Task Statement for JPL work on NIAC Phase II Study

``10 meter Sub-Orbital Large Balloon Reflector (LBR)”

JPL will work on developing optimum design for corrector to be used with spherical reflector primary of the LBR. JPL will develop specifications for corrector in terms of requirements (operating wavelength, allowable aperture phase error) and in terms of goals for imaging capability (number of beams in focal plane). This work will be carried out in context of evaluation of optimum initial operating frequency for LBR in the range 300 to 800 GHz. This will involve consideration of possible significant astronomical species and targets to be observed, value of a large reflector compared to other available facilities, and atmospheric transmission as function of velocity of the source.

JPL will interact with other LBR team members doing detailed corrector design to ensure optimum coupling to astronomical objectives of LBR.

JPL personnel will travel to one domestic conference to present results of work on LBR design.

Institutional PI: Paul Goldsmith