

JBIS



Journal of the British Interplanetary Society

VOLUME 68

2015

Issue No:	Themes
1/2	Tennessee Valley Interstellar Workshop 2014 Symposium Icarus Interstellar Starship Congress 2013
3/4	Tennessee Valley Interstellar Workshop 2014 100 Year Starship Study 2011: Time Distance Solutions Icarus Interstellar Starship Congress 2013
5/6	General papers 100 Year Starship Study 2011: Time Distance Solutions Tennessee Valley Interstellar Workshop 2014 Icarus Interstellar Starship Congress 2013
7	General Papers 100 Year Starship Study 2011: Time Distance Solutions
8	General papers
9/10	General papers Icarus Interstellar Starship Congress 2013 100 Year Starship Study 2011: Philosophical and Religious Considerations
11	General papers
12	General papers

* * *

Author Index

Allen D.W. <i>et al.</i>	Exploring the Oceans of Europa with Biologically-Inspired Underwater Vehicles	251
Bowman A.	Starship Congress 2013 – Proceedings of the General Assembly	48
Cockell C.S.	The Purpose of Art and Artists Beyond Earth	376
Dakka S.M.	Concept Design for Space Habitability for Long Term Missions	363
Desiato T.J.	The Electromagnetic Quantum Warp Drive	347
Dhanji D. <i>et al.</i>	Comparative Study of Aerial Platforms for Mars Exploration	282
Early J.T. <i>et al.</i>	Dust Grain Damage to Interstellar Vehicles and Lightsails	205
Ferguson C.K. <i>et al.</i>	Space 2100: A Shared Visioning Exercise for the Future Space Economy	10
Freeland II R.M.	Mathematics of Magsails	306
Freeland R.M. <i>et al.</i>	Firefly Icarus: An Unmanned Interstellar Probe Using Z-Pinch Fusion Propulsion	68
Genovese A. <i>et al.</i>	Innovative Ultra-FEEP Thrusters for Interstellar Precursor Missions	117
Goyal A. <i>et al.</i>	Mission Mars: A Dentist’s Perspective	393
Halbert M.	Scenarios for Long-Term Interstellar Distributed Data Networks	94
Hampson R.E.	Space Radiation and the Brain	5
Hempzell M. <i>et al.</i>	A Technical Overview of a SKYLON Based European Launch Service Operator	224
Hosek W.R.	Overcoming Myopia: A Business Plan for Colonizing Mars	145
Huo M. <i>et al.</i>	Mission Design for an Interstellar Probe with E-Sail Propulsion System	128
Jackson IV A.A.	Black Hole Bacon: Gravitational Lensing	342
Johnson L.	Solar Sails: Sneaking up on Interstellar Travel	44
Kammash T.	Nuclear Energy for Space Propulsion	200
Kowald A.	Why is There no Von Neumann Probe on Ceres? Error Catastrophe can Explain the Fermi-Hart Paradox	383
Lee J.S.	Acceleration of a Schwarzschild Kugelblitz Starship	105
Levine J.S. <i>et al.</i>	Nature-Inspired Design and Engineering (NIDE): A New Tool for the Next Generation of Robotic and Human Space Missions	389
Lubin P. <i>et al.</i>	Directed Energy for Relativistic Propulsion and Interstellar Communications	172
MacLay G.J.	The Role of the Quantum Vacuum in Space Travel	86
MacLeod C. <i>et al.</i>	An Alternative Design for Electrostatically Accelerated Ion Beam Fusion	336
MacLeod C. <i>et al.</i>	Overcoming Fuel-Air Mixing Issues with Pulsed Scramjets and Pelletized Fuel	354
Maiwald V.	Visiting Troy: The Solar Electric Trojan Investigation Probe to Jupiter’s Trojans	242
Matloff G.L. <i>et al.</i>	An Interstellar Sail Before 2020?	26
McPherson Smith C. <i>et al.</i>	The MarsCart: Simple, Reliable, Non-Powered, Field-Maintainable Transportation for Short-Range, Small-Payload Extravehicular Activity on Mars	297
Nasseri S.A.	Motivations for Space Exploration: A Survey within the Space Community	135
Nordley G.D. <i>et al.</i>	Mass Beam Propulsion, An Overview on Mars	153 297
Reddy S.K. <i>et al.</i>	Study of Daedalus Interstellar Spacecraft Reaction Chamber and Thrust Structure	33
Sinclair A.H.	The Longest Journey: Philosophical and Religious Considerations	324
Soilleux R.S. <i>et al.</i>	The In-Situ Construction, From Vitrified Lunar Regolith, of Large Structures including Habitats in Artificial Lava Caves	268
Soilleux R.S. <i>et al.</i>	Safe Comfortable Habitats on the Moon, Mars and Mercury using Soil Vitrification	275
Williams L.L.	Back to the Future: Rise of the Scalar Field and its Implications for Interstellar Travel	98
Yemets V. <i>et al.</i>	Investigations of a Combustible Inertial Launch Vehicle Design	188
Yu. C. <i>et al.</i>	The Dark Forest Rule: One Solution to the Fermi Paradox	142
Ziarnick B.	Starfleet Deferred: Project Orion in the 1962 Air Force Space Program	17

Technical Notes

Cardon A.L.	Ideal Biological Characteristics for Long-Duration Manned Space Travel	31
Cazzanigga D.	The Probability of Faster than Light Travel and our Place in the Universe	400
Cobbs C.C. <i>et al.</i>	Ecological Engineering Considerations for I.S.U.’s Worldship Project	81
Kammsh T.	Self-Fuelling Fusion Hybrid Propulsion System for Interstellar Missions	217
Lightfoot R.S. <i>et al.</i>	Communication, S.E.T.I., and Strategies	167
Lockley A.	Deliberate Destruction of Planets and Biospheres	150
Lockley A.	Geoengineering on Exoplanets	369
Olum K.D.	Does General Relativity Permit Superluminal Travel?	214
Ostojja-Starzewski M.	Pirouette Launch and Energy Storage System	406
Szocik K.	Mars, Human Nature and the Evolution of the Psyche	403
Weiss D.	Creating Materials for the Starship	211

Subject Index

Aerodynamics		Launch vehicles		nuclear thermal	200
Mars vehicles	282	combustible inertial	188	particle beam	153
SCRAMJET	354	Skylon	224	pellet fuel	354
Alpha Centauri	68	reusable	224	pirouette system	406
Art and artists	376	Manned spaceflight		pulse detonation	354
Artificial intelligence	48	EVA	297	SCRAMJET	354
Asteroids		interstellar	31,48	solar sail	26,44
Trojans	242	food and medicine	393	solar wind sail	128
Astrobiology	400	Mars colonisation	275	vacuum engineering	86,347
Bioengineering	31,48	Mars exploration	297,393	warp drive	214,347
Biomimetics	389	Moon	10,268,275	Z-Pinch fusion	68
Black hole		radiation protection	5	Radiator	68
gravitational lens	342	safety	5,363,393	Radiation	5
Brain, radiation effects	5	strategy	10	Relativity	98,214
Casimir effect	86	Mars		Religion	324
Cosmic radiation	5	aerial vehicles	282	Robotics	383,389
Cubesats	26	cart	297	Rocket	
Daedalus	33	colonisation	275,403	combustible inertial	188
Dark forest rule	142	exploration	282,297,376	Roving vehicles	251,282
Data network	94	settlements	275,363	SABRE	224
Data preservation	94	Marscart	297	Scalar fields	98
Dentistry	393	Materials		Schwarzschild kugelblitz	105
Design	389	composite	211	SETI	
Dust erosion	205	future	211	methods	167
Dyson plate	105	vitrified soil	268,275	Skylon	
Ecology	81	Mathematics	306	infrastructure	224
Economics	10,48	Medical aspects	5,363,393	reusable launch vehicle	224
Electric propulsion	117,242	Mercury		upper Stage	224
Electrostatic confinement	336	colonisation	275	Sociology	135,142
Error catastrophe	383	MEMS (Microelectromechanical		Solar sails	26,44
Ethics	48,324	systems)	86	Space art	376
Europa		Moon		Space cable	406
mission	251	colonisation	268,275	Space colonisation	275,383
Evolution	81,403	exploration	376	Space exploration	10,135
Exotic matter	347	habitat	268,275	Space law	363
Extrasolar planets	150,369	Motivation	135,324	Space power	
Extra-terrestrial civilisation	142,167,324,	NEA Scout	26	nuclear fusion	336
	383,400	NIDE (Biomimetics)	389	pirouette system	406
Extra-terrestrial life	48,324	Nuclear reactor	200,336	Space probes	242,251,389
Fermi paradox	142,383	Orbital mechanics	128,242	Space safety	
Firefly Icarus	68	Orion (project)	17	human factors	363
Fluid dynamics	354	Panspermia	150	Space 2100	10
Fusion ignition	336	Philosophy of space	48,324	Starship Congress 2013	48
Geoengineering	369	Planets		Structures	
Gravitational lens	342	extrasolar	150,369	consumable	188
Habitation Module	363	Policy		Daedalus propulsion	33
Hawking radiation	105	exploration strategy	10	Mars habitat	363
Heliopause mission	128	interstellar mission	48	moon habitat	268,275
History		Power systems (see also Space power)		Superluminal travel	214,400
Project Orion	17	pirouette system	406	Technical Note	31,81,150,167,211,214
solar sails	44	Propulsion methods			217,369,400,403,406
Human destiny	403	antimatter	200	Terraforming	150
Icarus	33,68,306	atmospheric	224,354	Trojan asteroids	242
Ice probes	251	black hole sail	105	Underwater vehicle	251
Infrastructure		combustible inertial	188	United Kingdom	
Skylon	224	electric	117,242	Skylon	224
Interstellar communications	94,167,172,	FEEP	117	USAF, Project Orion	17
	342	fission	17,200	Vision and motive	135,324,376
Interstellar dust	205	fusion	33,68,200,217,306	Vitrification	268,275
Interstellar precursor mission	26,117,128	interstellar	17,33,44,68,105,153,	Von Neumann probes	383
Interstellar propulsion	17,33,44,68,		172,217,347	Warfare	150
	105,153,172,217,347	laser/maser sail	44,172,205	World ships	81
Interstellar travel	31,44,48,94,98,	magnetic sail	306	100-year Starship Study	86,153,200,205,
	205,214,306,400	nuclear pulse	17,33		211,214,217,324

