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Gravity Probe B Relativity Mission

Confirmation of No Charging of the Gyroscope During Levitation

GP-B P0307 Rev -A

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Confirmation of No Charging of the Gyroscope During Levitation

This procedure is to be performed only by persons listed as certified operators of the gyroscope acceptance facilities.

Purpose: To confirm that the gyroscope is not charging during levitation.

Equipment: Gyroscope Commissioning Probe
DDC Suspension System

Cleanliness precautions N/A

ESD precautions: Follow accepted ESD procedures.

Preparation: In conjunction with P0272:
Completion of P0111 and P0299. The gyroscope must have been levitated for more than 1 hour.

In conjunction with P0275:
Completion of P0204, P0273 and P0299. The gyroscope must have been levitated for more than 1 hour.

- Procedure**
- I.** Open the current DDC data file. The name of the file is automatically assigned according to the following: CHXXYYYY.DAT and is found in the subdirectory DATA in the DDCEXE directory where “XX” corresponds to the day the gyroscope was levitated and “YYYY” the time of the current lift. (for example a file CH141546.DAT is created when a gyroscope is levitated on the 14th of the month at 15:46) The six voltages corresponding to the electrodes are recorded every 30 seconds to this file.
 - II.** Examine the six voltages. If the values of the voltages are stable report in **section I. of table FGT #2 or FGT #3** “no charging”. If the average voltages change more than 10 volts over the period ask a qualified engineer to interpret the data and to record the charging rate into **section I. of table FGT #2 or FGT #3**.
 - III.** Upon completion of either P0272 or P0275 complete **section II. of either FGT #2 or FGT #3**.