



CRaTER Thermal Analysis

Eric O'Dea

Cosmic RAY Telescope for the Effects of Radiation



Contents

The results of the Thermal Balance Tests conducted at Lincoln Labs, compared with the Thermal Model predictions for those tests.

Included are numbers for temperatures and heat flows.

Cosmic RAY Telescope for the Effects of Radiation



+29 C, Instrument On

- Shrouds: 29 C
- Plate: 29 C
- Box: 32.7 C model, 33 C test
- Scope: 32.5 model, 33 C test

- + 6.60 W (internal power)
- - 6.41 W (to mounting plate)
- - 0.06 W (out apertures)
- - 0.13 W (out blankets)

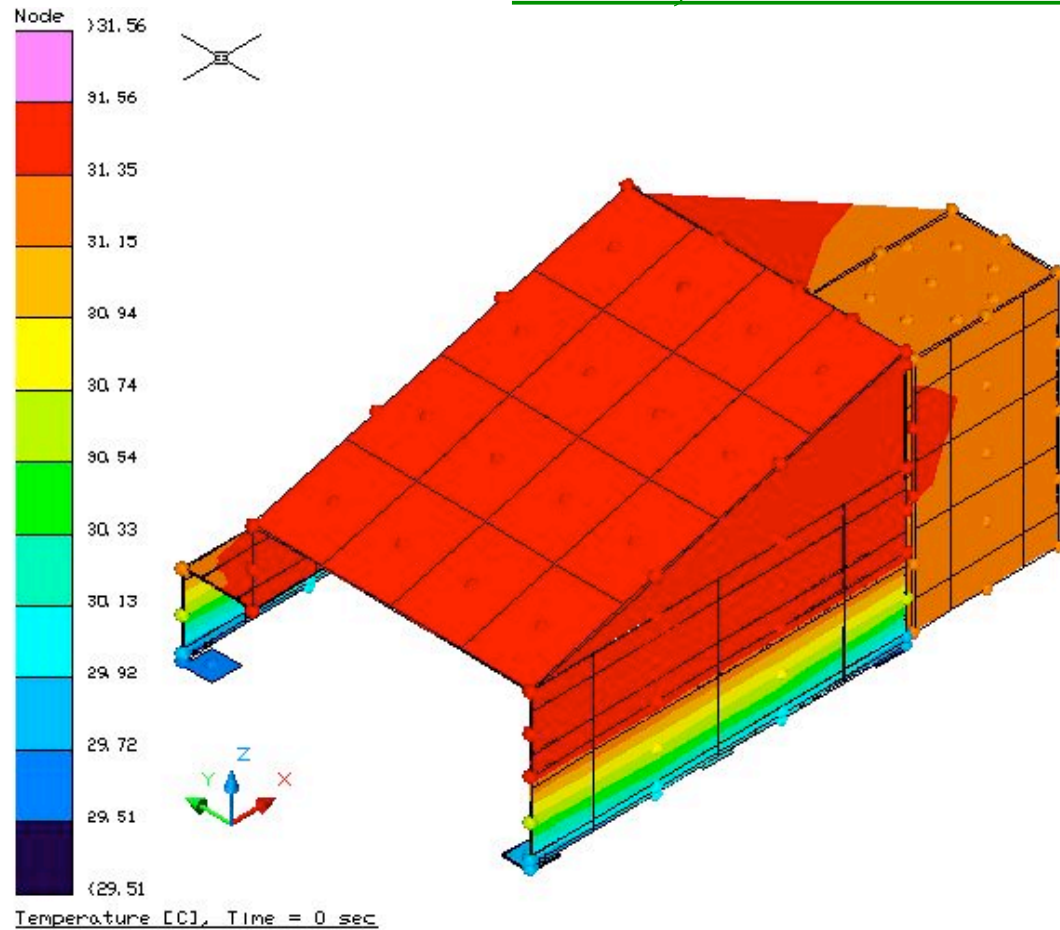
Cosmic RAY Telescope for the Effects of Radiation



THE AEROSPACE CORPORATION



+29 C, Instrument On



Cosmic RAY Telescope for the Effects of Radiation



-30 C, Instrument On

- Shrouds: -190 C
- Plate: -30 C
- Box: -29 C model, -27 C test
- Scope: -31 model, -29 C test

- + 6.60 W (internal power)
- - 3.97 W (to mounting plate)
- - 0.74 W (out apertures)
- - 1.89 W (out blankets)

Cosmic RAY Telescope for the Effects of Radiation



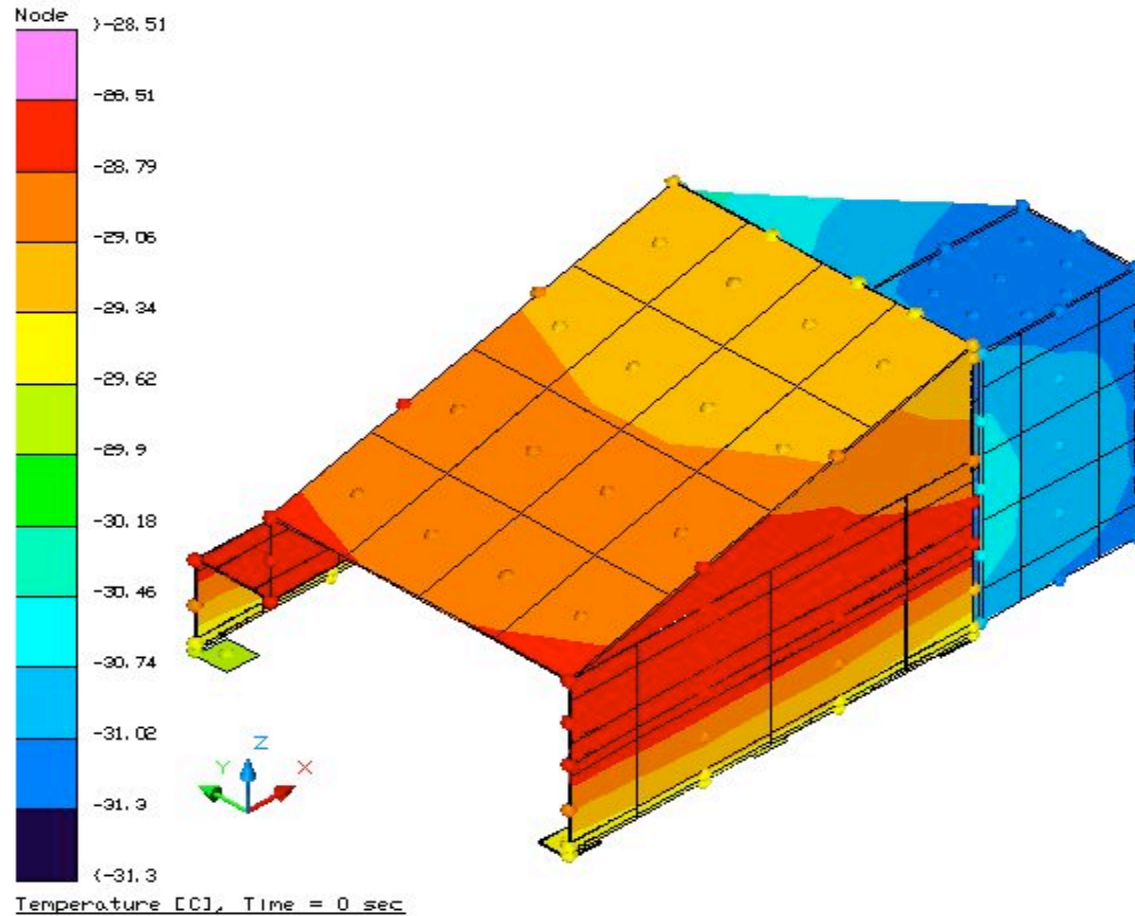
THE AEROSPACE CORPORATION



UT



-30 C, Instrument On



Cosmic RAY Telescope for the Effects of Radiation



-40 C, Instrument Off

- Shrouds: -190 C
- Plate: -40 C
- Box: -41.3 C model, -41 C test
- Scope: -43 C model, -43 C test

- + 0 W (internal power)
- - +2.14 W (from mounting plate)
- - 0.60 W (out apertures)
- - 1.54 W (out blankets)

Cosmic RAY Telescope for the Effects of Radiation



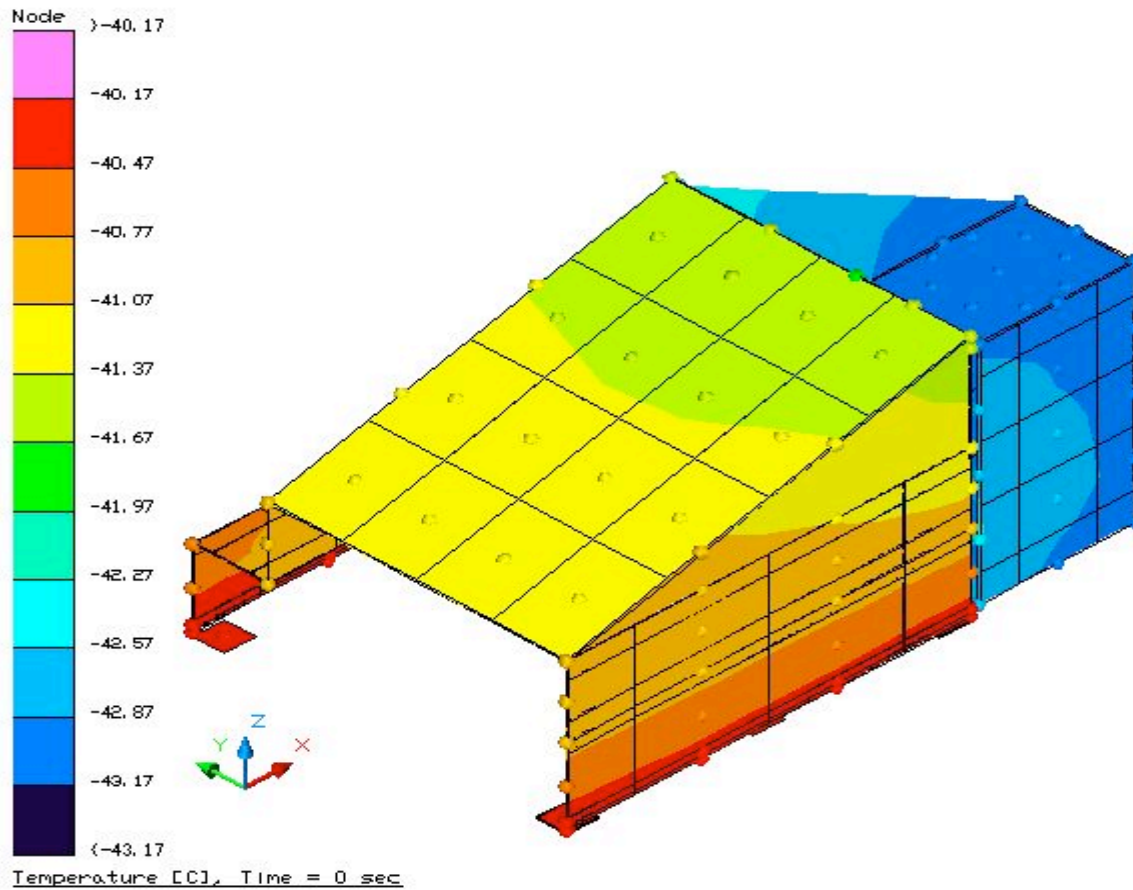
THE AEROSPACE CORPORATION



UT



-40 C, Instrument Off



Cosmic RAY Telescope for the Effects of Radiation