

22 November 1999

### LENA Instrument Specification Requirements

- LENA054 – Thermal Design Requirements – These issues are all addressed in the document entitled "IMAGE Low Energy Neutral Atom (LENA) Instrument Thermal Balance Test Report." This document is available on the LENA web site, otherwise the LENA team can supply a hard copy.
- LENA055 – Thermal Design Concept – These issues are all addressed in the document entitled "IMAGE Low Energy Neutral Atom (LENA) Instrument Thermal Control." This document is available on the LENA web site, otherwise the LENA team can supply a hard copy.
- LENA058 – Thermal Finish – These issues are addressed in the ISO-9000 work instructions 545-WI-8072.1.31 and 545-WI-8072.1.27 as well as in the document entitled "IMAGE Low Energy Neutral Atom (LENA) Instrument Thermal Control." The LENA team can supply hard copies of these documents.
- LENA061 – Thermal Analysis and Prediction – According to the LENA logbook, page 37 dated 11 Jan 99-12 Jan 99, the total power consumption with the start MCP at 2.18 kV, the stop MCP at 2.19 kV, the collimator positive at 6.45 kV, the collimator negative at 6.49 kV, and the optics level at 15.2 kV was 0.528 Amperes on the 28 Volt supply or 14.8 Watts dissipated. A copy of the logbook page can be supplied by the LENA team.
- LENA063 – Life – LENA was fabricated from flight approved parts which have greater than 2 years storage and operations lifetime. A list of parts can be obtained from the LENA team.
- LENA065 – Maintainability and Storage – LENA was stored and transported in a custom designed Zero Enclosures box fitted with purge ports. The LENA team can supply copies of the zero box drawings, certificate of compliance, and pictures.
- LENA069 – Limits – The LENA team complied with the LENA specifications on purge interruption.
- LENA070 – Protection – The LENA team can supply documentation, currently on file at ManTech, the responsible company for monitoring and maintaining the clean room, on particle count.
- LENA072 – Purging – The LENA team was consistent with the specifications.