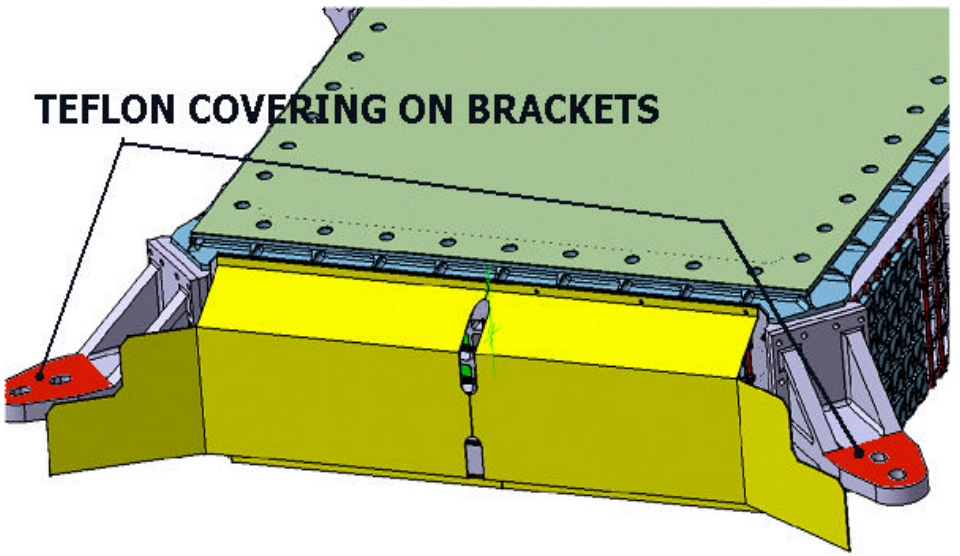
Impact of Teflon on ECAL thermal performance

(By CGS)

ANALYSIS OF THERMAL EFFECTS OF APPLICATION OF A TEFLON COVERING ON ECAL'S BRACKETS (USS02 INTERFACE)



CHARACTERISTICS OF THE ANALYSIS:

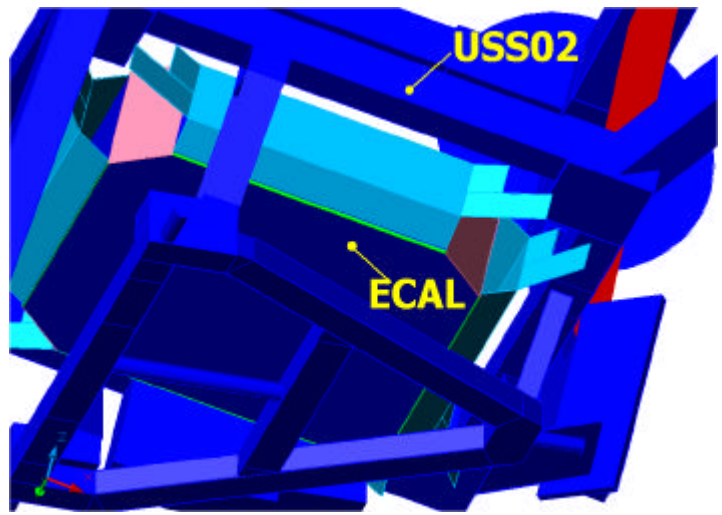
- **ORBITAL CASE CONSIDERED: Beta -75 Yaw -15 Pitch 15 Roll 0 Type HOT (the hottest case encountered for PMTs; hotter for WAKE and STARBOARD)**

- **THERMAL MODEL:**

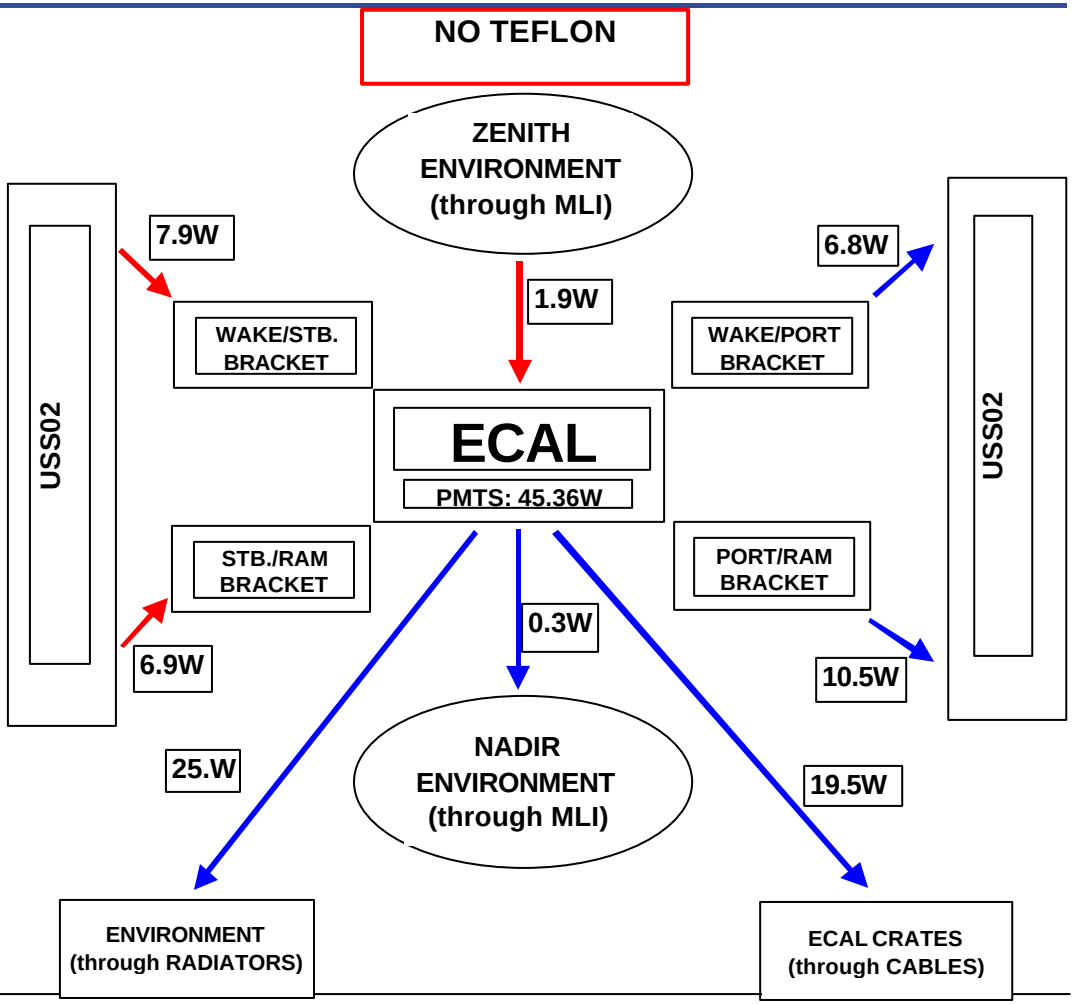
➢ **"C" radiator panels and "Winglet" included (t/o properties Silver Teflon)**

➢ **Radiator panels thickness 3 mm**

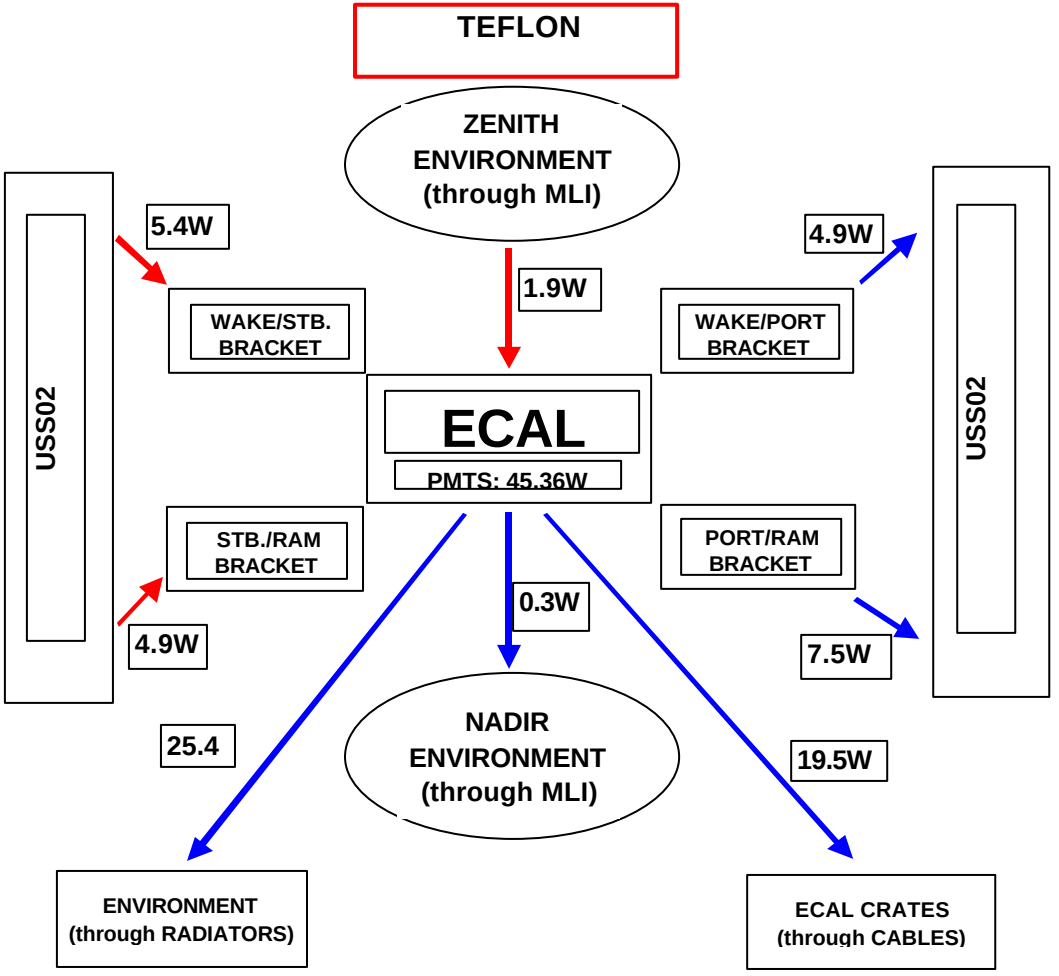
➢ **PMT heating power 0.140 W each**



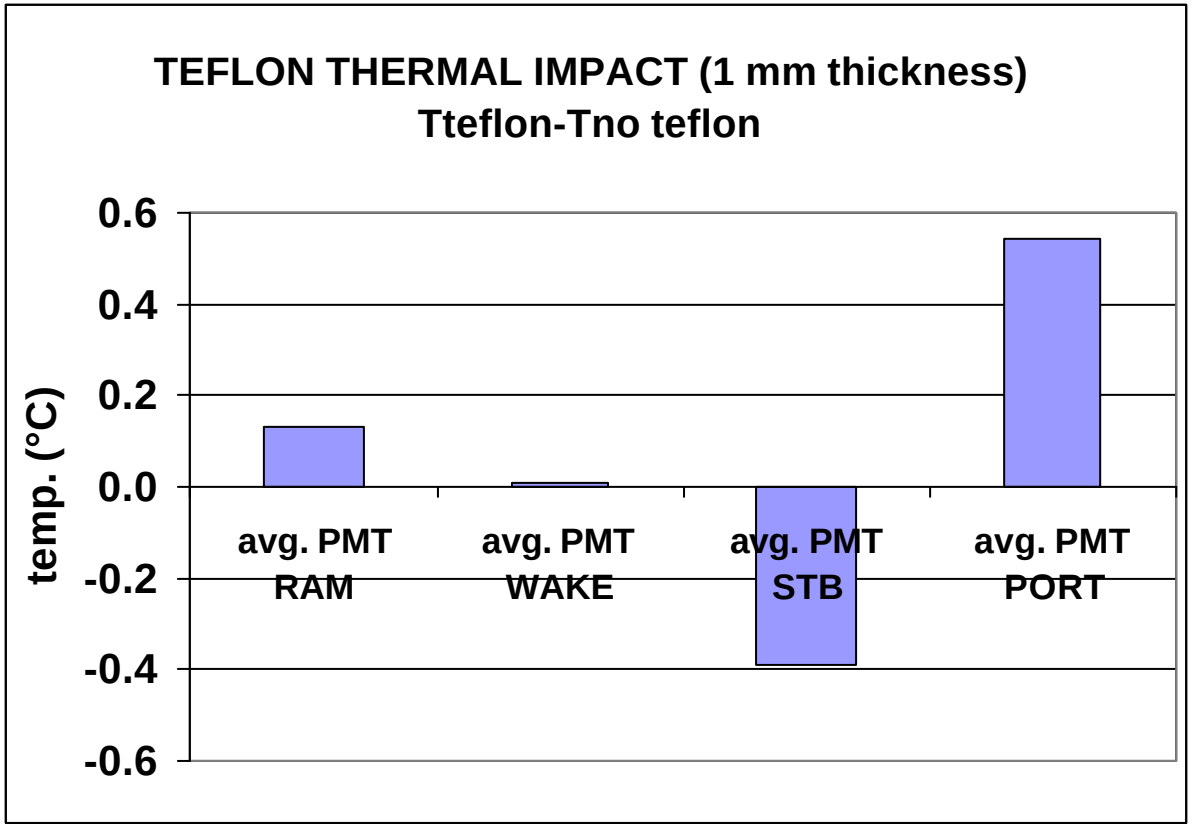
Without teflon on brackets



With teflon on brackets



Comparison of average PMT temperature



CONCLUSIONS

- From the thermal point of view, the introduction of a Teflon Layer does not affect the performance of the system (PMT temperatures)