

Comments from Dr. Larry Young, JPL

- ◆ There are the common sense items like the use of a common reference frame, both time and space, use of similar signals to simplify receivers and reduce inter-signal biases from the receivers. In addition, for high-precision and space service volume users of GNSS, my recommendations include:
- ◆ Keep all signals commensurate. The drift of code phase versus carrier phase should be less than 1 cm over any 6 hour period.
- ◆ Carrier phase at all frequencies should remain commensurate to less than 10 milliradians when the lower frequency carrier is scaled to the higher.
- ◆ Characterize transmit antenna phase and time delay variations with angle.
- ◆ Send power past the earth limb for radio occultation science, and to support users in the Space Service Volume.
- ◆ Satellites from all services should broadcast about the same power spectral density when they overlap, to optimize the tradeoff between the utility of more signals vs. the rise of noise floor.