Fixes and New Features

• Fix for the eight-character project IDs in custom beam forming observations
• New SDF validation tool
• New “beam-dipole” observing mode
• Ability to “un-submit” SDFs at the station
Fixes and New Features

- Updates to the Operator Screen webpage
  - Queue View – See your observations while they happen
- LWATV “appliance” with a Raspberry Pi
  - See one over at Physics & Astronomy
- Automated triggering system
HAL:
Heuristic Automation for LWA1
HAL is taking control of LWA1 in order to observe the trigger 'Swift_BAT_GRB #603488' which occurred at 2014-07-05 00:32:48.570010. Observations will start at 2014-07-05 09:34:40 (0:01:51.429990 after the event) and continue until 2014-07-05 12:34:40 on beams #2, #3, #4, #1.

The following entries the MCS/exec queue have been canceled:
- LS003001, session 1576
- LS004, session 1394
- LS003001, session 1577
- LS004, session 1393
- LS003001, session 1574
- LS003001, session 1575
- LS004, session 1396
- LS004, session 1395

The following DR operations have been canceled:
- 056843_000315926 on DR1
- 056843_000315932 on DR2
- 056843_000315943 on DR3
- 056843_000315950 on DR4

The following 'at' commands have been canceled:
- 4724
- 4727
- 4728
- 4729
- 4732
- 4733
HAL: Triggering Projects

- One currently running:
  - GRB follow up observations
  - Interface between HAL and the GCN provided by the Burst Early Response Triggering system
- Other projects possible
HAL: More than Just Triggering

• Monitoring of station health and environmental conditions
  – Takes action to protect the station

• Scheduling of observations
  – SDFs and ongoing projects, e.g., LO001
  – ASP filter changes
  – TBW health checks
Characterization of the Station

- **Bandpass Characterization**
  - Important component of calibration
- **Beam Flux Calibration**
  - See Frank’s talk later today
Characterization of the Station

• New Memos:
  – #199: LWA1 DRX Gain Setting Test
  – #200: DC Component Analysis at LWA1
  – #201: In-situ Testing of Frequency Labeling and Aliasing of DP and Measurement of Signal Cross-Coupling at LWA1
RFI Environment

• Two major sources during the last year
RFI Environment

• Two major cleanups over the last year
  – November 2013 – AAB lights
RFI Environment

• Two major cleanups over the last year
  – June 2014 – Powerlines near the VLA Visitor Center
Current Issues

• Standard monsoon season woes
• Upcoming release of new DR software
• Standard DP Issues:
  – Beam tracking degrades TBN
    • Fixed beams OK
  – TBN seems to promote beam former underflow
Beyond LWA1

• Future station: LWA-SV located on the Sevilleta NWR
• LWA-SV electronics shelter and cable vault delivered
• Possibility for new, lower frequency capabilities
  – Down to 3 MHz?
Beyond LWA1

- Frequency response down to 5 MHz

**Graphs:**
- **FEE**
- **ARX - Full**