



GSFC and NESC Welcome

Spacecraft Anomalies and Failures Workshop March 27, 2024 Carmel Conaty

"It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow" – Robert H. Goddard



We Begin with SCIENCE and End with SCIENCE

Our mission is to combine world-class, multi-disciplinary science research, cutting-edge engineering, and focused technology development to advance human knowledge of our universe.





Core Areas of Excellence



HELIOPHYSICS EARTH SCIEN ASTROPHYSI **SUBORBITAI PLANETARY**

ABILITIES TECHNO



Looking forward to 2024 and Beyond

N'A SA



About the NASA Engineering and Safety Center

Established in July 2003 in response to the Columbia accident.

NESC highlights NASA's traditional safety philosophy.

Strong In-Line Checks & Balances • Healthy Tension Between Organizational Elements • Value-Added Independent Assessment

Provides independent assessment of technical issues for NASA programs/projects and addresses national needs.



The NESC is cultivating a safety culture focused on engineering and technical excellence, while fostering an open environment and attacking challenges with unequalled tenacity.

NESC at Goddard



- Institutionalized "Tiger Team" approach to solving problems
 - Agency-recognized NASA Technical Fellows lead Technical Discipline Teams (TDT)
 - Experts from across NASA, industry, academia and other agencies
 - Diverse, expert technical teams provide robust technical solutions
- Assemble independent, diverse, expert technical teams that provide robust technical solutions to the Agency's highest-risk and most complex issues
 - NESC involvement ranges from supporting reviews, augmenting project teams, and solving problems through independent test and analysis, to exploring alternate design concepts
- Strong Systems Engineering and Integration function for proactive trending and identification of problem areas before failures occur

NESC Chief Engineer at Goddard, the Tech Fellows for Systems Engineering and Mechanical Systems, as well as the NIO Systems Engineer POC for SMD, STMD, and ARMD reside at GSFC



Focusing on technical rigor and

engineering excellence



For more information, please visit our websites: <u>www.nasa.gov/goddard</u> <u>www.nasa.gov/nesc</u>



GSFC Leadership Team

* Reports directly to NASA Headquarters





NESC LEADERSHIP



OFFICE OF THE DIRECTOR ·



Wilson

NESC

Director





Michael T. Kirsch NESC Deputy Director



Manager

Lisa McAlhaney MTSO Manager



Peter Panetta NESC Tech Leader for Safety



NESC CHIEF ENGINEERS

Vande Hei NESC Chief Astronaut

NESC PRINCIPAL ENGINEERS —







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Dr. William H.

Prosser

Nondestructive

Evaluation

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lannello

Electrical

Dr. Jonathan E.

Jones

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Dr. Morgan B. Abney Environmental Control

Dr. Christopher N. Koehler D'Souza Flight Guidance, Navigation,



Null





Jon B. Holladay Systems Engineering

LIAISONS

David Francisco Office of the Chief Health and Medical Officer (OCHMO)

Glen W. Lockwood Office of Safety and Mission Assurance (OSMA)

& Life Support

Dr. Lorraine

Prokop

Software









Dr. Joseph I.

Minow

Space

Environments









Deneen M.

Taylor

Structures

& Protection

Dr. Bryan W.







Dr. Upendra N.

Singh

Sensors &

Instrumentation



Steven L.

Rickman Thermal Control



NASA TECHNICAL FELLOWS

LaRC

Gregory J.

Harrigan

KSC

