THADDEUS **JONES**

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EXPERIENCE

LOCKHEED MARTIN
SPACE SYSTEMS ARCHITECT   JUN 2022 - PRESENT

- Lead a cross-functional team of engineers in developing novel spacecraft architectures for NASA, DoD, and commercial deep space missions
- Manage technical performance budgets at the system level and across subsystems
- Define mission technical requirements and CONOPS, and decompose system level requirements
- Conduct system-level trade studies and risk analyses, identifying mitigation strategies
- Leading proposal efforts for a $1B NASA New Frontiers mission concept
- Won and delivered the NASA ARRIVAL study to demonstrate aerocapture technologies
- Won and completed two JPL study contracts for low cost Mars landers and low cost Mars orbiters
- Architected and presented an experimental two-spacecraft lunar mission to the Defense Innovation Unit (DIU), incorporating advanced sensor payloads and an autonomous navigation architecture
- Supported the definition of a deep space smallsat architecture that was leveraged across a number of proposal efforts

GENERAL ATOMICS
DEPUTY CHIEF ENGINEER   OCT 2021 – JUN 2022

- Successfully led a Space Force program through Critical Design Review (CDR) with the customer
- Led and reviewed the engineering efforts of a team of systems engineers, maintaining system budgets, requirements, verification, interface control, and artifact generation
- Defined system CONOPS across all mission phases, including LEOP, operations, fault recovery, collision avoidance, and deorbit
- Served as primary technical contact for USSF stakeholders, leading engineering meetings and milestone reviews
- Developed Monte Carlo simulations in Python to determine satellite constellation reliability

LEAD SPACECRAFT SYSTEMS ENGINEER   JUN 2019 – OCT 2021

- Successfully led a NASA program through Critical Design Review (CDR) with the customer
- Managed the mission system requirement specification, defining requirements, verification methods, approaches, and artifacts for each requirement
- Wrote and delivered to NASA the Verification & Validation Plan, Telemetry Database, AI&T Plan, and Spacecraft Operations Plan for a spacecraft program
- Developed the Interface Control Documents (ICDs) between the spacecraft and NASA payload
- Led weekly technical working groups with the NASA customer
- Oversaw the development of a spacecraft simulator for delivery to NASA
- Analyzed ground station contact duration in STK for a complex spacecraft/antenna geometry, and wrote scripts in MATLAB to interpret the data
- Operated the OTB-1 spacecraft on-orbit, including successful recovery from safe mode

LOCKHEED MARTIN
SPACECRAFT SYSTEMS ENGINEER   DEC 2017 – JUN 2019

- Ran Artemis-1 mission HIL/SIL testing efforts, including hardware-in-the-loop validation, fault injection, and mission execution under simulated reentry conditions
- Wrote high quality test procedures, test reports, and discrepancy documentation to support all mission testing efforts for the Orion spacecraft
- Responsible for all mission entry tests and all Fault Detection, Isolation, and Recovery (FDIR) tests for the Artemis-1 mission
- Conducted Run-for-Record tests for NASA stakeholders to validate requirements

SYSTEMS ENGINEER   JUN 2015 – DEC 2017
- Installed and tested the AEGIS missile system on three destroyers in Japan and South Korea as the lead Weapon Control Systems (WCS) engineer
- Led Change Review Boards with the Japanese and S. Korean Navies
- Coordinated and drove anomaly resolution from identification and root cause analysis to deployed solution
- Managed thousands of regression requirements for foreign and domestic AEGIS defense programs.
- Wrote new requirements, specification changes, and test procedures in DOORS

EDUCATION

DEC 2020
MS - SPACE SYSTEMS ENGINEERING, JOHNS HOPKINS UNIVERSITY
Graduated with Distinction
Advanced Coursework in:
Spacecraft Design, Electro-Optical Systems, Space Environments, Propulsion systems

MAY 2015
BSE - MECHANICAL ENGINEERING & MATERIAL SCIENCE, DUKE UNIVERSITY
Advanced Coursework in:
Aerospace Structures, Thermodynamics, Fluid Mechanics, Materials Science, Control Systems

SKILLS

- **Engineering Software**: SolidWorks, MATLAB, Python, STK, DOORS, SPICE, Cameo
- **Computer Skills**: Unix/Linux, Microsoft Office, Atlassian Suite (Confluence, JIRA), Windchill
- **Security Clearance**: TS/SCI w/ Poly in process, inactive Secret

AWARDS

GENERAL ATOMICS SPOTLIGHT AWARD
From the GA Director of Space Systems for "Innovation and tireless execution of the mission"

ORION PROGRAM MANAGER'S COMMENDATION
From the NASA Orion Program Manager for "significant contributions to Orion Exploratory Mission 1"