

5th International Space Debris Re-entry Workshop (DRAFT version 2020-11-19)

2nd December 12:30-18:30 CET virtual event (WebEx)

Program (times are CET):

12:30 Connections and Introduction

12:50: Welcome

13:00 Materials

13:00: Introduction

13:05: B. Helber: *Advancements in demise testing at VKI: Sub- and supersonic experiments and simulations of COPVs, titanium, and glass – a preview*

13:15: P. Schrooyen: *Demise of CFRP materials in atmospheric entry conditions*

13:25: A. Pagan: *Simple but universal systematic ranking of quantitative material demisability from experimental findings*

13:35: A. Looten: *Design for demise applied to spacecraft structural panels and experiment for CleanSpace One platform*

13:45: Q&A, discussion

14:00 Aerothermodynamics

14:00: Introduction

14:05: J. Annaloro: *Impact of new aerothermodynamics and oxidation modelling on object-oriented codes*

14:15: S.-H. Park: *Revisiting ATD of reentering debris*

14:25: J. Navarro Laboulais: *Advanced Kinetics for Emission by-products of ablating debris*

14:35: Q&A, discussion

15:00 Break-up Simulations

15:00: Introduction

15:05: J. Beck. *Probabilistic Assessment of Destructive Re-entry (PADRE)*

15:15: B. Greene: *AutoORSAT parametric studies: a step toward incorporating uncertainty into reentry simulation*

15:25: M. Spel: *Demisability Study Of An Industrial Test Case With The Spacecraft-Oriented Code PAMPERO*

15:35: Q&A, discussion

16:00 Orbital Predictions and Observations

16:00: Introduction

16:05: D. Lubian Arenillas: *Implementation and assessment of a new blended whole atmosphere model in re-entry services for space surveillance & tracking operations as part of SWAMI H2020 project*

16:15: M. Trisolini: *Demisability analysis of re-entering structures on resonant trajectories*

16:25: S. Schmalz: *Photometry of space debris at the ISON-Castelgrande Observatory*

16:35: J. Silha: *Re-entry event of CZ-3B R/B observed by all-sky meteor cameras AMOS*

16:45: Q&A, discussion

17:10 Missions

17:10: Introduction

17:15: E. Doornbos: *Getting to the bottom of the upper atmosphere: the ESA EE10 candidate mission Daedalus*

17:25: A. Turchi: *Conceptual design of a re-entry analysis platform for investigation of space debris*

17:35: J. Merrifield: *Re-entry Break-up Experiment Assessment*

17:45: P. Martegani: *Debris Collision Alert System (DeCAS) for re-entry space debris risk mitigation*

17:55: D. Galla: *A CubeSat for demise investigation – SOURCE's approach for a better understanding of satellite re-entries*

18:05: Q&A, discussion

18:30 Wrap-up and goodbye