SPESIF 2011 & COFE4
Speaker Papers
PLENARY I

NEW ERA IN SPACE RESEARCH AND TECHNOLOGY

NASA Innovative Advanced Concepts
  John M. (Jay) Falker
NASA Game Changing Technology
  Harry Partridge
Examples of Advanced Concept and Technology Development in Australia
  H. David Froning

PLENARY II

FUTURE ENERGY

Qualification and Quantification of Telomeric Elongation Due to Electromagnetic Resonance Exposure
  Scott C Kelsey
Ion Conducting Materials; from Terrestrial Energy Conversion and Storage to Space Based Resource Utilization and Life Support
  Eric D. Wachsman

LECTURE SERIES

A Matter of Definition
  Greg Volk
Advanced Space Nuclear Reactors from Fiction to Reality
  Liviu Popa-Simil
The Morningstar Energy Box
  Paul A Murad, Morgan J Boardman and John Brandenburg

BANQUET DINNER SPEAKER

The Frontiers of Energetics and Space Propulsion; The “Responsibly Imaginable”
  Dennis M. Bushnell
8th SYMPOSIUM ON NEW FRONTIERS IN THE SPACE PROPULSION SCIENCES

ADVANCES IN CONTEMPORARY PROPULSION SCIENCES &
ADVANCED TECHNOLOGIES, CONCEPTS, AND TECHNIQUES FOR SPACE APPLICATION

VASIMR Human Mission to Mars
Andrew V. Ilin, Leonard D. Cassady, Tim W. Glover and Franklin R. Chang Diaz

Sling-on-a-Ring: Structure for an Elevator to LEO
Andrew Meulenberg and Timothy Poston

Electromagnetic Catapult Assisted Horizontal Launch
George Scelzo, William Dawson, Ken House and Ron Litchford

Nano-hetero structure applications in beamed power and space energy harvesting
Liviu Popa-Simil

Combined hybrid nuclear system for energy and propulsion
Liviu Popa-Simil

Hydrogen Storage Methods for Microthrusters
Xiaoling Yang, George H Miley, Nie Luo, Barbara Betti and Francesco Nasuti

FRONTIERS IN PROPULSION SCIENCE; THEORIES, MODELS AND CONCEPTS

Vortex Formation in the Wake of Dark Matter Propulsion
Glen A Robertson and Mario J Pinheiro

The Chameleon Hypothesis, Contextual Cosmos, and Prospects for Novel forms of Energy Generation
Don Reed

Physics of Extreme Gravitomagnetic and Gravity-Like Fields for Novel Space Propulsion and Energy Generation
Walter Dröschler and Jochem Hauser

Reverse Engineering Podkletnov’s Experiments
Benjamin T Solomon

Theoretical and Experimental Searches for the Podkletnov Effect
Hamilton Carter

FRONTIERS IN PROPULSION SCIENCE; EXPERIMENTAL RESULTS

On the Nature of the Propulsive Force of Asymmetric Capacitors in the Atmosphere
Alexandre A Martins (Student) and Mario J Pinheiro

New Directions in Electromagnetism for Propulsion and Power
H David Froning and Terence W Barrett

Possible Mach Effects in Bodies Accelerated by Non-Uniform Magnetic Fields
Nembo Buldrini

Mach Effects: Recent Experimental Results
James F Woodward

Electromagnetic Radiation Experiments with Transmitting, Contra-Wound Toroidal Coils
H David Froning, George W Hathaway and Blair Cleveland
On the Propulsive Force Developed Asymmetric Capacitors in a Vacuum
Alexandre A Martins (Student) and Mario J Pinheiro

Progress in an Antigravity Mechanism using rotating masses
Christopher Provatidis

NEW DIRECTIONS IN ASTROPHYSICS/PARTICLE PHYSICS

Nuclear and Crystal State Aspects of Overlapping Holographic Phase Patterns
Bernd Binder

A New Model for Matter, Space and Energy
Mark AB Garstin

Recurrent Anholonomy in Curved Space Navigation Solved by the Riemann Zeta Function
Bernd Binder

UNCONVENTIONAL PHYSICAL PRINCIPLES AND GRAVITATIONAL MODELS

Experimental and Theoretical Progress on the GEM Theory
John E Brandenburg

Consequences of Unusual Behavior in Einstein’s Field Equations for Advanced Propulsion Schemes
Paul Murad

The Voyager Anomaly and the GEM theory
John E Brandenburg

An Experiment in Synchronicity
Shelley Thomson

Replicating Pulsar Behavior to Create a Future Space Propulsor
Paul Murad

FAR TERM SPACE TRANSPORT/ENVIRONMENT MODELS AND THEORIES

Can the Universe be Represented a Superposition of Space-Time Manifolds?
Raymond Jensen

Study of Gravity (Part 1) (Part 2)
Mike Gamble
3rd SYMPOSIUM ON ASTROSOCIOLOGY

DEFINITION, SCOPE, AND RELEVANCE/ASTROSOCIOLOGY IN THE CLASSROOM

Report on the Progress of Astrosociology
Jim Pass

Negotiations between Utopia and Dystopia in Iain M Banks's Culture Sequence
Simone Caroti

SCIENCE FICTION AND SCIENTIFIC ACTUALITY

Space and the Evolution of Political Identity in Science Fiction
Laura M Delgado (Student)

SPACE POLICY AND SPACE LAW IN A SOCIETAL CONTEXT

The Nexus between Law and Astrosociology
Christopher Hearsey

SPACE SOCIETIES/THE SETTLEMENT OF SPACE ENVIRONMENTS

Astrosociology and the Capacity of Major World Religions to Contextualize the Possibility of Life Beyond Earth
Eric M McAdamis

SPACEFARING SOCIETIES

An Astrosociological Perspective on Space-Capable vs Spacefaring Societies
Jim Pass

MEDICAL ASTROSOCIOLOGY

Human Motivations for Long-Term Confined Habitation in Remote High Risk Areas & Training: An Astrosociological Approach
Melvin S Marsh (Student) and Vadim Y Rygalov

Deviance in Space Habitats: A Preliminary Look at Health and Safety Violations
Jim Pass

OVERVIEW EFFECT

Analyzing Distinctive Elements in Astrosociology: the Interplay between Ecologies and Environments
Christopher Hearsey
Space exploration: The dreams of the first half of the century vs the reality of the second half
Bob Zimmerman

The Death of Rocket Science in the 21st Century
Glen A Robertson and Darryl W Webb

Identifying Sociological Factors for the Success of Space Exploration
Charles A Lundquist

How We Remember Apollo
Roger D. Launius
2nd SYMPOSIUM ON HIGH-FREQUENCY GRAVITATIONAL WAVES

Estimate of Diffraction from Gaussian Beam in Li-Baker HFGW Detector
   R Clive Woods

The Li-Baker High-Frequency Gravitational Wave Detector
   Robert M L Baker, Jr

Celeration parameter $Q(z)$ and the Role of Nucleated GW Gravition Gas in the Development of Dark Energy Alternatives
   Andrew Beckwith

Can a Massive Graviton be a Stable Particle?
   Andrew Beckwith
4th CONFERENCE ON FUTURE ENERGY

SOLAR AND SPACE SOLAR POWER

Terrestrial Micro Renewable Energy Applications of Space Technology
Narayanan Komerath

Sandwich Module Development for Space Solar Power
Paul Jaffe

ADVANCED NUCLEAR ENERGY

Modeling of Selected Ceramic Processing Parameters Employed in the Fabrication of 238PuO2 Fuel Pellets

Enhanced Singular Wave Reactor for Surface Power
Liviu Popa-Simil

Extensions to Physics: Low-Energy Nuclear Reactions
Andrew Meulenberg and K P Sinha

Deuteron Driven Fast Ignition of Pre-compressed Fuel: An Estimation of Energy Enhancement
George H Miley, Xiaoling Yang, Kirk A Flippo, Heinrich Hora

The Progress of Low Energy Nuclear Reaction Study at University of Illinois at Urbana-Champaign
Xiaoling Yang, George H Miley, Heinrich Hora

Conventional physics can explain cold fusion excess heat
Scott R. Chubb

EXPERIMENTAL DEVICES

A Hyper-efficient Inverter Driven By Positive EMF In Combination with Transient Phenomenon
Osamu Ide

Water Electrolyzers and Zero-Point Energy
Moray B King

Experiments with Coler Magnetic Current Apparatus
Thorsten Ludwig

OTHERS NOT DEFINED ABOVE

The Flow of Energy
Frank Znidarsic and Glen A Robertson

Department of Energy (DOE) R&D Programs
Dave Goodwin
2ND MEETING ON FUTURE DIRECTIONS IN SPACE RESEARCH AND TECHNOLOGY

ENABLING TECHNOLOGIES FOR SURFACE SCIENCE

Breakthrough X-ray Analysis Tool for Unprepared Samples
   Z. Arzoumanian, P. E. Clark and K. Gendreau
Lunar Surface Thermal Radiator: Performance Evaluation and Thermal Analysis
   Ching-fen Tsai, John Tran, Julian Prabhu, and Sri K Iya
Small Cold Temperature Instrument Packages
   P. E. Clark, P. S. Millar, P. S. Yeh, S. Feng, D. Brigham and B. Beaman
A New Paradigm for Robotic Rovers
   P. E. Clark, S. A. Curtis and M. L. Rilee

TRANSFORMATIONAL TECHNOLOGIES TO EXPEDITE SPACE ACCESS AND DEVELOPMENT

LEO-Ring-Based Communications Network
   A. Meulenberg and Tat-Chee Wan
Enabling Exploration Through Automated Manufacture
   Jeremiah J Hansen
A Development and Test Program for the Magnetically Inflated Cable (MIC) Large Space Structures System
   James Powell, George Maise and John Rather
A Development and Test Program for the Generation-1 Maglev Launch System
   James Powell, George Maise and John Rather