

National Aeronautics and  
Space Administration



# NASA Glenn Research Center

A Perspective on NASA Glenn Research Center and the Future of Technology

Research Day

Cleveland State University, College of Engineering

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**Director, Research & Engineering**

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National Aeronautics and Space Administration



www.nasa.gov

MARCH 3, 1915

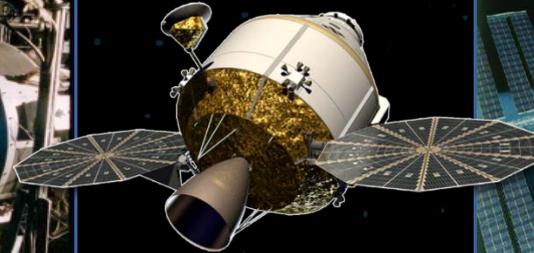
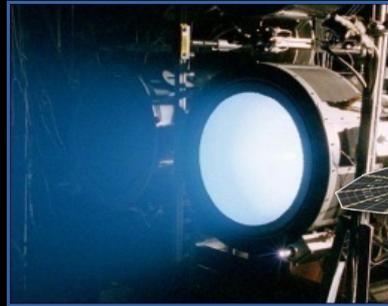
JANUARY 23, 1941

OCTOBER 1, 1958

CELEBRATING  
75 Years  
1941-2016

GLENN RESEARCH CENTER  
OUR PAST-OUR PRESENT-YOUR FUTURE

Glenn's Mission: We **drive** Research, Technology, and Systems to **advance** Aviation, **enable** Exploration of the Universe, and **improve** Life on Earth



Lewis Field (Cleveland)

- 350 acres
- 1568 civil servants and 1560 contractors



Plum Brook Station (Sandusky)

- 6500 acres
- 18 civil servants and 97 contractors



Air-Breathing Propulsion



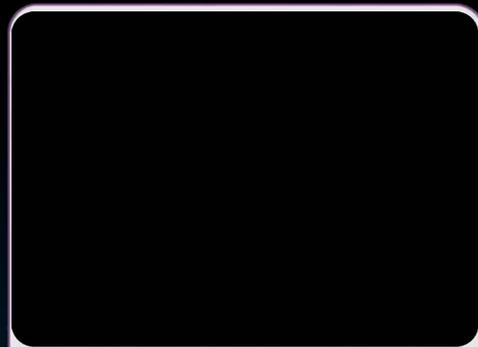
In-Space Propulsion and Cryogenic Fluids Management



Physical Sciences and Biomedical Technologies in Space



Communications Technology and Development



Power, Energy Storage and Conversion



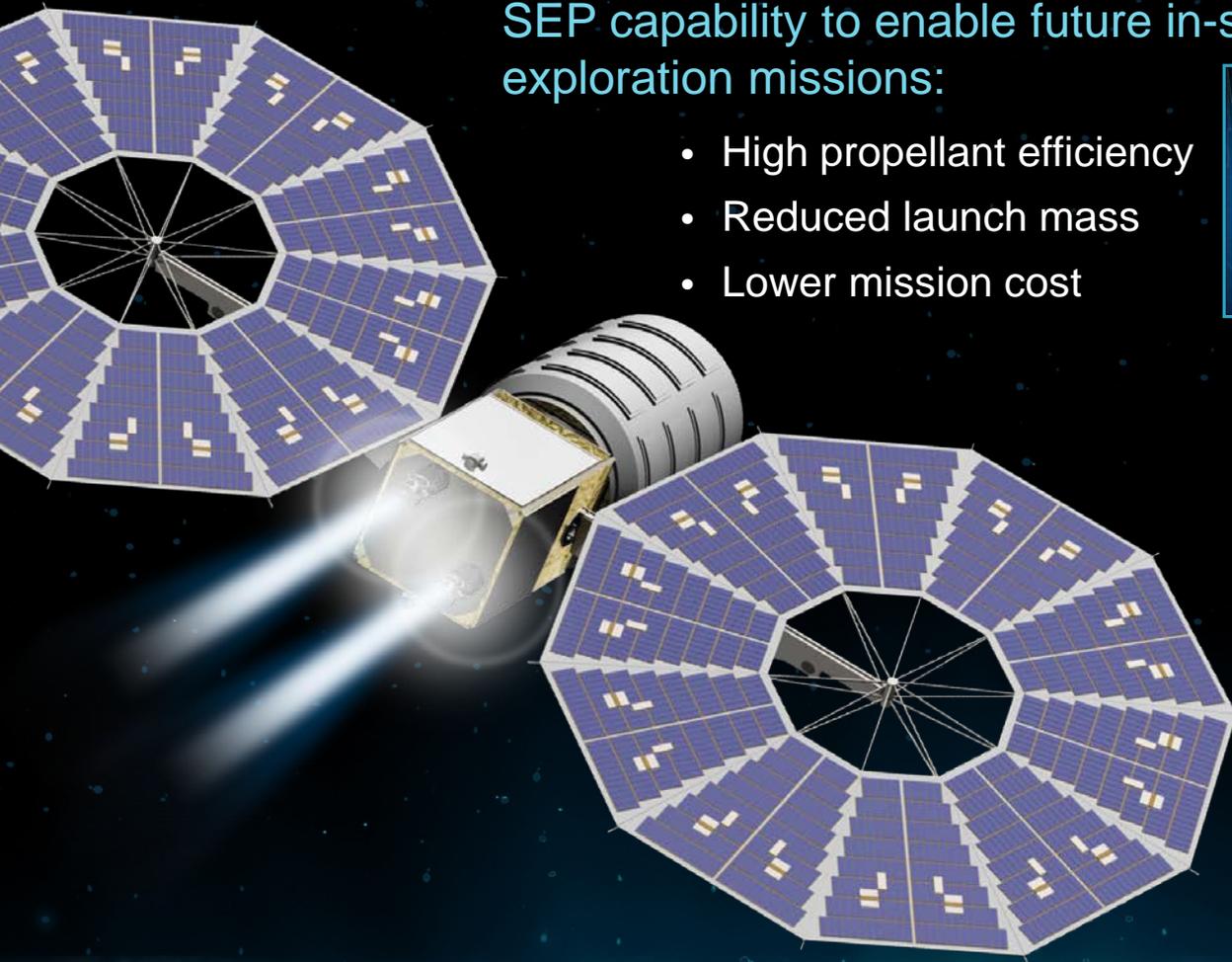
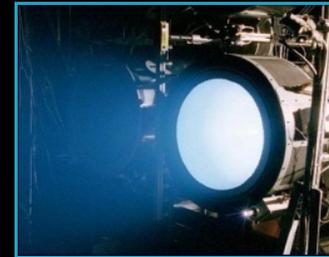
Materials and Structures for Extreme Environments





NASA is developing high-performance SEP capability to enable future in-space exploration missions:

- High propellant efficiency
- Reduced launch mass
- Lower mission cost



# NASA External Impacts

- Chevy combined NASA developed topology mapping software with unique Lotus algorithms to directly or indirectly control vehicle speed to maximize MPG based on road conditions
- Cleveland Clinic used NASA flow visualization software with patient MRI images to visualize stresses during walking to study how diabetic foot ulcers develop
- An inflatable antenna developed with GRC membrane reflector and shape-memory polymer antenna technology enables communications for emergency personnel

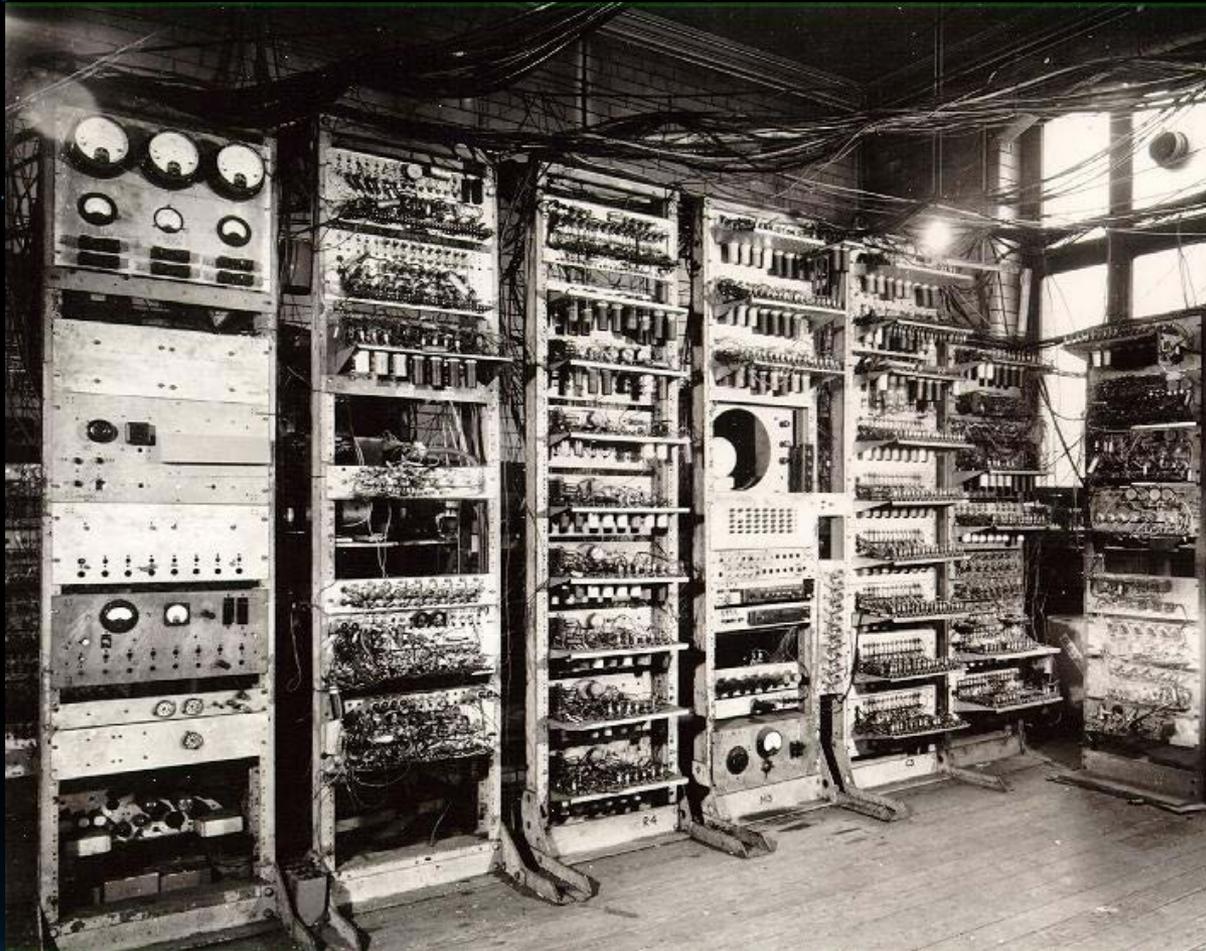


 Cleveland Clinic

Take Control of Diabetes  
and Stay a Step Ahead with Your  
Treatment Strategy



Do you know what this?



Do you know what this?



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QUESTIONS???

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BACKUP

# How I spent my summer Vacation



