

**INTERNATIONAL  
ELECTRIC PROPULSION CONFERENCE  
17-20 September 2007  
Florence, Italy**



**TECHNICAL PROGRAM**

## PAPER / SESSION INDEX

PAPER	SESSION						
1	2-F-3	94	4-E-4	172	2-B-1	268	2-C-2
2	4-B-4	95	3-A-1	173	4-D-3	269	2-C-3
5	4-B-2	98	4-D-4	174	4-C-3	270	4-C-3
9	2-F-4	99	4-F-3	177	3-B-2	271	2-G-3
10	1-D-4	100	2-B-1	178	2-E-1	272	3-G-1
12	4-G-3	101	2-D-4	179	2-E-4	274	3-F-1
14	1-E-4	102	4-B-3	180	3-G-1	276	2-D-2
15	2-E-2	103	4-C-2	181	4-E-2	277	1-E-3
16	4-E-1	105	4-G-1	185	3-E-2	278	4-C-4
17	4-C-1	106	4-G-1	186	2-E-4	279	2-F-2
18	4-G-3	107	4-G-3	187	1-A-4	280	4-E-3
19	2-F-1	108	4-E-1	188	4-A-1	281	3-C-2
20	2-G-3	109	2-G-1	189	2-C-2	283	4-F-2
21	2-F-2	110	2-E-1	191	4-E-2	285	3-G-2
23	4-C-1	111	2-F-1	192	4-E-2	286	4-E-4
24	2-D-4	112	4-F-4	193	1-E-3	287	1-F-3
25	1-D-3	113	4-C-1	195	4-E-1	288	4-F-3
27	1-F-4	114	4-F-1	196	3-G-1	290	2-G-1
29	1-E-4	115	1-C-3	197	4-G-4	291	1-A-4
30	1-F-4	116	2-C-4	199	1-C-4	294	2-F-1
31	4-A-3	117	4-C-2	200	3-A-1	295	4-F-2
33	1-D-4	118	3-E-1	201	4-F-4	298	1-A-3
34	2-A-1	119	4-D-4	202	2-E-1	300	2-C-1
35	2-E-2	120	4-F-4	203	4-E-3	301	2-G-3
36	4-G-1	122	3-D-2	204	4-G-1		
37	4-G-3	123	3-D-1	206	2-G-3	304	3-F-1
38	3-B-1	124	3-A-2	207	2-D-1	305	1-F-4
39	2-B-4	125	2-C-3	209	2-D-2	306	1-F-3
41	2-E-2	126	2-C-2	210	4-F-1	307	2-F-1
42	4-G-2	128	4-B-2	211	4-G-2	308	1-E-4
43	2-D-3	129	2-B-1	212	3-F-2	309	2-E-4
45	1-B-4	130	2-C-4	213	4-F-1	310	4-A-1
46	3-B-1	131	3-B-1	214	2-B-3	311	4-A-2
48	1-F-4	132	2-C-3	215	4-C-2	316	2-A-3
49	2-F-3	134	2-C-1	217	2-B-2	317	4-A-1
50	4-D-3	135	1-C-3	218	2-D-4	319	2-G-1
51	3-A-1	136	1-C-4	219	4-D-1	320	2-B-1
52	2-A-4	137	4-D-2	220	2-D-3	321	4-B-4
53	4-F-2	138	3-C-2	221	2-B-4	322	2-G-3
57	2-E-3	139	4-B-1	222	2-B-2	323	3-D-2
60	2-F-4	140	3-D-1	223	2-E-3	325	4-G-4
61	4-E-4	141	3-C-1	224	3-B-2	328	2-G-3
62	3-B-2	142	2-G-1	225	1-B-3	330	1-C-3
66	2-A-2	143	1-B-3	226	2-D-3	331	3-C-1
67	2-A-1	144	4-B-1	227	3-F-1	335	1-C-4
68	2-D-2	145	4-F-3	228	4-A-4	336	4-B-2
69	4-B-1	146	4-G-2	229	3-E-1	338	2-B-2
70	1-A-4	148	1-D-3	231	2-D-2		
71	4-E-3	149	1-D-3	233	4-F-3	343	4-A-2
72	2-D-1	150	3-D-1	234	1-B-4	346	2-F-2
73	4-A-3	151	2-B-3	236	4-E-1	349	3-F-2
74	4-D-3	152	4-C-3	237	3-G-2	350	4-F-4
75	4-D-4	153	3-G-2	238	2-C-4	351	2-E-1
77	4-F-1	154	3-D-2	240	4-E-4	352	3-F-2
78	4-C-4	155	2-F-2	241	2-D-1	353	3-C-2
79	4-A-1	157	2-A-2	243	2-C-1	354	2-G-3
80	2-E-4	158	3-C-1	244	1-F-3	355	2-E-3
81	4-D-2	159	3-C-1	247	3-A-2	356	1-F-3
82	3-E-1	160	1-B-3	250	2-A-1	357	1-C-4
83	3-F-1	161	4-D-4	252	3-E-2	360	1-C-3
84	2-F-4	162	4-E-3	253	4-C-4	362	4-D-1
85	2-B-4	163	2-G-3	254	4-A-2	363	3-D-2
		164	3-B-2	256	4-C-3	364	4-E-2
87	3-C-2	165	2-C-3	257	2-F-3	365	4-A-2
88	4-A-3	166	2-B-3	258	1-A-3		
89	4-C-4	167	3-E-2	260	1-B-3		
90	1-D-4	168	3-E-2	261	3-A-2		
91	2-A-3	169	1-D-3	262	2-G-3		
92	4-B-2	170	1-E-3	265	1-D-4		
93	4-F-2	171	4-D-1	267	2-A-1		

# MONDAY, 17th of September 2007, 14:00 - 18:30

## SESSION 1-A-3

Monday 9/17/2007	Room A	<b>HALL THRUSTER PHYSICS AND MODELING 1</b>  Chaired by:
---------------------	--------	--

14.00	IEPC -2007-	
14.30	IEPC -2007- 298	<b>SPATIALLY GROWING INSTABILITIES IN HALL THRUSTERS</b>  Enrico A. De Marco and Mariano Andreucci
15.00	IEPC -2007-	
15.30	IEPC -2007- 258	<b>THE ROLE OF THE ELECTRON ENERGY BALANCE IN HALL THRUSTER PLASMA INSTABILITIES</b>  Zbigniew Peradzynski, Karol Makowski, Serge Barral, Jacek Kurzyna and Michel Dudeck

## SESSION 1-A-4

Monday 9/17/2007	Room A	<b>HALL THRUSTER PHYSICS AND MODELING 2</b>  Chaired by:
---------------------	--------	--

16.30	IEPC -2007-	
17.00	IEPC -2007- 70	<b>QUASI-LINEAR ANALYSIS OF ANOMALOUS ELECTRON MOBILITY INSIDE A HALL THRUSTER</b>  Rostislav Spektor
17.30	IEPC -2007- 291	<b>HALL THRUSTER ELECTRON MOBILITY INVESTIGATION USING FULL 3D MONTE CARLO TRAJECTORY SIMULATIONS</b>  Darren Alman, Joshua Rovey, Robert Stubbers and Brian Jurczyk
18.00	IEPC -2007- 187	<b>A PLANAR HALL THRUSTER FOR INVESTIGATING ELECTRON MOBILITY IN EXB DEVICES</b>  Joshua Rovey, Matthew Giacomi, Robert Stubbers and Brian Jurczyk

**SESSION 1-B-3**

Monday 9/17/2007 Room B HALL THRUSTER DEVELOPMENT 1  
Chaired by:

14.00	IEPC -2007- 260	<b>IONIZATION EFFICIENCY IN ELECTRIC PROPULSION DEVICES</b>  Jerry Ross and Lyon King
14.30	IEPC -2007- 143	<b>INVESTIGATION OF ELECTRON TRANSPORT PROPERTIES IN HALL THRUSTERS THROUGH MEASUREMENTS OF MAGNETIC FIELD FLUCTUATIONS</b>  Giovanni CODUTI, Alexey Lazurenko, Thierry Dudok De Wit, Claude Cavoit, Vladimir Krasnoselskikh, Andre Bouchoule, Stefane Mazouffre and Michel Dudeck
15.00	IEPC -2007- 160	<b>A LASER SPECTROSCOPIC STUDY ON XE+ ION TRANSPORT PHENOMENA IN A 5 KW-CLASS HALL EFFECT THRUSTER.</b>  Damien Gawron, Stéphane Mazouffre and Nader Sadeghi
15.30	IEPC -2007- 225	<b>STUDY OF THE CHAMBER CERAMIC EROSION OF THE PPS®X000-ML BY OES AND REDEPOSITION ON SILICON SUBSTRATES INSIDE THE CHANNEL FOR TOOLED CERAMICS AT VARIOUS VIRTUAL</b>  Daniel Pagnon, Stéphane Pellerin, Pascal Lasgorceix and Claude Legentil

**SESSION 1-B-4**

Monday 9/17/2007 Room B HALL THRUSTER DEVELOPMENT 2  
Chaired by:

16.30	IEPC -2007- 45	<b>EXPERIMENTAL STUDY OF HETEROGENEITY IN AN AZIMUTHAL DIRECTION OF HALL THRUSTER (HT) PLASMA FLOW</b>  Sergey Oghienko
17.00	IEPC -2007- 234	<b>PLUME DIVERGENCE IN THE HALL THRUSTER DUE TO PLASMA PRESSURE</b>  Amnon Fruchtman and Avi Cohen-Zur
17.30	IEPC -2007-	
18.00	IEPC -2007-	

**SESSION 1-C-3**

Monday 9/17/2007 Room C MPD THRUSTERS 1  
Chaired by:

14.00	IEPC -2007- 115	<b>AN EXPERIMENTAL STUDY OF THE ELECTRODE FALL VOLTAGE IN AN MPD THRUSTER</b>  Daisuke Nakata, Kyoichiro Toki, Yukio Shimizu, Ikko Funaki, Hitoshi Kuninaka and Yoshihiro Arakawa
14.30	IEPC -2007- 330	<b>EXPERIMENTAL ASSESSMENT OF A PASSIVE METHOD FOR MHD INSTABILITY SUPPRESSION IN MPD THRUSTERS</b>  Fabrizio Paganucci, P. Rossetti, M. Andreucci, M. Zuin, V. Antoni, R. Cavazzana, M. De Tata, E. Martines, G. Serianni and F. Tarallo
15.00	IEPC -2007- 135	<b>SCALING OF THE CURRENT CONDUCTION ZONE IN LITHIUM-FED ARC MULTICHANNEL AND SINGLE-CHANNEL HOLLOW CATHODES</b>  Leonard Cassady and Edgar Choueiri
15.30	IEPC -2007- 360	<b>RELATIONSHIP BETWEEN ANODE SPOTS AND ONSET VOLTAGE HASH IN QUASY-STEADY MAGNETOPLASMA DYNAMIC THRUSTERS</b>  Luke Uribarri, Edgar Choueiri

**SESSION 1-C-4**

Monday 9/17/2007 Room C **MPD THRUSTERS 2**  
Chaired by:

16.30	<b>IEPC -2007- 335</b>	<b>PERFORMANCE AND PLASMA CHARACTERISTICS OF A CUSP AND DIVERGENT-NOZZLE APPLIED-MAGNETIC-FIELD MPD THRUSTER</b> Hirokazu Tahara
17.00	<b>IEPC -2007- 136</b>	<b>DEVELOPMENT OF HIGH POWER MAGNETOPLASMA DYNAMIC THRUSTERS IN USSR</b> Vladimir Shutov, Oleg Gorshkov, Konstantin Kozubsky, Valery Ostrovsky and Vladimir Obukhov
17.30	<b>IEPC -2007- 199</b>	<b>PULSED MAGNETOPLASMA DYNAMIC DETONATION PROPULSION</b> Kyoichi Kuriki, Junichiro Aoyagi and Haruki Takegahara
18.00	<b>IEPC -2007- 357</b>	<b>NUCLEAR ACTIVATION ENHANCED MHD AND MPD THRUSTER</b> Samim Anghaie and Angelo Ferrari

**SESSION 1-D-3**

Monday 9/17/2007 Room D **ION THRUSTERS 1**  
Chaired by:

14.00	<b>IEPC -2007- 148</b>	<b>ION BEAM CHARACTERIZATION BY ADVANCED PLASMA DIAGNOSTICS WITH LEVITATED PARTICLES</b> Holger Kersten, Thomas Trottenberg, Ruben Wiese, Frank Scholze, Michael Tartz and Horst Neumann
14.30	<b>IEPC -2007- 169</b>	<b>MULTIPHOTON SPECTROSCOPY ON XENON FOR APPLICATION ON ION THRUSTERS PLASMA PARAMETER INVESTIGATIONS: EXPERIMENT AND THEORY</b> Christoph Eichhorn, Monika Auweter-Kurtz and Michael Winter
15.00	<b>IEPC -2007- 149</b>	<b>A PENDULUM TARGET BALANCE FOR ION ENGINE THRUST MEASUREMENT</b> Paolo Gessini, Gilberto M. Sandomato, Ricardo T. Irita, José A.N. Gonçalves and George F. Fernandes
15.30	<b>IEPC -2007- 25</b>	<b>TWO-DIMENSIONAL CHARACTERIZATION OF MICROWAVE E-FIELDS AND BEAM PROFILES OF THE ECR ION THRUSTER <math>\mu 20</math></b> Kazutaka Nishiyama, Hitoshi Kuninaka and Tatsuya Nakai

**SESSION 1-D-4**

Monday 9/17/2007 Room D **ION THRUSTERS 2**  
Chaired by:

16.30	<b>IEPC -2007- 33</b>	<b>NEXT LONG-DURATION TEST AFTER 11,570-HRS AND 237-KG OF XENON PROCESSED</b> Daniel Herman, George Soulas and Michael Patterson
17.00	<b>IEPC -2007- 10</b>	<b>SENSITIVITY TESTING OF THE NSTAR ION THRUSTER</b> Anita Sengupta, John Anderson and John Brophy
17.30	<b>IEPC -2007- 265</b>	<b>XIPS ION THRUSTER GRID EROSION PREDICTIONS FOR THE LONG-DURATION MISSIONS AND EXTENDED THROTTLE RANGE</b> Richard Wirz, John Anderson, Ira Katz and Dan Goebel
18.00	<b>IEPC -2007- 90</b>	<b>MEASUREMENTS OF HOLE SHAPE ON CARBON-CARBON COMPOSITE GRIDS AFTER 20,000-HOUR ENDURANCE TEST</b> Miyuki Usui and Hitoshi Kuninaka

**SESSION 1-E-3**

Monday  
9/17/2007

Room E

**CATHODE DEVELOPMENT 1**

Chaired by:

14.00	<b>IEPC -2007- 170</b>	<b>DISPENSER TEMPERATURE PROFILE MEASUREMENT AND DISCHARGE CURRENT DIVISION IN THE T5&amp;T6 KAUFMAN-TYPE ION THRUSTERS</b> Ismat M. Ahmed Rudwan, Neil Wallace and Michael Kelly
14.30	<b>IEPC -2007- 193</b>	<b>XIPS 25-CM THRUSTER CATHODE LIFE QUALIFICATION FOR USE ON DEEP SPACE MISSIONS</b> James Polk, Dan Goebel, Ioannis Mikellides, Ira Katz and William Tighe
15.00	<b>IEPC -2007- 277</b>	<b>PLASMA POTENTIAL BEHAVIOR AND PLUME MODE TRANSITIONS IN HOLLOW CATHODE DISCHARGES</b> Dan Goebel, Kristina Jameson, Ira Katz and Ioannis Mikellides
15.30	<b>IEPC -2007-</b>	

**SESSION 1-E-4**

Monday  
9/17/2007

Room E

**ADVANCED AND MISCELLANEOUS CONCEPTS 1**

Chaired by:

16.30	<b>IEPC -2007- 29</b>	<b>NUMERICAL ANALYSIS AND EXPERIMENTS OF A MICROWAVE-EXCITED MICROPLASMA THRUSTER</b> Takeshi Takahashi, Yoshinori Takao, Koji Eriguchi and Kouichi Ono
17.00	<b>IEPC -2007- 308</b>	<b>NUMERICAL ANALYSIS OF THE ACCELERATION PROCESS IN CLUSTER FRAGMENTATION ION SOURCES</b> Paola Rossetti, Francesco Nania, Christoph Gebhardt, Hartmut Schroeder, Fabrizio Paganucci
17.30	<b>IEPC -2007- 14</b>	<b>INITIATION OF THE NUMERICAL INVESTIGATION OF THE HYBRID PLASMA THRUSTER TIHTUS</b> Uwe Bauder, Markus Fertig, Hannah Boehrk and Monika Auweter-Kurtz
18.00	<b>IEPC -2007-</b>	

**SESSION 1-F-3**

Monday  
9/17/2007

Room F

**MISSION ANALYSIS AND DESIGN 1**

Chaired by:

14.00	<b>IEPC -2007- 244</b>	<b>PROJECTED LUNAR CARGO CAPABILITIES OF HIGH-POWER VASIMR PROPULSION</b> Tim Glover, Andrew Ilin, Franklin Chang-Diaz and Robert Vondra
14.30	<b>IEPC -2007- 306</b>	<b>A VEGA DEDICATED ELECTRIC PROPULSION TRANSFER MODULE TO THE MOON</b> Cosmo Casaregola, Koen Geurts, Pierpaolo Pergola, Leonardo Biagioni and Mariano Andrenucci
15.00	<b>IEPC -2007- 287</b>	<b>ELECTRIC PROPULSION PERFORMANCE FROM GEO-TRANSFER TO GEOSYNCHRONOUS ORBITS</b> John Dankanich and Christian Carpenter
15.30	<b>IEPC -2007- 356</b>	<b>INDIRECT OPTIMIZATION METHOD FOR LOW-THRUST INTERPLANETARY TRAJECTORIES</b> Lorenzo Casalino, Guido Colasurdo and Matteo Rosa Sentinella

**SESSION 1-F-4**Monday  
9/17/2007

Room F

**MISSION ANALYSIS AND DESIGN 2**

Chaired by:

16.30	<b>IEPC -2007- 305</b>	<b>THREE BODY INVARIANT MANIFOLD TRANSITION WITH ELECTRIC PROPULSION</b>  Cosmo Casaregola, Pierpaolo Pergola, Koen Geurts, Mariano Andrenucci and Leonardo Biagioni
17.00	<b>IEPC -2007- 48</b>	<b>SEP-SAMPLE RETURN FROM A MAIN-BELT ASTEROID</b>  Horst W. Loeb, Karl-Heinz Schartner, Wolfgang Seboldt and Bernd Dachwald
17.30	<b>IEPC -2007- 27</b>	<b>IN-SPACE PROPULSION INFLUENCES ON COMSAT MISSIONS</b>  David Byers and John Dankanich
18.00	<b>IEPC -2007- 30</b>	<b>SPACECRAFT MOTION AND ATTITUDE CONTROL IN HIGH ELLEPTICAL ORBIT</b>  Vladimir Obukhov, Alexander Pokrushkin, Garri Popov and Natalia Yashina

# TUESDAY, 18th of September 2007, 8:30 - 13:00

## SESSION 2-A-1

Tuesday 9/18/2007	Room A	<b>HALL THRUSTER PHYSICS AND MODELING 3</b> <small>Chaired by:</small>
----------------------	--------	---

8.30	<b>IEPC -2007- 250</b>	<b>MODELING OF HALL THRUSTER LIFETIME AND EROSION MECHANISMS</b>  Shannon Cheng and Manuel Martinez-Sanchez
9.00	<b>IEPC -2007- 34</b>	<b>HALL THRUSTER EROSION PREDICTION USING A HYDRODYNAMIC PLASMA MODEL AND SPUTTERING SIMULATION</b>  John Yim, Michael Keidar and Iain Boyd
9.30	<b>IEPC -2007- 67</b>	<b>SIMULATION OF WALL EROSION IN HALL THRUSTERS</b>  ALFREDO ANTON and EDUARDO AHEDO
10.00	<b>IEPC -2007- 267</b>	<b>BPT-4000 HALL THRUSTER DISCHARGE CHAMBER EROSION MODEL COMPARISON WITH QUALIFICATION LIFE TEST DATA</b>  Richard Hofer, Ioannis Mikellides and Ira Katz

## SESSION 2-A-2

Tuesday 9/18/2007	Room A	<b>HALL THRUSTER PHYSICS AND MODELING 4</b> <small>Chaired by:</small>
----------------------	--------	---

11.00	<b>IEPC -2007- 157</b>	<b>TWO-DIMENSIONAL HYBRID MODEL OF A MINIATURIZED CYLINDRICAL HALL THRUSTER</b>  Laurent Garrigues, Gerjan Hagelaar, Jean-Pierre Boeuf, Yevgeny Raitses, Artem Smirnov and Nathaniel Fisch
11.30	<b>IEPC -2007- 66</b>	<b>ADVANCES ON A HALL THRUSTER HYBRID CODE</b>  IGNACIO MAQUEDA, DIEGO ESCOBAR and EDUARDO AHEDO
12.00	<b>IEPC -2007-</b>	
12.30	<b>IEPC -2007-</b>	

**SESSION 2-B-1**

Tuesday 9/18/2007	Room B	<b>HALL THRUSTER DEVELOPMENT 3</b> Chaired by:
----------------------	--------	---

8.30	<b>IEPC -2007- 320</b>	<b>EXPERIMENTAL CHARACTERIZATION OF THE HT-100 HALL THRUSTER IN TWIN ENGINE CLUSTER CONFIGURATION</b> Massimo Saverdi, Massimiliano Signori and Leonardo Biagioni
9.00	<b>IEPC -2007- 129</b>	<b>DEVELOPMENT OF LOW-POWER HALL THRUSTER WITH LIFETIME UP TO 3000 HOURS</b> Mikhail Belikov, Oleg Gorshkov, Evgeny Dyshlyuk, Alexander Lovtsov and Andrey Shagayda
9.30	<b>IEPC -2007- 100</b>	<b>PERFORMANCE INVESTIGATION OF SPT-20M LOW POWER HALL EFFECT THRUSTER</b> Andriy Loyan and Taras Maksymenko
10.00	<b>IEPC -2007- 172</b>	<b>ION VELOCITY MEASUREMENTS WITHIN THE ACCELERATION CHANNEL OF A LOW POWER HALL THRUSTER</b> William Hargus, Jared Ekholm and Michael Nakles

**SESSION 2-B-2**

Tuesday 9/18/2007	Room B	<b>HALL THRUSTER DEVELOPMENT 4</b> Chaired by:
----------------------	--------	---

11.00	<b>IEPC -2007-</b>	
11.30	<b>IEPC -2007- 222</b>	<b>OVERRUN DISCHARGE CURRENT OPERATION OF LOW POWER CYLINDRICAL HALL THRUSTERS</b> Yevgeny Raitses, Artem Smirnov, Erik Granstedt and Nathaniel J. Fisch
12.00	<b>IEPC -2007- 217</b>	<b>PERFORMANCE INVESTIGATION OF SPT-20M LOW POWER HALL THRUSTER</b> T.A.Maksimenko, A.V.Loyan and N.N.Koshelev
12.30	<b>IEPC -2007- 338</b>	<b>EFFECTS OF MAGNETIC FIELD CONFIGURATION AND ELECTRICALLY-FLOATING METAL PLATES IN HALL THRUSTERS WITH CIRCULAR CROSS-SECTIONAL DISCHARGE CHAMBERS</b> Hirokazu Tahara and Atsushi Shirasaki

**SESSION 2-C-1**

Tuesday 9/18/2007	Room C	<b>PULSED PLASMA THRUSTERS 1</b> Chaired by:
----------------------	--------	---

8.30	<b>IEPC -2007- 300</b>	<b>HIGH FREQUENCY BURST PULSED PLASMA THRUSTER RESEARCH AT THE UNIVERSITY OF SOUTHAMPTON</b> Rodrigo Marques, Stephen Gabriel and Fernando Costa
9.00	<b>IEPC -2007- 134</b>	<b>NEXT GENERATION APPT DEVELOPMENT AT RIAME</b> Garry Popov, Nikolay Antropov, Grigoriy Diakonov, Michael Orlov, Valeriy Tyutin and Vladimir Yakovlev
9.30	<b>IEPC -2007- 243</b>	<b>RESEARCH AND DEVELOPMENT ON COAXIAL PULSED PLASMA THRUSTER FOR SMALL SATELLITES</b> Masayuki Mukai, Yukiya Kamishima, Tsubasa Sasaki, Kouhei Shintani, Junichiro Aoyagi, Haruki Takegahara, Takashi Wakizono and Mitsuteru Sugiki
10.00	<b>IEPC -2007-</b>	

**SESSION 2-C-2**

Tuesday  
9/18/2007

Room C

**PULSED PLASMA THRUSTERS 2**

Chaired by:

11.00	<b>IEPC -2007- 189</b>	<b>PLASMA FLOW BEHAVIORS AND THEIR EFFECTS ON THE PERFORMANCE OF PULSED PLASMA THRUSTERS</b>  Hiroyuki Koizumi, Kimiya Komurasaki and Yoshihiro Arakawa
11.30	<b>IEPC -2007-</b>	
12.00	<b>IEPC -2007- 126</b>	<b>LOW BANK ENERGY APPT FOR MICRO SATELLITES</b>  Nikolay Antropov, Garry Popov, Michael Kazeev and Vladimir Khodnenko
12.30	<b>IEPC -2007- 268</b>	<b>ABSOLUTE EMISSION FROM THE MID-INFRARED TO THE EXTREME ULTRAVIOLET FROM A PULSED PLASMA THRUSTER (PPT)</b>  Edward Beiting, Jun Qian, James Pollard, Will Caven and Ron Cory

**SESSION 2-D-1**

Tuesday  
9/18/2007

Room D

**ION THRUSTERS 3**

Chaired by:

8.30	<b>IEPC -2007- 72</b>	<b>SIMPLE PERFORMANCE MODELING OF A RADIO-FREQUENCY ION THRUSTER</b>  Michael Tsay and Manuel Martinez-Sanchez
9.00	<b>IEPC -2007- 241</b>	<b>MODELING ION THRUSTER BEAM NEUTRALIZATION</b>  Joseph Wang
9.30	<b>IEPC -2007-</b>	
10.00	<b>IEPC -2007- 207</b>	<b>THE "NEW GRID SYSTEMS FOR ION ENGINES" TECHNOLOGY PROJECT - FINAL ASSESSMENT</b>  Hans Leiter, Rainer Killinger, Fabrizio Scortecci, Elisa Bonelli, n n, Maurizio Materassi, Marco Cappaci, Michael Tartz and Niccola Kutufa

**SESSION 2-D-2**

Tuesday  
9/18/2007

Room D

**ION THRUSTERS 4**

Chaired by:

11.00	<b>IEPC -2007- 209</b>	<b>RIT-<math>\mu</math>X - THE NEW MODULAR HIGH PRECISION MICRO ION PROPULSION SYSTEM</b>  Hans Leiter, Rainer Killinger, Michael Boss, Rafael Braeg, Michael Tartz, n n, Davar Feili, Horst L�b, Jose Gonzales Del Amo and Davia Maria Di Cara
11.30	<b>IEPC -2007- 68</b>	<b>ION BEAM PROPERTIES OF THE RIT 22 ION THRUSTER</b>  Frank Scholze, Michael Tartz, Horst Neumann, Hans Leiter and Davar Feili
12.00	<b>IEPC -2007- 276</b>	<b>ENVIRONMENTAL TESTING OF THE NEXT PM1R ION ENGINE</b>  John Snyder, John Anderson, George Soulas and Jon Van Noord
12.30	<b>IEPC -2007- 231</b>	<b>OPTIMIZATION AND ASSESSMENT OF THE TOTAL IMPULSE CAPABILITY OF THE T6 ION THRUSTER</b>  Neil Wallace and Michael Corbett

**SESSION 2-E-1**

Tuesday 9/18/2007	Room E	<b>ADVANCED PROPULSION CONCEPTS 2</b> Chaired by:
----------------------	--------	--

8.30	<b>IEPC -2007- 110</b>	<b>STATUS OF THE THALES HIGH EFFICIENCY MULTI STAGE PLASMA THRUSTER DEVELOPMENT FOR HEMP-T 3050 AND HEMP-T 30250</b>  Norbert Koch, Hans-Peter Harmann and Guenter Kornfeld
9.00	<b>IEPC -2007- 178</b>	<b>HIGH-POWER ELECTRIC PROPULSION UTILIZING LASER-DRIVEN PONDEROMOTIVE FIELDS</b>  George Williams
9.30	<b>IEPC -2007- 202</b>	<b>CHARACTERIZATION OF AN ANNULAR HELICON PLASMA SOURCE</b>  Douglas Palmer, Logan Williams and Mitchell L.R. Walker
10.00	<b>IEPC -2007- 351</b>	<b>HIGH POWER ELECTRIC PROPULSION USING LIQUID METAL ION SOURCES</b>  Salvo Marcuccio and Nicola Giusti

**SESSION 2-E-2**

Tuesday 9/18/2007	Room E	<b>ADVANCED PROPULSION CONCEPTS 3</b> Chaired by:
----------------------	--------	--

11.00	<b>IEPC -2007-</b>	
11.30	<b>IEPC -2007- 41</b>	<b>HIGH DENSITY MAGNETIZED TOROID FORMATION AND TRANSLATION WITHIN XOCOT: AN ANNULAR FIELD REVERSED CONFIGURATION PLASMA CONCEPT</b>  David Kirtley, Alec Gallimore, James Haas and Michael Reilly
12.00	<b>IEPC -2007- 15</b>	<b>PLASMA SAIL PROPULSION BASED ON THE PLASMA MAGNET</b>  John Slough
12.30	<b>IEPC -2007- 35</b>	<b>A SIMPLE ELECTRIC THRUSTER BASED ON ION CHARGE EXCHANGE</b>  Joe Khachan and Lachlan Blackhall

**SESSION 2-F-1**

Tuesday 9/18/2007	Room F	<b>SYSTEMS 1</b> Chaired by:
----------------------	--------	---------------------------------

8.30	<b>IEPC -2007- 19</b>	<b>MICRO-NEWTON RIT POWER CONTROL UNIT DEVELOPMENT</b>  Matthias Gollor, Michael Boss, Rafael Braeg, Andreas Franke, Frank Herty and Bernhard Kiewe
9.00	<b>IEPC -2007- 111</b>	<b>EUROPEAN STUDENT MOON ORBITER SOLAR ELECTRIC PROPULSION SUBSYSTEM ARCHITECTURE. AN ALL □ ELECTRIC SPACECRAFT</b>  Michele Coletti, Angelo Grubisic, Neil Wallace and Nigel Wells
9.30	<b>IEPC -2007- 307</b>	<b>ANALYSIS OF HALL EFFECT THRUSTERS APPLICATION TO FORMATION FLYING AND DRAG COMPENSATION</b>  Paola Rossetti and Dominique Valentian
10.00	<b>IEPC -2007- 294</b>	<b>INNOVATIVE ARCHITECTURES DEVELOPED FOR THE POWER SUPPLY CONTROL UNITS OF THE ION THRUSTERS FOR INCOMING PROGRAMS</b>  Cristina Tato

**SESSION 2-F-2**

Tuesday 9/18/2007	Room F	<b>SYSTEMS 2</b> Chaired by:
----------------------	--------	---------------------------------

11.00	<b>IEPC -2007- 21</b> <b>GENERIC HIGH VOLTAGE POWER SUPPLIES (HVPS) WITH OPTIMUM EFFICIENCY AND MULTI-RANGE</b>  Matthias Gollor, Michael Boss, Frank Herty and Bernhard Kiewe
11.30	<b>IEPC -2007- 155</b> <b>ADVANCED FLUIDIC COMPONENTS FOR ELECTRIC AND COLD GAS PROPULSION APPLICATIONS: REVIEW OF STATUS OF ACHIEVEMENTS AT TAS-I FLORENCE</b>  Giovanni Noci, Piero Siciliano, Giovanni Matticari and Leonardo Fallerini
12.00	<b>IEPC -2007- 279</b> <b>PROPELLANT THROUGHPUT CAPABILITY OF THE DAWN ION THRUSTERS</b>  John Brophy
12.30	<b>IEPC -2007- 346</b> <b>CONTINUING DEVELOPMENT OF THE PROPORTIONAL FLOW CONTROL VALVE (PFCV) FOR ELECTRIC PROPULSION SYSTEMS</b>  David Pehrson

**SESSION 2-G-1**

Tuesday 9/18/2007	Room G	<b>EP HISTORY</b> Chaired by:
----------------------	--------	----------------------------------

8.30	<b>IEPC -2007- 109</b> <b>DEVELOPMENT AND FLIGHT TESTING OF THE FIRST ELECTRIC PROPULSION SYSTEM IN SPACE</b>  Victor Khrabrov
9.00	<b>IEPC -2007- 142</b> <b>HISTORY OF THE HALL THRUSTERS DEVELOPMENT IN USSR</b>  Vladimir Kim, Konstantin Kozubsky, Vyacheslav Murashko and Veniamin Semenkin
9.30	<b>IEPC -2007-</b>
10.00	<b>IEPC -2007- 319</b> <b>MHD CHANNEL THEORY: A REVIEW</b>  Tommaso Misuri and Mariano Andrenucci
11.00	<b>IEPC -2007- 290</b> <b>A PULSED PLASMA THRUSTER USING MERCURY PROPELLANT: A LATE-1960S PROJECT AT THE ROYAL AEROSPACE ESTABLISHMENT, FARNBOROUGH</b>  David Fearn
11.30	<b>IEPC -2007-</b>
12.00	<b>IEPC -2007-</b>
12.30	<b>IEPC -2007-</b>

# TUESDAY, 18th of September 2007, 14:00 - 18:30

## SESSION 2-A-3

Tuesday 9/18/2007	Room A	HALL THRUSTER PHYSICS AND MODELING 5  Chaired by:
----------------------	--------	---

14.00	IEPC -2007-	
14.30	IEPC -2007-	
15.00	IEPC -2007- 91	MONTE CARLO SIMULATION OF NEUTRAL XENON FLOWS IN SPT-ATON  yan guojun
15.30	IEPC -2007- 316	STUDY ON PLASMA LENS OF HALL THRUSTERS IN DIFFERENT OPERATING MODES  Jie Li, Da-Ren Yu and Yong Li

## SESSION 2-A-4

Tuesday 9/18/2007	Room A	HALL THRUSTER PHYSICS AND MODELING 6  Chaired by:
----------------------	--------	---

16.30	IEPC -2007-	
17.00	IEPC -2007-	
17.30	IEPC -2007- 52	ELECTRON KINETIC EFFECTS AND BEAM-RELATED INSTABILITIES IN HALL THRUSTERS  Igor Kaganovich, Yevgeny Raitses, Dmytro Sydorenko and Andrey Smolyakov
18.00	IEPC -2007-	

**SESSION 2-B-3**Tuesday  
9/18/2007

Room B

**HALL THRUSTER DEVELOPMENT 5**

Chaired by:

14.00	<b>IEPC -2007- 151</b>	<b>INVESTIGATION OF THE SPT OPERATION AND DISCHARGE CHAMBER WALL EROSION RATE UNDER INCREASED DISCHARGE VOLTAGES</b>  Andre Bouchoule, Vladimir Kim, Vyacheslav Kozlov, Vyacheslav Murashko, Alexander Nesterenko, Alexander Skrylnikov and Evgeny Sidorenko
14.30	<b>IEPC -2007- 166</b>	<b>MEASUREMENTS AND MODELLING OF THE INSIDE CHANNEL DISPOSITION OF THE SPUTTERED CERAMICS ON HET PPSX000-ML. A TOOL TO PREDICT THE EROSION ALONG THE THRUSTER</b>  Pagnon Daniel, Pellerin Stéphane, Lasgorceix Pascal and Legentil Claude
15.00	<b>IEPC -2007-</b>	
15.30	<b>IEPC -2007- 214</b>	<b>SIMULATION OF THE ENERGY DEPOSITION ON DIELECTRIC WALL SURFACES IN HALL THRUSTERS</b>  Cristian Focsa, Daniel Pagnon, Nadia Pellerin, Stéphane Pellerin, Patrick Echegut and Michel Dudeck

**SESSION 2-B-4**Tuesday  
9/18/2007

Room B

**HALL THRUSTER DEVELOPMENT 6**

Chaired by:

16.30	<b>IEPC -2007- 39</b>	<b>DIVERGING CUSPED-FIELD HALL THRUSTER (DCHT)</b>  Daniel Courtney and Manuel Martinez-Sanchez
17.00	<b>IEPC -2007- 85</b>	<b>DEVELOPMENT AND THRUST PERFORMANCE OF A MICROWAVE DISCHARGE HALL THRUSTER</b>  Hirohisa Kuwano, Hitoshi Kuninaka and Hideki Nakashima
17.30	<b>IEPC -2007-</b>	
18.00	<b>IEPC -2007- 221</b>	<b>TWO-MODES OPERATION OF SPT OF SECOND GENERATION</b>  Antonina Bugrova, Alexey Desyatskov, Vadim Kharchevnikov, Alexander Lipatov and Stephan Zurbach

**SESSION 2-C-3**Tuesday  
9/18/2007

Room C

**PULSED PLASMA THRUSTERS 3**

Chaired by:

14.00	<b>IEPC -2007- 132</b>	<b>APPT HEAT FLUXES MEASUREMENT AND CALCULATION</b>  Nikolay Antropov, Garry Popov, Valery Tyutin, Vladimir Jakovlev, Michael Kazeev and Vladimir Kozlov
14.30	<b>IEPC -2007- 269</b>	<b>ELECTROMAGNETIC EMISSIONS FROM DC TO 17 GHZ FROM A PULSED PLASMA THRUSTER (PPT)</b>  Michael Garrett and Edward Beiting
15.00	<b>IEPC -2007- 165</b>	<b>CURRENT SHEET FORMATION IN A CONICAL THETA PINCH FARADAY ACCELERATOR WITH RADIO-FREQUENCY ASSISTED DISCHARGE</b>  Ashley Hallock, Edgar Choueiri, Kurt A. Polzin
15.30	<b>IEPC -2007- 125</b>	<b>MICRO PULSED PLASMA THRUSTER DEVELOPMENT</b>  Sabrina pottinger and carsten scharlemann

**SESSION 2-C-4**

Tuesday 9/18/2007	Room C	<b>PULSED PLASMA THRUSTERS 4</b> Chaired by:
----------------------	--------	---

16.30	<b>IEPC -2007- 116</b>	<b>PULSED PLASMA THRUSTER USING POWDERED PROPELLANT</b>  Takefumi Saito, Hiroyuki Koizumi and Hitoshi Kuninaka
17.00	<b>IEPC -2007- 130</b>	<b>DEVELOPMENT OF VERNIER PROPULSION SYSTEM FOR MICRO SATELLITE ON THE BASIS OF ABLATIVE PULSED PLASMA THRUSTER</b>  Alexander Bogaty and Grigory Diakonov
17.30	<b>IEPC -2007- 238</b>	<b>CAPILLARY DISCHARGE BASED PULSED PLASMA THRUSTERS</b>  Jean-Luc Cambier, Marcus Young, Leonid Pekker and Anthony Pancotti
18.00	<b>IEPC -2007-</b>	

**SESSION 2-D-3**

Tuesday 9/18/2007	Room D	<b>ION THRUSTERS 5</b> Chaired by:
----------------------	--------	---------------------------------------

14.00	<b>IEPC -2007- 220</b>	<b>OPTIMISED THRUST STEERING OF A GRIDDED ION ENGINE</b>  Peter Jameson
14.30	<b>IEPC -2007-</b>	
15.00	<b>IEPC -2007- 226</b>	<b>PRELIMINARY STUDY ON RADIO FREQUENCY NEUTRALIZER FOR ION ENGINE</b>  Tomoyuki Hatakeyama
15.30	<b>IEPC -2007- 43</b>	<b>FEASIBILITY STUDY ON VISUALIZED ION THRUSTER</b>  Yoshinori Nakayama and Yasuhiro Teraura

**SESSION 2-D-4**

Tuesday 9/18/2007	Room D	<b>ION THRUSTERS 6</b> Chaired by:
----------------------	--------	---------------------------------------

16.30	<b>IEPC -2007- 101</b>	<b>INTERNAL PLASMA STRUCTURE MEASUREMENTS IN A MINIATURE MICROWAVE DISCHARGE ION THRUSTER</b>  Shinya KONDO, Takayuki CHIKAOKA, Naoji YAMAMOTO, Amane Majima, Takao Yamada, Kentaro Tomita, Kiichiro Uchino and Hideki NAKASHIMA
17.00	<b>IEPC -2007- 218</b>	<b>THE <math>\mu</math>NRIT-4 ION ENGINE: A FIRST STEP TOWARDS A EUROPEAN MINI-ION ENGINE SYSTEM DEVELOPMENT.</b>  Davar Feili, Davina M. Di Cara, Hans J. Leiter, Jose G. Del Amo, Horst W. Loeb, Stefan Weis, Danny Kirmse, Hans Müller and Bruno K. Meyer
17.30	<b>IEPC -2007- 24</b>	<b>ION THRUSTER DEVELOPMENT AT L-3 ETI FOR SMALL SATELLITE APPLICATIONS</b>  William Tighe, Kuei-Ru Chien, Rafael Spears and Dan Goebel
18.00	<b>IEPC -2007-</b>	

**SESSION 2-E-3**

Tuesday 9/18/2007	Room E	<b>ADVANCED PROPULSION CONCEPTS 4</b> Chaired by:
----------------------	--------	--

14.00	<b>IEPC -2007-</b>	
14.30	<b>IEPC -2007- 355</b>	<b>DEVELOPMENT OF THE MINI-HELICON THRUSTER AT MIT</b> Oleg Batishchev, Nareg Sinenian, Murat Celik and Martinez-Sanchez Manuel
15.00	<b>IEPC -2007- 57</b>	<b>ON SUPERSONIC HYDROGEN HEATING: THE TIHTUS ENGINE</b> Hannah Böhrk and Monika Auweter-Kurtz
15.30	<b>IEPC -2007- 223</b>	<b>FEASIBILITY STUDY OF PLASMA CHEMICAL THRUSTER</b> Junichiro Aoyagi, Jun Yokote, Akira Kakami, Kyoichi Kuriki, Takeshi Tachibana and Haruki Takegahara

**SESSION 2-E-4**

Tuesday 9/18/2007	Room E	<b>ADVANCED PROPULSION CONCEPTS 5</b> Chaired by:
----------------------	--------	--

16.30	<b>IEPC -2007- 179</b>	<b>FEASIBILITY OF ELECTROSTATIC MICROPARTICLE THRUSTERS</b> Thomas Trottenberg, Holger Kersten and Horst Neumann
17.00	<b>IEPC -2007- 186</b>	<b>PHYSICAL MODELS AND PERFORMANCE IMPLICATIONS FOR THE NANOPARTICLE FIELD EXTRACTION THRUSTER</b> Thomas Liu, Louis Musinski, Michael Keidar, Alec Gallimore and Brian Gilchrist
17.30	<b>IEPC -2007- 80</b>	<b>NANOPARTICLE FIELD EXTRACTION THRUSTER (NANOFET): DESIGN AND RESULTS OF THE MICROPARTICLE EMITTER PROTOTYPE</b> Louis Musinski, Thomas Liu, Brian Gilchrist, Michael Keidar and Alec Gallimore
18.00	<b>IEPC -2007- 309</b>	<b>REVIEW OF RF PLASMA THRUSTER DEVELOPMENT</b> Ivana Hrbud

**SESSION 2-F-3**

Tuesday 9/18/2007	Room F	<b>SYSTEMS 3</b> Chaired by:
----------------------	--------	---------------------------------

14.00	<b>IEPC -2007-</b>	
14.30	<b>IEPC -2007- 49</b>	<b>THE PLASMA PLUME OF THE ISS PLASMA CONTACTOR UNIT UNDER THE EFFECT OF THE GEOMAGNETIC FIELD</b> Ekaterina Tverdokhlebova, Anatoly Korsun, Georgy Karabadzhak and Flur Gabdullin
15.00	<b>IEPC -2007- 257</b>	<b>ENVIRONMENTAL EFFECTS FROM XENON ELECTRIC PROPULSION</b> Mark Crofton
15.30	<b>IEPC -2007- 1</b>	<b>CALCULATING SPUTTER RATE ANGULAR DEPENDENCE USING OPTICAL PROFILOMETRY</b> Alexander Barrie, Lubos Brieda, Michael Nakles, William Hargus and William Larson

**SESSION 2-F-4**

Tuesday 9/18/2007	Room F	<b>FLIGHT EXPERIENCE</b> Chaired by:
----------------------	--------	---

16.30	<b>IEPC -2007- 60</b>  Alain Demairé and Howard Gray	<b>PLASMA PROPULSION SYSTEM FUNCTIONAL CHAIN FIRST THREE YEARS IN ORBIT ON EUROSTAR 3000</b>
17.00	<b>IEPC -2007- 84</b>  Toshiyuki Ozaki, Yukikazu Kasai, Takafumi Nakagawa, Eiji Nishida, Takashi Itoh, Kenichi Kajiwara and Masafumi Ikeda	<b>IN ORBIT OPERATION OF 20MN CLASS XENON ION ENGINE FOR ETS-VIII</b>
17.30	<b>IEPC -2007- 9</b>  Hitoshi Kuninaka, Kazutaka Nishiyama, Yukio Shimizu, Tetsuya Yamada, Ikko Funaki, Satoshi Hosoda and Hiroyuki Koizumi	<b>REIGNITION OF MICROWAVE DISCHARGE ION ENGINES ON HAYABUSA FOR HOMEWARD JOURNEY</b>
18.00	<b>IEPC -2007-</b>	

**SESSION 2-G-3**

Tuesday 9/18/2007	Room G	<b>OVERVIEWS</b> Chaired by:
----------------------	--------	---------------------------------

14.00	<b>IEPC -2007- 322</b>  Mariano Andrenucci, Leonardo Biagioni, Fabio Ceccanti, Salvo Marcuccio, Fabrizio Paganucci, Paola Rossetti and Massimo Saverdi	<b>ELECTRIC PROPULSION ACTIVITIES AT ALTA: FROM MICROPROPULSION TO MACROPROPULSION</b>
14.30	<b>IEPC -2007- 262</b>  Shoji Kitamura, Kenichi Kajiwara, Hiroshi Nagano and Yukio Hayakawa	<b>DEVELOPMENT HISTORY AND CURRENT STATUS OF DC-TYPE ION ENGINES AT JAXA</b>
15.00	<b>IEPC -2007- 271</b>  Thomas Randolph	<b>QUALIFICATION OF COMMERCIAL ELECTRIC PROPULSION SYSTEMS FOR DEEP SPACE MISSIONS</b>
15.30	<b>IEPC -2007- 206</b>  Denis Arrat, Enrico Chesta, Franck Darnon, Stephan D'Escrivan and Nicolas Pillet	<b>CNES ELECTRIC PROPULSION ACTIVITIES OVERVIEW: FLIGHT PROGRAMS, R&amp;T ACTIONS, NOVEL MISSION DESIGNS</b>
16.00	<b>IEPC -2007- 20</b>  Michael Boss and Matthias Gollor	<b>ELECTRIC PROPULSION ELECTRONICS ACTIVITIES IN ASTRIUM GERMANY</b>
16.30	<b>IEPC -2007- 328</b>  Eric Pencil, Leonard Dudzinski and John Dankanich	<b>RECENT DEVELOPMENTS IN ELECTRIC PROPULSION UNDER NASA'S IN SPACE PROPULSION TECHNOLOGY PROJECT</b>
17.00	<b>IEPC -2007- 354</b>  Leonard Dudzinski, Eric Pencil and John Dankanich	<b>ELECTRIC PROPULSION REQUIREMENTS AND MISSION ANALYSIS UNDER NASA'S IN SPACE PROPULSION TECHNOLOGY PROJECT</b>
17.30	<b>IEPC -2007- 301</b>  Michel Lyszyk	<b>THALES ALENIA SPACE EXPERIENCE ON PLASMA PROPULSION</b>
18.00	<b>IEPC -2007- 163</b>  Norbert Püttmann, Ralf Dittmann and Hans Meusemann	<b>ELECTRIC PROPULSION IN GERMANY: CURRENT PROGRAM AND NOVEL ASPECTS</b>

# WEDNESDAY, 19th of September 2007, 8:30 - 13:00

## SESSION 3-A-1

Wednesday 9/19/2007	Room A	HALL THRUSTER PHYSICS AND MODELING 7 Chaired by:
------------------------	--------	---

8.30	IEPC -2007- 51	EFFECT OF A MAGNETIC FIELD IN SIMULATING THE PLUME-FIELD OF AN ANODE LAYER HALL THRUSTER Yongjun Choi, Michael Keidar and Iain Boyd
9.00	IEPC -2007- 200	NUMERICAL CALCULATION OF WALL EROSION ON HALL THRUSTERS USING 2D-HYBRID-PIC MODELING Hiroyuki Koizumi, Kimiya Komurasaki and Yoshihiro Arakawa
9.30	IEPC -2007- 95	NUMERICAL ANALYSIS OF ANODE SHEATH STRUCTURE TRANSITION IN AN ANODE-LAYER TYPE HALL THRUSTER Shigeru Yokota, Kimiya Komurasaki and Yoshihiro Arakawa
10.00	IEPC -2007-	

## SESSION 3-A-2

Wednesday 9/19/2007	Room A	HALL THRUSTER PHYSICS AND MODELING 8 Chaired by:
------------------------	--------	---

11.00	IEPC -2007- 261	THEORETICAL ANALYSIS OF THE INFLUENCE OF THE POWER SUPPLY ON BREATHING OSCILLATIONS IN HALL THRUSTERS Serge Barral and Eduardo Ahedo
11.30	IEPC -2007- 247	CHARACTERIZATION OF HIGH FREQUENCY PLASMA OSCILLATIONS IN A HALL EFFECT THRUSTER BONHOMME Gerard, LEMOINE Nicolas, BROCHARD Frederic, LAZURENKO Alexey, MAZOUFFRE Stephane and DUDECK Michel
12.00	IEPC -2007- 124	INFLUENCE OF AZIMUTHAL INSTABILITIES ON ELECTRON MOTION IN A HALL EFFECT THRUSTER Jaime Perez-Luna, G.J.M. Hagelaar, Laurent Garrigues, Nicolas Dubuit and Jean Pierre Boeuf
12.30	IEPC -2007-	

**SESSION 3-B-1**

Wednesday 9/19/2007 Room B HALL THRUSTER DEVELOPMENT 7  
Chaired by:

8.30	IEPC -2007-	
9.00	IEPC -2007- 38	<b>REVIEW OF HALL THRUSTER NEUTRAL FLOW DYNAMICS</b> Bryan Reid, Alec Gallimore and Richard Hofer
9.30	IEPC -2007- 46	<b>DISTRIBUTION OF UNIONIZED PROPELLANT XENON IN A HALL THRUSTER PLUME</b> Makoto Matsui, Shigeru Yokota, Daichi Sakoh, Kimiya Komurasaki and Yoshihiro Arakawa
10.00	IEPC -2007- 131	<b>PROBE MEASUREMENTS IN THE CHANNEL OF 1.5 KW HALL THRUSTER WITH DISCHARGE VOLTAGE UP TO 1000 V</b> Mikhail Belikov, Oleg Gorshkov, Alexander Lovtsov and Andrey Shagayda

**SESSION 3-B-2**

Wednesday 9/19/2007 Room B HALL THRUSTER DEVELOPMENT 8  
Chaired by:

11.00	IEPC -2007- 224	<b>PPS@-X000ML HALL EFFECT THRUSTER: PERFORMANCES AND EROSION'S SPECTROSCOPY IN A LARGE RANGE OF WORKING PARAMETERS</b> Daniel Pagnon, Stéphane Pellerin, Pascal Lasgorceix and Claude Legentil
11.30	IEPC -2007- 164	<b>PPS@1350-G QUALIFICATION STATUS 10500 H</b> Frederic Marchandise, Nicolas Cornu, Franck Darnon and Denis Estublier
12.00	IEPC -2007- 62	<b>RUSSIAN FLIGHT HALL THRUSTERS SPT-70 &amp; SPT-100 AFTER CATHODE CHANGE START DURING 20-25 MS</b> Vjacheslav Murashko, Aleksandr Koryakin, Aleksandr Nesterenko, Sergey Olotin, Anatoliy Oranskiy, Andriy Loyan, Mikola Koshelev, Volodimir Bilokon and Sergiy Nesterenko
12.30	IEPC -2007- 177	<b>PERFORMANCE MEASUREMENTS FROM A CLUSTER OF FOUR HALL THRUSTERS</b> Robert Lobbia and Alec Gallimore

**SESSION 3-C-1**

Wednesday 9/19/2007 Room C MPD THRUSTERS 3  
Chaired by:

8.30	IEPC -2007- 331	<b>MAGNETIC FLUCTUATIONS IN A MPD THRUSTER WITH PASSIVE SYSTEMS FOR THE CONTROL OF MHD INSTABILITIES</b> Fabrizio Paganucci, M. Zuin, V. Antoni, R. Cavazzana, M. De Tata, E. Martines, G. Serianni, F. Tarallo, M. Andrenucci and P. Rossetti
9.00	IEPC -2007- 158	<b>SOLID STATE MPD THRUSTER WITH APPLIED MAGNETIC FIELD</b> Michele Coletti, Andrea Balestra, Matteo Sensini and Giorgio Paccani
9.30	IEPC -2007- 159	<b>SPECTROSCOPIC TEMPERATURE MEASUREMENT IN A APPLIED FIELD MPD</b> Michele Coletti, Sandra Ciampone, Giorgio Paccani and Giuseppe Mazzitelli
10.00	IEPC -2007- 141	<b>EXPERIMENTAL INVESTIGATIONS OF MAGNETOPLASMA DYNAMIC THRUSTERS WITH COAXIAL APPLIED MAGNETIC FIELD</b> Daniel Haag, Monika Auweter-Kurtz, Markus Fertig, Helmut Kurtz and Michael Winter

**SESSION 3-C-2**

Wednesday 9/19/2007	Room C	<b>MPD THRUSTERS 4</b> Chaired by:
------------------------	--------	---------------------------------------

11.00	<b>IEPC -2007- 138</b> <b>NUMERICAL SIMULATIONS OF MAGNETOPLASMDYNAMIC THRUSTERS WITH COAXIAL APPLIED MAGNETIC FIELD</b>  Daniel Haag, Monika Auweter-Kurtz, Markus Fertig, Helmut Kurtz and Michael Winter
11.30	<b>IEPC -2007- 87</b> <b>NUMERICAL STUDY OF ELECTRODE GEOMETRY EFFECTS ON FLOWFIELD IN TWO-DIMENSIONAL MPD THRUSTERS</b>  Kenichi Kubota, Ikko Funaki and Yoshihiro Okuno
12.00	<b>IEPC -2007- 281</b> <b>SIMULATION OF ARGON PLASMA FLOWS IN MAGNETOPLASMDYNAMIC THRUSTERS</b>  Mohsen H. Moghimi and Mohammad Farshchi
12.30	<b>IEPC -2007- 353</b> <b>APPLICATION OF A VARIATIONAL MHD PRINCIPLE TO THE STUDY OF PLASMA THRUSTERS</b>  Tommaso Andreussi and Francesco Pegoraro

**SESSION 3-D-1**

Wednesday 9/19/2007	Room D	<b>FEEP THRUSTERS 1</b> Chaired by:
------------------------	--------	--

8.30	<b>IEPC -2007- 150</b> <b>ELECTRIC PROPULSION DIAGNOSTIC PACKAGE FOR THE FEEP THRUSTER ON LISA PATHFINDER: REVIEW OF STATUS OF ACHIEVEMENTS AT TAS-I</b>  Marco Capacci, Maurizio Materassi, Giovanni Matticari and Emiliano Artina
9.00	<b>IEPC -2007- 140</b> <b>3000 HOUR LIFE TIME TEST OF AN INDIUM FEEP CLUSTER FOR THE LISA PATHFINDER MISSION</b>  Angelo Genovese and carsten scharlemann
9.30	<b>IEPC -2007-</b>
10.00	<b>IEPC -2007- 123</b> <b>FIELD EMISSION PERFORMANCE OF MACROSCOPICALLY GATED MULTIWALLED CARBON NANOTUBES FOR A SPACECRAFT NEUTRALISER</b>  Karen Aplin, Barry Kent, Chris Castelli and Wenhui Song

**SESSION 3-D-2**

Wednesday 9/19/2007	Room D	<b>FEEP THRUSTERS 2</b> Chaired by:
------------------------	--------	--

11.00	<b>IEPC -2007- 122</b> <b>STATUS OF THE INDIUM FEEP MICROPROPULSION SUBSYSTEM DEVELOPMENT FOR LISA PATHFINDER</b>  Carsten Scharlemann and Martin Tajmar
11.30	<b>IEPC -2007- 154</b> <b>DEVELOPMENT AND QUALIFICATION OF A NEUTRALIZER DEVICE FOR THE FEEP MICRO PROPULSION ON MICROSCOPE AND LISA PATHFINDER</b>  Maurizio Materassi, Marco Capacci, Giovanni Noci and Giovanni Matticari
12.00	<b>IEPC -2007- 323</b> <b>STATUS OF THE FEEP-150 THRUSTER DEVELOPMENT FOR THE LISA PATHFINDER AND MICROSCOPE MISSIONS</b>  Fabio Ceccanti, Angela Rossodivita, Emilio Rapposelli, Ugo Cesari, Leonardo Priami and Mirko Spurio
12.30	<b>IEPC -2007- 363</b> <b>LISA PATHFINDER FIELD EMISSION THRUSTER SYSTEM DEVELOPMENT PROGRAM</b>  Davide Nicolini

**SESSION 3-E-1**

Wednesday 9/19/2007 Room E **DIAGNOSTICS 1**  
Chaired by:

8.30	IEPC -2007- 82	<b>CHARACTERIZING SPECIES COMPOSITION IN RADIO-FREQUENCY PLASMA PRODUCED FROM WATER VAPOR</b> Sonca Nguyen, Kristina Lemmer, Alec Gallimore and John Foster
9.00	IEPC -2007- 229	<b>OPTOGALVANIC AND LASER-INDUCED FLUORESCENCE SPECTROSCOPY OF THE ZEEMAN EFFECT IN XENON</b> Timothy Smith, David Huang, Bailo Ngom and Alec Gallimore
9.30	IEPC -2007- 118	<b>THRUST MEASUREMENTS WITH THE ONERA MICRO-NEWTON BALANCE</b> Jean Bonnet, Denis Packan and Simone Rocca
10.00	IEPC -2007-	

**SESSION 3-E-2**

Wednesday 9/19/2007 Room E **DIAGNOSTICS 2**  
Chaired by:

11.00	IEPC -2007- 167	<b>SPECIFIC LABORATORY TESTING EQUIPMENT &amp; METHODOLOGY FOR SPUTTERING TESTS OF ELECTRIC PROPULSION MATERIALS</b> Iñaki Caro, Pablo Corengia, Jon Ustarroz, Jose Antonio Gonzalez del Amo, Jesus Marcos and Eduardo Ahedo
11.30	IEPC -2007- 168	<b>SIMP-LEX: SYSTEMATIC GEOMETRY VARIATION USING THRUST BALANCE MEASUREMENTS</b> Anuscheh Nawaz, Georg Herdrich, Monika Auweter-Kurtz and Helmut Kurtz
12.00	IEPC -2007- 252	<b>NEAR-FIELD LASER-INDUCED FLUORESCENCE VELOCIMETRY OF NEUTRAL XENON IN A 6-KW HALL THRUSTER PLUME</b> Timothy Smith, David Huang, Bryan Reid and Alec Gallimore
12.30	IEPC -2007- 185	<b>SPECTROSCOPIC ELECTRON TEMPERATURE MEASUREMENT OF THE RECOMBINING PLASMA ON THE VASIMR EXPERIMENT</b> Ella M. Sciamma, Roger D. Bengtson, Franklin R. Chang-Diaz, Jared P. Squire, Verlin T. Jacobson and William J. Chancery

**SESSION 3-F-1**

Wednesday 9/19/2007 Room F **MISSION ANALYSIS AND DESIGN 3**  
Chaired by:

8.30	IEPC -2007- 304	<b>RADIOISOTOPE ELECTRIC PROPULSION TRANSFERS TO THE THE OUTER PLANETS IN TWO AND THREE BODY MODELS</b> Cosmo Casaregola, Pierpaolo Pergola, Koen Geurts, Mariano Andrenucci and Leonardo Biagioni
9.00	IEPC -2007- 83	<b>THE DAWN ION PROPULSION SYSTEM - GETTING TO LAUNCH</b> John Brophy, M. Andy Etters, Jason Gates, Charles Garner, Marlin Klatte, John Lo, Michael Marcucci, Steven Mikes, Masashi Mizukami, Barry Nakazono and Greg Pixler
9.30	IEPC -2007- 274	<b>SOLELY EP BASED ORBIT CONTROL SYSTEM ON SMALL GEO SATELLITE</b> Hendrik Lübberstedt
10.00	IEPC -2007- 227	<b>MULTI-CHANNEL HALL-EFFECT THRUSTERS: MISSION APPLICATIONS AND ARCHITECTURE TRADE-OFFS</b> Olivier Duchemin, Anthony Lorand, Michael Notarianni, Dominique Valentian and Enrico Chesta

**SESSION 3-F-2**

Wednesday 9/19/2007	Room F	<b>MISSION ANALYSIS AND DESIGN 4</b> Chaired by:
------------------------	--------	---

11.00	<b>IEPC -2007- 212</b>	<b>THE ANALYSIS OF INFLUENCE OF ELECTRICAL PROPULSION CHARACTERISTICS ON EFFICIENCY OF TRANSPORT MANEUVERS</b> Mikhail Konstantinov
11.30	<b>IEPC -2007- 352</b>	<b>ELECTRIC SAIL PROPULSION MODELING AND MISSION ANALYSIS</b> Pekka Janhunen, Giovanni Mengali and Alessandro A. Quarta
12.00	<b>IEPC -2007- 349</b>	<b>A SMALL EP SPACECRAFT FOR PLASMA PHYSICS EXPERIMENTS</b> Salvo Marcuccio, Antonio D'Alfonso and Francesco Pegoraro
12.30	<b>IEPC -2007-</b>	

**SESSION 3-G-1**

Wednesday 9/19/2007	Room G	<b>BASIC PROCESSES 1</b> Chaired by:
------------------------	--------	---

8.30	<b>IEPC -2007- 180</b>	<b>MAGNETIC NOZZLE AND PLASMA DETACHMENT SCENARIO</b> Boris Breizman, Mikhail Tushentsov and Alexey Arefiev
9.00	<b>IEPC -2007- 196</b>	<b>EFFECTS OF HELICON WAVE PROPAGATION BASED ON A CONICAL ANTENNA DESIGN: PART I</b> Michael Reilly, Garrett Reed, George Miley, David Kirtley and William Hargus
9.30	<b>IEPC -2007-</b>	
10.00	<b>IEPC -2007- 272</b>	<b>DEVELOPMENT STATUS OF THE NON-AMBIPOlar ELECTRON SOURCE</b> Ben Longmier and Noah Hershkowitz

**SESSION 3-G-2**

Wednesday 9/19/2007	Room G	<b>BASIC PROCESSES 2</b> Chaired by:
------------------------	--------	---

11.00	<b>IEPC -2007- 153</b>	<b>CONFINEMENT TIME IN AN ELECTRON TRAP USED FOR ELECTRON-MOBILITY STUDIES IN HALL THRUSTER-LIKE FIELDS</b> Emily Fossum and Lyon B. King
11.30	<b>IEPC -2007- 285</b>	<b>A XENON COLLISIONAL-RADIATIVE MODEL FOR PLASMA THRUSTER OPTICAL DIAGNOSTICS AND MODELING</b> Konstantinos Katsonis, Jean Bonnet, Denis Packan, Chloe Berenguer, R.E.H. Clark, Marguerite Cornille and G. Maynard
12.00	<b>IEPC -2007- 237</b>	<b>FUNDAMENTALS OF DISCHARGE INITIATION IN PULSED PLASMA THRUSTERS: THRESHOLD CRITERIA FOR UNDERVOLTAGE BREAKDOWN</b> James Cooley and Edgar Choueiri
12.30	<b>IEPC -2007-</b>	

# THURSDAY, 20th of September 2007, 8:30 - 13:00

## SESSION 4-A-1

Thursday 9/20/2007	Room A	<b>HALL THRUSTER PHYSICS AND MODELING 9</b> Chaired by:
-----------------------	--------	--

8.30	<b>IEPC -2007- 310</b>	<b>A [RE(RE-)] EXAMINATION OF ELECTRON MOTION IN HALL THRUSTER FIELDS</b>  Enrico A. De Marco and Mariano Andreucci
9.00	<b>IEPC -2007- 317</b>	<b>NUMERICAL SIMULATION FOR MAGNETIC MIRROR EFFECT ON ELECTRON BEHAVIOR IN A HALL THRUSTER</b>  Da-Ren Yu, Hui Liu and Zhi-Wen Wu
9.30	<b>IEPC -2007- 79</b>	<b>LOW FREQUENCY INSTABILITY AND ENHANCED TRANSFER OF ELECTRONS IN NEAR-ANODE REGION OF HALL THRUSTER</b>  Alexander Kapulkin and Moshe Guelman
10.00	<b>IEPC -2007- 188</b>	<b>ANALYTICAL EXTRACTION OF PLASMA PROPERTIES USING A HALL THRUSTER EFFICIENCY ARCHITECTURE</b>  Daniel Brown, William Larson, James Haas and Alec Gallimore

## SESSION 4-A-2

Thursday 9/20/2007	Room A	<b>HALL THRUSTER PHYSICS AND MODELING 10</b> Chaired by:
-----------------------	--------	---

11.00	<b>IEPC -2007- 311</b>	<b>HIGH POWER HALL THRUSTERS DESIGN OPTIONS</b>  Francesco Battista, Tommaso Misuri, Christian Barbieri and Mariano Andreucci
11.30	<b>IEPC -2007- 254</b>	<b>NUMERICAL SIMULATION OF THE ZEEMAN EFFECT FROM LASER-INDUCED FLUORESCENCE OF NEUTRAL XENON</b>  Bailo Ngom, Timothy Smith and Alec Gallimore
12.00	<b>IEPC -2007- 365</b>	<b>ION CURRENT TRANSPORT IN HALL THRUSTERS</b>  Ira Katz, Richard R. Hofer, and Dan M. Goebel
12.30	<b>IEPC -2007- 343</b>	<b>3D MODEL OF ELECTRON DYNAMICS NEAR THE OUTLET SECTION OF SPT THRUSTER</b>  Grigory Toropov

**SESSION 4-B-1**

Thursday 9/20/2007	Room B	<b>HALL THRUSTER DEVELOPMENT 9</b> Chaired by:
-----------------------	--------	---

8.30	<b>IEPC -2007- 144</b>	<b>MASS-SPECTROMETRIC MEASUREMENTS OF A PARTICLE CHARGE STRUCTURE IN THE PLASMA JET OF THE STATIONARY PLASMA THRUSTER.</b> Alexander Veselovzorov, Eugeny Barkalov, Alexandre Pogorelov, Edward Svirsky and Vladimir Smirnov
9.00	<b>IEPC -2007- 69</b>	<b>NON-INVASIVE PLASMA DIAGNOSTIC INSIDE A HALL THRUSTER DISCHARGE</b> Rostislav Spektor and Edward Beiting
9.30	<b>IEPC -2007- 139</b>	<b>LASER INDUCED ELECTRON BURSTS FOR THE DIAGNOSTIC OF HALL THRUSTERS PLASMA</b> Titaina GIBERT, Alain LEUFROY and Luc ALBAREDE
10.00	<b>IEPC -2007-</b>	

**SESSION 4-B-2**

Thursday 9/20/2007	Room B	<b>HALL THRUSTER DEVELOPMENT 10</b> Chaired by:
-----------------------	--------	--

11.00	<b>IEPC -2007- 92</b>	<b>INVESTIGATION OF INTERNAL PLASMA STRUCTURE IN AN ANODE-LAYER HALL THRUSTER</b> Nanako Takahashi, Naoji Yamamoto, Shigeru Yokota, Kimiya Komurasaki, Hideki Nakashima and Yoshihiro Arakawa
11.30	<b>IEPC -2007- 336</b>	<b>INFLUENCES OF MAGNETIC FIELD TOPOGRAPHY AND DISCHARGE CHANNEL STRUCTURE ON PERORMANCE OF ANODE-LAYER HALL THRUSTERS</b> Seiro Yuge, Yoshihiro Kuwamura and Hirokazu Tahara
12.00	<b>IEPC -2007- 5</b>	<b>SUMMARY OF THE VHITAL THRUSTER TECHNOLOGY DEMONSTRATION PROGRAM: A TWO-STAGE BISMUTH-FED VERY HIGH SPECIFIC IMPULSE TAL</b> Anita Sengupta, Colleen Marrese Reading, Sasha Semekin, Rich Hofer, Leonid Zakharenkov and Sergey Tverdokhlebov
12.30	<b>IEPC -2007- 128</b>	<b>DEVELOPMENT AND TESTS OF THE VERY HIGH SPECIFIC IMPULSE BISMUTH TAL.</b> Leonid Zakharenkov, Alexander Semenkin, Sergey Tverdokhlebov, Anita Sengupta and Colleen Marrese-Reading

**SESSION 4-C-1**

Thursday 9/20/2007	Room C	<b>CATHODE DEVELOPMENT 2</b> Chaired by:
-----------------------	--------	---

8.30	<b>IEPC -2007- 17</b>	<b>PLASMA HEATING OF INERT GAS HOLLOW CATHODE INSERTS</b> Ira Katz, Ioannis Mikellides, Dan Goebel and James Polk
9.00	<b>IEPC -2007- 23</b>	<b>HOLLOW CATHODE IGNITION STUDIES AT L-3 ETI</b> William Tighe, Kuei-Ru Chien, Dan Goebel and Robert Longo
9.30	<b>IEPC -2007-</b>	
10.00	<b>IEPC -2007- 113</b>	<b>NUMERICAL SIMULATION OF THE INSERT CHEMISTRY OF THE HOLLOW CATHODES FROM THE DEEP SPACE 1 ION ENGINE 30,000 HRS LIFE TEST</b> Michele Coletti, Angelo Grubisic and Stephen Gabriel

**SESSION 4-C-2**

Thursday 9/20/2007	Room C	<b>CATHODE DEVELOPMENT 3</b> Chaired by:
-----------------------	--------	---

11.00	<b>IEPC -2007- 103</b>	<b>INVESTIGATION OF HOLLOW CATHODE FOR LOW POWER HALL EFFECT THRUSTER</b>  Nikolay Koshelev, Andriy Loyan and Oleg Rybalov
11.30	<b>IEPC -2007- 117</b>	<b>STATUS OF THE THALES TUNGSTEN/OSMIUM MIXED-METAL HOLLOW CATHODE NEUTRALIZER DEVELOPMENT</b>  Norbert Koch, Hans-Peter Harmann and Guenter Kornfeld
12.00	<b>IEPC -2007- 215</b>	<b>DISCHARGE MODES AND CHARACTERISTICS OF HOLLOW CATHODE</b>  shunsuke sakai
12.30	<b>IEPC -2007-</b>	

**SESSION 4-D-1**

Thursday 9/20/2007	Room D	<b>FEEP THRUSTERS 3</b> Chaired by:
-----------------------	--------	--

8.30	<b>IEPC -2007- 171</b>	<b>DEVELOPMENT AND TESTING OF A FIELD-EMISSION NEUTRALISER FOR MICRO-ELECTRIC PROPULSION</b>  Pierre-Etienne Frigot, Karen L. Alpin, Barry J. Kent, Davide Nicolini and José A. Gonzalez del Amo
9.00	<b>IEPC -2007- 362</b>	<b>SPIS MODELING OF FEEP THRUSTERS FOR LISA PATHFINDER</b>  Bjarne Andersson, Davide Nicolini, Eric Gengembre
9.30	<b>IEPC -2007- 219</b>	<b>NEUTRAL CESIUM VELOCITY VECTOR AND ABSOLUTE NUMBER DENSITY LIF OPTICAL MEASUREMENT WITH APPLICATION TO A FLIGHT MODEL MICROSCOPE CESIUM FEEP THRUSTER</b>  Denis Packan, Jean Bonnet and Simone Rocca
10.00	<b>IEPC -2007-</b>	

**SESSION 4-D-2**

Thursday 9/20/2007	Room D	<b>ARCJETS</b> Chaired by:
-----------------------	--------	-------------------------------

11.00	<b>IEPC -2007-</b>	
11.30	<b>IEPC -2007- 81</b>	<b>PRELIMINARY THRUST CHARACTERIZATION OF THE T-SERIES HOLLOW CATHODE THRUSTERS FOR ALL-ELECTRIC SPACECRAFT</b>  Angelo Grubisic and Steve Gabriel
12.00	<b>IEPC -2007- 137</b>	<b>SUBSCALE LIFECYCLE TEST OF THERMAL ARCJET THRUSTER TALOS FOR THE LUNAR MISSION BW1</b>  Dagmar Bock, Hans-Peter Röser, Georg Herdrich and Monika Auweter-Kurtz
12.30	<b>IEPC -2007-</b>	

**SESSION 4-E-1**

Thursday 9/20/2007 Room E **ADVANCED PROPULSION CONCEPTS 6**  
Chaired by:

8.30	<b>IEPC -2007- 236</b>	<b>COMPARISON OF THE THEORETICAL AND EXPERIMENTAL PERFORMANCE OF AN ANNULAR HELICON PLASMA SOURCE</b> Cengiz Akinli, Douglas Palmer and Mitchell Walker
9.00	<b>IEPC -2007- 108</b>	<b>PHYSICS AND EVOLUTION OF THE HEMP-THRUSTERS</b> Gunter Kornfeld, Norbert Koch and Hans-Peter Harmann
9.30	<b>IEPC -2007- 16</b>	<b>MAGNETICALLY ACCELERATED PLASMOID (MAP) THRUSTER - INITIAL RESULTS AND FUTURE PLANS</b> John Slough, George Votroubek, Arthur Blair and Chris Pihl
10.00	<b>IEPC -2007- 195</b>	<b>MHD ANALYSIS ON PROPULSIVE CHARACTERISTICS OF MAGNETO PLASMA SAIL</b> Hiroyuki Nishida, Ikkoh Funaki, Hiroyuki Ogawa and Yoshifumi Inatani

**SESSION 4-E-2**

Thursday 9/20/2007 Room E **ADVANCED PROPULSION CONCEPTS 7**  
Chaired by:

11.00	<b>IEPC -2007- 364</b>	<b>ANALYSIS OF RF THRUSTERS WITH TOPICA AND A GLOBAL SYSTEM-LEVEL MODEL</b> Vito Lancellotti, Giuseppe Vecchi, Daniele Pavarin, Cristina Bramanti
11.30	<b>IEPC -2007- 181</b>	<b>HIGH POWER VASIMR EXPERIMENTS USING DEUTERIUM, NEON AND ARGON</b> Jared Squire, Franklin Chang-Diaz, Mark Carter, Leonard Cassady, W. Jacob Chancery, Tim Glover, Verlin Jacobson, Gregory McCaskill, Roger Bengtson, Edgar Bering and Christopher Deline
12.00	<b>IEPC -2007- 191</b>	<b>ION HEATING AND ACCELERATION EXPERIMENT IN HYDROGEN PLASMA FOR THE VASIMR-TYPE THRUSTER</b> Akira Ando, Yuji Kasashima, Tatsuya Hagiwara, Kunihiro Hattori and Masaaki Inutake
12.30	<b>IEPC -2007- 192</b>	<b>PLASMA MEASUREMENTS IN AN INTEGRATED-SYSTEM FARAD THRUSTER</b> Kurt Polzin, Millard Rose, Robert Miller and Steve Best

**SESSION 4-F-1**

Thursday 9/20/2007 Room F **SYSTEMS 4**  
Chaired by:

8.30	<b>IEPC -2007- 213</b>	<b>MICROSCOPE MISSION: PHASE B PROPULSION SYSTEM ACTIVITIES AT SPACECRAFT LEVEL: REQUIREMENTS CONSOLIDATION AND ASSESSMENT OF NEUTRALIZATION AND CONTAMINATION</b> Enrico Chesta, Yves André, Laurent Perraud, Nicolas Pillet, Benjamin Pouilloux, Pascal Prieur, Thierry Tirolien, Jean-François Roussel and Thomas Tondou
9.00	<b>IEPC -2007- 77</b>	<b>ELECTRIC PROPULSION PLUMES INTERACTIONS WITH FORMATION FLYING SPACECRAFT</b> RAED KAFAY, JOSEPH WANG and YONG CAO
9.30	<b>IEPC -2007- 210</b>	<b>THRUST CONTROL ALGORITHMS FOR THE GOCE ION PROPULSION ASSEMBLY</b> Michael Henry Corbett and Clive Henderson Edwards
10.00	<b>IEPC -2007- 114</b>	<b>LOW COMPLEXITY AND LOW COST ELECTRIC PROPULSION SYSTEM FOR TELECOM SATELLITES BASED ON HEMP THRUSTER ASSEMBLY</b> Hans-Peter Harmann, Norbert Koch and Gunter Kornfeld

**SESSION 4-F-2**

Thursday 9/20/2007 Room F **SYSTEMS 5**  
Chaired by:

11.00	<b>IEPC -2007- 53</b>	<b>ADVANCES IN RADIATION-TOLERANT SOLAR ARRAYS FOR SEP MISSIONS</b>  Henry Brandhorst, Steve Best, Mark O'Neill, Michael Eskenazi and Julie Rodiek
11.30	<b>IEPC -2007- 93</b>	<b>DEVELOPMENT STATUS OF POWER PROCESSING UNIT FOR 250MN-CLASS HALL THRUSTER</b>  Hiroyuki Osuga
12.00	<b>IEPC -2007- 295</b>	<b>POWER CONTROL UNIT FOR ION PROPULSION ASSEMBLY IN GOCE PROGRAM</b>  Cristina Tato
12.30	<b>IEPC -2007- 283</b>	<b>POWER CONTROL UNIT FOR UN FECP PROPULSION SUBSYSTEM</b>  Luca Ceruti, Andrea Antimiani and Aldo Polli

**SESSION 4-G-1**

Thursday 9/20/2007 Room G **NUMERICAL SIMULATION 1**  
Chaired by:

8.30	<b>IEPC -2007- 36</b>	<b>LONG RANGE PARTICLE COLLISIONS FOR THE PIC/DSMC SIMULATION CODE PICLAS</b>  Danilo D'Andrea, Markus Fertig, Claus-Dieter Munz, Sabine Roller and Rudolf Schneider
9.00	<b>IEPC -2007- 105</b>	<b>VISUALIZATION OF THE CHARGED PARTICLES MOVEMENT FEATURES IN CONDITIONS, WHICH ARE CHARACTERISTIC FOR THE HALL THRUSTER DISCHARGE INTERVAL AS THE TECHNIQUE FOR</b>  Sergey Oghienko, Olga Kulish and Tamara Vakulenko
9.30	<b>IEPC -2007- 204</b>	<b>NUMERICAL SIMULATION OF THE FREE MOLECULE MICRO-RESISTOJET FLOW</b>  Mao-lin Chen, Gen-wang Mao, Juan Yang and Guang-qing Xia
10.00	<b>IEPC -2007- 106</b>	<b>1D SIMULATIONS OF THE HELICON DOUBLE LAYER</b>  Marco Manente, Ivano Musso, Johan Carlsson, Cinzia Giacomuzzo, Daniele Pavarin, Cristina Bramanti and Francesco Angrilli

**SESSION 4-G-2**

Thursday 9/20/2007 Room G **NUMERICAL SIMULATION 2**  
Chaired by:

11.00	<b>IEPC -2007- 211</b>	<b>NUMERICAL SIMULATION OF MICROWAVE PLASMA THRUSTER FLOW</b>  Mao-lin Chen, Geng-wang Mao, Juan Yang and Guang-qing Xia
11.30	<b>IEPC -2007- 42</b>	<b>A HIGH ORDER RELATIVISTIC PARTICLE PUSH METHOD FOR PIC SIMULATIONS</b>  Martin Quandt, Claus-Dieter Munz and Rudolf Schneider
12.00	<b>IEPC -2007- 146</b>	<b>2D-OOPIC SIMULATIONS OF THE HELICON DOUBLE LAYER</b>  Ivano Musso, Marco Manente, Johan Carlsson, Cinzia Giacomuzzo, Daniele Pavarin, Cristina Bramanti and Francesco Angrilli
12.30	<b>IEPC -2007-</b>	

# THURSDAY, 20th of September 2007, 14:00 - 18:30

## SESSION 4-A-3

Thursday 9/20/2007	Room A	HALL THRUSTER PHYSICS AND MODELING 11 Chaired by:
-----------------------	--------	--

14.00	IEPC -2007- 31	INVESTIGATION OF HIGH-ENERGY IONS WITH HIGH-ANGLE TRAJECTORIES IN HALL THRUSTER PLUMES Regina Sullivan, Joseph Shepherd and Lee Johnson
14.30	IEPC -2007- 73	EXPERIMENTAL AND NUMERICAL EXAMINATION OF A HALL THRUSTER PLUME Michael Nakles, Lubos Brieda, Garrett Reed and William Hargus
15.00	IEPC -2007- 88	REALIZATION OF LOW FREQUENCY OSCILLATION FREE OPERATION IN A HALL THRUSTER Taichiro Tamida, Takafumi Nakagawa, Ikuro Suga, Hiroyuki Osga, Toshiyuki Ozaki and Katsuaki Matsui
15.30	IEPC -2007-	

## SESSION 4-A-4

Thursday 9/20/2007	Room A	NON-PROPULSIVE APPLICATIONS Chaired by:
-----------------------	--------	--

16.30	IEPC -2007- 228	FEASIBILITY STUDY OF AN MPD ARCJET AS A PLASMA INJECTOR FOR MARS'S ATMOSPHERE DYNAMICS RESEARCH Yukio Shimizu, Naoki Terada, Hitoshi Kuninaka and Daisuke Nakata
17.00	IEPC -2007-	
17.30	IEPC -2007-	
18.00	IEPC -2007-	

**SESSION 4-B-3**

Thursday 9/20/2007	Room B	HALL THRUSTER DEVELOPMENT 11 Chaired by:
-----------------------	--------	---

14.00	IEPC -2007-
14.30	<b>IEPC -2007- 102 MULTI-MODE THRUSTER WITH ANODE LAYER DEVELOPMENT STATUS</b> Alexander Solodukhin, Alexander Semenkin, Leonid Zakharenkov, Anatoly Rusakov and Alexander Nesterenko
15.00	IEPC -2007-
15.30	IEPC -2007-

**SESSION 4-B-4**

Thursday 9/20/2007	Room B	GROUND TESTING Chaired by:
-----------------------	--------	-------------------------------

16.30	<b>IEPC -2007- 321 THE IV10 SPACE SIMULATOR FOR HIGH POWER ELECTRIC PROPULSION TESTING: PERFORMANCE IMPROVEMENTS AND OPERATION STATUS</b> Massimo Saverdi, Massimiliano Signori, Luciano Milaneschi and Leonardo Biagioni
17.00	<b>IEPC -2007- 2 NUMERICAL PROCEDURE PERMITTING CALCULATION OF HOW A VACUUM CHAMBER INFLUENCES ELECTRIC PROPULSION THRUSTER JET EXPANSION</b> Grigory Toropov, Sergey Khartov and Vladimir Chervakov
17.30	IEPC -2007-
18.00	IEPC -2007-

**SESSION 4-C-3**

Thursday 9/20/2007	Room C	CATHODE DEVELOPMENT 4 Chaired by:
-----------------------	--------	--------------------------------------

14.00	<b>IEPC -2007- 152 PROGRESS ON RE-GENERABLE FIELD EMISSION CATHODES FOR LOW-POWER ELECTRIC PROPULSION</b> Jason Makela and Lyon King
14.30	<b>IEPC -2007- 256 EMITTER DEPLETION MEASUREMENT AND MODELING IN THE T5&amp;T6 KAUFMAN-TYPE ION THRUSTERS</b> Ismat M Ahmed Rudwan, Neil Wallace, Michele Coletti and Stephen Gabriel
15.00	<b>IEPC -2007- 270 COMPARATIVE HIGH-CURRENT-DENSITY EMITTERS POISONING OF HOLLOW CATHODES ELECTRIC PROPULSION</b> Anatoliy Taran, Andriy Loyal and Daniyil Voronovich
15.30	<b>IEPC -2007- 174 EFFECTS OF VARIED PROPELLANT COMPOSITIONS ON THE ION ENERGY DISTRIBUTIONS IN HOLLOW CATHODES</b> JoHanna Przybylowski, James Polk and Joseph Shepherd

**SESSION 4-C-4**

Thursday 9/20/2007 Room C **CATHODE DEVELOPMENT 5**  
Chaired by:

16.30	<b>IEPC -2007- 253</b>	<b>A MEMS CNT-BASED NEUTRALIZER FOR MICRO-PROPULSION APPLICATIONS</b>  Luis Fernando Velasquez-Garcia and Akintunde. I. Akinwande
17.00	<b>IEPC -2007- 89</b>	<b>HOLLOW CATHODE LIFE TEST FOR THE NEXT-GENERATION ION ENGINE IN JAXA</b>  Yasushi Ohkawa, Yukio Hayakawa, Hideki Yoshida, Katsuhiro Miyazaki, Hiroshi Nagano and Shoji Kitamura
17.30	<b>IEPC -2007- 78</b>	<b>EFFECT OF CATHODE POSITION ON HALL-EFFECT THRUSTER PERFORMANCE AND CATHODE COUPLING VOLTAGE</b>  Jason Sommerville and Lyon King
18.00	<b>IEPC -2007- 278</b>	<b>CATHODE COUPLING IN HALL THRUSTERS</b>  Kristina Jameson, Dan Goebel, Richard Hofer and Ron Watkins

**SESSION 4-D-3**

Thursday 9/20/2007 Room D **DIAGNOSTICS 3**  
Chaired by:

14.00	<b>IEPC -2007-</b>	
14.30	<b>IEPC -2007- 74</b>	<b>TOTAL AND DIFFERENTIAL SPUTTER YIELDS OF BORON NITRIDE MEASURED BY QUARTZ CRYSTAL MICROBALANCE AND WEIGHT LOSS</b>  Binyamin Rubin, James Topper and Azer Yalin
15.00	<b>IEPC -2007- 50</b>	<b>THE DESIGN AND OPERATION OF BEAM DIAGNOSTICS FOR THE DUAL STAGE 4-GRID ION THRUSTER</b>  Cristina Bramanti and David Fearn
15.30	<b>IEPC -2007- 173</b>	<b>STATUS ON PLASMA DIAGNOSTIC MEASUREMENTS ON A RIT-10 ION TRUSTER</b>  Michael Winter, Christoph Eichhorn and Monika Auweter-Kurtz

**SESSION 4-D-4**

Thursday 9/20/2007 Room D **DIAGNOSTICS 4**  
Chaired by:

16.30	<b>IEPC -2007- 75</b>	<b>BORON NITRIDE SPUTTER EROSION MEASUREMENTS BY CAVITY RING-DOWN SPECTROSCOPY</b>  Azer Yalin, Vijay Surla, Lei Tao, Tim Smith and Alec Gallimore
17.00	<b>IEPC -2007- 98</b>	<b>DEVELOPMENT OF A TWO-AXIS DUAL PENDULUM THRUST STAND FOR THRUST VECTOR MEASUREMENT OF HALL THRUSTERS</b>  Naoki Nagao, Shigeru Yokota, Yasuhiro Fukushima, Daichi Sakoh, Kimiya Komurasaki and Yoshihiro Arakawa
17.30	<b>IEPC -2007- 119</b>	<b>THE ULAN TEST STATION AND ITS DIAGNOSTIC PACKAGE FOR THRUSTER CHARACTERIZATION</b>  Hans-Peter Harmann, Norbert Koch and Guenter Kornfeld
18.00	<b>IEPC -2007- 161</b>	<b>REVIEW OF THREE RETARDING POTENTIAL ANALYZERS FOR USE IN HIGH DENSITY HELICON PLASMA</b>  Kristina Lemmer, Alec Gallimore, Daniel Austin and Tim Smith

**SESSION 4-E-3**Thursday  
9/20/2007

Room E

**ADVANCED PROPULSION CONCEPTS 8**

Chaired by:

14.00	<b>IEPC -2007- 162</b>	<b>RAM ELECTRIC PROPULSION FOR LOW EARTH ORBIT OPERATION: AN ESA STUDY.</b>  Davina Di Cara, José Gonzalez del Amo, Andrea Santovincenzo, Bernardo Carnicero Dominguez, Marco Arcioni, Andrew Caldwell and Ilaria Roma
14.30	<b>IEPC -2007- 280</b>	<b>MULTIPLE BARE TETHERS FOR ELECTRODYNAMIC TETHER PROPULSION</b>  Tepei Ikeda, Yasuhiro Nakamura, Yoshiki Yamagiwa, Hirotaka Otsu, Satomi Kawamoto, Yasushi Ohkawa and Atsushi Nakajima
15.00	<b>IEPC -2007- 71</b>	<b>OPERATING CHARACTERISTICS OF CYLINDRICAL AND ANNULAR HELICON SOURCES</b>  Brian Beal
15.30	<b>IEPC -2007- 203</b>	<b>SPECTRAL MEASUREMENTS OF MHTX HELICON DISCHARGE</b>  Murat Celik, Oleg Batishchev and Manuel Martinez-Sanchez

**SESSION 4-E-4**Thursday  
9/20/2007

Room E

**ADVANCED PROPULSION CONCEPTS 9**

Chaired by:

16.30	<b>IEPC -2007- 61</b>	<b>LABORATORY EXPERIMENT OF MAGNETOPLASMA SAIL, PART 1: PURE MAGNETIC SAIL</b>  Kazuma Ueno, Toshiyuki Kimura, Ikko Funaki, Hideyuki Horisawa and Hiroshi Yamakawa
17.00	<b>IEPC -2007- 94</b>	<b>LABORATORY EXPERIMENT OF MAGNETOPLASMA SAIL, PART 2: MAGNETIC FIELD INFLATION</b>  Ikko Funaki, Toshiyuki Kimura, Kazuma Ueno, Hideyuki Horisawa, Hiroshi Yamakawa, Yoshihiro Kajimura, Hideki Nakashima and Yukio Shimizu
17.30	<b>IEPC -2007- 240</b>	<b>DEVELOPMENT OF THE ELECTRODELESS PLASMA THRUSTER AT HIGH POWER : INVESTIGATIONS OF THE MICROWAVE-PLASMA COUPLING</b>  Gregory Emsellem
18.00	<b>IEPC -2007- 286</b>	<b>PRELIMINARY EXPERIMENTAL RESULTS FOR A GALLIUM ELECTROMAGNETIC (GEM) THRUSTER</b>  Robert Thomas, Rodney Burton, Nick Glumac and Kurt Polzin

**SESSION 4-F-3**Thursday  
9/20/2007

Room F

**MICROPROPULSION 1**

Chaired by:

14.00	<b>IEPC -2007- 233</b>	<b>A FULLY-INTEGRATED MICROFABRICATED EXTERNALLY-WETTED ELECTROSPRAY THRUSTER</b>  Blaise Gassend, Luis Fernando Velasquez-Garcia, Akintunde Ibitayo Akinwande and Manuel Martinez-Sanchez
14.30	<b>IEPC -2007- 145</b>	<b>FABRICATION AND CHARACTERIZATION OF POROUS METAL EMITTERS FOR ELECTROSPRAY THRUSTERS</b>  Robert Legge, Paulo Lozano and Manuel Martinez-Sanchez
15.00	<b>IEPC -2007- 99</b>	<b>DESIGN AND FABRICATION OF AN INTEGRATED MEMS-BASED COLLOID MICROPROPULSION SYSTEM</b>  Renato Krpoun, Herbert R. Shea, Katharine L. Smith and John P. W. Stark
15.30	<b>IEPC -2007- 288</b>	<b>FLIGHT HARDWARE DEVELOPMENT OF COLLOID MICROTHRUSTER TECHNOLOGY FOR THE SPACE TECHNOLOGY 7 AND LISA MISSIONS</b>  John Ziemer, Thomas Randolph and Vlad Hruby

**SESSION 4-F-4**

Thursday 9/20/2007 Room F **MICROPROPULSION 2**  
Chaired by:

16.30	<b>IEPC -2007- 350</b>	<b>FREQUENCY SPECTRA IN FEEP PLUMES</b>  Salvo Marcuccio and Nicola Giusti
17.00	<b>IEPC -2007- 112</b>	<b>SCALING OF A COLLOID THRUSTER SYSTEM FOR MICRO NEWTON TO MILLI NEWTON THRUST LEVELS</b>  Katharine L. Smith, Matthew S. Alexander, Mark D. Paine and John P.W. Stark
17.30	<b>IEPC -2007- 120</b>	<b>ELECTROSTATIC INFLUENCE ON CHARGE TO MASS SPECTRUM IN MIXED ION/DROPLET MODE: IMPLICATIONS FOR COLLOID THRUSTER DESIGN.</b>  Sobash Jhuree, Matthew Alexander and John Stark
18.00	<b>IEPC -2007- 201</b>	<b>MICRO-PLASMAJET ARRAY: MULTI-JET-EFFECT FOR THRUST PERFORMANCE IMPROVEMENT</b>  Atsushi Koshiyama, Kosuke Onodera, Fujimi Sawada, Hideyuki Horisawa and Ikkoh Funaki

**SESSION 4-G-3**

Thursday 9/20/2007 Room G **NUMERICAL SIMULATION 3**  
Chaired by:

14.00	<b>IEPC -2007- 107</b>	<b>NUMERICAL INVESTIGATION OF COUPLED ELECTRODYNAMIC TETHER / ELECTROSTATIC PROPULSION SYSTEMS</b>  Torsten Stindl, Markus Fertig and Monika Auweter-Kurtz
14.30	<b>IEPC -2007- 18</b>	<b>NUMERICAL SIMULATIONS OF A HALL THRUSTER HOLLOW CATHODE PLASMA</b>  Ioannis Mikellides and Ira Katz
15.00	<b>IEPC -2007- 37</b>	<b>A 3D MODEL FOR MFD FLOW SIMULATION</b>  Tommaso Misuri, Francesco Battista and Mariano Andrenucci
15.30	<b>IEPC -2007- 12</b>	<b>SEVEN YEARS OF HALL THRUSTER MODELLING: AN EUROPEAN COLLABORATION BETWEEN BARI AND GREIFSWALD</b>  Francesco Taccogna, Savino Longo, Mario Capitelli and Ralf Schneider

**SESSION 4-G-4**

Thursday 9/20/2007 Room G **NUMERICAL SIMULATION 4**  
Chaired by:

16.30	<b>IEPC -2007- 197</b>	<b>DEVELOPMENT OF NUMERICAL PLASMA PLUME ANALYSIS MODULE FOR SPACECRAFT ENVIRONMENT SIMULATOR</b>  Takanobu Muranaka, Hiroko Ueda, Shinji Hatta, Jeongho Kim, Satoshi Hosoda, Mengu Cho, Kiyokazu Koga, Tateshi Goka, Hideyuki Usui and Iku Shinohara
17.00	<b>IEPC -2007- 325</b>	<b>VALIDATION STATUS OF THE PICPLUS PLUME SIMULATION AND SPACECRAFT INTERACTION TOOLS: LESSON LEARNT FROM FLIGHT AND GROUND EXPERIMENTAL DATA</b>  Andrea Passaro, Alessandro Vicini and Francesco Nania
17.30	<b>IEPC -2007-</b>	
18.00	<b>IEPC -2007-</b>	

**IEPC 2007 POSTER SESSION - Wednesday 9/19/2007, 8:30 - 12:30**

IEPC -2007- 4	<b>A 3D BOUNDARY SHEATH ANALYSIS ON FARADAY PROBE MEASUREMENTS IN A NON-EQUILIBRIUM PLASMA</b> Grigory Toropov
IEPC -2007- 6	<b>PLASMA PARAMETERS INVESTIGATION IN THE NEAR CATHODE ZONE OF THE SPT DISCHARGE</b> Sergey Khartov, Igor Nazarenko and Andrey Pereslavitsev
IEPC -2007- 7	<b>SPUTTERING PROCESS OF BN BASED CERAMIC BY THE FLOWS OF NONCOMPENSATED CHARGE PLASMA</b> Elvira Nikiporetz, Alexander Semenov and Igor Shkarban
IEPC -2007- 8	<b>ELECTRON-ENHANCED DESORPTION INFLUENCE ON TO SPT ISOLATOR WALL EROSION PROCESSES</b> Sergey Khartov and Sergey Elovikov
IEPC -2007- 11	<b>A STUDY OF SOME PHYSICAL PROCESSES OF HALL THRUSTER, OPERATED IN THE DISCHARGE VOLTAGE RANGE UP TO 1000 V.</b> Sergey Oghienko, Anatoliy Oranskiy, Volodymyr Bilokon and Alexander Bober
IEPC -2007- 26	<b>INVESTIGATION OF AN INTEGRAL CHARACTERISTICS OF THE LOW POWER HALL THRUSTER FOR THE SPACECRAFT ORIENTATION PROPULSION SYSTEM DURING TRANSITION TO THE STATIONARY</b> Sergei Oghienko
IEPC -2007- 32	<b>MEASUREMENT OF NOZZLE EFFICIENCY AND MAGNETIC DETACHMENT EFFECTS IN A MAGNETIC NOZZLE</b> Christopher Deline, Roger Bengtson, Jared Squire, Jacob Chancery, Jackie Meyers, Chris Dobson, Jonathan Jones, Greg Chavers, Brian Gilchrist and Michael Brukardt
IEPC -2007- 44	<b>MATHEMATICAL MODEL AND CALCULATION METHOD FOR HOLLOW CATHODES LIFETIME FORECAST</b> Sergiy Nesterenko and Anatoliy Oranskiy
IEPC -2007- 55	<b>MICRO-PLASMAJET ARRAY: NUMERICAL SIMULATION ON THRUST IMPROVEMENT OF MULTI-JET EFFECT</b> Fujimi Sawada, Kosuke Onodera, Atsushi Koshiyama, Hideyuki Horisawa and Ikkoh Funaki
IEPC -2007- 56	<b>THRUST PERFORMANCE OF ELECTROMAGNETIC ACCELERATION MODE FOR LASER-ELECTRIC HYBRID THRUSTERS</b> Yusuke Sasaki, Hideyuki Horisawa, Ikkoh Funaki and Itsuro Kimura
IEPC -2007- 58	<b>RECTANGULAR LASER-ELECTROMAGNETIC HYBRID PULSED PLASMA THRUSTER</b> Tomohiro Ayabe, Hideyuki Horisawa, Ikkoh Funaki and Itsuro Kimura
IEPC -2007- 86	<b>TWO-DIMENSIONAL PARTICLE-IN-CELL SIMULATION OF A CYLINDRICAL HALL THRUSTER</b> Hae June Lee, Jongho Seon, Jongsub Lee, Youbong Lim and Winho Choe
IEPC -2007- 96	<b>FORWARD LASER PLASMA ACCELERATOR FOR RELATIVISTIC PLASMA PROPULSION</b> Sota Sumida, Hideyuki Horisawa and Masakuni Takagi
IEPC -2007- 97	<b>CHEMICALLY-AUGMENTED PULSED LASER-RAMJET</b> Tomoki Kaneko, Hideyuki Horisawa and Kazuhiro Tamada
IEPC -2007- 104	<b>PIC SIMULATIONS ON CHARGE MITIGATION BY PLASMA RELEASE</b> Hideyuki Usui and Koujiro Imasato

IEPC -2007- 121	<b>MODEL ANALYSIS OF A DOUBLE STAGE HALL EFFECT THRUSTER WITH DOUBLE-PEAKED MAGNETIC FIELD AND INTERMEDIATE ELECTRODE</b>
	Jaime Perez-Luna, G.J.M. Hagelaar, Laurent Garrigues and Jean Pierre Boeuf
IEPC -2007- 127	<b>THERMAL STATE INVESTIGATIONS OF TWO-STAGE THRUSTER WITH ANODE LAYER</b>
	Aleksey Mitroshin, Valery Garkusha, Alexander Semenkin and Alexander Solodukhin
IEPC -2007- 133	<b>ANALYSIS OF CERAMIC EROSION CHARACTERISTICS IN HALL-EFFECT THRUSTER WITH HIGH SPECIFIC IMPULSE</b>
	Vladimir Abashkin, Oleg Gorshkov, Alexander Lovtsov and Andrey Shagayda
IEPC -2007- 147	<b>THE BRAZILIAN ION PROPULSION PROGRAM</b>
	Gilberto M. Sandonato, José A.N. Gonçalves, Ricardo T. Irita, George F. Fernandes and Paolo Gessini
IEPC -2007- 190	<b>NUMERICAL SIMULATION OF INTERNAL PLASMA IN A MINIATURE MICROWAVE DISCHARGE ION THRUSTER</b>
	Takayasu KANAGAWA, Hirokazu MASUI, Naoji YAMAMOTO, Yoshihiro KAJIMURA and Hideki NAKASHIMA
IEPC -2007- 205	<b>MICROWAVE DISCHARGE ION THRUSTER USING ARGON AS A PROPELLANT</b>
	Makoto Miyoshi, Naoji Yamamoto and Hideki Nakashima
IEPC -2007- 230	<b>FUNDAMENTAL STUDY OF LASER MICRO PROPULSION USING POWDERED-PROPELLANT</b>
	Sahoshi Yokoyama, Hideyuki Horisawa, Ikkoh Funaki and Hitoshi Kuninaka
IEPC -2007- 232	<b>GEOMETRY AND ELECTRIC POWER EFFECTS ON SPECIFIC IMPULSE AND EFFICIENCY OF AN ARC-JET THRUSTER</b>
	KAMINSKA Aniela and DUDECK Michel
IEPC -2007- 239	<b>CURRENT AND PLASMA OSCILLATIONS INSPECTION IN PPS-X000-ML HET THRUSTER -- EMD APPROACH</b>
	Jacek Kurzyna, Aleksey Lazurenko, Giovanni Coduti, Michel Dudeck, Karol Makowski, Stephane Mazouffre and Zbigniew Peradzy&#324;ski
IEPC -2007- 245	<b>LASER-AUGMENTED MICRO-PULSEJET THRUSTER</b>
	Sou Eto and Yuseke Tomioka
IEPC -2007- 246	<b>NEAR WALL CONDUCTIVITY IN HALL THRUSTERS. CYLINDRICAL GEOMETRY EFFECT.</b>
	Karol Makowski, Zbigniew Peradzynski, Marcin Kolanowski, Serge Barral, Jacek Kurzyna and Michel Dudeck
IEPC -2007- 255	<b>EXPERIMENTS OF ION ACCELERATION IN A MAGNETIC NOZZLE FOR AN ADVANCED PLASMA THRUSTER</b>
	Tatsuya Hagiwara, Akira Ando, Yuji Kasashima, Kunihiko Hattori and Masaaki Inutake
IEPC -2007- 259	<b>DEPENDENCE OF LOW POWER CYLINDRICAL HALL THRUSTER PERFORMANCE ON MAGNETIC FIELD CONFIGURATION</b>
	Jongsub Lee, Youbong Lim, Mihui Seo, Wonho Choe and Jongho Seon
IEPC -2007- 263	<b>RESULTS FROM TESTS OF THE HELICON DOUBLE LAYER THRUSTER INSIDE A SPACE SIMULATION VACUUM CHAMBER</b>
	Michael D. West, Christine Charles and Rod W. Boswell
IEPC -2007- 264	<b>EXPERIMENTAL INVESTIGATION OF INFLUENCING FACTORS FOR RELIABLE STARTUP AND STEADY WORK OF 100W MICROWAVE PLASMA THRUSTER</b>
	Guang-qing XIA, Gen-wang MAO, Juan YANG and Mao-lin CHEN
IEPC -2007- 266	<b>RF PLASMA CATHODE-NEUTRALIZER FOR SPACE APPLICATIONS</b>
	Valery Godyak, Yevgeny Raitses and Nathaniel J. Fisch

IEPC -2007- 284	<b>FIELD EMISSION ELECTRIC THRUSTER OPTICAL DIAGNOSTICS BASED ON AN INDIUM COLLISIONAL-RADIATIVE MODEL</b>  Konstantinos Katsonis, Jean Bonnet, Denis Packan, Chloe Berenguer, Marguerite Cornille and Abdoulaziz Ndiaye
IEPC -2007- 293	<b>VERIFICATION OF ANALYSIS TOOL OF THRUSTER PLUME INTERACTIONS FOR SPACECRAFT</b>  Satoshi Hosoda, Takanobu Muranaka, Shinji Hatta, Jeongho Kim, Naomi Kurahara, Mengu Cho, Hiroko Ueda, Kiyokazu Koga, Tateo Goka and Hitoshi Kuninaka
IEPC -2007- 302	<b>IONS FORMATION DENSITY DISTRIBUTION IN SPT ATON CHANNEL</b>  Marina Kozintseva, Gleb Bugrov, Ivan Tarelkin and Vasily Terehov
IEPC -2007- 315	<b>PLASMA FLUCTUATIONS IN CYLINDRICAL HALL THRUSTER PLASMAS</b>  Youbong Lim, Jongsub Lee, Mihui Seo, Jaejin Lee, Wonho Choe, Jongho Seon and Hae June Lee
IEPC -2007- 324	<b>THE POTENTIAL OF HALL PLASMA SOURCES FOR FLEXIBLE AND HIGH-THROUGHPUT INDUSTRIAL MANUFACTURING PROCESSES</b>  Fabrizio Paganucci, Gabriele Fantoni and Leonardo Biagioni
IEPC -2007- 334	<b>AEDC PLUME MEASUREMENTS USING BI-DIRECTIONAL ION FLUX PROBES</b>  Yevgeny Raitses, Trevor Moeller and James Szabo
IEPC -2007- 337	<b>PERFORMANCE CHARACTERISTICS OF ELECTROTHERMAL PULSED PLASMA THRUSTERS WITH INSULATOR-ROD-ARRANGED CAVITIES AND TEFLON-ALTERNATIVE PROPELLANTS</b>  Hirokazu Tahara, Toshiaki Edamitsu and Hirokazu Sugihara
IEPC -2007- 339	<b>RESEARCH AND DEVELOPMENT OF COMPACT LASER ABLATIVE THRUSTERS FOR SMALL SATELLITES</b>  Hirokazu Tahara
IEPC -2007- 340	<b>GROUND-BASED EXPERIMENT OF CURRENT COLLECTION TO BARE TETHER IN HIGH-SPEED MAGNETIZED PLASMA</b>  Hirokazu Tahara
IEPC -2007- 342	<b>PIC-FLUID HYBRID SIMULATION OF SHEATH IN HALL THRUSTER WITH NEW SECONDARY ELECTRON EMISSION MODEL</b>  Xue Zhonghua, Liu Jinyuan, Liu Hui and Yu Daren
IEPC -2007- 347	<b>DEVELOPMENT OF NEUTRALIZER WITH CARBON NANOTUBE CAHTODE FOR SMALL SCALE ION ENGINE</b>  Yoshiyuki Takao, Naoji Yamamoto and Hideki Nakashima
IEPC -2007- 348	<b>PERFORMANCE TEST OF SMALL-SCALE MICROWAVE DISCHARGE ION THRUSTER</b>  Yoshiyuki Takao, Naoji Yamamoto and Hideki Nakashima
IEPC -2007- 359	<b>THE NEW NASA-STD-4005 AND NASA-HDBK-4006, ESSENTIALS FOR DIRECT-DRIVE SOLAR ELECTRIC PROPULSION</b>  Dale C. Ferguson
IEPC -2007- 361	<b>UKRAINIAN SPT-20 HALL EFFECT THRUSTERS: ANALYSIS OF THE PLUME BY OPTICAL EMISSION SPECTROSCOPY</b>  D.Pagnon, S.Pelerin, M.Dudeck, T.A.Maksimenko, A.V.Loyan and N.N.Koshelev