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To: UVLBI Group
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Subject: VLBI set-up at CARMA March 2011

The VLBI set-up at CARMA in March/April 2011 shown in the overall block diagram of Figure 1. The set-up was similar to that of 2009 in that 4 MK5 recorders were used but this time one of the MK5 recorders was used to record the phased sum of 7 CARMA antennas as an initial test of the phasing. Figure 2 shows a photo of the rack which contained the 4 Mark 5s, a DBE for recording a “comparison” antenna, and the “beamformer” for the phased sum of up to 8 antennas.

While CARMA now has a dual polarization capability for the March/April VLBI we only used LCP polarization. The MK5s were set-up with 669 as the “master” unit which could be accessed from the outside. The other 3 MK5s were made accessible via 669 via a local sub-net. As in 2009, we used an HP8662 as the critical synthesizer which provided the reference signal for the first L.O. we repeated the tests of 2009 which show that using the Agilent synthesizer normally used for the array results in some loss of coherence for VLBI. In order to avoid the zero-fringe rate problem in the processing of VLBI data on the local CARMA baselines a 114 Hz offset was applied to the data recorded from the comparison dish.

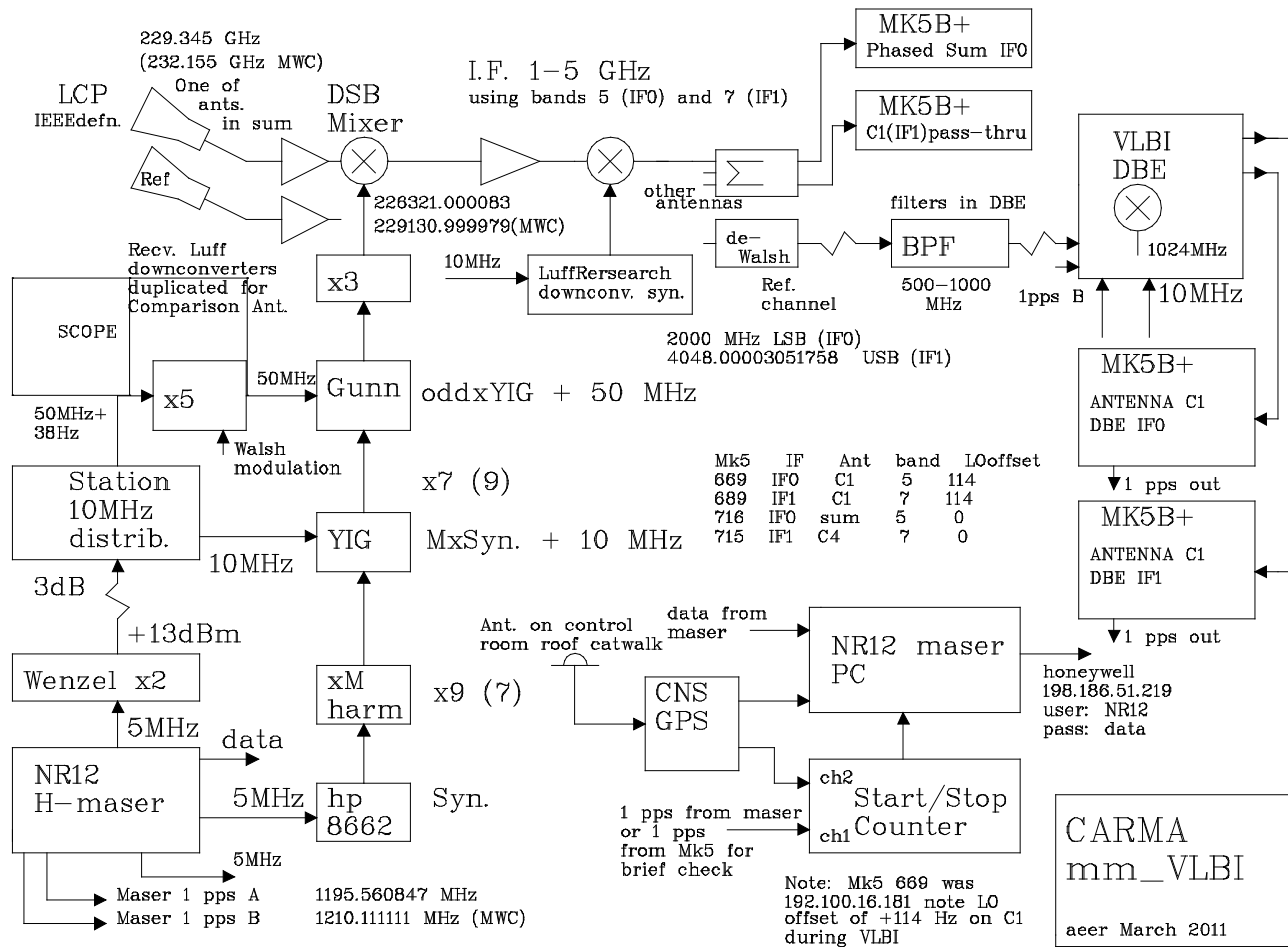


Figure 1.

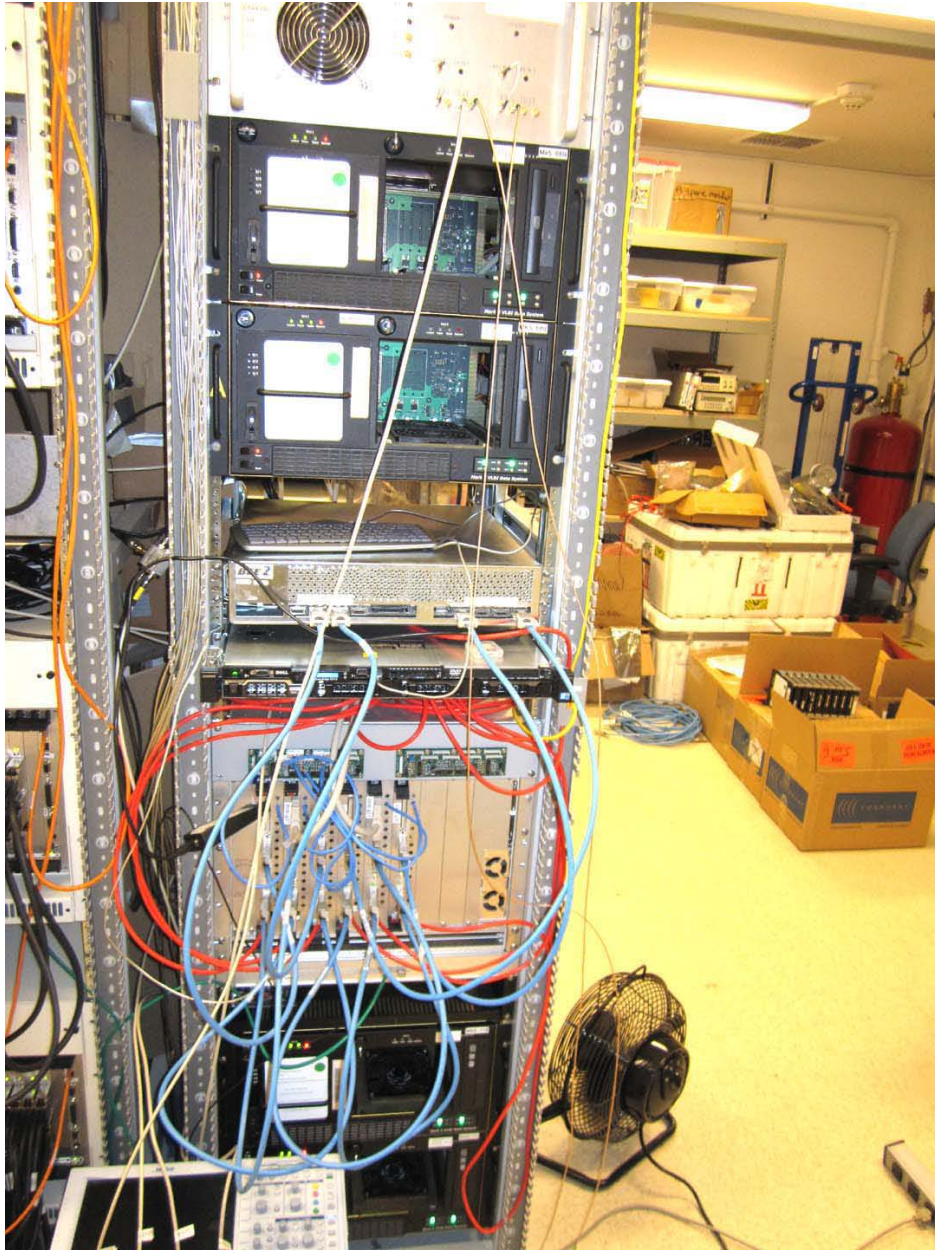


Figure 2.

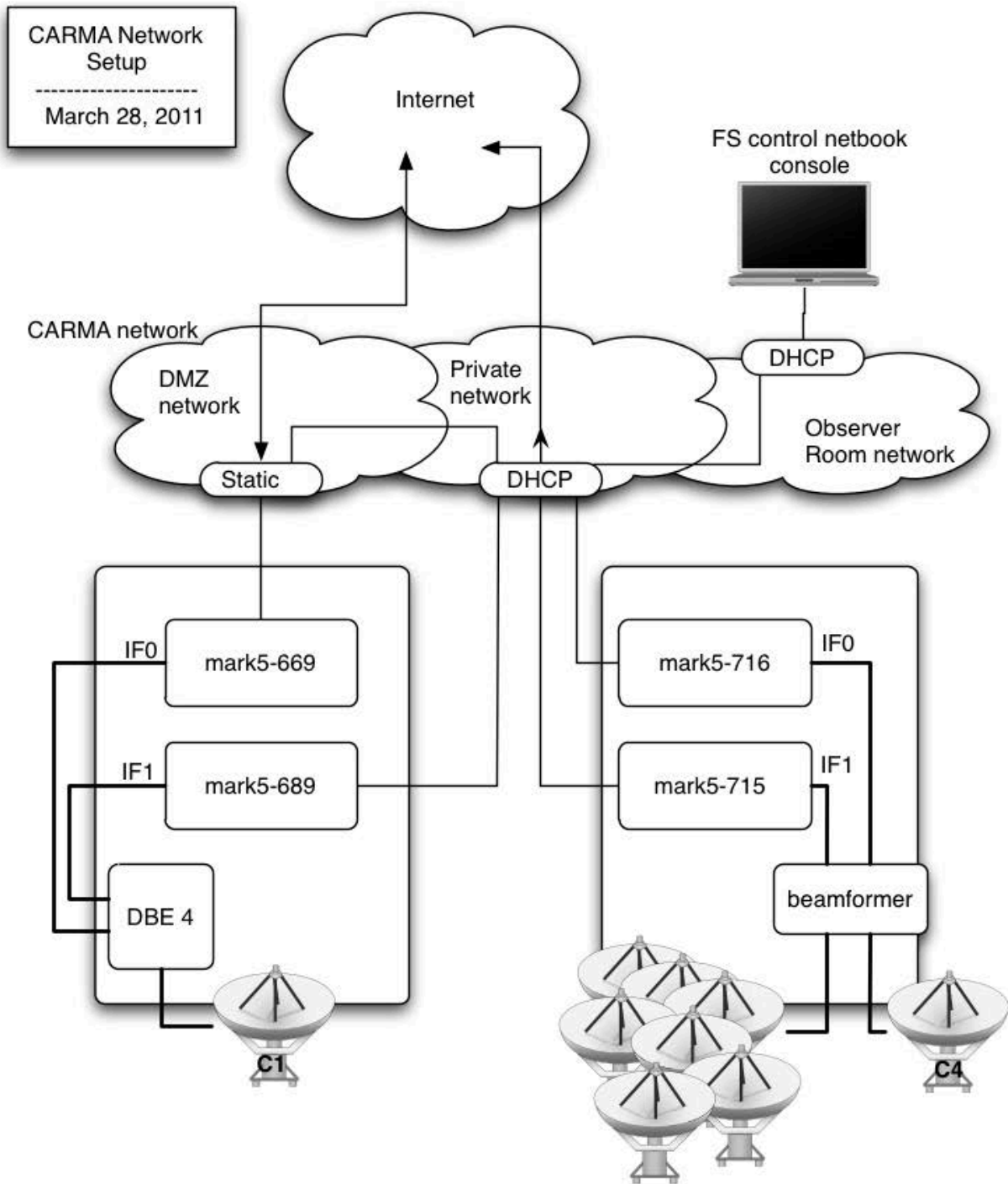


Figure 3.