

Jordan L. Thompson

Jr. Thermal Engineer

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AEROSPACE/JR THERMAL ENGINEER

EXPERIENCE

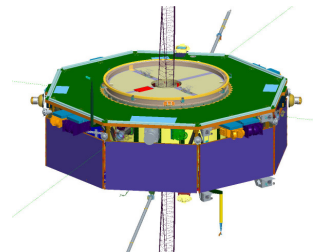
7/13 - PRESENT Tracking and Data Relay Satellite System (TDRSS) Junior Thermal Engineer

- Develop Thermal Desktop™ models of the spacecraft and components
- Perform flight correlation of TDRS 3-7 and TDRS 8-10 using Thermal Desktop™ thermal models
- Support TDRS-K/L pre-flight thermal model evaluation
- Support TDRS-K post-flight model correlation
- Developed additional thermal model components using Thermal Desktop™ to include additional fidelity
 - Gimbal Drive Assembly (GDA)
 - Battery Packs
 - Radiator Panels
 - Heater Simulations
- Support on-orbit operations, on-orbit/ground testing, analysis & support of on-orbit anomaly investigations, etc
- Improved Excel post-processing spreadsheets to compare flight and thermal model predictions
- Merged SINDA/FLUINT input data with Thermal Desktop™ that provided an integrated thermal analytical model



7/2013 - Present Magnetospheric Multi-Scale (MMS) Mission Junior Thermal Engineer

- Provide observatory Thermal Vacuum (TV) and Thermal Balance (TB) test support



- #### 9/2013-Present Solar Orbiter (SO-HIS) Junior Thermal Engineer
- Printed Circuit Board (PCB) thermal analysis using Thermal Desktop™ and SINDA/FLUINT
 - Electronic component junction temperature predictions
 - Post-process temperature and heat flow results
 - Created Excel and Power Point presentation files in support of instrument Critical Design Review (CDR)

OTHER WORK

Graduate Teaching Assistant, May 2012 – May 2013

Mechanical Engineering Dept., Virginia Tech, Blacksburg, VA

- Developed and built lab stations for an undergraduate engineering class (Intro to Thermal Fluids)
 - Instrumented an air compressor to measure the work and determine efficiency
 - Set up pitot tubes to measure air speed of a fan to find flow rate and fan efficiency
 - Developed a test setup to find the time constant of a RTD probe using transient heat transfer
- Instructed students in the lab and graded lab reports

Sensor Construction, December 2011 – May 2013

Mechanical Engineering Dept., Virginia Tech, Blacksburg, VA

- Built heat flux sensors for experimental testing
- Performed heat flux calibrations using a reference sensor and a radiation heat flux source
- Have been contracted by other companies to build sensors for them (GE, Sandia National Labs, Navy)

Energy & Sustainability Engineering Intern, Summer 2011

Office of Energy and Sustainability, Virginia Tech, Blacksburg, VA

- Evaluated current chilled water system at VT and proposed new equipment and techniques to improve the “delta T” of the system which would improve energy and cost savings
- Began the planning of a new solar panel array system to be installed on campus

Assistant Operator, Summer 2010

MeadWestvaco, Low Moor, VA

- Machine operator and forklift operator in production line for paper packaging plant

Sustainability Engineer Intern, Summer 2009

Reliability Dept., MeadWestvaco, Covington, VA

- Inspected the current equipment used on the paper machines and compared with the Bill of Materials
- Updated and corrected the current Bill of Materials at the time

RELATED SKILLS

- Proficient in Thermal Desktop™ and SINDA/FLUINT
- Proficient in Microsoft Office
- MatLab and Labview experience
- Setting up instrumentation for data collection; pressure transducers, pitot tube with manometer, encoders, thermocouples, RTDs,
- Sensor and instrument calibration
- Designing and building experimental setups for testing
- Data analysis

EDUCATION

M.S. Mechanical Engineering, May 2013, Virginia Polytechnic Institute (Virginia Tech), Blacksburg, Virginia
B.S. Mechanical Engineering, May 2011, Virginia Polytechnic Institute (Virginia Tech), Blacksburg, Virgi

SPECIAL ACHIEVMENTS

THESIS

Direct Measurement of Boiling Water Heat Flux for Predicting and Controlling Near CHF

- Designed experiment to measure boiling heat fluxes with the goal of reaching critical heat flux (CHF)
- Collected data for analysis using the heat flux sensor, which includes 2 thermocouple signals and 2 voltage signals for heat flux.
- Recently submitted paper to ANS (American Nuclear Society) for publication