CPT Strategy and Mission Review Document

ESTEC/Contract No. 13997/99/NL/PB

Document No.
ASRO/CPT/WP2000-SMRD

Issue 1
22 February 2000

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Abstract

The mission approach which should be taken to best achieve the objectives of the Charged Particle Telescope (CPT) is outlined. Benefits of various payload complements on a host spacecraft are considered. Several alternatives are found satisfactory, a dedicated space radiation environment mission being an optimum. Based on a comparison of the benefits and drawbacks of various orbits, it is concluded that geosynchronous transfer orbit would be the best choice for CPT, but most objectives could also be achieved from a polar orbit. A spin-stabilised spacecraft is preferred in order to easily carry out directional measurements. A flight during solar maximum is found satisfactory, but the need for long-term measurements is stressed. An overview of flight opportunities is given and some constraints considered.