Doc.No:	TOS-MCV/2004/2965/ln/BL	Issue:	1	Revision:	0
Lab.Act.No:	Eb164.04.538/5	Project:	STEREO	Date:	17.03.2004
Subject:	SEPT TV Cycling Test - PTR of FM 2				

Minutes of Meeting

Participants: S. Böttcher, J. Falenski (University of Kiel, D)

L. Duvet (D/SCI-A)

B. Lehmann (secretary), (TOS-MCV)

Date: 17.03.2004
Location: Mechanical Systems Laboratory (Eb164 at ESTEC)

SEPT FM 2 - Post Test Review

1. Test configuration deviations
none

2. Test procedure deviations
none

3. Test results
3.1. SEPT FM2
All functional tests of SEPT FM 2 were executed in accordance with the tests defined in the step-by-step sequence of the test plan, STEREO-ETKI-006.
3.2.Facility
The FM 2 was subjected to 7 TV cycles (one survival and 6 qualification cycles) in the range from -40ºC to +50ºC. The hot and cold dwells were realised according to the test procedure with a change rate of ≤1K/h. The implemented bake-out was conducted at a temperature of 48.5ºC (see annex 1).

The pressure inside the facility was kept at any time below $<10^{-5}$mbar during the cycling and off-gassed components were collected on a liquid Nitrogen trap installed in the facility.

4. NCR
4.1. SEPT FM 2
NCR 4: Detector “short” in SEPT-E sensor side A, detector electron and proton
4.2. Facility
NCR 5: Temperature exceeding during cycling on TC2 being mounted on the base plate of SEPT-E (see annex 2).

5. Open work, AOB
The facility report will be provided to the customer within 3 weeks. The data file will be send to the customer by email. The photos will be send on a CD.

6. Conclusion

The electronic parts of SEPT FM 2 passed successfully the TV cycling test consisting of one survival and 6 operational cycles in the qualification temperature range from -40ºC to +50ºC. The failure of the detectors has to be investigated (see also PTR of FM 1, TOS-MCV/2004/2964/ln/BL).

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Annex 1: SEPT FM 2 Test Temperatures

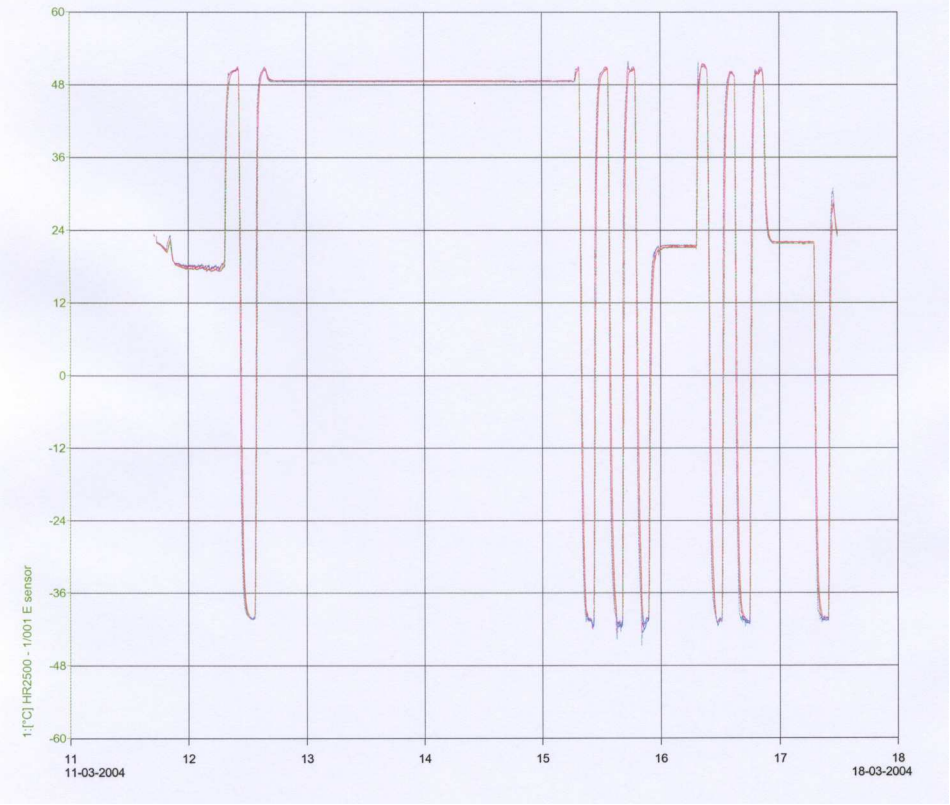
SEPT FM 2

Project: SEPT_FM2_TV

Printout: 17-03-2004

TV Cycling Test

Test Specimens Temperatures



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SEPT FM 2

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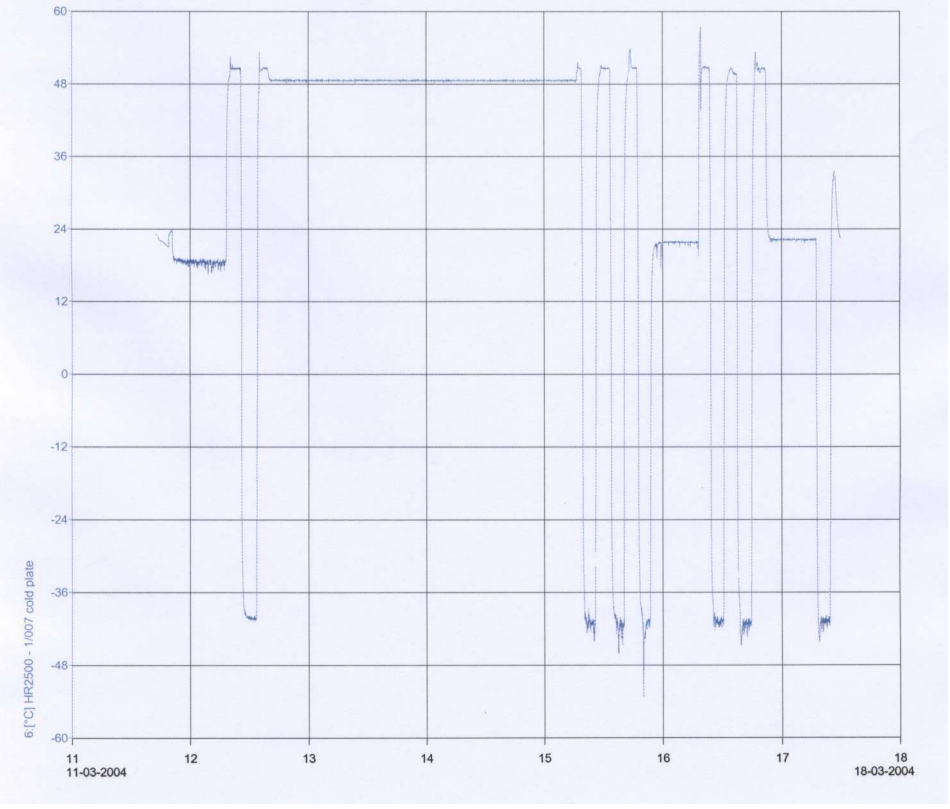
TV Cycling Test

Cold Plate Temperature



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SEPT FM 2

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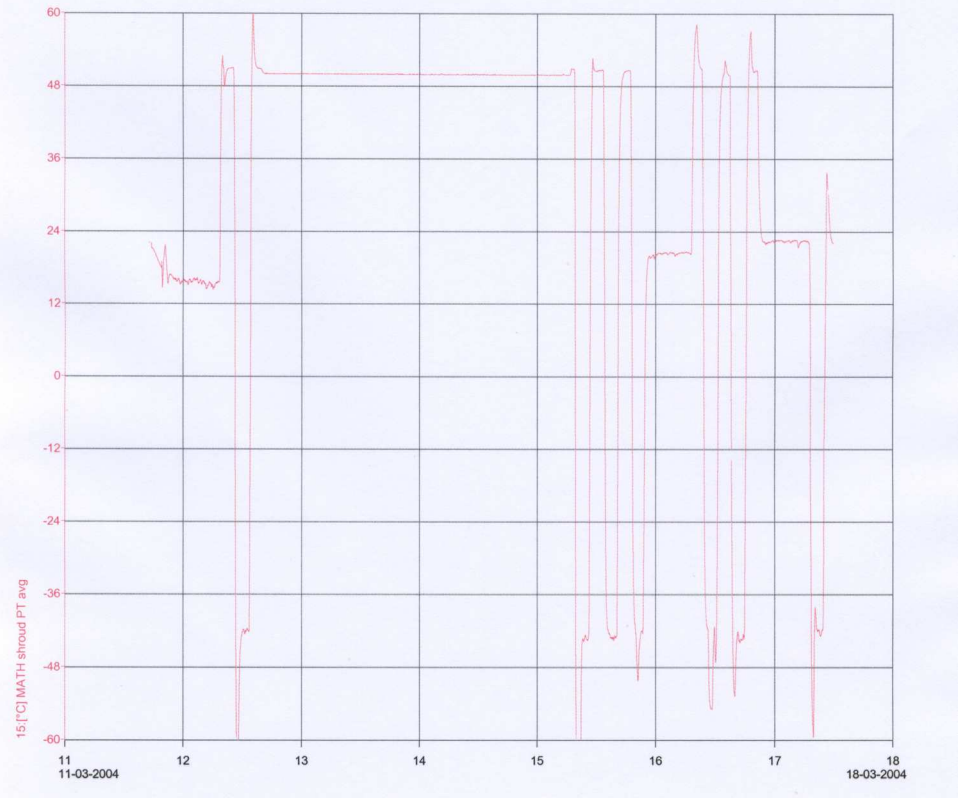
TV Cycling Test

Average Shroud Temperature



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SEPT FM 2

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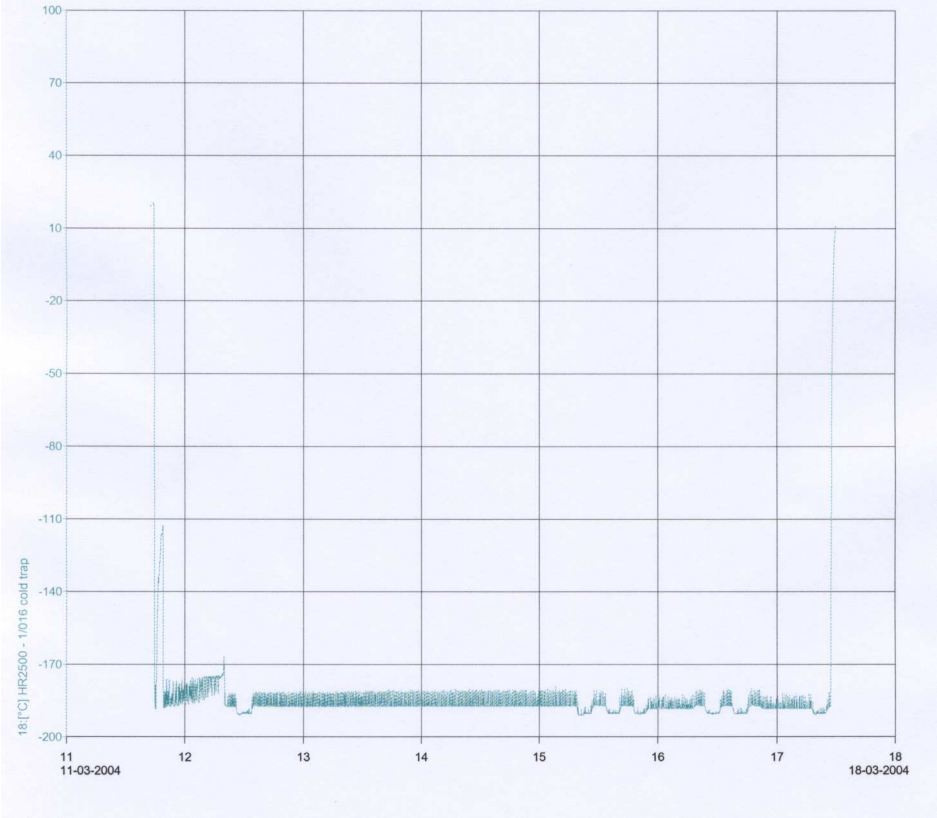
TV Cycling Test

Col Trap Temperature



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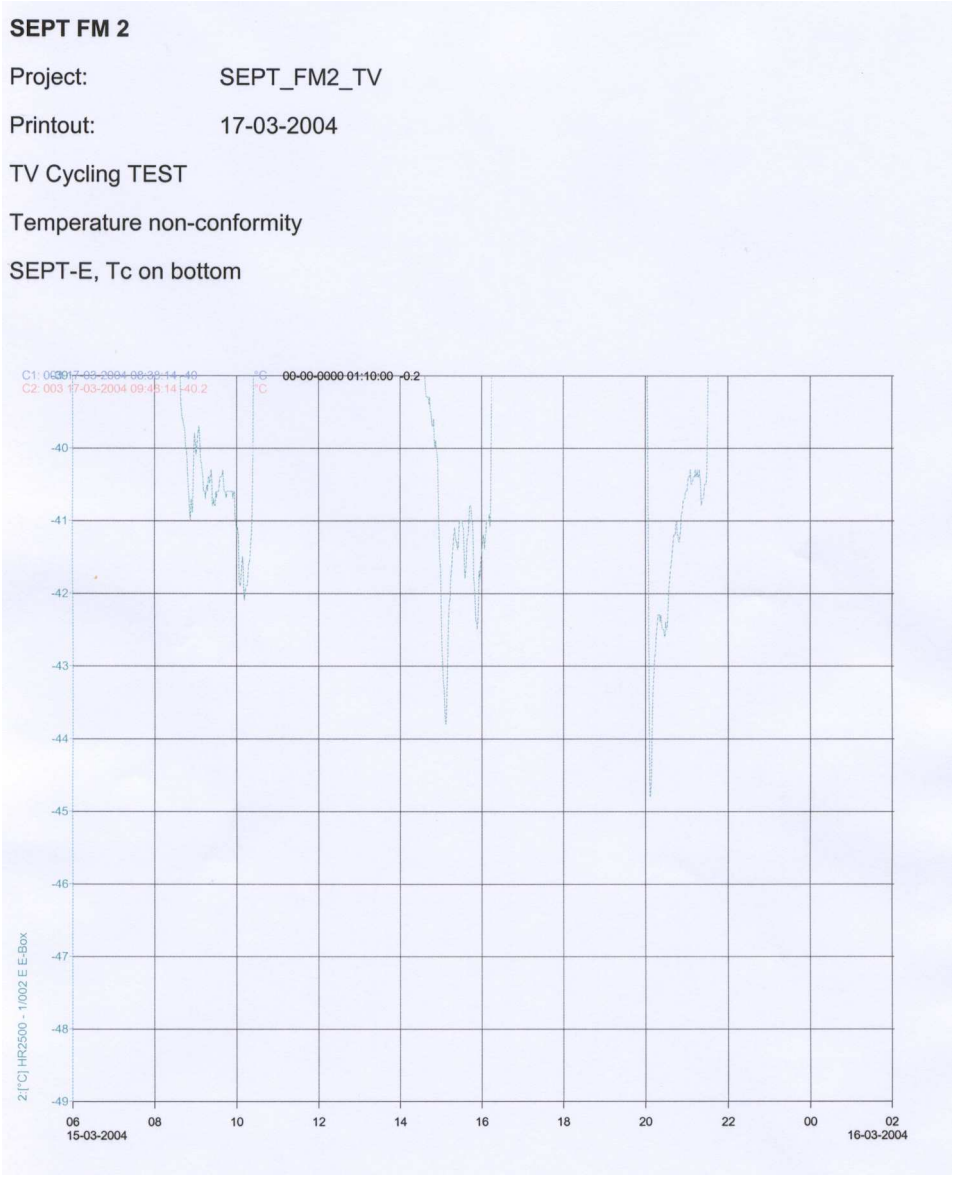
Annex 2: Temperature non-conformities

The temperatures of SEPT-E on the bottom were exceeded during cycle 3 and 4 at the minimum temperature limit for a short period of time (-43.8/-44.8ºC versus -43.0ºC).
All TC's allocated to the sensors stayed within the requirements.



The test procedure allows to boost the equipment by undershooting shroud and/or cold plate. TC 2 was linked quite well to the cold plate via the Aluminium washers and exceeded by approximately -1ºC and -2ºC the lower limit.