

# Gravity Modification Workshop

MAKING THE NEW PHYSICS & ENGINEERING ACCESSIBLE TO ENGINEERS

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# What does this Workshop Accomplish?

- ▶ The ability to develop new launch technologies
- ▶ Improve return on research funding:
  - ▶ Recognizing issues in physics that are not feasible today.
  - ▶ Construct new engineering research programs that are likely to succeed.
- ▶ Gravity modification physics & technology:
  - ▶ Provide an empirically validated knowledge base for gravity modification.
  - ▶ Excel models provided, with explanation on how to build and use them.
  - ▶ Ability to construct your own experiments and research programs in gravity modification, today.

# The Critical Need to Move Forward

## ▶ Our tools not our minds:

- ▶ If a 100,000 of our brightest minds have not been able to solve the gravity modification physics these last 100 years, then the problem is not with our minds but with our tools.

## ▶ The physics of gravity modification has been solved:

- ▶ Solomon solved the gravity modification physics with the discovery of Ni Fields and the new massless equation for gravitational acceleration,  $g=\tau c^2$ .
- ▶ This equation is the new propulsion equation that will drive the invention of new types of engines.

## ▶ Occam's Razor:

- ▶ The same simple  $g=\tau c^2$  massless formula for gravitational acceleration is also correct for mechanical and electromagnetic accelerations.
- ▶ Quantum theory is much more complicated, requiring a different particle for each type of force:
  - ▶ Virtual photons for electromagnetic forces.
  - ▶ Gravitons for gravity. At the present time there is no empirical evidence that gravitons exists.
- ▶ By Occam's Razor,  $g=\tau c^2$  is the superior model of Nature's macro forces.

# Workshop Overview: Program (278 slides)

## Introduction

- ✓ Principal Investigator
- ✓ Kline Directive
- ✓ Types of Theories
- ✓ New Definitions & Formulae
- ✓ Impeller Emergence
- ✓ Question & Answer Time

## Current Fallacies

- ✓ Rigor & Falsifiability
- ✓ Feasibility & Commercial Success
- ✓ Interstellar Rocket Concept Fallacies
- ✓ Physics Inconsistencies
- ✓ Process Models
- ✓ Question & Answer Time

## Time Travel Lessons

- ✓ Universe Designer Questions
- ✓ A Time Travel Universe
- ✓ No Time Travel Universe
- ✓ Lorentz-FitzGerald Revisited
- ✓ The Law that Replaces Censorship
- ✓ Question & Answer Time

## Tools & Models

- ✓ Designing Excel Worksheets
- ✓ X Numbers Add In
- ✓ Mechanical Acceleration
- ✓ Gravitational Acceleration
- ✓ Electromagnetic Acceleration
- ✓ Question & Answer Time

## Engineering Designs

- ✓ Laithwaite's Rotating Spinning Disc
- ✓ Podkletnov's Observations
- ✓ Superconducting Disc Model
- ✓ Theoretical Engine Designs Issues
- ✓ Question & Answer Time

# Workshop Module 01 Overview: Introduction (34 slides)

## Principal Investigator & Presenter

- ✓ Benjamin T Solomon

## Kline Directive

- ✓ Who
- ✓ Nature
- ✓ Scope
- ✓ Interstellar Challenge Matrix (ICM)

## Types of Theories

- ✓ Recognizing Feasibility for Funding
- ✓ Millennium Theories
- ✓ Century Theories
- ✓ Engineering Feasible Theories

## New Definitions & Formulae

- ✓ Gravity Modification
- ✓ Interstellar Propulsion
- ✓ Ni Fields &  $g=\tau c^2$
- ✓ Asymmetric Fields are Key to Forces
- ✓ Laithwaite's Big Wheel
- ✓ Var-Gamma & Spatial Probability
- ✓ Time Travel versus Temporal Reversibility

## Impeller Emergence

- ✓ Definition, Classical vs Impeller
- ✓ (E1) New Property
- ✓ (E2) Impeller Property
- ✓ (E3) Resemblance Property
- ✓ (E4) External Factor Property
- ✓ (E5) Form Property
- ✓ (E6) Inheritance Property
- ✓ (E7) Reversion Property

# Workshop Module 02 Overview: Current Fallacies

(53 slides)

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## Rigor & Falsifiability

- ✓ Peer Review
- ✓ Getting the Concepts Right
- ✓ Look at the Big Picture
- ✓ Controlled Scenarios for Rigor
- ✓ Mathematical Rigor
- ✓ Mathematical Sophistication
- ✓ Falsifiability
- ✓ Strong & Weak Forms
- ✓ The Standard Model

## Interstellar Rocket Concept Issues

- ✓ Conventional Rockets
- ✓ Atomic Bomb Pulse Detonation
- ✓ Antimatter Rockets
- ✓ Wormholes / Time Travel
- ✓ Alcubierre Type Warp Drives
- ✓ Quantum Foam Propulsion
- ✓ Small Black Hole Propulsion

## Feasibility & Commercial Success

- ✓ Review Kline Directive
- ✓ Interstellar Challenge Matrix
- ✓ Definition of Commercial Success

## Physics Inconsistencies

- ✓ Baking bread
- ✓ Universe structure
- ✓ 5-Particle Box Paradox
- ✓ Consistency
- ✓ Time travel
- ✓ Quantum foam
- ✓ Exotic matter
- ✓ Tensile particles
- ✓ Virtual particles
- ✓ Mass proxy
- ✓ Wave function
- ✓ Photon probability
- ✓ Probability fields
- ✓ Spectrum Independence
- ✓ Photon structure
- ✓ Sophisticated spacetime

## Process Models

- ✓ What are Process Models?
- ✓ Structural Questions

# Workshop Module 03 Overview: Time Travel Lessons (48 slides)

## Universe Designer Questions

- ✓ Perspectives Change not Questions

## A Time Travel Universe

- ✓ Thin Slice of Baking Bread
- ✓ Definition Problem
- ✓ Basic Outline
- ✓ God's Issues
- ✓ Mass-Energy
- ✓ Arrow of Time
- ✓ Temporal Reversibility

## Non Time Travel Universe

- ✓ Expanding Sphere
- ✓ Basic Outline
- ✓ God's Issues
- ✓ Mass-Energy
- ✓ Arrow of Time
- ✓ Temporal Reversibility

## Lorentz-FitzGerald Revisited

- ✓ Universe Shell Explanation for LFT
- ✓ Universe Shell Black Holes

## Lessons Learned

- ✓ Context Sensitive
- ✓ What is Censorship?
- ✓ The Law that Replaces Censorship
- ✓ Power of Alternate Scenarios

# Workshop Module 04 Overview: Tools & Models (88 slides)

## Designing Excel Worksheets

- ✓ Internal Spreadsheet Design
- ✓ Modular Worksheet Design
- ✓ Model Integrity
- ✓ Model Cohesion
- ✓ Exercise 01 & Answers
- ✓ XNumbers Add In

## Mechanical Acceleration

- ✓  $g = \tau c^2$
- ✓ Linear Acceleration
- ✓ Centripetal Acceleration
- ✓ Something to Think About
- ✓ Rules for Combining 3D Ni Fields

## Gravitational Acceleration

- ✓ The Gravity Schema
- ✓ Local Field Effects
- ✓ Local Acceleration Model
- ✓ Review Excel Worksheet Model

## Electromagnetic Acceleration

- ✓ Classical Electromagnetism
- ✓ Electromagnetic Ni Fields
- ✓ Review Excel Worksheet Model

## New Electric Field Model

- ✓ Ni Field Form of E&M Field Lines
- ✓ Center of Moments Concept
- ✓ Rules for Combining Electrical Fields
- ✓ Change in  $C_E$  Tells the Story
- ✓ Electron Motion & Charged Plates
- ✓ Motion of Two Charged Particles
- ✓ Poincare Stresses Don't Exist



# Workshop Module 05 Overview: Engineering Designs (55 slides)

## Laithwaite's Rotating Spinning Disc

- ✓ Reviewing the  $\Omega$  Function
- ✓ Reconciling Others' Results
- ✓ Numerical Model
- ✓ LRSD Launch Vehicles

## Podkletnov's Observations

- ✓ Summary of Observations
- ✓ Podkletnov's 1992 paper
- ✓ Lesson: Asymmetric Fields
- ✓ Podkletnov's 1997 paper
- ✓ Definition of Gravity Modification
- ✓ Implementing Asymmetric Fields
- ✓ Critical Observations for Model
- ✓ Gravitational Column Launch

## Superconducting Disc Model

- ✓ Origin Independent Locality
- ✓ Broadened Principle of Equivalence
- ✓ Ni Field Form of Electric & Magnetic Field Lines
- ✓ Sub Models Required
- ✓ Magnetic & Single Field Effect
- ✓ Static Magnetic Field Model Results
- ✓ Definition of the Single Field Effect
- ✓ The Electromagnetic Model
- ✓ Electromagnetic Model Results
- ✓ Conclusion
- ✓ Questions & Answers

# Principal Investigator & Presenter

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- ▶ Founder & Chairman of the Xodus One Foundation (<http://www.XodusOneFoundation.org>)
- ▶ Principal Investigator, since 1999, at iSETI LLC (<http://www.iseti.us/>)
- ▶ Discoveries
  - ▶ Ni Fields &  $g=tc^2$  massless gravitational acceleration.
  - ▶ Var-Gamma Photon Spatial Probability Field which unifies Shielding/Invisibility, Cloaking/Resolution and Transmission into a single phenomenon.
- ▶ Published the 12-year study, An Introduction to Gravity Modification (available on Amazon.com & other stores).
- ▶ Published numerous peer reviewed papers.

# Workshop Details

- ▶ **Title:** The Gravity Modification Workshop
- ▶ **Presenter:** Benjamin T Solomon
- ▶ **Duration:** 1 day (8:00am – 5:00pm) Mountain Daylight Savings Time
- ▶ **Location:** Webcast using Webex
- ▶ **Date:** Wednesday, August 20, 2014.
- ▶ **Fee:** \$100 introductory workshop fee.
- ▶ **Tax:** Workshop fee is tax deductible as the Xodus One Foundation is a registered 501(c)(3) non profit.

- ▶ **Register By:** 08/13/2014 is last date for receipt of payments.
- ▶ **Materials Provided:**
  - ▶ Electronic pdf copies of slides.
  - ▶ Emailed to participants on the morning of the workshop.
- ▶ **PC Requirements:** Any tablet, notebook or PC with web browser, that can open pdf files.
- ▶ **Meals:** N/A

# Contact Details

- ▶ Please email Ben Solomon, [bts AT XodusOneFoundation . Org](mailto:bts@XodusOneFoundation.org)
  - ▶ To register & make payments by [August, 13 2014](#).
- ▶ Link to future Workshop Schedule: <http://xodusonefoundation.org/wordpress/gm-workshop-schedule/>
- ▶ Make donation to the Xodus One Foundation:  
<http://xodusonefoundation.org/wordpress/donation-page/>