ENDCAP GROUNDING AND SHIELDING

Structures shown are primarily aluminum

OUTER SUPPORT TUBE THERMAL SPREADER: 150 um

OUTER SUPPORT TUBE SKIN:
Aluminum Skin on outside face of Support Tube, 75 um thick, isolated from tube

Disks isolated from support tube CFRP, Tied to Outer Support Tube Skin

Power tapes have bypass capacitors at PP0, DGND shorted to Outer Support Tube Skin

Power tapes need no shielding wrap in service channel

COOLED INNER SUPPORT TUBE SKIN: Add 50 um aluminum skin to cooled face of Front Thermal Enclosure. Tie to inner annulus of Disk 1 at 8 equal-space points.

INNER SUPPORT TUBE THERMAL SPREADER: 150 um

ADD 50 um aluminum skin to outside inner support tube

Tie Rear Thermal Spreader (Cooled) to Disk 9 inner annulus at 8 equal-space points.

PP1 with power tape Commoning DGND has AC tie to Shield

Tie to inner annulus of Disk 1 at 8 equal-space points.

Tray is detailed Page 2

Single point earth tie

Structures shown are primarily aluminum

Page 1 of 2

Ned Spencer, UCSC, October 1, 2001
EnDCAP GROUNDING AND SHIELDING

Aluminum Cable Tray PP1 to Heat Shield

- Bundle of 62 tapes
- 0.5 mm thickness aluminum
- Cooling Tube 5 mm OD
- 1 cm thickness aluminum-Kapton Wrap, 50 um aluminum
- 7.0 cm length

Tray is isolated from other conductors

Attachment to heat shield uses plated contact areas, mechanically clamped, no epoxy for electrical contact