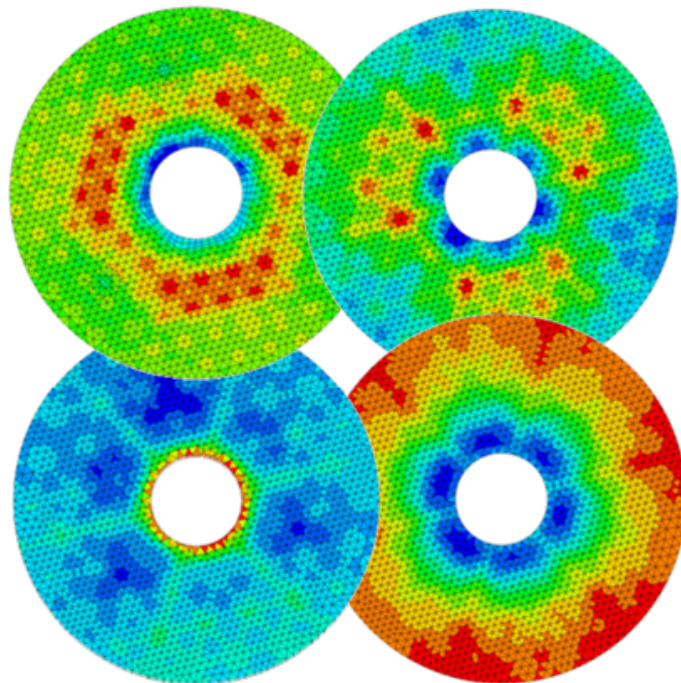


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Agence spatiale européenne*

Abstract

This document contains the presentations of the 28th European Space Thermal Analysis Workshop held at ESA/ESTEC, Noordwijk, The Netherlands on 14–15 October 2014. The final schedule for the Workshop can be found after the table of contents. The list of participants appears as the final appendix. The other appendices consist of copies of the viewgraphs used in each presentation and any related documents.

Proceedings of previous workshops can be found at http://www.esa.int/TEC/Thermal_control under ‘Workshops’.

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Programme Day 1

- 9:00 Registration
- 9:45 **Welcome and introduction**
Harrie Rooijackers (ESA/ESTEC, The Netherlands)
- 10:00 **Definition of Experimental Based Thermal Parameters for a Standard Thermal Architecture of Electronic Boards and Units based on modular concept and relevant Thermal Mathematical Model Validation**
Andrea Zamboni (Selex ES, Italy)
- 10:25 **LISA pathfinder Inertial Sensor Head thermal analysis in frequency domain**
Paolo Ruzza (CGS S.p.A., Italy)
- 10:50 **Fluid-selection tool**
Henk Jan van Gerner (NLR, The Netherlands)
- 11:15 Coffee break in the Foyer
- 11:45 **Development of a thermal control system for South Africa's next generation Earth observation satellite**
Daniël van der Merwe (DENEL Spaceteq, South Africa)
- 12:10 **GENETIK — Optimisation tool for thermal analyses performed with SYSTEMA**
Hélène Pasquier & Guillaume Mas (CNES, France)
- 12:35 **An overview of CHEOPS Instrument thermal design and analysis**
Romain Peyrou-Lauga (ESA, The Netherlands)
Giordano Bruno (University of Bern, Switzerland)
- 13:00 Lunch in the ESTEC Restaurant
- 14:00 **PEASSS — New horizons for cubesat missions**
Luca Celotti & Riccardo Nadalini (Active Space Technologies GmbH, Germany)
- 14:25 **TMRT Module Software — Use on an Industrial Application**
Michèle Ferrier & David Valentini (Thales Alenia Space, France)
- 14:50 **Thermal issues related to ExoMars EDLS performance**
Emilie Boulier & Grégory Pinaud & Patrick Bugnon (Airbus Defence & Space, France)
- 15:15 **A personal look back on Thermal Software evolution within the past 36 years**
Harold Rathjen (HRC, Germany)
- 15:45 Coffee break in the Foyer
- 16:15 **General-purpose GPU Radiative Solver**
Andrea Tosetto & Marco Giardino & Matteo Gorlani (Blue Engineering & Design, Italy)
- 16:40 **Insight HP3 — Thermal Modelling with Thermal Desktop**
Asli Gencosmanoglu & Luca Celotti & Riccardo Nadalini (Active Space Technologies GmbH, Germany)
- 17:05 **Analysis Strategies For Missions Involving Comprehensive Thermal Issues**
Nicolas Liquière (EPSILON, France)
- 17:30 Social Gathering in the Foyer
- 19:30 Dinner in *Iets Anders*

Programme Day 2

- 9:00 **Assessment of stochastic methods for the thermal design of a telecom satellite**
Nicolas Donadey (AKKA Technology, France)
Jean-Paul Dudon & Patrick Connil & Patrick Hugonnot (Thales, France)
- 9:25 **Development of an automated thermal model correlation tool**
Martin Trinoga (Airbus Defence and Space, Germany)
- 9:50 **On using quasi Newton algorithms of the Broyden class for model-to-test correlation**
Jan Klement (Tesat-Spacecom GmbH & Co. KG, Germany)
- 10:15 **SYSTEMA – THERMICA 4.7.0 & THERMICALC 4.7.0**
Timothée Soriano & Rose Nerriere (Astrium SAS, France)
- 11:00 Coffee break in the Foyer
- 11:25 **ESATAN Thermal Modelling Suite — Product Developments and Demonstration**
Chris Kirtley & Nicolas Bures (ITP Engines UK Ltd, United Kingdom)
- 12:10 **Tests of solids implementation in ESATAN TMS R6**
Olivier Frapsauce & Dominique Fraioli (Airbus DS Les Mureaux, France)
- 12:35 **Finite element model reduction for the determination of accurate conductive links and application to MTG IRS BTA**
Lionel Jacques
(Space Structures and Systems Laboratory, University of Liège & Centre Spatial de Liège, Belgium)
Luc Masset (Space Structures and Systems Laboratory, University of Liège, Belgium)
Tanguy Thibert & Pierre Jamotton & Coraline Dalibot (Centre Spatial de Liège, Belgium)
Gaetan Kerschen (Space Structures and Systems Laboratory, University of Liège, Belgium)
- 13:00 Closure
- 13:00 Lunch in the ESTEC Restaurant