

S. M. Merkowitz, J. Esper, L. Hilliard, E. D. Hoffman, J. L. Long, C. Ma, D. R. McCormick, J. F. McGarry, M. D. Shappirio

### **NASA's Next Generation Space Geodesy Co-located Sites**

Co-location of the different space geodetic techniques at sites around the globe is required to take advantage of the strengths of each technique and tie them together in the definition of the Terrestrial Reference Frame. In 2013, NASA completed the first demonstration of a next generation core site at NASA's Goddard Geophysical and Astronomical Observatory (GGAO) with co-located, next-generation Very Long Baseline Interferometry (VLBI), Satellite Laser Ranging (SLR), Global Navigation Satellite Systems (GNSS), and Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) stations, and is currently developing a core site at the McDonald Observatory in Texas. Lessons learned from the GGAO experience will be presented as well as how those lessons are being applied to the Texas site. In particular, we will discuss the need for radio frequency interference measurements, careful layout of the site, and coordination between the SLR and VLBI operations.