

Sunday 13th May 2018	
17:00	REGISTRATION
19:00	WELCOME COCKTAIL
Monday 14th May 2018	
08:30	REGISTRATION
09:00	WELCOME COFFEE
ROOM	PLENARY SESSION – SEVILLA
10:00	CONFERENCE INTRODUCTION
10:30	<u>HEAD OF AGENCIES ROUND TABLE: MID AND LONG TERM POLICIES</u>
12:00	<u>KEYNOTE SPEECH 1</u>
12:30	LUNCH
13:45	<u>PRIMES AND OPERATORS VS SUPPLIERS: SPACE TRANSPORTATION</u>
15:30	COFFEE BREAK
16:00	<u>PRIMES AND OPERATORS VS SUPPLIERS: SPACECRAFT</u>
18:00	END OF DAY 1
19:00	TRADITIONAL DINNER

1	2	3	4	5	6	7	8
SPACECRAFT	SPACE TRANSPORTATION	GENERAL INTEREST					

Tuesday 15th May 2018

ROOM

PLENARY SESSION – SEVILLA

08:30

KEYNOTE SPEECH 2: ARIANE 6 AND VEGA PROGRAMMES STATUS
Stefano BIANCHI, Head of Space Transportation Development Programmes, ESA

Session 1 - ST - Programmes	Session 2 - ST - Components: Combustion Chambers	Session 3 - ST - System Modelling	Session 4 - SC - Lessons Learned	Session 5 - SC-CP - Components: Green Monopropellant Thrusters	Session 6 - SC-EP - Mission Analysis	Session 7 - SC-EP - Thermal (1)	Session 8 - SC - Microsatellite Propulsion (1)
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ROOM

GIRALDA

TRIANA 1

TRIANA 2

ESPAÑA 1

ESPAÑA 2

ESPAÑA 3

ESPAÑA 4

ESPAÑA 5

Chairpersons	GIRALDA	TRIANA 1	TRIANA 2	ESPAÑA 1	ESPAÑA 2	ESPAÑA 3	ESPAÑA 4	ESPAÑA 5
09:10	331 Propulsion systems developments for next generation of the European Vega Launcher E. D'Aversa, Italian Space Agency (ASI), IT	270 Characterization of a Multiple Injectors for a Rocket Engine Combustion Chamber G. Jeong, Seoul National University, KR	193 Statistical approach in structural mechanics for robust design of liquid rocket engines C. Marattukalam, ArianeGroup, DE	165 In-Orbit Performance of the LISA Pathfinder Cold Gas Micro-Propulsion System M. George, Airbus Defence & Space, GB	388 HAN-based Monopropellant Thruster Development with New Heat-Resistant Catalyst H. Keigo, Japan Aerospace Exploration Agency (JAXA), JP	529 LiteEPS – New Horizons for EP in Constellations Design D. Lev, Rafael, IL	85 Development of a high performance xenon – fed resistojet S. Centola, Mars Space Ltd, GB	104 Dual Chemical-Electric Propulsion Systems Design for Interplanetary CubeSats K. V. Mani, Politecnico di Milano, IT
09:30	328 Development of Rocket Engines in Russia S. Mosolov, Keldysh Research Center, RU	123 Experimental Investigation and Numerical Simulation of Cooling Film in the Nozzle Extension of a LOX/H2 Subscale Thrust Chamber D. Suslov, German Aerospace Center (DLR), DE	453 Cycle Analysis and Feasibility Evaluation of Pump fed Hybrid Propulsion System R. Hahn, German Aerospace Center (DLR), DE	409 Small-GEO Electric Propulsion In-Flight Performance S. Beekmans, OHB System, DE	134 Development status of a 200mN class low-cost thruster for small satellite. S. Igarashi, IHI Aerospace, JP	530 Venus - mission enhancement using electric propulsion D. Lev, Rafael, IL	109 Optimum Design of Low Pressure Micro-Resistojets Applied to Nano- and Pico-satellites D. Cordeiro Guerrieri, TU Delft, NL	387 Development and Ground Testing of the PM200 Bi-Propellant CubeSat Propulsion Module J. Wink, Hyperion Technologies, NL
09:50	72 Getting to Mars and back beyond the initial missions S. Scimemi, NASA Headquarters, US	176 3D-printed coaxial injector for a LOX/kerosene rocket engine M. Kuhn, German Aerospace Center (DLR), DE	79 A presentation of a complete design cycle for optimized hybrid rocket motors J. Hijikema, ONERA, FR	147 The 15 years orbital operation summary of DRTS (Data Relay Test Satellite) unified propulsion subsystem and the Lessons and Learned G. Daisuke, Japan Aerospace Exploration Agency (JAXA), JP	549 Development of 1N green propellant thruster in MHI (Mitsubishi Heavy Industries, Ltd.) D. Shiraiva, Mitsubishi Heavy Industries (MHI), JP	465 Mission Scenarios for High-Power Electric Propulsion M. Mammarella, Politecnico di Torino, IT	136 A 17.8 GHz Ammonia Microwave Electrothermal Thruster for CubeSats and Small Satellites M. Micci, Pennsylvania State University, US	74 Final Development of the Osaka Institute of Technology 2nd PROITERES Nano-Satellite with High-Power Electrothermal Pulsed Plasma Thrusters for Powered Flight H. Tahara, Osaka Institute of Technology (OIT), JP
10:10	297 Status of Research Activities on Liquid Rocket Engines in JAXA 2017 T. Tomita, Japan Aerospace Exploration Agency (JAXA), JP	523 Numerical fatigue life analysis of a prospective LCH4-cooled core stage main combustion chamber wall and comparison to LH2 cooling J. Riccius, German Aerospace Center (DLR), DE	83 Development of fault diagnosis program for liquid rocket engine C. Kim, Korea Aerospace Research Institute (KARI), KR	146 The initial orbital operation results of SLATS IES(Ion Engine System) and RCS (reaction Control System) G. Daisuke, Japan Aerospace Exploration Agency (JAXA), JP	90 Green Propulsion Advancement and Infusion H. Mulkey, NASA Goddard Space Flight Center, US	32 Orbital Maneuvers of Earth Observing Satellites Using Electric Propulsion Systems M. Kazeev, NRC Kurchatov Institute, RU	160 Design and Flight Qualification of a Micro-Resistojet Payload for the Delfi-PQ Satellite A. Cervone, Delft University of Technology, NL	71 Final Development of Coaxial Pulsed Plasma Thruster systems for Powered Flight onboard the Osaka Institute of Technology 2nd PROITERES Nano-Satellite K. Enomoto, Osaka Institute of Technology (OIT), JP
10:30	318 Project Sirius - Affordable Access to Space: Part 1 A. Musker, DELTACAT Ltd, GB	316 Numerical and Experimental Studies on Pintle Injector for LOX/CH4 Engines A. Terracciano, Avio, IT	170 Implementation of a two-phase pipe component inside the ESPSS library F. Pinna, Von Karman Institute for Fluid Dynamics (VKI), BE	155 Chemical Propulsion In-flight Experience and Analysis Correlation I. Fischer, OHB System, DE	443 The Experimental Investigation and On-orbit Flying Validation of the ADN-based Liquid Thruster Z. Yao, Beijing Institute of Control Engineering, CN	334 Enhancement of the maneuverability capabilities of a small spacecraft for remote sensing of the earth for stereoscopic surveys based on the unified platform AIST-2 I. Tkachenko, Samara University, RU	257 High Performance Resistojet Thruster: STAR Status Update F. Romei, University of Southampton, GB	261 Performance Improvement and Flight Model Design of the Water Resistjet Propulsion System, AQUARIUS for 6U CubeSat: EQUULEUS A. Hattori, The University of Tokyo, JP
10:50		89 On the use of Methane in Rocket Nozzle Cooling Channels – Bench scale trials J. Fridh, KTH Royal Institute of Technology, SE	143 RPA 3: new features for modelling rocket propulsion systems A. Ponomarenko, RP Software+Engineering, DE	434 Primary In-Space Experimental results of the HEP-100MF Thruster On Satellite XY-2 Y. Shen, Beijing Institute of Control Engineering, CN	563 Investigation of the thermal catalytic thruster on han-based monopropellant D. Goza, EDB Fakel, RU	73 Deorbit of Space Debris by Exposure of Plasma Flows Exhausted from Electric Thrusters with PROITERES-4 Nano-Satellite K. Kajihara, Osaka Institute of Technology (OIT), JP	300 Performance Evaluation of 10 W Class Water Resistojet: AQUARIUS for CubeSats K. Nishii, The University of Tokyo, JP	511 ThrustMe – a provider of electric space propulsion systems for the next generation satellites A. Aanesland, ThrustMe, FR
11:10	COFFEE BREAK							

Tuesday 15th May 2018

Session 9 - ST - Reusability

Session 10 - ST - Solid Rocket Motors

Session 11 - ST - Modelling: Multi-Phase Flows

Session 12 - SC-CP - Green propulsion

Session 13 - SC-CP - Components: Hydrogen Peroxide Thrusters

Session 14 - SC-EP - System Analysis (1)

Session 15 - SC-EP - Thermal (2)

Session 16 - SC - Microsatellite Propulsion (2)

ROOM

GIRALDA

TRIANA 1

TRIANA 2

ESPAÑA 1

ESPAÑA 2

ESPAÑA 3

ESPAÑA 4

ESPAÑA 5

Chairpersons

11:30

348
Prometheus: Precursor of new low-cost rocket Engine Family
P. Simontacchi, ArianeGroup, FR

504
Optimal Design of a First Stage SRM for a Class of VEGA Light Vehicles
A. Neri, European Space Agency (ESA), IT

222
A five equation model for the simulation of the two-phase flow in cryogenic coaxial injector
A. Murrone, ONERA, FR

28
Overview of the CNES "High Performance Green Monopropellant Project": Requirements, Organization & Breakthroughs
N. Pelletier, CNES, FR

454
Development of a Flight Type 1N Hydrogen Peroxide Thruster
U. Gotzig, ArianeGroup, DE

375
Refinement of Performance and Flexibility Needs for Electric Propulsion
B. Wollenhaupt, OHB System, DE

326
Environmental and Endurance Testing of the STAR Additively Manufactured Resistojet
M. Robinson, University of Southampton, GB

258
Performance dependence on the microwave frequency of the miniature water ion thruster and its neutralizer
Y. Nakagawa, The University of Tokyo, JP

11:50

406
Callisto - Reusable VTOL launcher first stage demonstrator
E. Dumont, German Aerospace Center (DLR), DE

560
An electro-mechanical thrust vector control system for the VEGA-C launcher
T. Vanthuyne, SABCA, BE

67
Experimental and Numerical Investigation of Cryogenic Two-Phase Flows and Application to Liquid Rocket Propulsion Systems
S. Soller, ArianeGroup, DE

66
Green monopropellant thruster complete design and optimization by numerical simulation
Q. Levard, ONERA, FR

101
Test Bench Preparation and Hot Firing Tests of a 1 N Hydrogen Peroxide Monopropellant Thruster
F. Lauck, German Aerospace Center (DLR), DE

419
Performance Mapping of Electrostatic Propulsion Devices
M. Andreucci, SITAEL, IT

359
AQUAJET: an electrodeless ECR water thruster
D. Staab, AVS UK, GB

391
On the development and Demonstration of the NanoSpace CubeSat Propulsion Module Product Family with Close-loop Thrust Control
K. Palmer, GomSpace Group, SE

12:10

478
Assessment of a European reusable VTOL booster stage
J. Wilken, German Aerospace Center (DLR), DE

315
European Space Propulsion Mechanisms for Active Thrust Vectoring
M. Toso, European Space Agency (ATG), NL

12
Influence of non-linear mixing effects onto flow and heat transfer in rocket combustion chambers
S. Fechter, German Aerospace Center (DLR), DE

75
Research and development of green propellant engines for space propulsion systems
Q. Lin, Shanghai Institute of Space Propulsion, CN

325
Towards flight qualification of a 1 N Hydrogen Peroxide Thruster
R. Charlie, University of Southampton, GB

344
Automated System Analysis and Design for Electric Propulsion Systems
E. Manfred, University of Stuttgart Institute of Space Systems (IRS), DE

405
XMET: a Xenon Electrothermal Thruster using additive manufacturing
D. Staab, AVS UK, GB

433
Latest Progress of Micro-Propulsion Development Activities In BICE
Y. Shen, Beijing Institute of Control Engineering, CN

12:30

309
Preliminary Component Definition of Reusable Staged-Combustion Rocket Engine
M. Sippel, German Aerospace Center (DLR), DE

221
Modular Solid Propulsion Design
M. Rumeau, ArianeGroup, FR

78
Numerical evaluation of the characteristics of Liquid Hydrogen Mixer using LES
T. Shimizu, Japan Aerospace Exploration Agency (JAXA), JP

185
Test Facility for Research on Advanced Green Propellants under High-Altitude Conditions
M. Wilhelm, German Aerospace Center (DLR), DE

481
Green Propellant Thruster Design for LEO Platforms Active Debris Removal
D. Valentini, SITAEL, IT

420
EP Boom Operations Concept on the Electra Satellite Platform for GEO Applications
B. Wollenhaupt, OHB System, DE

451
Spatio-temporal plasma heating mechanisms in a radio-frequency electrothermal microthruster
S. Doyle, University of York, GB

Design of a Flexible Propulsion Test bed for Cubesats
S. Corpio, Politecnico di Torino, IT

12:50

40
Aerothermal Analysis of Reusable Launcher Systems during Retro-propulsion Reentry and Landing
T. Ecker, German Aerospace Center (DLR), DE

282
Innovative Solid Propulsion Technologies for Space Applications
P. Caubet, ArianeGroup, FR

228
Modeling of multi-phase effects in cold-gas nozzle flows
K. Makowka, ArianeGroup, DE

489
Experimental Campaign on a 98% H2O2 Pulsed Thruster
D. Valentini, SITAEL, IT

194
Architecture Features and Application Aspects of High-Power Spacecrafts with Electric Propulsion
A. Solodukhin, Keldysh Research Center, RU

55
Performance Characteristics and Electrode Erosion of Low-Power Water-Cooled and Anode-Radiation-Cooled DC Arcjet Thrusters Using Water and HAN Propellants
K. Okuda, Osaka Institute of Technology (OIT), JP

305
A 17.8 GHz Ammonia Microwave Electrothermal Thruster for CubeSats and Small Satellites
M. Micci, Pennsylvania State University, US

13:10

LUNCH

Tuesday 15th May 2018

ROOM PLENARY SESSION – SEVILLA

14:30 **PLENARY ROUND TABLE 1: MICROSATELLITE PROPULSION – INNOVATION AND PERSPECTIVES**

16:00 COFFEE BREAK

Session 17 - ST - Engine developments (1)

Session 18 - ST - P120C Motor (1)

Session 19 - ST - Air-breathing Propulsion - SABRE (1)

Session 20 - SC-EP - GIT (1)

Session 21 - SC-CP - Components: Monopropellant Thrusters

Session 22 - SC-EP - System Analysis (2)

Session 23 - SC-EP - Modelling (1)

Session 24 - SC - Microsatellite Propulsion (3)

ROOM GIRALDA TRIANA 1 TRIANA 2 ESPAÑA 1 ESPAÑA 2 ESPAÑA 3 ESPAÑA 4 ESPAÑA 5

Chairpersons								
16:20	349 VULCAIN 2.1, the European reference for Ariane 6 lower stage cryogenic propulsive system L. Dariol, ArianeGroup, FR	206 Ariane 6 & VEGA-C Programs - The P120C Nozzle Development Progress Status E. Gautronneau, ArianeGroup, FR	512 ESA/UK Space Agency Progress and Overview on the SABRE Engine M. Ford, European Space Agency (ESA), NL	197 Development of a 30-cm Ring Cusp Discharge Chamber - design and performance characterisation with simulated ion beam extraction S. Ciaralli, Mars Space Ltd, GB	540 Qualification of Nammo 1N Hydrazine Thruster S. Warad, Nammo Westcott, GB	418 Electric Propulsion Module for Hubble Space Telescope Reboost S. Gregucci, SITAEL, IT	124 Hybrid-Direct Kinetic Hall Thruster Simulation Improvement through Grid Refinement and Convergence A. Raisanen, University of Michigan, US	398 Development of a resistorjet for cubesats A. Mayer, TNO, NL
16:40	95 Development of advanced oxygen-kerosene rocket engines on basis of RD170/RD171 engines for LV of medium and heavy classes. V. Sudakov, NPO Energomash, RU	279 Two Minutes Inside P120C SRM - Current Status on the future SRM thrust oscillations behavior S. Larrieu, ArianeGroup, FR	506 The SABRE Engine – Concept and Development Status S. Driscoll, Reaction Engines, GB	198 Development status of the T7 ring cusp thruster J. Perez Luna, QinetiQ, GB	204 Development of Reaction Control System and low-cost 50N thruster for the H3 Launch Vehicle S. Koga, IHI Aerospace, JP	467 Design and Cost Analysis of High-Power Solar Electric Propulsion Platforms M. Mammarella, Politecnico di Torino, IT	128 openPlume, new concept for next generation plume modelling B. Zitouni, OHB System, DE	458 Vacuum Arc Thrusters for space propulsion with magnet field enhancements and exotic materials J. Schein, Universität der Bundeswehr München, DE
17:00		394 Advanced Plants designed for Non-Destructive-Testing of P120 Solid Propellant Motor in development for Ariane 6 and Vega C Programs E. Tosti, Avio, IT	423 HTX – High Temperature Heat Exchanger Development I. Duran, Reaction Engines, GB	352 T5 gridded ion engine development P. Randall, QinetiQ, GB	562 Investigation of the ultra-low thrust hydrazine thermal catalytic thruster D. Goza, EDB Fakel, RU	69 Implementation of Hall Effect Propulsion System on DubaiSat-2 A. Sharafi, Mohammed Bin Rashid Space Centre (MBRSC), AE	156 EP plasma plume: Modelling, validation status and way forward J. Laube, OHB System, DE	163 Integration and Miniaturization Challenges in the Design of Micro-Propulsion Systems for Picosatellite Platforms A. Cervone, Delft University of Technology, NL
	Session 25 - ST - Engine developments (2)	Session 26 - ST - P120C Motor (2)	Session 27 - ST - Air-breathing Propulsion - SABRE (2)	Session 28 - SC-EP - GIT (2)	Session 29 - SC-CP - Propellants: Nitrous Oxide Fuel Blend	Session 30 - SC-CP - EOL Issues and Passivation	Session 31 - SC-EP - Modelling (2)	Session 32 - SC - Microsatellite Propulsion (4)
Chairpersons								
17:20	33 Development Progress of LE-9 Engine for H3 Launch Vehicle H. Kawashima, Japan Aerospace Exploration Agency (JAXA), JP	1 Integrated Production Plant for the Nozzle of the P120C booster of Ariane 6 E. Pradie, ArianeGroup, FR	503 SABRE DEMO-A – Key Challenges for a Ground Demonstrator R. Payne, Reaction Engines, GB	366 Development and qualification status of the RIT 2X electric propulsion system J.-P. Porst, ArianeGroup, DE	301 European Fuel Blend Development for space craft propulsion A. Mayer, TNO, NL	129 Helium passivation: calibration with in-orbit data B. Zitouni, OHB System, DE	212 A Xenon Detailed Global Model in Support of Electric Propulsion Technology K. Katsonis, DEDALOS Ltd, GR	8 Design and numeric simulation of a solid propellant microthruster for the attitude control of cubesat L. Shipeng, Beijing Institute of Technology, CN
17:40	65 Progress of Engineering Model Hot-Firing Tests in LE-9 Engine Development T. Kai, Mitsubishi Heavy Industries (MHI), JP	2 Deployment of a new Industrialization process in Ariane Group : Exemple of the nozzle of the P120C booster of Ariane 6 E. Pradie, ArianeGroup, FR	502 SABRE TF1 – Development of the SABRE Demonstrator Test Facility M. Hood, Reaction Engines, GB	410 QinetiQ High Power Electric Propulsion Systems J. Perez Luna, QinetiQ, GB	218 Testing of a novel nitrous-oxide fuel blend W. Iain, Airborne Engineering, GB	551 Presentation of a French passivation device for spacecraft propulsion system (upper stage) : qualification status and test results of firing on reactive mixtures T. Lienart, CNES, FR	295 A 3D electron fluid model to study magnetic field effects on an expanding plasma thruster plume F. Cichocki, Carlos III University of Madrid (UC3M), ES	311 Active attitude control with thrusters versus magnetic torquers for CubeSats C. Kopel, Kopoos Consulting, FR
18:00	133 Qualification Test Results of the 2nd Stage Engine for H3 Launch Vehicle S. Ukai, Japan Aerospace Exploration Agency (JAXA), JP	558 Progress Synthesis of the Development of the Common Propulsive Srm for Ariane 6 and Vega-C T. Germani, EUROPROPULSION, FR	505 SABRE Technology Development – Pathways to Flight J. Barth, Reaction Engines, GB	430 High Power Gridded Ion Thruster Systems For Deep Space Missions A. May, Aerojet Rocketdyne, US	53 Influence of combustion chamber size (L*) on characteristic exhaust velocity (c*) for a N2O/C2H4 premixed green propellant L. Werling, German Aerospace Center (DLR), DE	479 Impulsive helium venting impact S. Hyde, European Space Agency (ESA), NL	306 On electromagnetic and plasma thruster thermodynamics M. Ivanov, Central Institute of Aviation Motors, RU	
18:20	END OF DAY 2							

Wednesday 16th May 2018

ROOM

PLENARY SESSION – SEVILLA

08:30

KEYNOTE SPEECH 3: INITIATIVE IN VERY HIGH POWER ELECTRIC PROPULSION WITH SOLAR AND NUCLEAR SOURCES
Alexander SEMENKIN, Keldysh Research Center, RU

Session 33 - SC - Programmes

Session 34 - ST - Components:
Tanks and linesSession 35 - ST - Solid Rocket
Motors Modelling & TestSession 36 - SC - Components:
Propellant Management (1)Session 37 - SC-CP - Components:
Bipropellant ThrustersSession 38 - SC-EP - Plasma
Thrusters (1)

Session 39 - SC-EP - Modelling (3)

Session 40 - SC - Microthruster
Propulsion Systems

ROOM

GIRALDA

TRIANA 1

TRIANA 2

ESPAÑA 1

ESPAÑA 2

ESPAÑA 3

ESPAÑA 4

ESPAÑA 5

Chairpersons

09:10

294
Flexible Operations of the
BepiColombo Electric Propulsion
System
H. Gray, Airbus Defence & Space, GB

179
Structural Heat Intercept, Insulation,
and Vibration Evaluation Rig
(SHIVER)
W. Johnson, NASA Kennedy Space
Center, US

304
Pressure Oscillations Analysis and
Reconstruction of P80 Flight Data
M. Laureti, Sapienza University of
Rome, IT

269
Development of Next-Generation
Electric Propulsion Fluid
Management Systems
M. Poucet, Bradford Engineering, NL

242
MMH/MON-3 bi-propellant ceramic
thruster and joining of ceramic and
metal
G. Fujii, Japan Aerospace Exploration
Agency (JAXA), JP

54
Performance Characteristics of Low-
Power Direct-Current Arcjet
Thrusters with Low-Toxicity
Propellants
T. Mimura, Osaka Institute of
Technology (OIT), JP

339
Study on the Influence of Anode on
Discharge Characteristics and
Performance of Multistage Cusped
Field Thruster
W. Jiang, Harbin Institute of
Technology, CN

483
Micro Propulsion for Scientific
Missions
L. Fallarini, Leonardo, IT

09:30

255
Propulsion System Development
and Verification Activities for the
Jupiter Icy Moons Explorer (JUICE)
M. Wolf, ArianeGroup, DE

361
Evaluation of diaphragm behavior of
partially loaded RCS propellant tank
during vibration and acceleration
condition
I. Masuda, Japan Aerospace
Exploration Agency (JAXA), JP

303
Investigation of Pressure Oscillation
Phenomena in Aft-Finocyl Solid
Rocket Motor
M. Laureti, Sapienza University of
Rome, IT

493
MEMS Based Flow Control Module
for Electric Propulsion, Recent
Developments and Qualification
Approach
J. Bejhed, NanoSpace, SE

548
Development of 10N bipropellant
ceramic thruster in MHI (Mitsubishi
Heavy Industries, Ltd.)
D. Shiraiva, Mitsubishi Heavy Industries
(MHI), JP

62
Performance Characteristics of High-
Power Steady-State MPD Thrusters
Using Permanent Magnets for Deep
Space Exploration
S. Saito, Osaka Institute of Technology
(OIT), JP

424
Numerical model of the Plasma
Source of an Helicon Plasma
Thruster
M. Magarotto, University of Padova, IT

567
Colloid Micronewton Thruster
(CMNT) – Comparison Between LISA
Pathfinder Flight and Ground
Measurements
V. Hruby, Busek Co. Inc., US

09:50

167
Integrated Management of NASA's
Distributed Propulsion Capability
T. Brown, NASA Engineering and
Safety Center, US

244
Development of LOx recirculation
line for 75 ton-class liquid propellant
rocket engine
J. Kim, Korea Aerospace Research
Institute (KARI), KR

272
Numerical Simulation of Combustion
Instabilities and Pressure
Oscillations in a Solid Rocket Motor
A. D. French, Italian Aerospace
Research Centre (CIRA), IT

232
Miniaturized low-cost pressure
regulator for HET electric propulsion
systems
T. Pardal, Omnidea, PT

248
Development of Thruster Chamber
of Bipropellant Liquid Rocket Engine
in China
X. Fangtao, Aerospace Research
Institute of Material & Processing
Technology, CN

100
Plasma properties of a non-volatile
liquid propellant for ablative pulsed
plasma thrusters
W. Yeong Liang Ling, Beijing Institute
of Technology, CN

462
PlasmaPIC: a simulation tool for
optimizing RITs
R. Henrich, Justus Liebig University
Giessen, DE

350
RIT-uX Miniaturized Radio
Frequency Ion Thruster Systems -
Applications and recent Program
Status
H. Leiter, ArianeGroup, DE

10:10

31
Ongoing activities of the Strategic
Research Clusters on Space Electric
Propulsion (2017-2018)
J. Lopez Reig, Centre for the
Development of Industrial Technology
(CDTI), ES

199
Development of a Capacitive Void
Fraction Sensor to Mount on a
Space Propulsion System for a
Ground Firing Test
Y. Sakamoto, Waseda University, JP

320
Aluminum particle tracking on
experimental shadowgraphy and AI
PLIF images to provide velocity data
for two-phase flow solid rocket
motor simulations
R. Devillers, ONERA, FR

7
Development of Robust and
Affordable Xenon Feed Unit for Hall
Effect Propulsion Systems
E. Lee, Satrec Initiative (SI), KR

437
Aluminizing modification of iridium
coating: a promising and effective
strategy to improve the performance
and lifetime of the iridium/rhenium
rocket engine combustion chamber
Y. Ai, National University of Defense
Technology (NUDT), CN

116
Coaxial Air-Fed Pulsed Plasma
Thruster Research and Development
for RAM-EP Application
T. Schönherr, European Space Agency
(ESA), NL

482
Ways to ensure the spacecraft
resistance to EPS plasma effects
A. Sizov, TsNIImash, RU

360
Design, Construction and Testing of
a Variable Isp Radio Frequency Mini
Ion Engine to better serve the
Propulsion Requirements of the Next
Generation Gravity Missions
"NGGM"
M. Smimova, TransMIT, DE

10:30

449
The Ariane Group Electric
Propulsion Program 2018
H. Leiter, ArianeGroup, DE

64
Liquid Nitrogen Chilldown: Void
Fraction Measurement and
Feasibility of Extension to Liquid
Methane Testing
L. Peveroni, Von Karman Institute for
Fluid Dynamics (VKI), BE

302
Immersed Boundary Method and
Centered Scheme for the Study of
the Aero-Acoustic Field in SRMs
M. Laureti, Sapienza University of
Rome, IT

494
Development Status Of Xenon Flow
Control Unit For Electric Propulsion
Subsystem On Turksat6a
Communication Satellite
B. Aydin, TUBITAK UZAY Space
Technologies Research Institute, TR

438
Near net shape Iridium/rhenium
combustion chamber produced by
electrodeposition and CVD
L. Zhu, National University of Defense
Technology (NUDT), CN

117
Development of Ignition Unit for a
Liquid Pulsed Plasma Thruster
C. Dobranszki, University of
Southampton, GB

515
Partice In Cell Modelling of a quasi-
neutral ECR thruster
P.-Q. Elias, ONERA, FR

400
High Precision Attitude and Orbit
Control System Based on the
Emission of Electromagnetic
Radiation (PACER)
J. Martin, University of Stuttgart Institute
of Space Systems (IRS), DE

10:50

50
Characterization of SRM Plumes
with Alumina Particulate in Subscale
Testing
D. Saile, German Aerospace Center
(DLR), DE

106
New possibilities on creating apogee
propulsion systems with
pneumopump propellant supply
systems
A. Kukhta, Yuzhnoye State Design
Office, UA

125
Overview of Halo Thruster Research
and Development Activities
A. Lucca Fabris, University of Surrey,
GB

11:10

COFFEE BREAK

SPACECRAFT

SPACE TRANSPORTATION

GENERAL INTEREST

Wednesday 16th May 2018

Session 41 - SC - Overview (1)

Session 42 - ST - Components:
NozzlesSession 43 - ST - Modelling:
Combustion (1)Session 44 - SC - Components:
Propellant Management (2)Session 45 - SC-CP - Components:
CatalystsSession 46 - SC-EP - Plasma
Thrusters (2)

Session 47 - SC-EP - HET (1)

Session 48 - GEN - Manufacturing
and Processes (1)

ROOM

GIRALDA

TRIANA 1

TRIANA 2

ESPAÑA 1

ESPAÑA 2

ESPAÑA 3

ESPAÑA 4

ESPAÑA 5

Chairpersons

11:30

ESA Chemical Propulsion Activities
M. Ford, European Space Agency
(ESA), NL161
Reinforcement of Sandwich Rocket
Nozzle Extensions by Laser Metal
Deposition
M. Holmquist, GKN Aerospace Engine
Systems, SE184
Numerical simulation of a single-
injector GOX/GCH₄ combustion
chamber using TAU Code with a
finite rate chemistry model
J. Van Schyndel, German Aerospace
Center (DLR), DE519
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T. Pardal, Omnidea, PT

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J. Zhou, Carlos III University of Madrid
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T. Andreussi, SITAEI, IT

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I. Pyatikh, EDB Fakel, RU

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LUNCH

ROOM

PLENARY SESSION – SEVILLA

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PLENARY ROUND TABLE 2: MICROLAUNCHERS

16:00

COFFEE BREAK

SPACECRAFT

SPACE TRANSPORTATION

GENERAL INTEREST

Wednesday 16th May 2018

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Session 50 - ST - Future Launcher Preparatory Programme

Session 51 - ST - Modelling

Session 52 - SC-CP - Testing

Session 53 - SC-CP - Components: Hydrocarbon Bipropellant Thrusters

Session 54 - SC-EP - Plasma Thrusters (3)

Session 55 - SC-EP - HET (2)

Session 56 - GEN - Manufacturing and Processes (2)

ROOM

GIRALDA

TRIANA 1

TRIANA 2

ESPAÑA 1

ESPAÑA 2

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Chairpersons

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J. Gonzalez Del Amo, European Space Agency (ESA), NL

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K. Underhill, European Space Agency (ESA), FR

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B. Cingal, ArianeGroup, FR

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W. Iain, Airborne Engineering, GB

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C. Cheng, Shanghai Institute of Space Propulsion, CN

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K. Fujiwara, Osaka Institute of Technology (OIT), JP

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T. Moulieres-Seban, ArianeGroup, FR

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G. Schmidt, NASA Glenn Research Center, US

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T. Fuhrmann, ArianeGroup, DE

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H. Negishi, Japan Aerospace Exploration Agency (JAXA), JP

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Y. Matsuura, IHI Aerospace, JP

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Development and ground testing of a 200 N vacuum thrust class thruster using a novel nitrous oxide/propene propellant combination
J. Wink, Dawn Aerospace, NL

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Ion acceleration in the magnetic nozzle of an ECR thruster: Comparison of experimental measurements with a quasi 1D kinetic model
S. Correyero, Carlos III University of Madrid (UC3M), ES

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Experimental Characterization of a 5 kW Magnetically-Shielded Hall Thruster
A. Piragino, SITAEL, IT

150
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N. Fernandes, Omnidea-RTG, DE

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Propulsion subsystems engineering for Electric and Chemical propulsion - synergy opportunities
A. Demaré, OHB Sweden, SE

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K. Lindblad, GKN Aerospace Engine Systems, SE

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L. Veggi, TU Munich, DE

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Optical Spectroscopy on Laser-Induced Ignition Sparks and other Space-Relevant Plasmas
R. Stützer, German Aerospace Center (DLR), DE

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W. Iain, Airborne Engineering, GB

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A. Sanchez-Villar, Carlos III University of Madrid (UC3M), ES

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M. Bernikova, EDB Fakel, RU

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A. Schachtsiek, ET Energietechnologie, DE

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A. Lovtsov, Keldysh Research Center, RU

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F. Dengra Moya, ArianeGroup, DE

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G. Fabbri, Avio, IT

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P. Bangalore Venkatesh, Purdue University, US

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D. Valentini, SITAEL, IT

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G. Pellegrini, SITAEL, IT

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F. Faraji, SITAEL, IT

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D. Catherall, Airbus Defence & Space, GB

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T. Lienart, CNES, FR

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V. Ledoux, Safran Aero Boosters, BE

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R. Paciorri, Sapienza University of Rome, IT

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B. Vasques, TU Munich, DE

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J. Navarro Cavallo, Carlos III University of Madrid (UC3M), ES

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M. Saravia, University of Pisa, IT

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S. Rabanin Harel, IMI Systems Ltd., IL

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O. Mitrofanova, EDB Fakel, RU

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Development Status of a Dierct Spark Ignition System for Restartable Upper Stage Engines
P. Batenburg, Aerospace Propulsion Products, NL

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E. Costa Ruiz, German Aerospace Center (DLR), DE

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Operational Behaviour investigation of Hartmann-Sprenger Tube based Resonance Ignition systems for Oxygen/Methane in-Orbit Propulsion applications
P. Lungu, TU Munich, DE

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E. Bragin, Kurchatov Institute, RU

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S. Mazouffre, CNRS - ICARE, FR

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19:30

GALA DINNER

23:30

Thursday 17th May 2018

ROOM

PLENARY SESSION – SEVILLA

08:30

KEYNOTE SPEECH 4: SPACE EXPLORATION AND PROPULSION CHALLENGES (provisional title)
David PARKER, Director of Human Spaceflight and Robotic Exploration, ESA

Session 57 - SC - Overview (3)

Session 58 - ST - Testing

Session 59 - ST - Modelling: Heat Fluxes

Session 60 - SC-CP - Green Propellants

Session 61 - SC-CP - Components: PMD Tanks

Session 62 - SC-EP - Plasma Thrusters (4)

Session 63 - SC-EP - Hall Mechanism (1)

Session 64 - SC-EP - Testing (1)

ROOM

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 S. Ayesha, Mohammed Bin Rashid Space Centre (MBRSC), AE

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Role of subscale tests for rocket engine technology development and verification
 J. Sender, German Aerospace Center (DLR), DE

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Numerical Thermal Flow Visualization for Rethinking Cryogenic Propellant Management Technology
 Y. Umemura, Japan Aerospace Exploration Agency (JAXA), JP

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Alternative green propellant developments at TNO
 A. Mayer, TNO, NL

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Review and History of ATK Space Systems Surface Tension PMD Tanks
 W. Tam, Orbital ATK, US

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Effects of applied magnetic field on IPG6-S, test-bed for an ABEP-based inductive plasma thruster (IPT)
 F. Romano, University of Stuttgart Institute of Space Systems (IRS), DE

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Modern trends and development prospects of thrusters with closed electron drift
 A. Solodukhin, Keldysh Research Center, RU

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EP; Towards Standardization of Testing and Qualification
 D. Felli, European Space Agency (ESA), NL

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 V. Kulygin, Kurchatov Institute, RU

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The arc heaters for tests of rocket propulsion systems parts
 A. Kozhev, Keldysh Research Center, RU

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High-fidelity Thermodynamic Model of Orbital Cryogenic Stages for Uncertain Environment
 K. Fujimoto, Japan Aerospace Exploration Agency (JAXA), JP

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Thermal ignition of ADN-based propellants – Selected results of the project Rheform
 M. Negri, German Aerospace Center (DLR), DE

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Propellant Management Devices - Functional Design Methodologies and Verifications
 W. Tam, Orbital ATK, US

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Development of a miniature plasma propulsion module for small satellites
 F. Trezzolani, T4i Space Technology for Innovation, IT

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 G. Lenguito, SSL, US

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 J. Schein, Universität der Bundeswehr München, DE

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 T. Misuri, SITAEL, IT

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 C. Bombardieri, German Aerospace Center (DLR), DE

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 J. Haemisich, German Aerospace Center (DLR), DE

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 V. Weiser, Fraunhofer ICT, DE

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 B. Busset, Airbus Defence & Space, FR

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 A. Boxberger, University of Stuttgart Institute of Space Systems (IRS), DE

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Characteristics of stationary plasma thruster of spt-100 standard size operating at increased power
 D. Merkureve, RIAME MAI, RU

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 S. Lausborg, Leybold, DE

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 D. Lev, Rafael, IL

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 K. Higashi, Japan Aerospace Exploration Agency (JAXA), JP

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 M. Leonardi, Sapienza University of Rome, IT

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 C. Miro Sabate, CNRS-University of Lyon, FR

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 H. Bavestrello, Airbus Defence & Space, FR

490
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 D. Packan, ONERA, FR

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Method for stationary plasma thruster outer and inner ceramic edges erosion rate diagnostics
 K. Alona, National Aerospace University "Kharkiv Aviation Institute" (KhAI), UA

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Update of a High-Precision Thrust Pendulum and Performance Characterization of PETRUS 2.0
 C. Montag, University of Stuttgart Institute of Space Systems (IRS), DE

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 G. Herdrich, University of Stuttgart Institute of Space Systems (IRS), DE

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 W. Song, Korea Aerospace University (KAU), KR

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 A. Sternin, TU Munich, DE

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 K. J. Stober, Stanford University, US

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 W. Tam, Orbital ATK, US

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Waveguide microwave coupling to a magnetic nozzle ECR thruster
 S. Peterschmitt, ONERA, FR

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Optimization of magnetic system of Hall Effect Thruster
 M. Titov, National Aerospace University "Kharkiv Aviation Institute" (KhAI), UA

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 R. Spektor, The Aerospace Corporation, US

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 D. Ricci, Italian Aerospace Research Centre (CIRA), IT

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 M. Propst, TU Dresden, DE

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Numerical Investigation on the Role of Radiative Heat Flux on Liquid Rocket Engines Thermal Loads
 G. Leccese, Sapienza University of Rome, IT

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Quantitative determination of segregation effects for ADN-based liquid monopropellants due to internal flow phenomena
 C. Hendrich, German Aerospace Center (DLR), DE

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An Experimental Derivation of the Damping Factors of a Submerged Propellant Tank Surface Tension Vane
 D. Gillis, Airbus Defence & Space, GB

164
Measurements of electron temperature in Helicon Plasma Thruster
 Y. Babou, Carlos III University of Madrid (UC3M), ES

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Relationships between ionization and acceleration zone properties with magnetic field parameters in Hall Effect Thruster
 M. Titov, National Aerospace University "Kharkiv Aviation Institute" (KhAI), UA

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Installation and Commissioning of a Test Bench for PPT Characterization
 T. Schönherr, European Space Agency (ESA), NL

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COFFEE BREAK

SPACECRAFT

SPACE TRANSPORTATION

GENERAL INTEREST

Thursday 17th May 2018

Session 65 - GEN - Hybrid Propulsion (1)

Session 66 - ST - Air-breathing Propulsion

Session 67 - ST - Acoustics and HF combustion instabilities (1)

Session 68 - SC-CP - Propellants: Hydrogen Peroxide

Session 69 - SC - Components: Tanks

Session 70 - SC-EP - Plasma Thrusters (5)

Session 71 - SC-EP - Hall Mechanism (2)

Session 72 - SC-EP - Testing (2)

ROOM

GIRALDA

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TRIANA 2

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ESPAÑA 2

ESPAÑA 3

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C. Schmierer, German Aerospace Center (DLR), DE

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F. Strauss, German Aerospace Center (DLR), DE

93
Study of the influence of operating conditions on LOX/H2 thrust chamber acoustic eigenmodes
J. Hardi, German Aerospace Center (DLR), DE

145
Verifications for the Thrusters and Propellant Tanks of a Satellite Propulsion System by Using Hydrogen Peroxide Propellant
T.-C. Kuo, National Space Organization, TW

24
Review of ATK Diaphragm Tanks - An Update
W. Tam, Orbital ATK, US

499
Separate measurement of magnetic and pressure thrust contributions in a magnetic nozzle ECR plasma thruster
T. Vialis, ONERA, FR

402
Impact of Cathode Flow Fraction on the Location of the Acceleration Region
S. Cusson, University of Michigan, US

537
Progress in Characterization of the Two-staged Hybrid Thruster System TIHTUS
G. Herdrich, University of Stuttgart Institute of Space Systems (IRS), DE

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Development of a Compact Hybrid Rocket Engine for Low-Cost In-Space Propulsion
C. Paravan, Politecnico di Milano, IT

296
Aerothermodynamic Design of a 3-D Prototyped Scramjet
J. F. De Araujo Martos, European Space Agency (ESA), NL

13
Modeling Combustion Chamber Acoustics using the DLR-TAU-Code
K. Hannemann, German Aerospace Center (DLR), DE

528
Mixing and Vibration influence on Hydrogen Peroxide
J. Bartosz, Jakusz SpaceTech, PL

395
Additive Manufactured Pressure Vessel Shell
W. Tam, Orbital ATK, US

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Electron Detachment from a Magnetic Nozzle
H. Shadrach, University of Michigan, US

414
Two-dimensional simulations of Hall Effect Thrusters
P. Fajardo, Carlos III University of Madrid (UC3M), ES

425
Experimental Characterization of the High Power RF Plasma Thruster developed in the project SAPERE-STRONG
M. Magarotto, University of Padova, IT

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HYPROGEO Hybrid propulsion: Latest project achievements
A. Lecossais, Airbus Defence & Space, FR

379
UFRN academic scramjet design to fly in Mach number 4 at low Earth's atmospheric altitude
P. Toro, Federal University of Rio Grande do Norte (UFRN), BR

132
Low-order modeling of coupling effects between propellant injection and pressure fluctuations in high frequency combustion instability
M. L. Frezzotti, Sapienza University of Rome, IT

263
Influence of catalyst geometry on performance of catalysts for green propellant thrusters
R.-J. Koopmans, FOTEC, AT

231
Development of a Xenon storage COPV with a seamless aluminium liner
T. Pardal, Omnidex, PT

538
Investigation of the Electro-Magnetic Contribution in the Low Discharge Current High Mass Flow Rate Regime of the AF-MPDT
A. Kitaeva, Beihang, CN

288
Non invasive population control for Hall effect thrusters low dimensional PIC models
A. Dominguez Vázquez, Carlos III University of Madrid (UC3M), ES

285
HK40 Hall Thruster Plume Measurements with Retarding Potential Analyzer, Faraday Probe and Langmuir Probe
K. Ugur, Bogazici University, TR

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Experimental Demonstration of an Innovative Hybrid Rocket Engine Compatible with Long Duration Operation
J.-Y. Lestrade, ONERA, FR

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UFRN Shock Tube
P. Toro, Federal University of Rio Grande do Norte (UFRN), BR

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Low-Order Modeling of High-Frequency Combustion Instabilities in Liquid Rocket Engines Driven by Propellant Flow Rate Oscillations
R. Nez, Laboratoire EM2C, CentraleSupélec, FR

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Preliminary Conceptual Testing of a Sub-Newton Hydrogen Peroxide Micro-Thruster
E. Fonda-Marsland, University of Southampton, GB

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Cryogenic propellant storage for high power plasma space propulsion
T. Wiertz, Air Liquide, FR

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Comparison of the HPT05M prototype performances in two different test facilities
M. Ruiz, SENER, ES

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Anomalous electron transport in Hall thruster by 3D PIC-MCC
F. Taccogna, CNR-Nanotec, IT

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Fluxgate Magnetometer-based Determination of Ion Beam Current
C. Volkmar, German Aerospace Center (DLR), DE

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Catalytic Injectors for an Isochoric Hybrid Rocket Motor
A. Musker, DELTACAT Ltd, GB

Numerical study of hydrogen mixing and combustion in HEXAFly-INT model combustion chamber
N. Kukshinov, CIAM, RU

513
Large-Eddy Simulation of the transition from a stable to thermo-acoustically unstable regime in a lab-scale liquid rocket engine
T. Schmitt, CNRS, FR

397
Impact of Using Aluminium Tanks on Spacecraft Propulsion Systems
R. Bellarosa, Airbus Defence & Space, GB

498
Ion energy distribution measurements in magnetically enhanced vacuum arc thrusters by means of retarding potential analyzer
J. Schein, Universität der Bundeswehr München, DE

277
Data-Driven Model for Anomalous Electron Transport in a Hall Effect Thruster
B. Jorns, University of Michigan, US

447
Evaluation of Active Vibration Isolation System Performance on Direct Thrust Noise Measurements
E. Bosch Borrás, European Space Agency (ESA), NL

13:10

LUNCH

Thursday 17th May 2018

ROOM

PLENARY SESSION – SEVILLA

14:30

PLENARY ROUND TABLE 3: DEMISABILITY AND SPACE DEBRIS MITIGATION: A PROPULSION PERSPECTIVE (provisional title)

16:00

COFFEE BREAK

Session 73 - ST - Engine developments (3)

Session 74 - ST - Components: Turbopumps

Session 75 - ST - Acoustics and HF combustion instabilities (2)

Session 76 - SC-EP - GIT (3)

Session 77 - SC-CP - Modelling

Session 78 - SC-EP - Components: Neutraliser (1)

Session 79 - SC-EP - Hall Mechanism (3)

Session 80 - SC-EP - FEEP

ROOM

GIRALDA

TRIANA 1

TRIANA 2

ESPAÑA 1

ESPAÑA 2

ESPAÑA 3

ESPAÑA 4

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Chairpersons

16:20

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Preparatory activities and development of a LOX-CH4 engine for the Vega-E upper stage
D. Kajon, Avio, IT545
Validation of Additive Manufactured Turbine Components for Low Cost Rocket Engines
L. Forsberg, GKN Aerospace Engine Systems, SE392
Numerical simulation of an air-assisted liquid jet submitted to a high-frequency transverse acoustic modulation
N. Rutard, ONERA, FR477
ARCLIGHT - A low cost plug-and-play RIT electric propulsion system
P. Gambach, ArianeGroup, DE51
Research on the Effects of Space Liquid Rocket Engines' Mixing Ratio on Gas Return Characteristics of Injectors' Surface
L. Changguo, Shanghai Institute of Space Propulsion, CN473
Design of a 100-A-class LaB6 cathode for high-power electric propulsion
L. Garrigues, CNRS Laplace, FR183
Suppression of Convective (Rayleigh-Taylor) Instability in Wall-less Hall Effect Thruster by Magnetic Field with Shear
A. Kapulkin, Technion - Israel Institute of Technology, IL281
In-Orbit Demonstration of the IFM Nano FEED Thruster Module
B. Seifert, FOTEC, AT

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463
Hyprob project: status of the technological and experimental activities of the LRE development line
F. Battista, Italian Aerospace Research Centre (CIRA), IT4
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T. Traudt, German Aerospace Center (DLR), DE207
Numerical Modelling of Acoustic Excitation of High Frequency Combustion Instabilities in an Experimental Combustor
F. Tonti, German Aerospace Center (DLR), DE500
Performance tests of a complete electric propulsion system based on cathode-less gridded ion thruster
A. Aanesland, ThrustMe, FR91
Characteristic Velocity Modeling of Bi-Propellant Thrusters
C. Inoue, The University of Tokyo, JP280
Overview of Hollow Cathode Development at Sitael
D. Pedrini, SITAEL, IT140
A Study of Discharge Characteristics of No-Wall Hall Thruster
Y. Ding, Harbin Institute of Technology, CN97
An Indium Detailed Global Model for FEED Thrusters Characterization and Optical Diagnostics
K. Katsonis, DEDALOS Ltd, GR

17:00

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S. Nakaya, The University of Tokyo, JP368
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M. Zeng, Harbin Institute of Technology, CN457
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F. Valencia-Bel, European Space Agency (ESA), NL190
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S. Ciaralli, Mars Space Ltd, GB37
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W. Li, Harbin Institute of Technology, CN15
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M. Tajmar, TU Dresden, DE

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L. Pfützenreuter, German Aerospace Center (DLR), DE510
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G. Pellegrini, SITAEL, IT59
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A. Petrarolo, German Aerospace Center (DLR), DE196
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S. Ciaralli, Mars Space Ltd, GB421
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M. D'Ambrogio, Thales Alenia Space Italy (TAS-I), IT236
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K. Lemmer, Western Michigan University, US63
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C. Min Gyoung, Korea Aerospace University (KAU), KR520
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D. Jelem, FOTEC, AT

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M. Kojima, Japan Aerospace Exploration Agency (JAXA), JP30
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I. Fischer, OHB System, DE514
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Experimental study of effect of propellant asymmetrical distribution on anode current in a Hall thruster
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G. C. Eleazar, PLD Space, ES362
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G. Stephen, University of Southampton, GB370
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S. Liang, Harbin Institute of Technology, CN

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SPACECRAFT

SPACE TRANSPORTATION

GENERAL INTEREST

Friday 18th May 2018

Session 81 - GEN - Hybrid Propulsion (2)

Session 82 - ST - Propellants

Session 83 - ST - Sloshing

Session 84 - SC-EP - Alternative Propellants (1)

Session 85 - SC - Advanced Propulsion

Session 86 - SC-EP - Components: Neutraliser (2)

Session 87 - SC-EP - HEMPT

Session 88 - SC-EP - MiniHET (1)

ROOM

GIRALDA

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ESPAÑA 2

ESPAÑA 3

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Chairpersons

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J. Anthoine, ONERA, FR

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M. T. Scelzo, Von Karman Institute for Fluid Dynamics (VKI), BE

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D. Welberg, ArianeGroup, DE

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N. Fazio, University of Southampton, GB

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L. Johnson, NASA Marshall Space Flight Center, US

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C. Drobny, TU Dresden, DE

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E. Bosch, Thales Deutschland, DE

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T. Misuri, SITAEL, IT

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A. J. Boiron, Nammo Raufoss, NO

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A. Mayer, TNO, NL

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D. Benson, NASA Goddard Space Flight Center, US

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A. Genovese, Thales Deutschland, DE

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U. Gotzig, ArianeGroup, DE

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S. Kraus, ArianeGroup, DE

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Lifetime Test of HEMPT-T Propulsion System
A. Lazurenko, Thales Deutschland, DE

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Simulation and optimization of a 200 W magnetically shielded Hall thruster with various discharge channel materials
L. Grimaud, CNRS - ICARE, FR

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Flight test of the hybrid rocket propulsion system - lessons learned from ILR-33 project
D. Kaniewski, Institute of Aviation, PL

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An Overview on Current Gelled Propellants Activities at DLR Lampoldshausen
C. Kirchberger, German Aerospace Center (DLR), DE

225
Propellant Phenomena in Cryogenic Tank Systems: Experiments with Liquid Hydrogen
J. Gerstmann, German Aerospace Center (DLR), DE

333
Investigation of alternative propellants for use with a low-power cylindrical Hall thruster
P. Tisdall, University of Southampton, GB

347
Development of a Water Electrolysis Propulsion System for Small Satellites
N. Harmansa, University of Stuttgart Institute of Space Systems (IRS), DE

408
Low-Current Hollow Cathodes for Hall Effect Thrusters
D. Pedrini, SITAEL, IT

241
Performance of the mN- μ HEMPT with iodine and xenon
M. Vaupel, Airbus Defence & Space, DE

181
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L. Hodong, Satrec Initiative (SI), KR

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D. Cardillo, Italian Aerospace Research Centre (CIRA), IT

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J. Wilken, German Aerospace Center (DLR), DE

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Effect of Thermal Stratification Thickness on Pressure Drop Enhanced by Sloshing in a Closed Vessel
T. Himeno, The University of Tokyo, JP

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F. Paganucci, University of Pisa, IT

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M. De Athayde Costa E Silva, TU Delft, NL

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A. Daykin-Iliopoulos, University of Southampton, GB

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S. Weis, Thales Deutschland, DE

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K. Ugur, Bogazici University, TR

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J. Messineo, Japan Aerospace Exploration Agency (JAXA), JP

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N. Wingborg, FOI, SE

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R. Roumigué, Airbus Defence & Space, FR

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A. Aanesland, ThrustMe, FR

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M. La Rosa Betancourt, Pi Integral Solutions, DE

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A. Tsaglov, National Aerospace University "Kharkiv Aviation Institute" (KhAI), UA

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S. Weis, Thales Deutschland, DE

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G. Poppe, German Aerospace Center (DLR), DE

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V. Gettwert, Fraunhofer ICT, DE

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H. Gu, China Institute of Atomic Energy, CN

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An investigation on the effects of the axial magnetic field on hollow cathode thruster performance
L. Chen-Guang, Harbin Institute of Technology, CN

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R. Heidemann, Thales Deutschland, DE

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COFFEE BREAK

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Friday 18th May 2018								
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Chairpersons								
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