SUGP-B P0288 Rev -K.Bower

Stanford University

W.W. Hansen Experimental Physics Laboratory Gravity Probe B Relativity Mission Stanford, California 94305-4085

GP-B Telescope Image Divider Assembly (IDA) "Position Beam Splitter on Beam Splitter Holder" P0288 Rev -

June 30, 1997

Prepared:	Ken Bower, Telescope Assembly	Date	
Prepared:	Don Davidson, Telescope Assembly	Date	
Prepared:	Jason Gwo, Telescope Assembly	Date	
Approved:	Lynn Huff, Telescope Responsible Engineer	Date	
Approved:	John Lipa, Telescope Manager	Date	
Approved:	John Turneaure, Hardware Manager	Date	

Approved:

Date _____

Ben Taller, Quality Assurance

POSITION BEAM SPLITTER ON BEAM SPLITTER HOLDER

- for SUGP-B dwg#25090
- also use *GP-B Telescope Image Divider Assembly (IDA) General Alignment and Bonding Procedures* (SUGP-B P0282).
- 1) Verify cleanliness of all fixturing. Take special care to verify cleanliness of the Beam Splitter stop which lies very close to bonding surfaces.
- 2) Install Beam Splitter Holder (SUGP-B dwg#25065) in custom fixture. Verify proper seating and hold down with lower clip. Use care to protect bonding surfaces of flight parts.
- 3) Swing Beam Splitter stop into position over Beam Splitter Holder and lock into position. The stop should be within 0.020" of the surface. Use care to avoid damaging bonding surfaces.
- 4) Carefully holding Beam Splitter (SUGP-B dwg#25062) with custom tweezers by region 10 (per dwg), verify correct placement over Beam Splitter Holder by eye without touching any of the bonding surfaces of either part to each other or any part of the fixturing.
- 5) Bond Beam Splitter to Beam Splitter Holder using *Bonding Procedures for Fused-Quartz Components* (SUGP-B P0218).
- 6) Use upper hold down clips if required (the Beam Splitter is so light that it has a strong tendency to 'float' out of alignment. Use care to avoid damaging the reflective coating. Tighten upper hold down clips only as required. Closely monitor the bond for distortions that can be caused by excessively tight or poorly placed hold down clips.
- After curing, carefully remove upper hold down clips, Beam Splitter stop, and lower hold down clip in that order. Use care to avoid damaging and coatings or bonding surfaces.
- 8) Remove completed Beam Splitter Assembly from fixture.

Attachments: SUGP-B dwg #'s 25090, 25065, 25062.