ZWURM, 06-04-2020 14:00 (WURM through Zoom because of #COVID19 house quarantaine/wk5)

Present Aard, Des, Ilse, Paul, eBob, Mark, Harro

The group seems to be coping with #BlijfThuis pretty good, telecon level is at acceptable level (apart from prospective two-day NOVA Instrument Steering Committee - telecons are NOT AT ALL a proper replacement for a two-day in-person meeting). Harro mentions it is getting more difficult, entering fifth week of isolation.

Announcements: e-VLBI tomorrow so e-presence of technical staff for support requested; a joint Support Scientist/Operations/TechnicalOps high-frequency meeting (> three times / year) is in the making to address ad-hoc and inpromptu actions, tests and feature requests.

Aard: Investigated SFXC crashes, linked to flexbuf0 faulty network link (details follow). Joint Ilse/Mark running of pre-calibration scripts in CASA container revealed missing packages, e.g. pyfits. Image updated. The sfxc output to filterbank format conversion program is now 'multithreaded', speedup x5, despite Python multiprocessing horrors. Added persistent storage to the Jupyterhub. Start migrating to Jupyterlab such that data extraction from e.g. archive can be implemented as Jupyterlab extention. Those are coded in Javascript so might need to invest some time in (re)learning that.

Des: The link-EVN-projects-to-publications script scrapes EVN project codes from PDFs now. Spending time on the database scheme to use for production. Looks like the regression tests for CASA, to be written in C++, are going nowhere; possibly fall back to plan B: implement them as Python-based unit tests.

Ilse: Spent time on running EVN precalibration scripts in the Jupyter notebook, revealing some issues (see others). Environment now also working on eee-dev. Running a different experiment through the notebook revealed in issue in append_tsys. Setting up CWL environment on new laptop, CASA workshop tutors have been asked (and responded enthousiastically). The website for the workshop is open and the first announcement will be sent after Easter (i.e. next week). Based on ZsoltP comments: comparing AIPS/CASA on any data is extremely difficult: not always same algorithm, neither work out of the box for EVN data. [side discussion: it is agreed that at least a basic comparison betwixt the two should be made for EVN data, if nothing to reassure ourselves it is not obviously broken.] Jessica Dempsey contacted Ilse if interested in taskforce diversity EHT - (yes), also important to stay involved.

Paul: EVN PC accepted both proposals for observing with good marks. Have to do a presentation for the Uni.Leiden promotion committee this week. Asked to work on a report about SKA frequency stability based on site temperature measurements. Flexbuf0 had one broken link - 1:250,000 packet error rate - enough to trip sfxc (MPI). Since network is redundant, disabled one link so now "only" 10 Gbps to/

from flexbuf0 until hardware can be fixed. Added some more diagnostic graphs to the network monitoring system. ASTRON's 100 Gbps equipment has been ordered. Created a couple of databases for eBob & Des. db0 backup partition is full, thinking about how/when to move to different filesystem — other VMs may be affected so requires caution.

eBob: VEX2/datastreams aware runjob installed as production, tools like vex2db/db2vex and log2vex2 still require conversion to VEX2. NorthStar database access fixed so can now look for how/where to add GDPR checkbox. An error whilst archiving was encountered "illegual HDUnr in extname 'UV_DATA'". [side discussion: probably zero sized MS, from empty .cor file being accidentally attempted to archive.]

Mark: The pre-calibration script were changed to Python modules to be able to import + run from Jupyter notebook (more difficult than would seem at first glance). Worked on gain curve in FITS-IDI, such that an append_gaincurve will add this data, importfitsidi will load this data. CASA code modified to process GC into CASA calibration table. Assembling and inventing mimetypes for data formats used in VLBI; ESCAPE partners in HEP and astroparticle domains need to be prodded to do the same. EHT Engineering Release 6 should happen this week because data looks OK, Thursday evaluation.

Harro: Spent a lot of time working on updating jive5ab documentation, getting new commands in, add section on FlexBuff/Mark6 and datastreams, make sure existing commands/text is up-to-date again.