



Sunday 18th May 2014	
17:00	REGISTRATION
19:00	WELCOME COCKTAIL Maritim Hotel
Monday 19th May 2014	
08:30	REGISTRATION
09:30	CONFERENCE INTRODUCTION M. SCHELLER, President, Association Aéronautique et Astronautique de France (3AF) J-J. DORDAIN, Director General, European Space Agency (ESA) G. SACCOCCIA and P.G. AMAND, Conference Chairs
10:00	SESSION 1 ROUND TABLE ON SPACE MISSIONS: MID AND LONG TERM POLICIES Moderator: S. BARENSKY ( <i>Air &amp; Cosmos</i> ) J-J. DORDAIN, Director General, European Space Agency (ESA) J.Y. LE GALL, President, French Space Agency (CNES) J.D. WÖRNER, Chairman of the Executive Board, German Space Agency (DLR) M. GAZARIK, Associate Administrator Space Technology Mission Directorate, American Space Agency (NASA) D. PARKER, Chief Executive, UK Space Agency (UKSA) A. SANDULLI, Extraordinary Commissioner, Italian Space Agency (ASI)
11:15	COFFEE BREAK
11:45	SESSION 2 AGENCIES VIEWS ON PROPULSION FOR LAUNCHERS, SPACECRAFT AND EXPLORATION VEHICLES Moderator: C. STAVRINIDIS ( <i>ESA</i> ) S. BIANCHI, Direction of Launchers, European Space Agency (ESA) F. ONGARO, Director of Technical and Quality Management (ESA) M. EYMARD, Director of Launchers, (CNES) C. LIPPERT, Head of Launcher Systems (DLR) M. GAZARIK, Associate Administrator Space Technology Mission Directorate (NASA) Y. ITO, Associate Executive Director, Aerospace Research and Development Directorate, Japanese Space Agency (JAXA)
13:30	LUNCH
14:30	SESSION 3 PRIMES AND OPERATORS VS SUPPLIERS VIEWS ON SPACE PROPULSION: SPACE TRANSPORTATION Moderator: P. B. de SELDING ( <i>Space News</i> ) H. GILBERT, Technical and Quality Director (AIRBUS Defence and Space) T. MUELLER, VP of Propulsion Engineering (SPACEX) P. JAUSSI, Chief Executive Officer (S3) H. AUSTRUY, General Director (SAFRAN - Herakles) D. QUANCARD, Director Space Engines (SAFRAN-Snecma) M. ONOFRI, Director of CRAS (University of Rome "La Sapienza") S. SCIPPA, Head of Business Unit (Avio S.p.A.)
16:00	COFFEE BREAK
16:30	SESSION 4 PRIMES AND SUPPLIERS VIEWS ON SPACE PROPULSION : SPACECRAFT Moderator: J-J. TORTORA ( <i>Eurospace</i> ) M. PERSSON, President (ECAPS) J. HENNIG, President (Moog) W. YASUHARA, Vice President, Space Systems Business unit (Aerojet) D. LE BOUL'CH, BSOOS (Thales Alenia Space) X. VIGOR, General Director (AIR LIQUIDE Advanced Space Technologies) N. ZACCHEO, Chief Executive Officer (Alta-Sitael) A. ROHNE, Director of Propulsion and Equipment (AIRBUS Defence and Space)
19:30	TRADITIONAL DINNER Gilden im Zims



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST						
<b>Tuesday 20th May 2014</b>									
08:30	<b>KEYNOTE SPEECH: A. BOND, Reaction Engines, GB Space Transportation for the 21st Century</b>								
	Session 1 - SC - Electric Propulsion (Hall effect Thrusters) (1)	Session 2 - SC - Electric Propulsion (Ion Thrusters)	Session 3 - SC - Cold Gas & Chemical Propulsion Systems	Session 4 - SC - Modelling Chemical Propulsion (1)	Session 5 - ST - Combustion Chambers & Injectors	Session 6 - ST - Lox-CH4 propulsion	Session 7 - ST - Nano Launchers and Hybrid propulsion	Session 8 - ST - Propulsion for future Launchers	
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>	
<b>Chairpersons</b>	M. Andreucci, Alta S.p.A., IT D. Di Cara, ESA/ESTEC, NL	D. Felli, University of Southampton, GB B. Fallis, ESA/ESTEC, NL	L. Naiker, MOOG, GB C. Hunter, ESA/ESTEC, NL	M. Onofri, University of Rome, IT L. Appel, Rafael, IL	E. Boronine, Airbus DS, DE G. Ordonneau, Onera, FR	A. de Lillis, ASI, IT J. Robinson, NASA, US	M. Pessana, TAS, FR S. Ferguson, Sierra Nevada Corp., US	Y. Sait, JAXA, JP U. Palmnas, GKN Aerospace, SE	
09:00	2969094 <b>Performance analysis of a Hall thruster with a highly versatile magnetic circuit</b> J. Vaudolon, ICARE-CNRS, FR	2967499 <b>Micro Ion Thruster Concept based on a MEMS Gas-Field-Ion-Source</b> M. Tajmar, TU Dresden, DE	2965761 <b>Passivation Options for Geostationary Satellite Propulsion Systems</b> M. Peukert, OHB System, DE	2967647 <b>Planar Micro Nozzles – CFD Model Demands for Thrust Optimization</b> D. Banuti, DLR, DE	2969567 <b>Laser ignition of a multi-injector liquid rocket engine</b> M. Börner, DLR, DE	2960041 <b>Characterisation of a LOX-LCH4 Gas Generator</b> S. Soller, Airbus Defence and Space, DE	2969760 <b>Low cost bipropellant rocket engine research for small launcher applications</b> J. Marlow, Kingston University London, GB	2969269 <b>Development status and parameter improvement methods for upper stage engines of Vega and Cyclone launch vehicles</b> V. Shulga, Yuzhnoye State Design Office, UA	
09:20	2969372 <b>Experimental Characterization of a LaB6 Hollow Cathode for Low-Power Hall Effect Thrusters</b> D. Pedrini, Alta SpA, IT	2969740 <b>BepiColombo Solar Electric Propulsion System (SEPS), Qualification Programme and Architectural Options for Future Applications</b> N. Wallace, QinetiQ/Mars Space, GB	2967752 <b>Live Propellant Transient Test Results achieved in the ExoMars Test Campaign</b> A. Pasquier, OHB-System, DE	2969031 <b>Numerical Investigation of Two Interacting Parallel Thruster-Plumes and Comparison to Experiment</b> M. Grabe, DLR, DE	2968427 <b>Numerical analysis of laser ignition and flame development in a sub-scale combustion chamber</b> M. Wohlhüter, DLR, German Aerospace Center, DE	2969084 <b>Development and Test of the LOX/Methane Regenerative Cooled Rocket Engine</b> K. Taya, IHI Corporation, JP	2969052 <b>Small, Low Cost, Launch Capability Development</b> J. Jones, NASA Marshall Space Flight Center, US	2969511 <b>NASA's Space Launch System: A New Capability for Science and Exploration</b> C. Crumbly, NASA Marshall Space Flight Center, US	
09:40	2969399 <b>The PPS 5000 Hall-Effect Plasma Thruster: Development Status and Mission Applications</b> S. Zurbach, Snecma (Safran), FR	2969676 <b>Development of an EM Mini Ion Engine for Next Generation Gravity Mission "NGGM"</b> D. Felli, University of Southampton, GB	2968193 <b>Advanced Thruster Module Assembly (ATMA) Development &amp; Industrialisation</b> M. Wartelski, Airbus Defence and Space, FR	2969280 <b>Computational modeling of propellant sloshing in spacecrafts with partially filled tanks incorporating flexible diaphragms</b> M. Hahn, Technische Universität München, DE	2971582 <b>Gas radiation in rocket engine thrust chambers – a simplified CFD approach</b> B. Kniesner, Airbus Defence and Space, DE	2969318 <b>Current Activities for the Development of a LOX/LCH4 Regenerative Thrust Chamber at the Italian Aerospace Research Center</b> F. Battista, Italian Aerospace Research Center, CIRA, IT	2969773 <b>Development of a Low Cost Propulsion System for Micro-Satellite Launch Vehicles</b> P. Weuta, WEPA-Technologies GmbH, DE	2971491 <b>Development scenario of Japan's Next Flagship Launch System, H-X</b> Y. Saito, JAXA, JP	
10:00	2969522 <b>HT-5k Hall Thruster to Improve Small Launcher Capabilities</b> T. Misuri, Alta S.p.a., IT	2969694 <b>A RIT X Miniaturized Ion Engine System Test with Innovative Components</b> C. Altmann, Airbus Defence and Space, DE	2969298 <b>An overview of development model testing for the LEROS 4 High Thrust Apogee Engine</b> L. Naicker, Moog ISP, GB	2969403 <b>Applications of OpenFOAM DSMC solver for plume-spacecraft interaction analysis in an industrial context</b> C. Theroude, Astrium Satellites, FR	2966404 <b>Extension of the Spalart-Allmaras One-Equation Turbulence Model for Effusive Cooled Rocket Chambers</b> R. Hink, Institute of Aerodynamics and Flow Technology/German Aerospace Center (DLR), DE	2969330 <b>Single-injector combustion chambers experimental behaviour characterization in the framework of the HyproBREAD project</b> F. Battista, Italian Aerospace Research Center, CIRA, IT	2980899 <b>Study of Low-cost 100kg-Satellite Launcher using Hybrid Rocket Engines</b> T. Shimada, Japan Aerospace Exploration Agency, JP		
10:20	2980922 <b>New component developments for electrical propulsion systems</b> A. Moureaux, AIR LIQUIDE Advanced Technologies, FR	2969702 <b>RIT X Miniaturized Radio Frequency Ion Thruster Systems - Status, Programs and Applications</b> H. Leiter, Airbus Defence and Space, DE	2967083 <b>PRECISE – Final Results of the &lt;micro&gt;-Chemical Propulsion</b> M. Gauer, DLR - German Aerospace Center, DE	2969405 <b>Thermal Modelling of a 1N Monopropellant Hydrazine Thruster</b> M. Poucet, Moog - ISP, GB	2969675 <b>Heat Transfer and GOX&amp;LOX/GH2 Flame Imaging Analysis in a High-Pressure and High-Mixture Ratio rocket Combustor</b> S. Peitot, CNES, FR	2969446 <b>A parametric study on the role of near wall chemical reactions in O2/CH4 combustion chamber heat flux evaluation</b> B. Betti, Sapienza University of Rome, IT	2969657 <b>FLPP Large Scale Hybrid Rocket Demonstrator</b> C.J. Verberne, Nammo Raufoss AS, NO		
10:40			2969207 <b>Cold Gas Micro Propulsion: overview of achievements for Gaia, LISA Pathfinder, Microscope and forthcoming Euclid</b> G. Matticari, Selex ES, IT			2980600 <b>The Status of the Research and Development for LNG Rocket Engines in Japan</b> H. Asakawa, Japan Aerospace Exploration Agency, JP			
11:00	<b>COFFEE BREAK</b>								



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Tuesday 20th May 2014</b>								
	Session 9 - SC -Chemical Propulsion Systems	Session 10 - SC - Modelling Electrical Propulsion (1)	Session 11 - SC - Modelling Chemical Propulsion (2)	Session 12 - SC - Propulsion Components - Electric	Session 13 - ST - Turbopumps bearings	Session 14 - ST - Future Liquid Stages & Engines (1)	Session 15 - ST - SRM Thrust Oscillations	Session 16 - SC - Green Propulsion for Spacecraft (1)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>	S. Hyde, ESA/ESTEC, NL	R. Heinrich, University of Giessen, DE	C. Theroude, Airbus DS, FR M. De Rosa, ESA/ESTEC, NL	L. Ceruti, Selex, IT J. Gonzales, ESA	M. Pirozzi, Avio S.P.A., IT G. Dehouve, CNES, FR	L. Darcis, Airbus DS, FR M. Thalamy, Snecma, FR	P. Cloutet, Herakles, FR M. Biagioni, Avio S.p.A., IT	L. Torre, Alta S.p.A., IT K. Anfio, ECAPS, SE
<b>11:30</b>	2968570 <b>Verification of the Highly Flexible Small GEO Bus Propulsion Systems</b> B. Wollenhaupt, OHB-System, DE	2980659 <b>PlasmaPIC: Simulation tool for &lt;micro&gt;N-RITS</b> R. Henrich, Justus-Liebig-Universität Gießen, DE	2969893 <b>Numerical Modeling of the Thermal Behavior of Rafael Hydrazine Thrusters</b> L. Appel, Rafael, IL	2969386 <b>Power Processing Unit Activities at Thales Alenia Space Belgium (ETCA)</b> E. Bouguignon, Thales Alenia Space Belgium (ETCA), BE	2968554 <b>Test equipments for characterizing the behaviour of materials, bearings and dynamic seals in cryogenic fluid environments</b> J.L. Bozet, University of Liège, BE	2961514 <b>LE-X engine technology demonstration results</b> N. Nagao, JAXA, JP	2970149 <b>Thrust oscillations in large Solid Rocket Motors</b> S. Larrieu, Herakles, FR	2966615 <b>PulCherR - Pulsed Chemical Rocket with Green High Performance Propellants</b> O. Cuffolo, Thales Alenia Space France, FR
<b>11:50</b>	2969425 <b>A Low Cost, Rapid Response Development of a Hydrazine Propulsion System for the FORMOSAT-7 Mission</b> A. Devereaux, SSTL, GB	2980736 <b>3D Thermal Simulation of a Mini Ion Engine</b> W. Gaertner, I. Physikalisches Institut, Justus Liebig Universität, DE	2969411 <b>Material and Geometry Trade-Off of the LEROS 4 1100N High Thrust Apogee Engine</b> M. Poucet, Moog - ISP, GB	2969407 <b>Improvement of the Power Control Unit for Ion Thruster to cope with Milli-Newton range</b> RIT L. Ceruti, Selex ES, IT	2969343 <b>Experimental Characterization of Rotodynamic Forces Acting on Space Turbopumps</b> G. Pace, University of Pisa, IT	2970538 <b>Preparing the future for liquid propulsion rocket engines</b> S. Palerm, CNES, FR	2969363 <b>Segmented SRM Pressure Oscillation Demonstrator- First test</b> L. Guenot, Herakles SAFRAN GROUP, FR	2966942 <b>Development and Hot-firing Test of a Hydrogen Peroxide Thruster for FORMOSAT-7 Project</b> Tien-Chuan Kuo, National Space Organization, TW
<b>12:10</b>	2969697 <b>First results of regression rate measurements on ultrasonic basis in the AHRES hybrid rocket motor</b> D. Pormann, German Aerospace Center, DE		2969463 <b>Influence of Node Density in the Numerical Simulation of Water Hammer</b> C. Bombardieri, DLR Lampoldshausen, DE	2968190 <b>Flow Regulators for Electric Propulsion</b> G. Matticari, Selex ES, IT	2969388 <b>Identification of Mechanical Impedances of Turbopumps Components: Hydrostatic Bearings, Annular Pressure Seals, Impellers</b> E. Renard, Institut PPrime, FR	2965659 <b>Overview of the Future Launchers Preparatory Programme Expander Technology Integrated Demonstrator</b> S. Krueger, Airbus Defence and Space, DE	2969374 <b>Preliminary Analysis of Quasi-Steady State Pressure Oscillations of an Overloaded VEGA First Stage by means of Q1D Modelling</b> E. Cavallini, Sapienza University of Rome, IT	2969392 <b>Stationary Propulsive Performance of Green Propellant Thruster Demonstrators for the PulCherR Project</b> L. Torre, Alta S.p.A., IT
<b>12:30</b>				2978323 <b>Bringing a PMD Propellant Tank Assembly to the Marketplace: A Model of US-Europe-Industry-Academia Collaboration</b> W. Tam, ATK, US		2966962 <b>Tripellant Duel-Mode Rocket Engine for Aerospace Systems and Launch-Vehicles of a New Generation</b> V. Gusev, JSC NPO Energomash, RU	2969274 <b>Effects of laminar/turbulent transition on SRM intrinsic instabilities</b> B. Gazanion, CNES, FR	2969393 <b>PULCHER – Pulsed Chemical Rocket with Green High Performance Propellants: First Year Project Overview</b> L. Torre, Alta S.p.A., IT
<b>12:50</b>	<b>LUNCH</b>							



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Tuesday 20th May 2014</b>								
14:20	(Plenary Session) <b>ELECTRIC PROPULSION : NEXT STEPS</b> , Moderator: <b>J. GONZALES DEL AMO</b> (ESA) <b>R. MYERS</b> (Aerojet-Rocketdyne) <b>R. HERNANDEZ</b> (SatMex) <b>J. M. FREE</b> (NASA) <b>V. JACOD</b> (AIRBUS Defense and Space) <b>G. SACCOCCIA</b> (ESA) <b>M. ANDRENUCCI</b> (Alta-Sitael)							
15:50	<b>COFFEE BREAK</b>							
	Session 17 - SC - AIV Facilities	Session 18 - SC - Modelling Electrical Propulsion (2)	Session 19 - SC - Modelling Chemical Propulsion (3)	Session 20 - SC - Propulsion Components - Chemical Valves (1)	Session 21 - ST - Injection & combustion (1)	Session 22 - ST - Future Liquid Stages & Engines (2)	Session 23 - ST - Future Propulsion Concepts	Session 24 - SC - Green Propulsion for Spacecraft (2)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
Chairpersons	F. Scortecci, Aerospazio, IT S. Clark, QinetiQ, GB	R.A. Gabrielli, IRS, DE K. Holste, Justus-Liebig-Universität, DE	K. Pfaab, CNES, FR F. De Matteo, ESA/ESTEC, NL	E. Abriat, MOOG, GB F. Valencia-Bel, ESA/ESTEC, NL	S. Palerm, CNES, FR S. Soller, Airbus DS, DE	S. Krueger, Airbus DS, DE J-D Caruana, ESA	M. Sippel, DLR-SART, DE	K. Atai, JAXA, JP M. Smith, ESA/ESTEC, NL
16:20	2968064 <b>ESA Propulsion Laboratory</b> J. Gonzales Del Amo, European Space Agency, NL	2967792 <b>Modeling of Electrical Parameters of an Inductively-Coupled Plasma Generator in 3-Dimensional Cartesian Space</b> C. Volkmar, Technische Hochschule Mittelhessen University of Applied Sciences, DE	2967994 <b>Test campaign on hydraulic mock-up for Exomars EDM propulsion design validation</b> F. Lavery, Thales Alenia Space, FR	2962486 <b>A high flow rate apogee engine solenoid valve for the next generation of ESA planetary missions</b> M. Houston, MOOG Dublin, IE	2969484 <b>Characterization of a GOX-GCH4 Single Element Combustion Chamber</b> S. Silvestri, Technische Universität München, DE	2968035 <b>Development Status of the a5ME Upper Stage</b> M. Thalamy, Snecma, FR	2968945 <b>Safe, Affordable, Nuclear Thermal Propulsion Systems</b> M. Houts, NASA MSFC, US	2968006 <b>Overview and actual Development Status of Astriums Monopropellant Thruster Family</b> Ulrich Goltzig, Airbus Defence and Space, DE
16:40	2969418 <b>Setup, Validation and Benefits of an In-House Vibration Test Facility</b> M. Poucet, Moog - ISP, GB	2969584 <b>Simulation of working processes in gas-discharge chamber of high-frequency ion engine</b> V. Nigmatzyanov, Moscow Aviation Institute (National Research University), RU	2968026 <b>Fluid transient simulation for the ExoMars bi-propellant propulsion subsystem</b> V. Tregubow, OHB System AG, DE	2967784 <b>EADS NO Pyrotechnic Valves Operation in Hydrazine Environment Risk Study</b> W. C. P. Fernando, EADS, Airbus Defence and Space, GB	2969417 <b>Numerical and experimental investigation for a GOX-GCH4 shear-coaxial injector element</b> M. P. Celano, Technische Universität München (TUM), DE	2969306 <b>Demonstrators for Upper Stage Propulsion in FLPP 3</b> J.N. Caruana, ESA Launchers, FR	2968446 <b>Installed Performance of an Air Turbo-Rocket Expander Cycle during Supersonic Acceleration</b> V. Fernandez Villace, von Karman Institute for Fluid Dynamics, BE	2969766 <b>The research and development activities on HAN-based monopropellant thrusters in JAXA</b> K. Hatai, JAXA, JP
17:00	2970582 <b>Electric Propulsion Testing at DLR Goettingen: Facility and Diagnostics</b> A. Neumann, DLR, DE	2969727 <b>Diagnosing ion thrusters by performing emittance measurements</b> K. Holste, Justus-Liebig-Universität, DE	2969361 <b>Fluidic Simulations and Tests of Space Mechanical Pressure Regulators</b> T. Lienart, CNES, FR	2968565 <b>Helium Electronic Pressure Regulator breadboard testing and development</b> R. Delanoë, OHB Sweden, SE	2962089 <b>CFD Simulations of Penn State GO2/GH2 Single Element Combustor</b> V.P. Zhukov, Institute of Space Propulsion, German Aerospace Center (DLR), DE	2980773 <b>FLPP 2 M&amp;S High-Performance Cryo Tank Demonstrator as "Pathfinder" for Ariane 6 Upper Stage Tank Technology</b> M. Malcherzyk, MT Aerospace, DE	2969350 <b>Experimental and Numerical Analysis of the Small-scale Lapcat II Scramjet-Vehicle under Wind Tunnel Conditions</b> K.Hannemann, German Aerospace Center, DLR, DE	2970918 <b>Design, Build and Test of a 1N Hydrogen Peroxide Monopropellant Thruster</b> M. Palmer, SSTL, GB
17:20	2979775 <b>QinetiQ Electric Propulsion Test Facilities</b> S. Clark, QinetiQ, GB	2977023 <b>Development of an Instrument for Comparative Propulsion System Studies</b> R. A. Gabrielli, Institute of Space Systems (IRS), DE	1234569 <b>MPCV Propulsion System Functional Model</b> F. Di Matteo, ESA-ESTEC, NL	2969245 <b>Adaptation of a Miniature Latch Valve into the Aeolus Oxygen Rated In-situ Cleaning System</b> B. Ippolitto, Marotta Controls, US	2980858 <b>A modeling strategy for fully flashing jets</b> G. Lamanna, University of Stuttgart, DE	2967964 <b>High Thrust In Space Advanced Liquid Propulsion Stages; OHB consortium</b> R. Schonenborg, Schonenborg Space Engineering B.V. (for ESA), NL	2971058 <b>Experimental investigation of a 3d stream-traced air-inlet for a scramjet engine</b> P. Gruhn, German Aerospace Center (DLR), DE	2980490 <b>Development of Integrated Propulsion System Based on Hydrogen Peroxide for Microsatellite</b> T. Sakuma, Tokyo Metropolitan University, JP
17:40			2980834 <b>Transient Analysis of a Simplified Satellite Monopropellant Propulsion System and Ground Tests Comparison</b> M. Bayramoglu, ROKETSAN Inc., TR		2971141 <b>3D Modeling of Spray Combustion and Flow in a 40kN H2/O2 Subscale Rocket Thrust Chamber</b> H. Riedmann, Airbus Defence and Space, DE	2969023 <b>High Thrust In Space Advanced Liquid Propulsion Stages; Avio consortium</b> R. Schonenborg, Schonenborg Space Engineering B.V. (For ESA-ESTEC), NL	2971766 <b>Numerical Validation of a Free-Flying Scramjet Powered Vehicle at Realistic Wind Tunnel Conditions</b> T. Langener, ESA, NL	2980755 <b>Development on HAN-based Monopropellant Thruster</b> C. Liu, Shanghai Institute of Space Propulsion, CN
18:00			2969369 <b>Characterization of Mechanical Microperturbations of a Cold Gas Micro-Truster</b> K. Pfaab, CNES, FR			2978116 <b>Functionalized 2-Tetrazenes</b> C. Miro Sabate, University of Lyon, FR		
<b>END OF CONFERENCE DAY</b>								



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Wednesday 21st May 2014</b>								
	Session 25 - SC - Electric Propulsion (Hall effect Thrusters) (2)	Session 26 - SC - Electric Propulsion (Electrothermal Thrusters)	Session 27 - SC - Propulsion Components - Chemical Feedlines	Session 28 - SC - Propulsion Components - Electric	Session 29 - ST - Turbomachinery	Session 30 - ST - Future Liquid Stages & Engines (3)	Session 31 - ST - SRM Nozzle Technologies	Session 32 - Overview of Current Programmes (1)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>		A. Passaro, ALTA, IT K. Dannenmayer, ESA/ESTEC, NL	F. Peyraud, Air Liquide, FR J. Anthoine, Onera, FR	A. Genovese, Thales Electronic Systems, FR J. Bejhed, NanoSpace, SE	M. Vales, Snecma, FR M. Almqvist, GKN Aerospace, SE	A. Lequeux, CNES, FR S. Schlechtriem, DLR, DE	G. Vigier, Airbus DS, FR J. Gigou, ESA, FR	G. Schmidt, NASA, US G. Saccoccia, ESA/ESTEC, NL
<b>09:00</b>		2969415 <b>Development and Testing of a 1 kW Arcjet Propulsion System</b> A. Passaro, Alta S.p.A. , IT	2968541 <b>Experimental and Numerical Analysis of Water Hammer During the Filling Process of Pipelines</b> C. Bombardieri, DLR Lampoldshausen, DE	2969445 <b>Environmental Qualification and Endurance Testing of the THALES HCN5000 Hollow Cathode Neutralizer for the S GEO Mission</b> A. Genovese, Thales Electronic Systems, DE	2969353 <b>Pumping and Suction Performance of Whirling Impellers</b> G. Pace, University of Pisa, IT	2969500 <b>Staged Combustion Cycle Rocket Engine Subsystem Definition for Future Advanced Passenger Transport</b> M. Sippel, DLR-SART, DE	2967497 <b>Herakles Thermal-Structural Composite Materials, Enhance Rocket Nozzle Performance</b> A. Lacombe, Herakles, FR	2967331 <b>ESA Activities in the field of Electric Propulsion</b> J. A. Gonzalez del Amo, European Space Agency, NL
<b>09:20</b>		2969459 <b>Development and testing of Alta high temperature resistojet propulsion system</b> A. Passaro, Alta S.p.A. , IT	2969720 Experimental database with real propellants to study multi-phase fluid hammer phenomena J. Anthoine, Onera, FR	2969770 <b>MEMS Xenon flow control devices for electric propulsion</b> J. Bejhed, NanoSpace, SE	2974773 <b>Observation of cavitation in rocket engine inducer using X-ray transmission tomography : water and LH2 test conditions</b> R. Guillet, CNES, FR	2969137 <b>The HYPROB Liquid Rocket Engine Demonstrator: CFD Modelling and Simulations</b> M. Panelli, C.I.R.A. The Italian Aerospace Research Center, IT	2965752 <b>An Electro-Mechanical Thrust Vector Control System for the Ariane 6 launcher</b> T. Vanthuyne, S.A.B.C.A. , BE	2980767 <b>Overview of Chemical Propulsion Activities at ESA</b> M. Ford, European Space Agency, NL
<b>09:40</b>		2980776 <b>Scheduled Development of the TIHTUS System: Geometric A Chadwick, University of Adelaide, AU</b>	2969719 <b>Assessment for Hydrazine detonability during priming system activities</b> F. Valencia-Bel, European Space Agency, NL	2979704 <b>0-D Numerical Model For LaB6 Thermionic Hollow Cathodes</b> O. Korkmaz, Bogazici University, TR	2976992 <b>LAPLACE : an innovative set up to characterize turbopumps cavitation in liquid hydrogen conditions</b> J. Dehouve, CNES, FR	2969277 <b>MPCV Service Module Propulsion Subsystem</b> M. Jaeger, Airbus Defence and Space, DE	2967779 <b>a TVC integrated in a solid rocket motor (SRM) : the iTVC concept (integrated Thrust Vector Control)</b> B. Orsoni, Herakles, SAFRAN group, FR	2970007 <b>Status of propulsion technology development under the NASA In-Space Propulsion Technology program</b> D. Anderson, National Aeronautics and Space Administration, US
<b>10:00</b>		2980822 <b>Geometry Optimization of a 2.45 GHz Microwave Electrothermal Thruster Resonant Cavity</b> M. Serhan Yildiz, Aeronautics and Space Technologies Institute of Turkish Air Force Academy, TR		2980902 <b>Design and Testing of Different Insert Region Heaters of a Lanthanum Hexaboride Hollow Cathode</b> O. Korkmaz, Bogazici University, TR	2969297 <b>The use of test and analysis in turbine development and method validation at GKN</b> S. Brodin, GKN, SE	2966961 <b>Powerful Lox-Kerosene Liquid Rocket Engine for Superheavy Launch-Vehicle</b> D. Pushkarev, JSC "NPO Energomash", RU	2967930 <b>Vega P80 Nozzle Evolution for PCXX</b> F. Dufour, Herakles, FR	2968951 <b>Propulsion System Development and Verification Activities for the ExoMars 2016 TGO</b> M. Wolf, OHB System, DE
<b>10:30</b>	<b>COFFEE BREAK</b>							



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Wednesday 21st May 2014</b>								
	Session 33 - SC - AIV Testing	Session 34 - SC - Electric Propulsion (Hall effect Thrusters) (2)	Session 35 - SC - Electric Propulsion (Plasma Thrusters) (1)	Session 36 - SC - Propulsion systems - Flight Testing & Experience	Session 37 - ST - Injection and combustion (2)	Session 38 - ST - Future Liquid Stages & Engines (4)	Session 39 - ST -Solid Rocket Motors (1)	Session 40 - Overview of Current Programmes (2)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>	E. Werner, DLR, DE D. Packan, Onera, FR	J. Pucci, Aerojet Rocketdyne, US V. Vial, Snecma, FR	M. Lau, Institute of Space Systems, DE J. Gonzalez del Amo, ESA/ESTEC, NL	M. Lyszyk, Thales Alenia Space, FR D. Perigo, ESA/ESTEC, NL	G. Langel, Airbus DS, DE G. Ordonneau, Onera, FR	N. Girard, CNES, FR M. Jaeger, Airbus DS, DE	D. Boury, Herakles, FR A. Jarry, CNES, FR	R. Delanoë, OHB Sweden, SE E. Freidl, Airbus DS, DE
<b>11:00</b>	2969221 <b>Experimental Characterization of a Cavitating Pintle Valve with H2O2</b> M. Faenza, CISAS "G. Colombo", University of Padova, IT	2969396 <b>HT100D characterization test with the ALPHCa cathode</b> C. Ducci, Alta S.p.A., IT	2965047 <b>Experimental study of performances of the plasma thruster with a hollow magnet anode</b> M. Potapenko, EDB Fakel, RU	2980842 <b>XPS plasma propulsion in flight experience on Alphasat</b> M. Lyszyk, Thales Alenia Space, FR	2969296 <b>Atomization Behavior of Newtonian and Non-Newtonian Fluids with an Impinging Jet Injector</b> M. Negri, DLR - Lampoldshausen, DE	2970503 <b>Demonstrators for future liquid propulsion engines</b> T. Jues, CNES, FR	2970578 <b>Low Cost Twin Screw Propellant Grain Process for Ariane P135 Solid Rocket Motors</b> F. Bruni, Herakles, FR	2968973 <b>Use of pyrovalves in Solar Orbiter: repressurization strategy and lifetime constraints</b> R. Delanoë, OHB Sweden, SE
<b>11:20</b>	2969313 <b>Design, Test and Evaluation of a 0.2 to 2.0N Thrust Stand</b> N. solway, MOOG, GB	2969352 <b>PPS@1350-E Development Status</b> V. Vial, Snecma, FR	2980924 <b>First Experimental Characterization of a Pulsed Plasma Thruster with Non-Volatile Liquid Propellant</b> S. Barral, Institute of Plasma Physics and Laser Microfusion, PL	2980763 <b>MPS Constellation : Flight Experiences</b> M. Battistel, Thales Alenia Space, FR	2969194 <b>Atomization of cryogenic rocket engines coaxial injectors. Modeling aspects and experimental investigations</b> A. Murrone, Onera the French Aerospace LAB, FR	2968378 <b>High-Thrust-in-Space Advanced Liquid Propulsion Stages: Storable Propellants Configuration</b> E. Dumont, Deutsches Zentrum für Luft- und Raumfahrt, DE	2970581 <b>Demonstration Technology Activities for Ariane 6 P135 Solid Rocket Motors Stages</b> Ph. Cloutet, Herakles, FR	2969184 <b>Updated Qualification and Delivery Status of the HEMPT based Ion Propulsion System for SmallGEO</b> S. Weis, Thales Electronic Systems GmbH, DE
<b>11:40</b>	2980895 <b>Experimental study of plume flow emanating from rectangular orifices</b> E. Werner, German Aerospace Center DLR, DE	2980890 <b>Development of the Miniature Ion Propulsion System: MIPS for the 50-kg-Nano-satellite HODOYOSHI-4</b> H. Koizumi, The University of Tokyo, JP	2980914 <b>Experimental Characterization of a Scalable Pulsed Magnetoplasmadynamic Propulsion System</b> M. Lau, Institute of Space Systems, DE	2980923 <b>First tests of the KLIMT thruster with xenon and krypton propellants at the ESA Propulsion Laboratory</b> J. Kurzyna, Institute of Plasma Physics and Laser Microfusion, PL	2969161 <b>Efficient multiphase rocket propellant injection model with high quality equation of state</b> D. Banuti, DLR, DE	2968464 <b>Extended Gas Generator Cycle for Re-ignitable Cryogenic Rocket Propulsion Systems</b> W. Kitsche, German Aerospace Center, DE	2980778 <b>Overview of P105 Solid Rocket Motor technological innovations</b> D. Scoccimarro, Avio s.p.a., IT	<b>Electric Propulsion</b> N. Puettmann, DLR, DE
<b>12:00</b>	2981056 <b>Micronewton cold gas thruster performance test at Onera</b> D. Packan, Onera, FR	2969656 <b>Evaluation of TAL-type Hall Thruster Operation with RF Plasma Cathode</b> H. Takegahara, Tokyo Metropolitan University, JP		2969354 <b>Characterization of Light Deflection on Hot Exhaust Gas for a LIDAR Feasibility Study</b> R. Stützer, German Aerospace Center, DE	2969154 <b>Combustion Performance and Stability of a Porous Injector Compared with a State-of-the-Art Coaxial Injector</b> J. Deeken, DLR, DE	2969059 <b>Highly Reliable Development Methods for Next Booster Engine LE-X</b> N. Kumada, Mitsubishi Heavy Industries, LTD., JP	2969761 <b>NDT in the Production of Solid Propellant Motor for Space Applications</b> E.T. Tosti, Avio SPAZIO S.p.A., IT	
<b>12:20</b>		2969704 <b>Experimental Study on Radio Frequency Plasma Cathodes for Hall Effect Thruster</b> J. Sato, Tokyo Metropolitan University, JP			2980824 <b>Numerical Method for Simulation of Different Combustion Types in High-Speed Viscous Turbulent Flows: Development &amp; Application</b> A. Shiryayeva, Central Aerohydrodynamic Institute named after prof. Zhukovsky, RU	2968040 <b>The VINCI Upper Stage Engine</b> P. Sabin, Snecma, FR	2980753 <b>Green Solid Propellants for Space Applications</b> N. Wingborg, Swedish Defence Research Agency, FOI, SE	
<b>12:40</b>	<b>LUNCH</b>							
<b>14:00</b>	(Plenary Session ) <b>CHEMICAL PROPULSION ROUND TABLE</b> , Moderator: <b>M. FORD</b> (ESA/ESTEC) <b>G. VINEY</b> (AIRBUS Defence and Space) <b>G. HAGEMANN</b> (AIRBUS Defence and Space) <b>P. GARCON</b> (Thales Alenia Space) <b>T. MAY</b> (NASA)							
<b>15:30</b>	<b>COFFEE BREAK</b>							



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Wednesday 21st May 2014</b>								
	Session 41 - SC - AIV Diagnostics	Session 42 - SC - Propulsion Components - Chemical Thrusters	Session 43 - SC - Production & Manufacturing Issues	Session 44 - SC - Technology Building blocks for Future Propulsion Systems (1)	Session 45 - ST - Liquid Propulsion Systems Simulation	Session 46 - ST - Tests Benches	Session 47 - ST - SRM Modeling	Session 48 - Overview of Current Programmes (3)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>	P. Köhler, I. Physikalisches Institut, DE D. Estublier, ESA/ESTEC, NL	G. Fujii, JAXA, JP N. Goody, ESA/ESTEC, NL	A. Bernad, RTG-Aero Hydraulic, DE D. Greuel, ESA/ESTEC, NL	M. De Tata, OHB System AG, DE N. Wallace, Mars Space Ltd, GB	F. Mathey, Air Liquide Adv. Technologies, FR G. Langel, Airbus DS, DE	W. Kitsche (DLR, DE) P. Yvart (Herakles, FR)	S. Pettitot, CNES, FR M. Biagioni, Avio, IT	S. Schlechtriem, DLR, DE D. Zube, Aerojet Rocketdyne Inc., US
<b>16:00</b>	2965539 Electrostatic probe measurements in the plume of electric propulsion devices – Recent works at the ESA Propulsion Laboratory K. Dannenmayer, ESA/ESTEC, NL	2969285 Construction of life prediction model of 1N and 4N monopropellant hydrazine thrusters N. Morita, IHI aerospace, JP	2969573 Emissivity increase of platinum alloy surfaces for combustion chamber application S. Kraus, Airbus Defence and Space, DE	2968475 Propulsion Subsystem for the Exomars Entry and Descent Module (2016 Mission Demonstrator) G. Lubrano, Thales Alenia Space, FR	2967435 RPA – Tool for Rocket Propulsion Analysis A. Ponomarenko, RPA, DE	2969458 The Design, Construction and Operational Experiences of a 0.5 to 15kN Sea Level Rocket Engine Test Facility I. Coxhill, MOOG ISP Westcott, GB	2969310 A Parametric Study on Ignition Transient of Solid Rocket Boosters for Future European Launchers E. Cavallini, Sapienza University of Rome, IT	2966753 Recent Developments for the Aerojet Rocketdyne MR-510 Hydrazine Arcjet System D. Zube, Aerojet Rocketdyne Inc., US
<b>16:20</b>	2969260 Spatially resolved momentum flux measurements for thruster plume diagnostics A. Spethmann, University of Kiel, DE	2969304 1N Monopropellant Hydrazine Thruster Hot Fire Test Results N. Solway, MOOG, GB	2968547 Transition Joints: Dissimilar Metal Welding Solution for Space Propulsion Applications A. Bernad, RTG-Aero Hydraulic, DE	2968551 Electra: European Solely EP Capability for Commercial GEO Telecommunication Applications M. De Tata, OHB System AG, DE	2969130 CARMEN, the liquid propulsion systems simulation platform T. Jues, CNES, FR	2962571 Mathematically analysis of measurement instrumentation on the test benches at DLR/Lampoldshausen - different methods, quality aspects and objective results in comparison W. Stuchlik, DLR - Hardthausen	2969673 Analytical Prediction of In-Flight RF Interference Caused by Solid Motor Plume K. Kinefuchi, JAXA, JP	2972265 New Generation of High-Performance Helium and Xenon Tanks for Satellites and Launchers M. Giegerich, MT Aerospace AG, DE
<b>16:40</b>	2980129 A Micro- to Milli-newtons Direct Thrust Balance for Hollow Cathode Thruster Application D. Frollani, University of Southampton, GB	2969455 Life evaluation test results of next generation long life 4N hydrazine monopropellant thruster G. Fujii, JAXA, JP	2969265 DEMO CPP C. Gerard, Herakles, FR	2980886 QinetiQ T6 Ion Thruster Neutraliser Lifetime Assessment in Support of the ESA BepiColombo Mission N. Wallace, Mars Space Ltd, GB	2970773 SMART Code – A Versatile Propulsion System Simulation Tool for Rocket Applications E. Boronine, Airbus Defence and Space, DE	2969620 P5.2 Test Facility for Testing New Ariane Cryogenic Upper Stage G. Kruehsel, Institute of Space Propulsion/German Aerospace Center, DE	2980153 Flow Disturbance Characteristics on Fin-slot Shaped Grain Simulator of Solid Rocket Motor with Submerged Nozzle M. Son, Korea Aerospace University, KR	2981553 Preliminary Result of TALOS with Advanced Nozzle Geometry G. Herdrich, Institute of Space Systems at Stuttgart University (IRS), DE
<b>17:00</b>	2980733 Beam Diagnostics for Gridded Ion Engines in theN Thrust Range P. Köhler, I. Physikalisches Institut, DE	2969581 Astrium 10N Bipropellant Thruster Hot Fire Testing under Severe Thermal Conditions G. Schulte, Airbus Defence and Space, DE		2962204 An innovative concept for off and on board electric generation E. Hodys, Cristal Powered, CH	2969589 Thrust chamber modelling for the analysis of liquid rocket engine transients M. Leonardi, "Sapienza" University of Rome, IT	2969649 Green propulsion rocket test stand C. Verberne, Nammo Raufoss AS, NO	2969026 Solid Propellant Autonomous DE-orbit System (SPADES) R. Schonenborg, Schonenborg Space Engineering B.V. (For ESA-ESTEC), NL	



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Wednesday 21st May 2014</b>								
	Session 49 - SC - AIV Methodologies	Session 50 - SC - Electric Propulsion (Measurements)	Session 51 - SC - Electric Propulsion (Ongoing Activities)	Session 52 - Propulsion Components - Chemical Tanks	Session 53 - ST - LRE Combustion Stabilities (1)	Session 54 - ST - Heat transfers (1)	Session 55 - ST - Propellant Tanks and Behavior	Session 56 - SC - Financial & Operational Aspects
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>	C. Hunter, ESA/ESTEC, NL	D. Frollani, University of Southampton, GB E. Bosch Borras, ESA/ESTEC, NL	G. Schmidt, NASA Glenn Research Center, US J. Gonzalez del Amo, ESA/ESTEC, NL	I. Masuda, JAXA, JP N. Goody, ESA/ESTEC, NL	G. Langel, Airbus DS, DE O. Haydn, TU Munich, DE	J. Riccius, DLR, DE N. Girard, CNES, FR	M. Thalamy, Snecma, FR B. Legrand, CNES, FR	S. Bianchi, Air Liquide Advanced Technologies, FR J. Longo, ESA/ESTEC, NL
<b>17:30</b>	2968452 Integration of a Variable Turn-Density Coil Actuator in a Micropropulsion Thrust Stand R.J.F. Bijster, Delft University of Technology, NL	2969728 Application of Langmuir probe measurements for plasma characterization inside the hollow anode of TAL thruster UT-58 T. Schönherr, The University of Tokyo, JP	2970006 Recent Development Activities and Future Mission Applications of Nasa's Evolutionary Xenon Thruster (NEXT) G. Schmidt, NASA Glenn Research Center, US	2969644 Development of New Satellite Composite Propellant Tank I. Masuda, JAXA, JP	2969409 Analysis of Acoustic Energy Dissipation in a Rectangular Combustion Chamber with Injection of Cryogenic Propellants S. Webster, DLR, DE	2969554 Coupled Combustion and Heat Transfer Simulation for Full-Scale Regeneratively Cooled Thrust Chambers H.N Negishi, JAXA, JP	2967348 Modelling of upper stage dynamics considering the impact of fuel behaviour and the cold gas RCS propulsion system P. Behruzi, Airbus Defence and Space, DE	2969413 Cost saving solutions and technologies for Cryogenic Upper Stage Equipped and Insulated Tanks S. Bianchi, Air Liquide Advanced Technologies, FR
<b>17:50</b>	2980672 Offloading and Decontamination of a MPS S/S M. Battistel, Thales Alenia Space, FR	2980127 Influence of Magnetic Field on Hollow Cathode Thrusters Thrust Measurements D. Frollani, University of Southampton, GB	2981547 Recent IEC Propulsion Developments at IRS G. Herdrich, Institute of Space Systems, DE		2968567 Influence of Temperature Distribution onto Eigen Modes in Combustion Chambers V. Kraft, DLR/Lampoldshausen, DE	2960043 Thrust Chamber Technology Investigation for Expander-Cycle Engines S. Soller, Airbus Defence and Space, DE	2969717 Tanks Pressurization Modeling for Launcher Tanks A. Dufour, Airbus Defence and Space, FR	A Preventive Debris Removal Solution for Mitigating the Increasing Concentration of Defunct Satellites L. Rossetini, Deorbital devices
<b>18:10</b>		2969721 Thrust Balance Characterization of the Halo Thruster using a Radio-Frequency Cathode Neutralizer T. Harle, Surrey Space Centre, GB	2969098 Bepi-Colombo High Power Propulsion Electronics Development Status J. Palencia, Astrium / Crisa, ES			2969646 Numerical Prediction of Flow Regime and Pressure Drop during Boiling Flow in Horizontal Rectangular Pipe Y. Umemura, JAXA, JP	2980821 Status of Development of A5ME Bare Tank (A5ME-BT) A. Steinacher, MT Aerospace, DE	
<b>END OF CONFERENCE DAY</b>								
<b>19:30</b> <b>23:30</b>	<b>GALA DINNER</b> Rhein Cruise Fantasie							





	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Thursday 22nd May 2014</b>								
	Session 57 - SC - Electric Propulsion (Hemp & Quad Thrusters)	Session 58- SC - Electric Propulsion (Plasma Thrusters) (2)	Session 59 - SC - Propulsion Components - Chemical Valves (2)	Session 60 - SC - Electric Propulsion (Ion & FEEP Thrusters)	Session 61 - ST - Cryogenic in 0g (1)	Session 62 - ST Heat Transfers (2)	Session 63 - ST - Hybrid Propulsion (1)	Session 64 - ST - RCS(1)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>	A.Genovese,Thales ES, DE T. Harle, University of Surrey, GB	N. Kutufà, ESA/ESTEC, NL	P.Bianco, Airbus DS, GB D. Perigo, ESA/ ESTEC, NL	M.Tajmar, TU Dresden, DE D.Estublier, ESA/ESTEC, NL	P. Behruzi, Airbus DS, DE	M. Vales, Snecma, FR G. Langel, Airbus DS, DE	O. Haydn, TU Munich, DE	M.Persson, ECAPS, SE M. Ford, ESA/ESTEC, NL
<b>09:00</b>	2969286 <b>Particle-in-Cell simulation of the plasma properties and ion acceleration of a down-scaled HEMP-Thruster</b> T. Brandt, German Aerospace Center (DLR), DE	2980728 <b>Experimental investigation of magnetic gradient in a coaxial ECR plasma thruster</b> F. Cannat, Onera, FR	2969576 <b>Development of orbital propulsion system valves with modern actuators</b> S. Kraus, Astrium GmbH, Lampoldshausen, DE	2980764 <b>2D RF Ion Thruster Modeling with Fluid Plasma and Analytical Sheath Formulation</b> M. Korkmaz, Bogazici University, TR	2969708 <b>ZBO system concepts adapted for European Long Term Cryogenic Propulsion</b> J. Lacapere, Absolut System, FR	2968034 <b>Evaluation of the Vinci rocket engine chill-down with COMETE, a new thermal-hydraulic software</b> D. Duri, Snecma, FR	2969362 <b>Test Campaign on a 10 kN class sorbitol-based hybrid rocket motor for the Stratos II Sounding Rocket</b> J. Wink, Delft University of Technology, NL	2965218 <b>Conceptual Study of a HPGP Reaction Control System for a Launcher Upper Stage</b> D. Welberg, Astrium GmbH - Space Transportation, Bremen, DE
<b>09:20</b>	2969377 <b>Orbit Raising and Station Keeping with the Dual-Mode HEMP-Thruster Cluster</b> B. van Reijen, Thales Electronic Systems GmbH, DE	2980896 <b>Determination of ion acceleration in the magnetic nozzle of an ECR plasma thruster</b> J. Jarrige, Onera, FR	2970569 <b>BepiColombo High Pressure Regulator: Heritage and Performances</b> P. Bianco, Astrium Ltd, GB	2969735 <b>Analytical Description of the Radio Frequency Ion Thruster Systems</b> J.-P. Porst, Airbus Defence and Space, DE	2969509 <b>Progress and status of French R&amp;T "cryogenic propellant behAvior" activities</b> B. Legrand, CNES, FR	2971077 <b>Validation of cooling film modeling in rocket combustion chambers</b> C. Höglauer, Airbus Defence and Space, DE	2968602 <b>Development of a throttleable hybrid rocket engine for the SPARTAN lander</b> Jan-Erik Rønningen, Nammo Raufoss, NO	2968097 <b>200N HPGP Thruster Demonstration for Launcher Upper Stage Reaction Control System</b> K. Anflo, ECAPS, SE
<b>09:40</b>	2969401 <b>Influence of Cathode Position on the Performance of the Quad Confinement Thruster</b> T. Harle, University of Surrey, GB	2980756 <b>Assessment of helicon plasma thruster technology for space missions</b> E. Ahedo, Universidad Carlos III De Madrid (UC3M), ES	2969749 <b>Satellite Propellant Gauging using Gas Injection</b> P. Rangsten, NanoSpace AB, SE	2967498 <b>Highly Miniaturized FEEP Thrusters for CubeSat Applications</b> M. Tajmar, TU Dresden, DE	2981539 <b>Numerical simulations of cryogenic fluids in support to the design of the cryofenix experiment using a Maser sounding rocket</b> F. Mathey, Air liquide advanced technologies, FR	1234568 <b>Demonstration of very high insulating performances on cryogenic stage for exploration missions</b> S. Bianchi, Air Liquide, FR	2969590 <b>Low Frequency Instability in Hybrid Rocket Combustion</b> C. Lee, Konkuk University, KR	2969324 <b>Strategy for the synthesis of a new green propellant for space launchers, to replace hydrazines threatened by the REACH regulation: procedure, characterization, security and toxicity</b> A.J. Bougrine, Laboratoire Hydrazines et Composés Energétiques Polyazotés- UMR 5278 UCBL/CNRS/CNES/SAFRAN-Herakles, FR
<b>10:00</b>	2969460 <b>Qualification, Acceptance and E2E Testing of HEMP-T Propulsion System for SGE0 Satellite</b> A. Lazurenko, Thales Electronic Systems GmbH, DE			2970300 <b>Detailed Performance Characterization of the mN-FEEP Thruster</b> A. Reissner, FOTEC Forschungs- und Technologietransfer GmbH, DE	2969787 <b>Technology Maturation in Preparation for the Cryogenic Propellant Storage and Transfer Technology Demonstration Mission</b> M. Meyer, NASA, US	2963952 <b>Heat Transfer in a Single Fluid, Two-phase System using the DLR-TAU Code</b> D. Keiderling, GermanAerospace, DE	2969165 <b>Hybrid Propulsion System for CubeSat Mission Applications</b> O. D. Ahmed, University of Surrey, GB	2968435 <b>Experimental Characterization of the Combustion Characteristics of Nitrous Oxide-Ethane Bi-Propellant Rocket Engines</b> A. Cervone, Delft University of Technology, NL
<b>10:20</b>	2968974 <b>Quad Confinement Thruster A low cost, EP solution for Small Spacecraft</b> R. Long SSTL, UK				2969641 <b>Heat Exchange and Pressure Drop Enhanced by Violent Sloshing</b> T. Himeno, University of Tokyo, JP	2966361 <b>A superposition methodology for modeling the multi directional flow through a non-orthotropic porous combustion chamber wall material</b> J. Riccius, DLR-Institute of Space Propulsion, DE		
<b>10:40</b>	<b>COFFEE BREAK</b>							



	SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					
<b>Thursday 22nd May 2014</b>								
	Session 65 - SC - Electric Propulsion (PPT & micro Thrusters)	Session 66 - SC - Electric Propulsion (Hall effect Thrusters) (3)	Session 67 - SC - New and Green Propellants in Chemical Propulsion (1)	Session 68 - SC - Electric Cold Gas Propulsion New Initiatives	Session 69 - ST - Cryogen in 0g (2)	Session 70 - ST - LRE Combustion Stabilities (2)	Session 71 - ST - Solid Rocket Motors (2)	Session 72 - Hybrid Propulsion (2)
<b>ROOM</b>	<b>KÖLN</b>	<b>BONN</b>	<b>DARMSTADT</b>	<b>WÜRZBURG</b>	<b>MANNHEIM</b>	<b>KÖNIGSWINTER</b>	<b>TITISEE</b>	<b>MARITIM HALL</b>
<b>Chairpersons</b>	A. Reissner, FOTEC GmbH, AT C. Scharlemann, University of Applied Sciences Wiener Neustadt, AT	G. Popov, RIAME MAI, RU S. Mazouffre, CNRS, FR	J. Robinson, NASA/MSFC, US N. Murray, ESA/ESTEC, NL	T. Misuri, Alta S.p.a., IT G. Herdrich, Institute of Space Systems at Stuttgart University, DE	T. Himeno, University of Tokyo, JP M. Meyer, NASA, US	S. Palerm, CNES, FR G. Langel, Airbus DS, DE	A. Lacombe, Herakles, FR A. Jarry CNES, FR	M. Pessana, TAS-I, IT M. Kobald, DLR, DE
<b>11:10</b>	2970292 <b>Electric Propulsion Systems for small Satellites</b> A. Reissner, FOTEC GmbH, AT	2970604 <b>Hall thruster with external electric field</b> S. Mazouffre, CNRS, FR	2966727 <b>An Analysis of Green Propulsion Applied to NASA Missions</b> E. Cardiff, NASA GSFC, US	2969515 <b>MEPS Programme - Development of a Low Power, Low Cost HET for Small Satellites</b> T. Misuri, Alta S.p.a., IT	2969512 <b>Cryofenix (Cryogenic sounding rocket experiment) progress and status</b> B. Legrand, CNES, FR	2968016 <b>Development of combustion technologies using the DLR P8 cryogenic test bench</b> L. Lesaulnier, Snecma, FR	2969076 <b>Space Launch System Development Status</b> G. Lyles, NASA Marshall Space Flight Center, US	2969412 <b>Numerical Modeling of Combustion Chamber and Nozzle Flow in HTPB/GOX Hybrid Rocket Motors</b> D. Bianchi, "Sapienza" University of Rome, IT
<b>11:30</b>	2980125 <b>PPTCUP-QM: qualification test campaign results</b> S. Ciaralli, University of Southampton, GB	2970960 <b>High-Power Hall Propulsion System Development at NASA Glenn Research Center</b> H. Kamhawi, NASA Glenn Research Center, US	2968950 <b>Numerical and Experimental Investigations on Resonance Ignition</b> C. Bauer, Technische Universität München, DE	2981550 <b>Electric Propulsion at IRS</b> G. Herdrich, Institute of Space Systems at Stuttgart University (IRS), DE	2980789 <b>Numerical simulation of propellant behaviour inside cryogenic tanks equipped with an anti-wetting device for propellant management during ballistic phases</b> F. Mathey, Air liquide Advanced Technologies, FR	2969752 <b>Influence of hydrogen temperature on the acoustics of a rocket engine combustion chamber operated with LOX/H2 at representative conditions</b> S. Gröning, Deutsches Zentrum für Luft- und Raumfahrt, DE	2969632 <b>Safety Design of Abort Motor Thrust Profile for Launch Abort System</b> K. Fujimoto, Japan Aerospace Exploration Agency, JP	2969753 <b>Investigation of the Combustion Behaviour of Different Hybrid Rocket Fuels in a 2D Slab Burner</b> M. Kobald, DLR, DE
<b>11:50</b>	2970599 <b>The MicroThrust MEMS electro-spray thruster: experimental results and conclusions</b> C. Ryan, EPFL, CH	2979732 <b>Evaluation of different methods for determining the electric field profile in a Hall thruster</b> J. Vaudolon, ICARE-CNRS, FR	2969043 <b>The Advancing State of AF-M315E Propulsion Technology</b> E. Driscoll, Aerojet Rocketdyne, US	<b>Replacing Xenon - Diamantoides as alternative electric propellants</b> B. Meyer, I. Physics Institute Giessen, DE	2981540 <b>Numerical simulations of two-phase flow inside cryogenic tanks under micro-gravity and zero gravity conditions</b> F. Mathey, Air liquide advanced technologies, FR	2969765 <b>Large-Eddy Simulation of a multiple injector combustor under transcritical conditions and high frequency modulations</b> M. Boileau, EM2C laboratory, CNRS, Ecole Centrale Paris, FR	2969187 <b>A Solid Rocket Motor for the Ariane 6 launcher multi-P configuration</b> E. Vaast, Herakles, FR	2968529 <b>Combustion instabilities and spontaneous engine operation shifting in a high mass flux N2O-PMMA hybrid rocket engine</b> A. Cervone, Delft University of Technology, NL
<b>12:10</b>			2969461 <b>Study on Discharge Plasma Ignition System for Green Monopropellant</b> T. Shindo, Tokyo Metropolitan University, JP			2972388 <b>Modeling of Acoustic Absorbers for Rocket Combustion Chambers</b> S. Koeglmeier, Airbus Defence and Space, DE	2980783 <b>Zefiro 40 Solid Rocket Motor</b> D. Scoccimaro, Avio, IT	
<b>12:30</b>			2969495 <b>Green Mono Propulsion Activities at MSFC</b> J. Robinson, NASA/MSFC, US			2969767 <b>Influence of chamber wall thermal properties on spontaneous high frequency combustion instability</b> J.S. Hardi, German Aerospace Center DLR	2967497 <b>Herakles thermal-structural composite materials, enhance rocket nozzle performance</b> A. Lacombe, Herakles, FR	
<b>12:50</b>	<b>LUNCH</b>							



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	Session 73 - SC - New and Green Propellants in Chemical Propulsion (2)	Session 74 - SC - Missions	Session 75 - SC - Propulsion Components - Chemical	Session 76 - ST- Liquid Engines Nozzles	Session 77 - ST-Manufacturing	Session 78 - ST- Green Liquid Propulsion	Session 79 - ST- Hybrid Propulsion (3)	Session 80 - New Concepts
ROOM	KÖLN	BONN	DARMSTADT	WÜRZBURG	MANNHEIM	KÖNIGSWINTER	TITISEE	MARITIM HALL
Chairpersons	M. Smith, ESA/ESTEC, NL	A. Cervone, Delft University of Technology, NL	B. Sanders, CGG Safety & Systems, NL R. Schoenborg, ESA/ESTEC, NL	S. Jack, DLR, DE T. Kachler, ESA/ESTEC, NL	S. Beyer, Airbus Defence and Space, DE S. Hyde, ESA/ESTEC, NL	J. Robinson, NASA/MSFC, US N. Murray, ESA/ESTEC, NL	S. Ferguson, Sierra Nevada Corp., US M. De Rosa, ESA/ESTEC, NL	G. Schmidt, NASA Glenn Research Center, US F. Daurelle, Pyroalliance, FR
14:30	2969617 A Comprehensive Performance Analysis of Nitrous Oxide as a Rocket Propellant and Gas Generator Oxidizer M. Grubelich, Sandia National Laboratories, US	2969133 Design, Simulation and Optimization of a Low-Pressure Micro-Resistojet for Small Satellite Missions A. Mancas, Delft University of Technology, NL	2969574 Short Pulse Spray Breakup Analysis of a Double Cone Vortex Injector and Comparison with Hot Fire Data J. Deck, Airbus Defence and Space, DE	2968546 Final report on the Vulcan 2+ NE Demonstrator & SWAN sandwich nozzle programs M. Almqvist, GKN Aesospace Sweden AB, SE	2980921 Additive Layer Manufacturing (ALM) of Space Propulsion Components and Fluid Control Equipment S. Beyer, Airbus Defence and Space, DE	2980883 Green, Highly Throttleable and Affordable Rocket Motors Burning Gelled Propellants K. W. Naumann, Bayern-Chemie, DE	2981545 Development of a small-scale hybrid thruster using hydrogen peroxide as the oxidiser G.T. Roberts, University of Southampton, GB	2969331 Coulomb Drag Devices: Electric Solar Wind Sail Propulsion and Ionospheric Deorbiting P. Janhunen, Finnish Meteorological Institute, FI
14:50	2969619 Investigation of the combustion and ignition process of NOFBE L. Werling, German Aerospace Center, DE	2979769 BepiColombo Electric Propulsion Thruster and High Power Electronics Coupling Test Performances S. Clark, QinetiQ, GB	2969706 Propulsion Module for CubeSats with Closed-loop Thrust Control K. Palmer, NanoSpace AB, SE	2968553 Ariane V Performance Optimization Using Dual Bell Nozzle Extension D. Schneider, German Aerospace Center, DE	2969754 Additive manufacturing enabled design approaches in rocket injectors S. Hyde, European Space Agency, NL	2925788 Green Propulsion Auxiliary Power Unit Demonstration at MSFC J. Robinson, NASA/MSFC, US	2969230 Deep Throttling Characterization of a Simulated H2O2-HTPB Hybrid Rocket Motor M. Faenza, CISAS G. Colombo, University of Padova, IT	2967899 Study of Performance Requirements of Onboard Propulsion System For Small Lunar Orbiters Kyun Ho Lee, Sejong University, KR
15:10	2969687 Overview of NASA GRC's Green Propellant Infusion Mission (GPIM) Thruster Testing and Plume Diagnostics G. Schmidt, NASA Glenn Research Center, US	2970500 The Design and Ballistic Optimization of the Earth-Moon-Earth Mission by the Plasma Propulsion System O. Starinova, SSAU, RU	2969927 Expanding the Horizons of Space Propulsion Systems Development D. Hasan, Rafael, IL	2969192 Numerical and Experimental Investigation of Flow Separation in Ovalized Nozzles S. Jack, German Aerospace Center DLR, DE	2969327 Additive manufacturing: processes, materials and applications for liquid propulsion engines R. Salapete, CNES, FR	2968009 Astriums Alternative Propellant Activities U. Gotzig, Airbus Defence and Space, DE	2969383 1-D Simulation of Solid and Hybrid Rocket Motors with EcosimPro / ESPSS J. Moral, Empresarios Agrupados, ES	2963329 On theoretical aspects of space propulsion and space energy on the light of modern technical and mathematical physics achievements M. Ivanov, Central Institute of Aviation Motors, RU
15:30	2980910 Influence of water content in an ADN based liquid monopropellant on performance characteristics C. Hendrich, German Aerospace Center, DE	2980908 The FP7 LEOSWEEP Project: improving Low Earth Orbit Security With Enhanced Electric Propulsion M. Ruiz, SENER, ES	2970671 Improvements of Cool Gas Generators and their application in space propulsion systems B. Sanders, CGG Safety & Systems, NL	2980860 Film Cooling Simulation of Liquid Rocket Nozzle M. Serhan Yildiz, Aeronautics and Space Technologies Institute of Turkish Air Force, TR	2969010 High Temperature Combustion Chambers Produced by Electroforming A. Shchetkovskiy, Plasma Processes, LLC, US	2969625 Experimental assessment of hydrogen peroxide material compatibility and storability C. Scharfmann, University of Applied Sciences Wiener Neustadt, AT		1234567 New generation of Pyrocords F. Daurelle, Pyroalliance, FR
15:50	2968005 Development of a 10N TRL5 Monopropellant Thruster Using Hydrogen Peroxide J. Wynn, Airbus DS, GB	2963073 A Combined Solar Electric and Storable Chemical Propulsion Vehicle for Piloted Mars Missions G. Schmidt, NASA Glenn Research Center, US	2974669 Flow Characteristics of Impinging Atomization Enhanced by Microjet Injection I. Inoue, University of Tokyo, JP		2965747 Airbus Defence and Space Eurostar Spacecraft Propellant Tanks Past, Present and Future R. Bellarosa, Airbus Defence and Space, GB			2980673 Graphical Cycle Analysis of Laser-Supported Detonation Wave Using Thermal Non-equilibrium CFD Results H. Shiraiishi, Daido University, JP
16:10	COFFEE BREAK							



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	Session 81 - SC - Technology Building blocks for Future Propulsion Systems (2)	Session 82 - External Flows	Session 83 - ST - Fluid mechanisms for space		Session 85 - ST - RCS (2)		Session 87 - Mechanical & Sensors	
ROOM	KÖLN	BONN	DARMSTADT	WÜRZBURG	MANNHEIM	KÖNIGSWINTER	TITISEE	MARITIM HALL
Chairpersons	F. Jansen, DLR, DE T. Langener, ESA/ESTEC, NL	G. Langel, Airbus DS, DE M. Oswald, DLR, DE	J.L. Bozet, University of Liège, BE E. Abriat, MOOG, GB		V. Bombelli, Airbus DS, DE M. Toussaint, ESA, FR		W. Bouajila, DLR Lampoldshausen, DE S. Angier, Groupe SAFRAN, FR	
17:00	2969585 <b>Concepts for miniaturised sub-micronewton electric thrusters</b> T. Henning, Justus Liebig University, DE	2970847 <b>Investigation of Hot Plume-External Flow Interaction in the Near-Wake Region of a Generic Space Transportation System Configuration in the High Subsonic Flow Regime</b> D. Saile, German Aerospace Center, DE	2980147 <b>Development Program for the Ariane 5 ME / Ariane 6 upper stage functional propulsion fluid equipment</b> M. Merkle, Airbus Defence and Space, DE		2980820 <b>Development Status of the 200N H2O2 Thruster for aA5-ME Upper Stage Reaction Control System</b> M. Toussaint, European Space Agency - ESA, FR		2959116 <b>Identification of the unified Chaboche Constitutive Model's Parameters for a Cost Efficient Copper-Based Alloy</b> W. Bouajila, DLR Lampoldshausen, DE	
17:20	2969724 <b>Solar and Drag Sail Propulsion: From Technology to Science Mission Implementation</b> C. Johnson, NASA Marshall Space Flight Center, US	2969422 <b>Gas generator side-flow balancing in the frame of engine cycle analysis</b> A. Herbertz, DLR, DE	2980124 <b>Novel Valve Designs for an Electro-Mechanically Controlled Launch System</b> T. Staufenbiel, Airbus Defence and Space, DE		2938390 <b>Development of Attitude Control and Propellant Settling System for A5ME upper Stage</b> D. Kajon, Airbus Defence and Space, DE		2969456 <b>Overview of European efforts on health monitoring/management systems for rocket engines</b> A. Iannetti, CNES, FR	
17:40	2969848 <b>MEGAHIT: Megawatt Highly Efficient Technologies for Space Power and Propulsion Systems for Long-Duration Exploration Missions</b> F. Jansen, DLR, DE	2969109 <b>Plasma composition and ion acceleration in the PEGASES thruster</b> D. Renaud, ICARE - CNRS, FR			2969699 <b>The latest Achievements in the Development of a Rocket Grade Hydrogen Peroxide Catalyst Chamber with Flow Capacity of 1 kg/s</b> O. Bozic, German Aerospace Center (DLR) - Institute of Aerodynamics and Flow Technology, DE		2967670 <b>New Generation Pressure Transducers</b> R. Matthijssen, MOOG Bradford, NL	
18:00					2978090 <b>Stability of gaseous hydrazine as a function of temperature and pressure</b> V. Bombelli, Airbus Defence and Space, DE		2981546 <b>Pressure and temperature transducers for satellites and launchers</b> S. Angier, Groupe SAFRAN, FR	
END OF CONFERENCE								