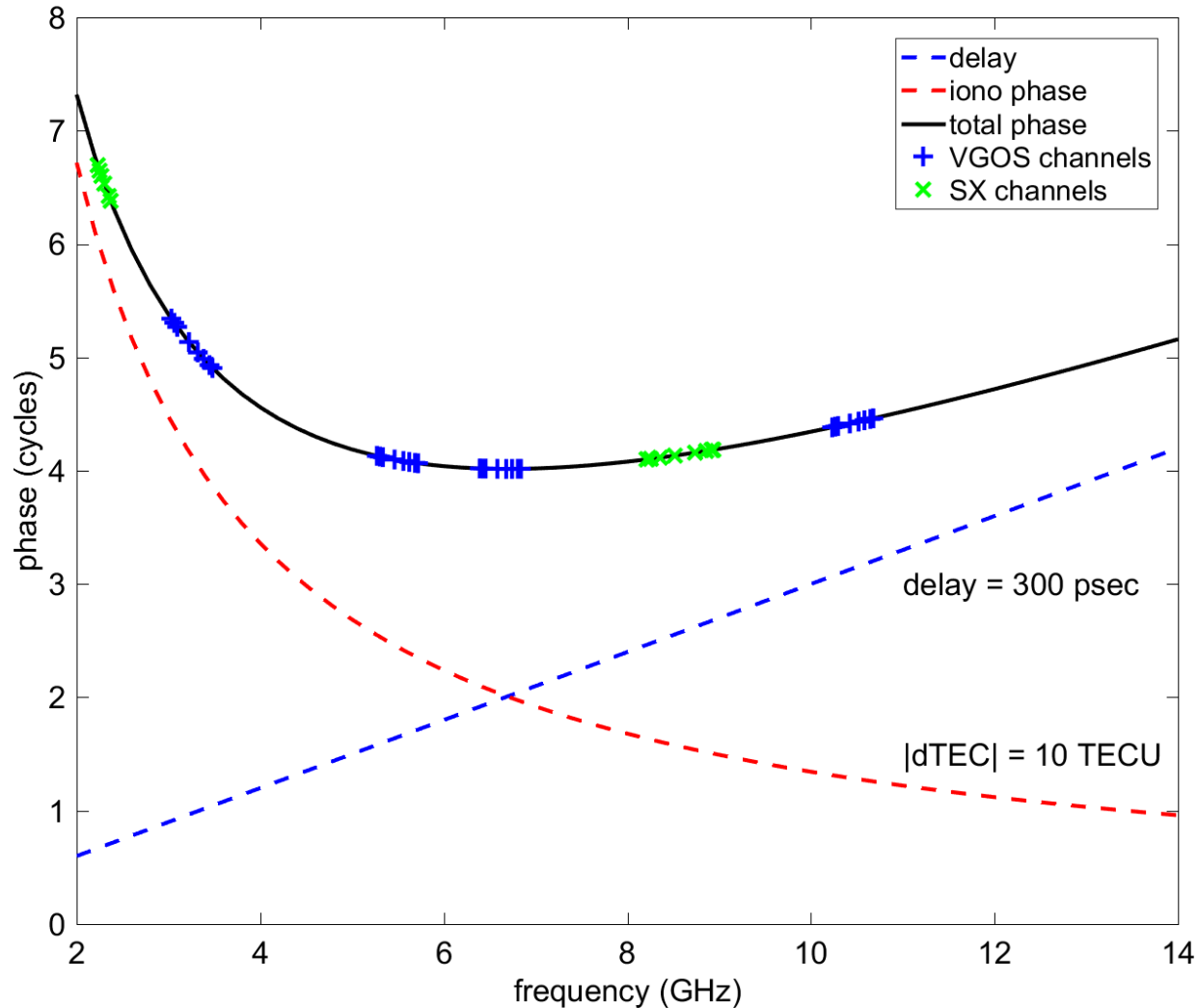


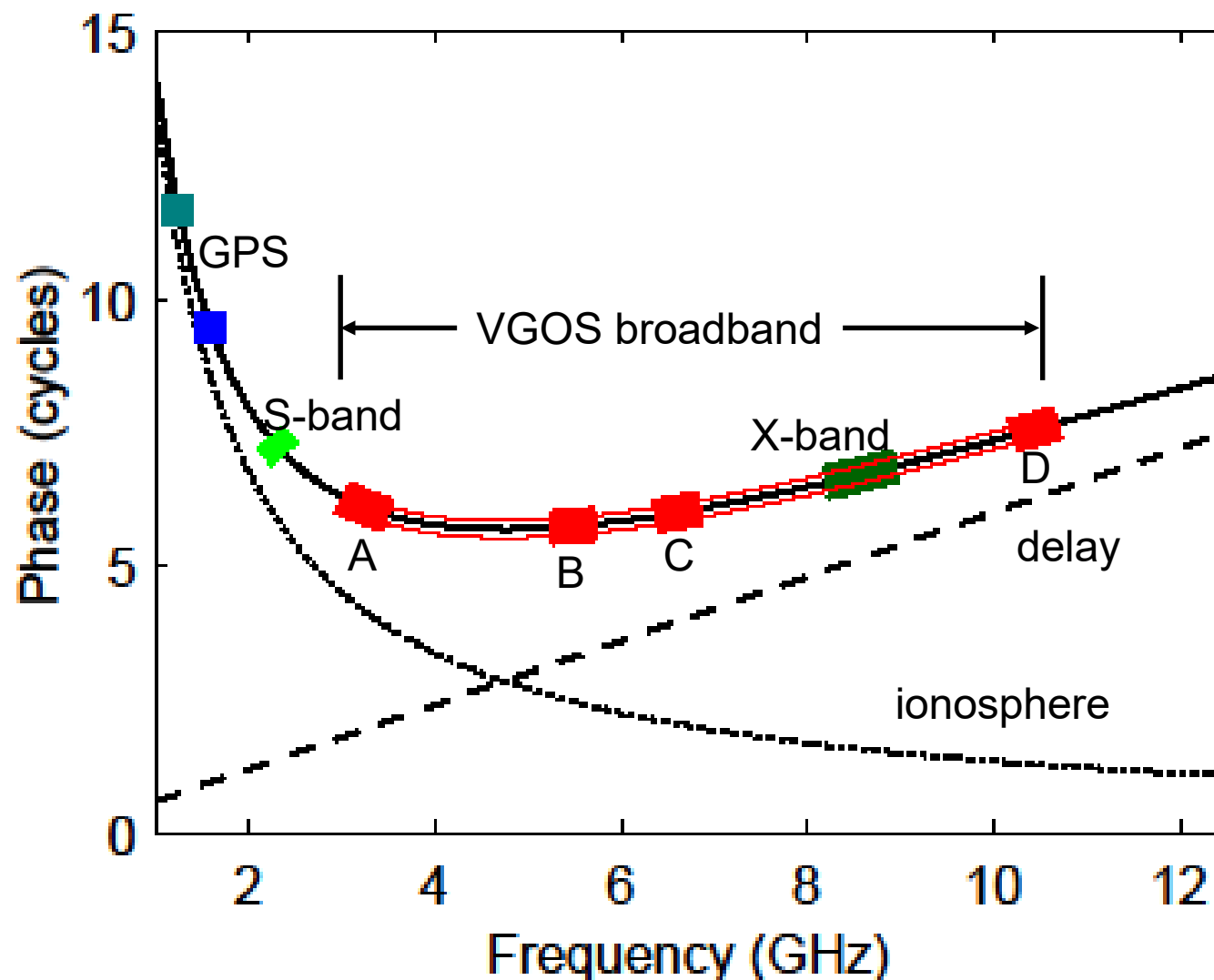
Overview of VGOS signal chain and differences to S/X



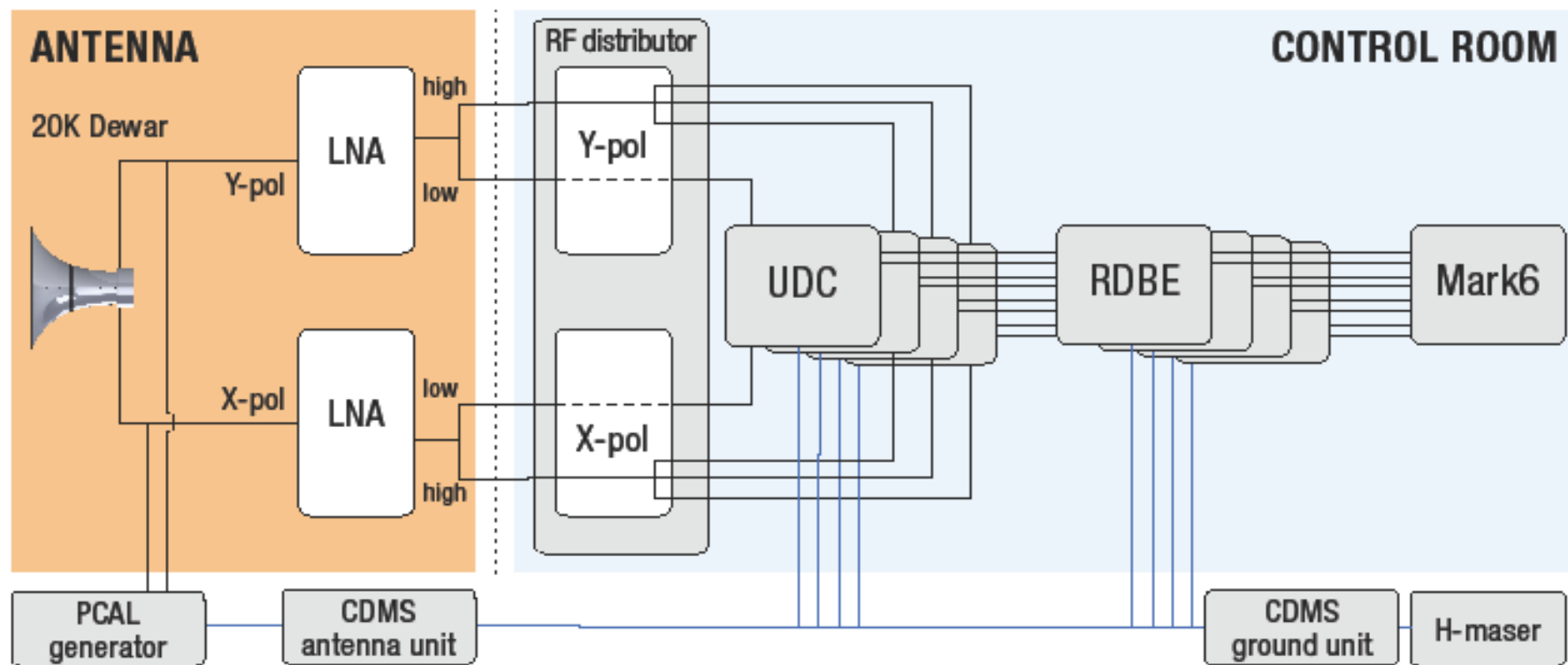
Broadband phase and delay



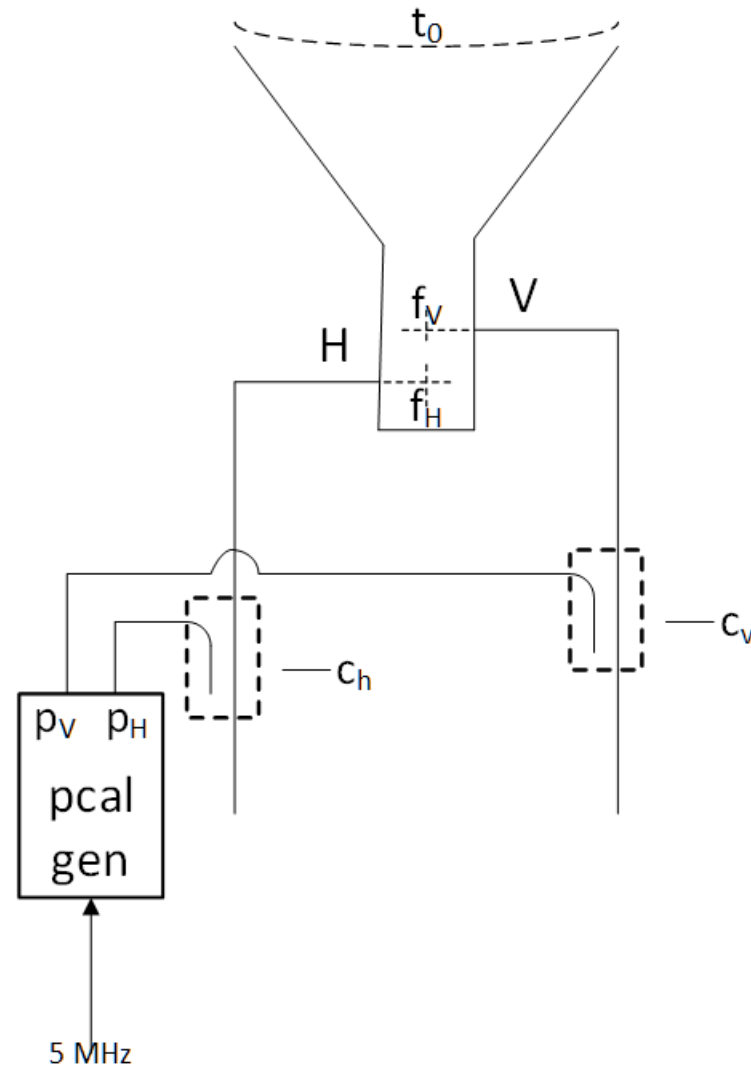
Observing frequency bands



Broadband system diagram



VGOS feed and phasecal



Main differences VGOS to S/X



■ Polarization

- ☐ Receive and record both polarizations
- ☐ The polarizations are linear.
- ☐ All bands and both polarizations are combined.

■ Phase calibration

- ☐ The multitone phase cal delay is essential for broadband fringe-fitting.

■ Ionosphere correction

- ☐ The ionosphere value is estimated along with delay, phase, and delay rate in *fourfit*.

Broadband correlation and post-correlation

- Correlate all four bands simultaneously.
 - directly from the Mark6 (last six sessions)
 - all polarization products within each band for all four bands
- *fourfit*
 - Apply multitone phasecal delays and phases to align the phases of the four bands.
 - Correct for uncalibrated delay and phase offsets between polarizations (use one strong source for values).
 - Coherently estimate group delay and dTEC (ionosphere).

Broadband system diagram

