

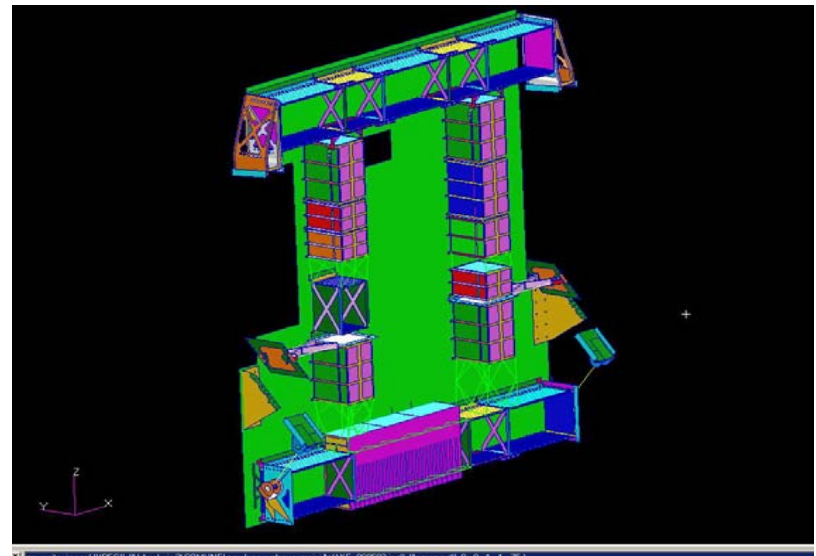
**TCS + crates
Mass Saving RoadMap
Thermal Control System Group +
others**

Mass saving meeting 31st July 2003

- Participants at the meeting
 - J. Burger (MIT)
 - M. Molina (CGS)
 - R. Becker (MIT)
 - G. Laurenti (INFN)
 - C. Guandalini (INFN)
 - T. Martin (LMSO)
 - C. Clark (LMSO)
 - R. Harold (LMSO)
 - A. Franzoso (CGS)
 - Y. Wang (MIT)
 - B. Hungerford (NASA)
 - T. Tinsler (LMSO)

TCS + crates are a SINGLE, INTEGRATED system

- A novel approach is needed in order to come to a GLOBAL mass saving for the ENTIRE SYSTEM
 - TCS (radiators)
 - CRATES
- We will redesign the CRATES+RADIATORS+BRA CKETS system so that its mass is within 771 Kg (according to the mass budget)

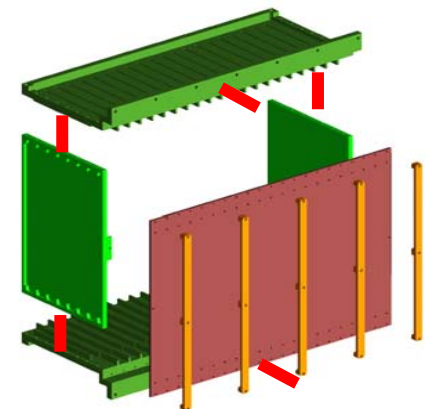
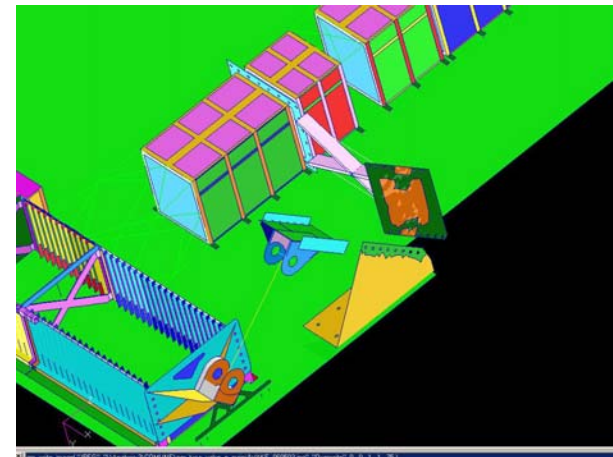


A couple of good news

- For the first time we have a TCS structural design with positive margins: design optimization can start from this, reducing unnecessary “too high” margins
- Crates thermal balance test results, showing a better thermal performance, allows us to reduce the thickness of some of the electronic crates

Recommendations from the meeting

- CRATES
 - 1) structural optimization (neglecting thermal)
 - Customized design
 - 2) Specific design (RAM/WAKE)
- RADIATOR
 - 3) Attachment points for the brackets
 - Number
 - Interface area
 - 4) doublers
- TOP BRACKETS
 - 5) Shear plate
- MID BRACKETS
 - 6) Reduce length
 - 7) Outside the radiator
 - 8) TTCS box combination
- MISCELLANEA
 - 9) Modelling techniques
 - 10) Remove “some” brackets



Schedule of the RoadMap

