Completed on: 2008-10-16 10:01:23**

Lacasse (Thu 16 Oct @ 10:03):

## Tasks Updated between Wed 15 Oct and Wed 22 Oct 2008

### Lacasse

#### Give Dave Phase Drift AVAR SW (Task # 1034, Project Cartridge Test (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1034>

Completed on: 2008-10-16 10:01:23

Lacasse (Thu 16 Oct @ 10:03): Rebuilt this program after Dave and Mike R discovered a bug. Instructions for installing and running the program have also been modified: Install the labview 8.5.1 runtime environment by running this: \\cvfiler\cv-cdl-sis\Software\temp\LabVIEW installs\LVRTE851std.exe

#### Software -- Integrate new YIG filter design (Task # 1452, Project Amplifier Test System)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1452>

Lacasse (Thu 16 Oct @ 10:00): Perhaps important to note: The YiG filter only operates up to 12.4 GHz. Mike has been scanning up to 13GHz. I suppose this'll have to change, perhaps requiring a scale change in the excel template graph.

#### Automate Amplitude Stability Measurement (Task # 1648, Project Meas Software)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1648>

Lacasse (Tue 21 Oct @ 22:25): High priority flag cleared.

Lacasse (Tue 21 Oct @ 22:25): Future enhancements - '\Cancel\' button on the VB dialog box (that shows the progress bar) because the measurement can't easily be stopped otherwise. - Write cartridge SN to spreadsheet to further automate reporting. - Read back allan variance results and record them to MySQL

Lacasse (Tue 21 Oct @ 22:20): Software tested and is working. For each LO frequency, LabVIEW locks LO, sets bias params and selects IF Port, then runs existing (slightly modified) Excel macro for taking the measurement and calculating Allan Variance. Each dataset is recorded to a separate sheet in a single

### Lambeth

#### Mixer Block 134 (Task # 1461, Project Mixer Assembly)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1461>

Groves (Mon 20 Oct @ 14:28): Task assignment changed from Groves to Lambeth.

Groves (Mon 20 Oct @ 14:28): Mixer block 134:168/173:052 was put into the desiccator for the preamps to be swapped prior to testing again.

Groves (Mon 20 Oct @ 14:27): Mixer block 134:168/173:052 was tested over the weekend, but the image rejection on the LSB exceeded the ALMA specs with the number of points below 10dB at 11%, when the spec is 10%max. Mike L. will swap the preamps and this device will undergo testing once again, and

Groves (Fri 17 Oct @ 15:58): Mixer block 134:168/173:052 was tested with the optimum bias program, and it will be running in the MTS and recording data over the weekend.

Groves (Thu 16 Oct @ 14:34): Mixer block 134:168/173:052 was installed in the MTS and is now cooling down.

Lambeth (Thu 16 Oct @ 14:33): Task assignment changed from Lambeth to Groves.

Lambeth (Thu 16 Oct @ 14:33): Mixer block 134 has new mixer chips installed from wafer #03 and is ready for retesting.

#### Mixer Block 112 (Task # 1566, Project Mixer Assembly)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1566>

Groves (Thu 16 Oct @ 14:31): Task assignment changed from Groves to Lambeth.

## Tasks Updated between Wed 15 Oct and Wed 22 Oct 2008

### Lambeth

#### Mixer Block 112 (Task # 1566, Project Mixer Assembly)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1566>

Groves (Thu 16 Oct @ 14:31): Replace mixer chips in mixer block 112 for re-testing purposes.

Groves (Thu 16 Oct @ 14:30): Re-test mixer block 112:077/079:07 as it was originally removed from Cartridge #05 for poor image rejection below the 7dB minimum ALMA spec. Mike L. installed new preamps with .041 devices, but the image rejection was still poor along with the receiver noise temperatures. After

### Morgan

#### Develop Hot Load (Task # 993, Project Cartridge Test Set)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=993>

Morgan (Tue 21 Oct @ 12:19): no news

#### Construct Complex Beam Pattern Measurement System (Task # 1197, Project Cartridge Test Set)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1197>

Morgan (Tue 21 Oct @ 12:19): Initial tests with the new cables and new HVAC system are promising. Some points now meet spec, others do not. Dave says the USB tends to be worse than the LSB, which if true might indicate the cables are somewhat out of balance. We may try tweaking the delay compensation path

#### Develop new photomixer simulator (Task # 1207, Project Cartridge Test Set)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1207>

Morgan (Mon 20 Oct @ 09:36): The APH416 block has not appeared on the shop list, but Greg confirms that he has the job in his queue. Hi Matt, I got the jobs. --Greg -----  
Original Message----- From: Matt Morgan [mailto:mmmorgan2@nrao.edu] Sent: Monday, October 20, 2008 9:36 AM To: Greg Morris Subject:

#### Investigate Band 3 Cold Load design (Task # 1389, Project Mixer Test Set)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1389>

Morgan (Tue 21 Oct @ 12:20): have not worked on this

### Nagaraj

#### Analysis Software for Beam Patterns (Task # 1637, Project Software)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1637>

Nagaraj (Thu 16 Oct @ 13:02): -----Original Message----- From: John Effland [mailto:jeffland@nrao.edu] Sent: Thursday, October 16, 2008 1:02 PM To: Deepika Nagaraj  
Cc: Michael Lacasse; dschmitt@nrao.edu; mreynold@nrao.edu; mshannon@nrao.edu Subject: RE: BeamPattern template version 1 Deepika,

#### Manage Preamp Pairs (Task # 1638, Project Software)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1638>

Nagaraj (Tue 21 Oct @ 17:23): Estimated completion date changed from 2008-10-16 to 2008-10-28.

### Reynolds

#### Band 6 Cartridge Room Test Procedure (Task # 1550, Project Cartridge Test (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1550>

**Completed on: 2008-10-16 14:48:07**

Reynolds (Thu 16 Oct @ 14:48):

## Tasks Updated between Wed 15 Oct and Wed 22 Oct 2008

### Reynolds

#### DC testing cartridge 6.010 (Task # 1596, Project Cartridge Test (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1596>

Reynolds (Thu 16 Oct @ 14:50): Estimated completion date changed from 2008-09-29 to 2008-11-13.

Reynolds (Thu 16 Oct @ 14:50): Room test will be done when cartridge is retested.

#### Test Equipment Repair and Calibration (Task # 1613, Project Miscellaneous Tasks)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1613>

Reynolds (Thu 16 Oct @ 15:29): Estimated completion date changed from 2008-11-06 to 2008-11-13.

Reynolds (Thu 16 Oct @ 15:29): Items will be picked up at NTC on 2008\_10\_21.

### Shannon

#### Expedite Cold Cartridge Body Deliveries for 13-73 (Task # 1551, Project Cartridge Assembly (Production))

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1551>

Mike Shannon (Tue 21 Oct @ 13:45): Jenny, We have some concerns about these plates and the areas where they are out of tolerance. It is difficult for us to fully understand due to the language and I had hoped that maybe you could help us here. On all the 110K and 15K plates, lines 305 and 306 are out of tolerances and in

#### Order 2nd Cartridge Test Cryostat (Task # 1610, Project MRR Action Items)

<http://www.cv.nrao.edu/php-internal/ntc/Tasks/Events2.php?TaskNum=1610>

Effland (Mon 20 Oct @ 13:19): From: Michael Shannon (12 kB) Sent: Monday, October 20, 2008 1:19 PM To: Bill Shields cc: Davina Moore; John Effland Subj: RDK-3ST Cryocooler System for NRAO Charlottesville Bill, I have been informed by our Buyer that because this is such a high dollar amount,

Mike Shannon (Fri 17 Oct @ 11:41): Estimated completion date changed from 2008-09-26 to 2009-05-25.

Mike Shannon (Fri 17 Oct @ 11:41): Hi Mike, The price of a Sumitomo Model SRDK-3ST (Type 6)-CNA-61D Cryocooler System, including: RDK-3ST (Type 6), 3 stage coldhead CNA-61D, high voltage, "In-door / Out-door" compressor 20 meter long "In-door" Flexlines 20 meter long "Out-door" Flexlines

Mike Shannon (Fri 17 Oct @ 08:42): Sumitomo has come back with the price and delivery for a Model RDK-3ST (Type 6) Coldhead, per drawing number XRD91Z0154CQ. The price is \$41,150.00, FOB Wilmington, and delivery is approximately 150 days, ARO. I hope this is the information you require at this time,