

Automating NASA's Space Geodesy Satellite Laser Ranging (SGSLR) Systems. J. Horvath¹, J. McGarry², J. Cheek³, C. Clarke¹, H. Donovan¹, D. Patterson¹, R. Ricklefs⁴, A. Nelson¹, F. Hall¹, A. Mann¹, J. Degnan³, S. Wetzel¹. ¹Honeywell Technology Solutions Inc., ²Lanham, MD 20706, USA; NASA Goddard Space Flight Center, Greenbelt, MD 20771, USA; ³Sigma Space Corporation, Lanham, MD 20706 USA; ⁴Cybioms Corp, Greenbelt, MD, 20771.

Abstract: Following the successful performance verification of NASA's Next Generation SLR (NGSLR) prototype system, NASA plans to build and deploy two Space Geodesy Satellite Laser Ranging (SGSLR) Systems within the next few years. These new systems will use much of the software already developed and tested on the NGSLR. While many aspects of system automation were built into the NGSLR, more development is necessary to fully complete SGSLR system automation. In particular, software and subsystems will be added or upgraded that will close the tracking loop, manage and monitor the system health and safety, and make operator decisions all without human intervention. This poster will present the SGSLR system automation plans.