

Introduction: Although current budget realities (US and international) discourage optimism regarding future development of large spaceborne astronomical telescopes in all wavebands, it is prudent to identify options to leverage other technologies, systems, and capabilities that may enhance the cost-benefit equation for astronomy, possibly enabling opportunities sooner rather than later. This presentation is based upon an August 2013 presentation at SPIE [1] that discussed some infrastructure options for a 20 meter UV-Optical-IR (UVOIR) telescope assembled in space and operating in Sun-Earth L2 (SEL2) halo orbit. The briefing will discuss possible concepts and technologies for human and robotic systems that could be used for assembly and servicing of large Far IR space telescopes, compare with the cited UVOIR discussion, and point out similarities and differences that may be encountered. The presentation will also draw upon earlier work [2] on servicing of the SAFIR telescope concept.

The intent is to enlist members of the Far IR community in a collaborative endeavor with other scientific communities that could benefit all participants, enabling earlier realization of synergistic observations for astrophysics.

References:

- [1] MacEwen, H; “In-space infrastructures and the Modular Assembled Space Telescope (MAST)”, Proc. SPIE 8860, 8860(9) (2013).
- [2] Lester, D. et al; “Strategies for servicing the Single Aperture Far IR (SAFIR)Telescope”, Proc. SPIE 5899, 58990K-1 – 58990K-12 (2005).