FS Linux Distribution

- **FSL9**
  - Current standard (still, but …)
  - Based on Debian wheezy
  - Has some minor serial issues, but so far we have solutions

- **FSL10**
  - Next standard
  - Based on Debian stretch
  - Beginning of FS 64-bit architecture support
    - 32-bit FS will still be available
      - FS source will be unified 32/64-bit
  - Availability TBD, hopefully this summer
Current Release – FS 9.13.0

- Includes FS display server, strongly recommended
  - Allows simultaneous remote displays
  - Killing the FS accidently is much less likely
- Ad hoc support for sched “staggered start” mode
- Full support for dual VSI outputs for DBBC2 with FiLa10G, also:
  - VSI1 support for geo2 mode
  - VSI2 support for wastro2 and geo2 modes
- Full support for all allowed bit rates for VDIF recording with jive5ab
- NTP, if available, is now the recommended way to manage FS PC time
  - Use computer time model in time.ctl
  - Formatter time is still monitored.
  - Recommendations for reliable NTP configuration are in
    /usr2/fs/misc/ntp.txt
- Many other improvements and bug fixes, for full details see:
  /usr2/fs/misc/fs9130up.txt
Soon to be released – FS 9.13.1

- Finished:
  - Support for DBBC2 DDC v107
    - Includes 32 MHz channels
    - DBBC2 \texttt{vsi\_clk} rate setting and checking
  - Possible:
    - Logging of active .\texttt{rxg} file data.
    - Met. sensor height information logging.
  - Other small improvements
Includes FS display server

DBBC3 support

Radiometry: \texttt{fivpt}, \texttt{onoff}, and \texttt{Tsys}

- Continuous and non-continuous calibration supported

\texttt{bbcnnn} commands, \texttt{nnn} from 001 to 128

\texttt{ifx} commands, \texttt{x} from a to h

\texttt{iftpx} commands, \texttt{x} from a to h

Not yet:

- DBBC3 \texttt{drudg} support
  - Expected with merge into main branch

- DBBC3 Time setting/monitoring
Summer Development Plans

- Unify into one version:
  - Main branch, FS 9.13
  - VGOS branch, FS 9.12
  - Add `drudg` DBBC3 support
- Make source 32/64-bit compliant
- We need testing help for the new versions.
Other features that are coming …

- git version control
- TUI (Text User Interface)
- Web FS clients
- Periodic Satellite Commands in Az-EI and RA-Dec
- More mature RDBE-G, Mark 6, UDC, and VGOS observing support
- VEX2 support
- Ethernet/serial converter support
- Ethernet/GPIB converter support
Also coming ...

- 30 minute periodic beob procedure in place of midtp for periodic monitoring functions
- Improved rack type none set-up comments
- Source scanning on the fly
  - Improvement in fivpt for antennas that can scan in rate
- Band switching
Conclusion

- It would be very helpful to have:
  - Feedback on bugs that are occurring in the field
  - Input on what features are still needed or need to be changed for DBBC support
  - Any other requests …