Sunday 9 September
2:00 – 6:00 PM  EARLY REGISTRATION | Aulani Foyer

Monday 10 September
2:00 – 6:00 PM  EARLY REGISTRATION | Aulani Foyer

Tuesday 11 September
8:00 – 6:00 PM  EXHIBITOR LOAD-IN | Jade-Plumeria Ballroom
2:00 – 6:00 PM  EARLY REGISTRATION | Aulani Foyer
6:00 – 7:30 PM  WELCOME RECEPTION | Luau Gardens

Wednesday 12 September
6:00-7:15 AM  BREAKFAST AT LEISURE | Luau Gardens
10:00-6:00 PM  EXHIBITION HOURS
7:30  CONFERENCE OPENING | Aulani Ballroom
Jeanne Unemori Skog, President & CEO, Maui Economic Development Board
NATIONAL ANTHEM AND HAWA‘I PONO‘I
TSgt Tamiko Boone, U.S. Air Force Band of the Pacific
INVOCATION
Reverend Kealahou Alica, Keawala‘i Congregational Church
WELCOME REMARKS (via video)
Daniel K. Inouye, United States Senator
7:45-8:45  KEYNOTE ADDRESS
Introduction
Colonel L. Kirk Lewis, Ret.
Senior Analyst, Institute for Defense Analyses
General William L. Shelton
Air Force Space Command, U.S. Air Force
8:45  BREAK (15 MINUTES)
9:00  PANEL
9:45  BREAK (15 MINUTES)
10:00  ADAPTIVE OPTICS AND IMAGING
Session Chair: Charles Matson, Air Force Research Laboratory
Development of Robust, Light-weight, Agile Deformable Mirrors in Carbon Fiber
Michael Hart, The University of Arizona
Closed-loop Performance of an Actuated Deformable Carbon Fiber Reinforced Polymer Mirror
Christopher Wilcox, Naval Research Laboratory
Active Optics Modernization of the AEOS Telescope
David Greenwald, Boeing

11:00
LUNCHEON | Lokelani Ballroom
Co-sponsored by BAE Systems

12:00 PM
ADAPTIVE OPTICS AND IMAGING (continued)

Numerical Techniques for 3D-Turbulence Effects Analysis and Piston Phase Retrieval
Mikhail Vorontsov, University of Dayton Analysis of Galileo Style Geostationary Satellite Imaging:

Temporally Evolving Atmospheric Phase Screen Generation
Isaac Putnam, USAF - AFIT/ENG

Image Reconstruction
Henrique Schmitt, Computational Physics, Inc.

High Resolution Near Real Time Image Processing and Support for MSSS Modernization
Robert Bruce Duncan, Boeing Company

Application of the ITIQUE Image Quality Modeling Metric to SSA Domain Imagery
David Gerwe, Boeing

1:40
ORBITAL DEBRIS
Session Chair: Thomas Schildknecht, Astronomical Institute University of Bern

Overview of Multiyear Results of GEO and HEO Region Space Debris Search, Tracking and Characterization
Vladimir Agapov, KIAM RAS

Visible Light Spectroscopy of GEO Debris
Patrick Seitzer, University of Michigan Astronomy

Long-Term Evolution of High Area-to-Mass Ratio Objects in Different Orbital Regions
Thomas Schildknecht, Astronomical Institute University of Bern

Prediction of HAMR Debris Population Distribution Released from GEO Space
Aaron Rosengren, University of Colorado at Boulder

3:00
BREAK (20 MINUTES)

3:20
ORBITAL DEBRIS (continued)

Estimating the Error in Statistical HAMR Object Populations Resulting from Simplified Radiation Pressure Modeling
Sven Flegel, Institute of Aerospace Systems, Technische Universität Braunschweig

Comparison Between Four Detection Algorithms for GEO Objects
Toshifumi Yanagisawa, Japan Aerospace Exploration Agency

Phase Function Determination in Support of Orbital Debris Size Estimation
Matthew Hejduk, LZ Technologies Inc.

Probable Rotation States of Rocket Bodies in Low Earth Orbit
Gregory Ojakangas, Drury University and LZ technology
Brute Force Modeling of the Orbital Debris Evolution
Sergei Nikolaev, Lawrence Livermore National Laboratory

LightForce: Photon Pressure Induced Collision Avoidance
Creon Levit, NASA Ames Research Center

5:20-6:30 EXHIBITION AND POSTER SESSION | Jade-Plumeria Ballroom

6:00-7:00 AIR FORCE MAUI OPTICAL AND SUPERCOMPUTING (AMOS) SITE | Aulani Ballroom
CAPABILITIES TUTORIAL

Thursday 13 September

6:00-7:15 AM BREAKFAST AT LEISURE | Luau Gardens

10:00-6:00 PM EXHIBITION HOURS

7:30 BREAK (20 MINUTES)

9:00 SPACE IN THE CLASSROOM FOR MAUI SCHOOL STUDENTS
300 middle and high school students to participate in Audience with an Astronaut and hands-on STEM activities

9:20 NON-RESOLVED OBJECT CHARACTERIZATION
Session Chair: Matthew Hejduk, LZ Technologies Inc.

Algorithms for Automated Characterization of Three-Axis Stabilized GEOs using Non-Resolved Optical Observations
Jeremy Murray-Krezan, Air Force Research Lab - Space Vehicles

Satellite Surface Characterization from Non-resolved Multi-band Optical Observations
Doyle Hall, Boeing - LTS

Noise-Robust Spectral Signature Classification in Non-resolved Object Detection using Feedback Controlled Adaptive Learning
Mark Schmalz, University of Florida

Characterization of 3-Axis Stabilized RSOs from Geometrically-Diverse Photometric Observations
Alexander Quenon, Applied Optimization

Attitude Estimation for Unresolved Agile Space Objects with Shape Model Uncertainty
Marcus Holzinger, Texas A&M University

11:00 LUNCHEON | Lokelani Ballroom

12:00 PM NON-RESOLVED OBJECT CHARACTERIZATION (continued)

The Oculus-ASR: An Orbiting Nanosatellite Testbed for Unresolved Object Characterization
Lyon King, Michigan Technological University

Imaging of Non-Resolved Objects Using the Fine Scale Optical Range
Thomas Pollock, Aerospace Engineering Department, Texas A&M University
Multi-sensor Waveband Utility for RSO Information
David Wellems, ATA

Large Phase Angle Observations of GEO Satellites
Rita Cogion, Oceanit

1:20

ASTRONOMY
Session Chair: Michael Maberry, Institute for Astronomy, University of Hawai’i

The Pan-STARRS Wide Field Imaging System
Nicholas Kaiser, University of Hawaii

Status and Early Science Results of the PS1 Science Mission
Kenneth Chambers, Institute for Astronomy, Univ. of Hawaii

Physical Characterization Studies of Near-Earth Object Spacecraft Mission Targets
Eileen Ryan, New Mexico Institute of Mining and Technology

2:20

BREAK (20 MINUTES)

2:40

NOVEL APPROACHES TO ELECTRO-OPTICAL SSA SENSING
Session Chair: Eric Pearce, MIT Lincoln Laboratory

Subsystems of the ISON telescopes for GEO, HEO and LEO observations
Igor Molotov, Keldysh Institute of Applied Mathematics, RAS

Pan-STARRS Gigapixel Cameras 1 and 2, Orthogonal Transfer and a New TDI Mode for GEO Observations
Peter Onaka, IfA, University of Hawaii

The Space Surveillance Telescope: Focus and Alignment of a Three Mirror Telescope
Deborah Woods, MIT Lincoln Laboratory

Early Science Instruments and Image Releases from SOFIA
Helen Hall, Universities Space Research Association

Sea Based Tracking Control System
Wayde Kanda, Lockheed Martin

Real-Time Utilization of STSS for Improved Collision Risk Management
Matthew Duncan, SpaceNav

JSpOC Mission System Application Development Environment
Maj Rick Luce, SMC/SY

5:00-6:00

EXHIBITION AND POSTER SESSION | Jade-Plumeria Ballroom

6:00 PM

CONFERENCE ADJOURN

Friday 14 September

6:00-7:15 AM
BREAKFAST AT LEISURE | Luau Gardens

10:00-4:00 PM
EXHIBITION HOURS
7:30-9:00 AM  PANEL
Lt Gen Michael A. Hamel, USAF (Retired), Senior Vice President, Strategy and Development, Orbital Sciences Corporation

9:00  BREAK (20 MINUTES)

9:20  SPACE WEATHER
Session Chair: Randall Alliss, Northrop Grumman

Integration of Space Weather Forecasts into Space Protection
Geoffrey Reeves, Los Alamos National Laboratory

Forecasting of Optical Turbulence in Support of Realtime Optical Imaging and Communication Systems
Randall Alliss, Northrop Grumman

Trans-Ionospheric High Frequency Signal Ray Tracing
Scott Wright, Northrop Grumman Corporation

10:20  DATA & SERVICES
Session Chair: Travis Blake, DARPA

Viral Space Situational Awareness
Anthony Gleckler, GEOST, Inc.

A Comparison Between a Non-linear, Poisson-based Statistical Detector and a Linear, Gaussian Statistical Detector for Detecting Dim Satellites
Stephen Maksim, USAF AFIT/ENG

11:00  LUNCHEON | Lokelani Ballroom

12:00  DATA & SERVICES (continued)
Speaker TBA

Speaker TBA

Speaker TBA

13:00  ASTRODYNAMICS
Session Chair: Paul Cefola, University at Buffalo (SUNY)

A General Solution to the Second Order J2 Contribution in a Mean Equinoctial Element Semianalytic Satellite Theory
Zachary Folcik, MIT Lincoln Laboratory

Improving Low-Earth Orbit Predictions Using Two-line Element Data with Bias Correction
James Bennett, The Satellite Positioning for Atmosphere, Climate and Environment (SPACE) Research Centre, School of Mathematical and Geospatial Sciences, RMIT University

Allocation of DSST in the New Implementation of Tastrodyweb Tools Web-site
Juan Felix San Juan, Universidad de La Rioja

Orbital State Uncertainty Realism
Joshua Horwood, Numerica Corporation

2:20  BREAK (20 MINUTES)
Rapid Non-Linear Uncertainty Propagation via Analytical Techniques  
Kohei Fujimoto, The University of Colorado at Boulder

Covariance Based Pre-Filters and Screening Criteria for Conjunction Analysis  
Eric George, The Aerospace Corporation

Precision Orbit Derived Atmospheric Density: Development and Performance  
Craig McLaughlin, University of Kansas

Satellite Re-entry Modeling and Uncertainty Quantification  
Matthew Horsley, Lawrence Livermore National Laboratory

New Angles-only Algorithms for Initial Orbit Determination  
Gim Der, Derastrodynamics

Search and Determine Integrated Environment (SADIE)  
Robert Bruce Duncan, Boeing Company

NRC Assessment of the USAF Astrodynamical Algorithms  
Paul Nielsen, Carnegie Mellon University’s Software Engineering Institute

5:00 PM  
CONFERENCE ADJOURN

6:00 – 9:00 PM  
CLOSING DINNER | Luau Gardens

Saturday 15 September

7:30 & 9:30 AM  
OPTIONAL TECHNICAL TOUR  
Departs from Wailea Marriott

POSTER PRESENTERS

Implicit Runge-Kutta Methods for Uncertainty Propagation  
Jeffrey Aristoff, Numerica Corporation

Novel Methods Used in the Fabrication and Testing of the Pan-STARRS Telescope Optics  
David Anderson, Rayleigh Optical Corporation

Building Affordable and Interoperable SSA architectures -- Application of Advanced System Engineering and Architecture methods to address the challenges in leveraging the SSA capabilities of allies and space partners  
Gennaro Avvento, Lockheed Martin

One Class of Nonlinear Model Solutions for Flight Vehicles and Applications to Targeting and Guidance Schemes  
Dilmurat Azimov, University of Hawaii at Manoa

Independent Laser Beam Atmospheric Tilt Track Alrogithm  
David Becker, United States Air Force

Spectrometric Characterization of the Anik F Series Satellites  
Donald Bedard, Royal Military College of Canada

An Optical Satellite Tracking System for Undergraduate Research  
Shane Bruski, USAF

Determination of Satellite Characteristics through Visible Light Intensity Analysis  
Shane Bruski, USAF
Optical Signature Analysis of Tumbling Rocket Bodies via Laboratory Measurements
Heather Cowardin, JACOBS/ESCG

Robust Global Image Registration based on a Hybrid Algorithm Combining Fourier- and Spatial-domain Techniques
Peter Crabtree, Air Force Research Laboratory

Early Science Results from SOFIA, the World’s Largest Airborne Observatory
James De Buizer, USRA

New Positions and/or Orbits for Binary Stars Observed at the SOR
Jack Drummond, AFRL/RDS

A Study of the Effects of Material Type and Configuration on Optical Cross Section
Kelly Feirstine, Schafer Corporation

Modeling the Effects of Solar Cell Attitude Distribution on Optical Cross Section for Solar Panel Simulations
Kelly Feirstine, Schafer Corporation

Long Term Sustainability of Space Activities
David Finkleman, Center for Space Standards and Innovation

Wired Widgets: Agile Visualization for SSA
Kelly Gerschefske, MITRE

Sapphire Payload for Space Situational Awareness
John Hackett, COM DEV Ltd.

Polymer Strip Coating Metrology on Large Scale Astronomical Optics
James Hamilton, University of Wisconsin-Platteville

Orbital Error Analysis for Surveillance of Space
Nick Harwood, Dstl

Using Cryptography to Improve Conjunction Analysis
Brett Hemenway, RAND

Analysis of the Long-term Area-to-mass Ratio Variation of Space Debris
Johannes Herzog, Astronomical Institute, University of Bern

GPU-based Space Situational Awareness Simulation for Disparate Multi-sensor Scheduling
Tyler Hobson, The University of Queensland

The JSpOC Mission System (JMS) Common Data Model: Foundation for Net-Centric Interoperability for Space Situational Awareness
Maryann Hutchision, The Aerospace Corporation

Overview of Human-Centric Space Situational Awareness (SSA) Science and Technology (S&T)
John Ianni, AFRL

Implementation of Tomography for Raven, a Multi-Object Adaptive Optics science and technology demonstrator
Kate Jackson, University of Victoria: Mechanical Engineering

Daytime Sky Brightness Modeling of Haleakala along the GEO Belt
Kevin Jim, Oceanit

Imaging Geostationary Satellites with a Common-Mount Interferometer: Image quality and fringe tracking
Anders Jorgensen, New Mexico Tech
Characterizing Orbital Debris and Spacecrafts through a Multi-Analytical Approach
Susan Lederer, NASA

Sky Brightness Analysis using a Million GEODSS Observations
W. Jody Mandeville, MITRE Corporation

Status of the PS2 Telescope Fabrication
Jeffrey Morgan, Pan-STARRS

A Novel Approach to Environment Reconstruction in LiDAR and HSI Datasets
Dejan Nikic, The Boeing Company

Infrasound Rocket Signatures
John Olson, Geophysical Institute, UAF

A Korean Space Situational Awareness Program: OWL Network
Jang-Hyun Park, Korea Astronomy and Space Science Institute

Enhanced Collaboration for Space Situational Awareness via Proxy Agents
Paul Picciano, Aptima

Optical Measurements of Tumbling Rocket Bodies
Jon Read, Hamilton Sundstrand

Ballistic Coefficient Prediction for Resident Space Objects
Ryan Russell, University of Texas at Austin

Scalable Track Initiation for Optical Space Surveillance
Paul Schumacher, Air Force Research Laboratory RDSM

Large Area and High Efficiency Photon Counting Imaging Detectors with High Time and Spatial Resolution for Night Time Sensing and Astronomy
Oswald Siegmund, University of California, Space Sciences Lab

Data Handling and Protection of Need-to-Know Data in a Need-to-Share Netcentric Enterprise
Jeffrey Skelton, The MITRE Corporation

Low Frequency Plasma Turbulence as a Source of Clutter in Surveillance and Communication
Vladimir Sotnikov, Air Force Research Laboratory/Sensors Directorate

NASA's Marshall Space Flight Center Recent Studies and Technology Developments in the Area of SSA/Orbital Debris
Bruce Wiegmann, NASA - Marshall Space Flight Center

Cross-Organization Service Use Management for SSA
Jeremy Witmer, MITRE

Dynamics of Objects in Geosynchronous Earth Orbit: Implications to the Design of a Ground-based Remote Sensing System
Scott Wright, Northrop Grumman Corporation

Adding the "Local" Layer to the SSA Picture
Farakh Zaman, USAF/SMC/SY

Improving Ground Based Telescope Focus through Joint Parameter Estimation
J. Chris Zingarelli, USAF