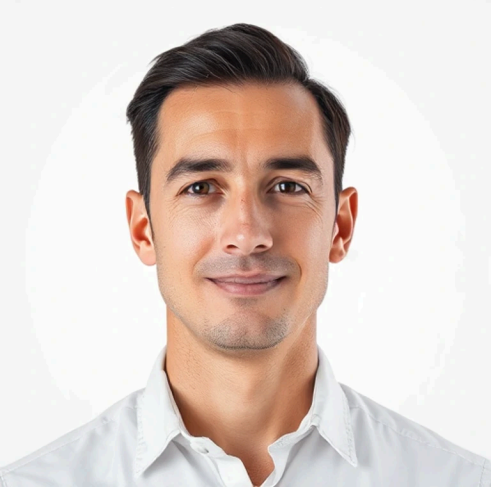

Omar Sherman

Senior Thermal Engineer, Spaceflight Thermal Control

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SUMMARY

Senior thermal engineer with nine years of aerospace experience supporting spaceflight instruments, CubeSats, spacecraft electronics, mechanisms, structures, and optical assemblies. Leads thermal control work across concept development, **requirements generation**, analysis, hardware selection, verification, testing, integration, and mission support. Uses **Thermal Desktop** for analytical modeling, with SolidWorks supporting CAD inputs and hardware definition. Directs thermal vacuum planning, procedures, **ground support equipment** definition, staffing, execution, data review, and **post test model correlation**. Partners with scientists, systems engineers, mechanical teams, test personnel, suppliers, and mission stakeholders to resolve constraints and defend design decisions. Prepares proposals, technical reports, review presentations, procurement specifications, and verification evidence. Brings practical technical leadership, careful model development, and hands on support for small and mid sized aerospace programs.

EXPERIENCE

Senior Thermal Engineer

Summit Orbital Instruments March 2023 - Present Fort Collins, CO

Leads **thermal engineering** for spaceflight instrument programs, owning analysis, requirements, **design reviews**, testing, integration support, and verification evidence with limited oversight.

- Defined instrument scope, assumptions, and traceable inputs for multidisciplinary technical reviews and design decisions.
- Built Thermal Desktop models from drawings and requirements, then verified inputs through peer review and data checks.
- Resolved thermal interfaces across **electronics**, **structures**, mechanisms, and optical assemblies without compromising system intent.
- Planned thermal testing with instrumentation reviews, analytical predictions, and measured data interpretation for design confidence.
- Prepared SolidWorks inputs, calculations, reports, and presentations supporting **procurement**, integration, **verification**, and review boards.
- Closed findings through model refinement, documented design updates, test correlation, and focused engineering peer reviews.

Thermal Engineer III

Pioneer Spaceworks January 2021 - February 2023 Boulder, CO

Owned thermal analysis and verification for CubeSat payload programs, coordinating scientists, systems engineers, hardware teams, and test personnel from concept through delivery.

- Established **CubeSat** payload scope, assumptions, and traceable engineering inputs for review with **scientists** and systems teams.
- Developed **Thermal Desktop** analyses for payload hardware, checking model inputs against drawings, requirements, and design data.
- Coordinated multidisciplinary interfaces to resolve thermal constraints across payload structures, electronics, **mechanisms**, and optical hardware.
- Supported thermal vacuum planning, instrumentation review, **test execution**, and comparison of measured behavior with predictions.
- Prepared CAD inputs, procurement details, technical reports, and review presentations for hardware decisions and verification planning.
- Closed technical findings through design updates, **model correlation**, test evidence, and peer review with delivery teams.

Thermal Engineer II

High Plains Aerospace June 2019 - December 2020 Denver, CO

Performed thermal engineering for spacecraft electronics and structures, developing models, requirements evidence, hardware inputs, and test support for flight programs.

STRENGTHS

Thermal modeling
Built Thermal Desktop models from drawings and requirements, then checked inputs carefully. Teams relied on those models during reviews.

Test leadership
Thermal vacuum work became easier for test teams after procedures, staffing, instrumentation, and GSE needs were made clear.

Cross team delivery
Connected scientists, systems engineers, mechanical teams, and suppliers around practical thermal choices. Tough interfaces moved forward.

Verification discipline
Traceable requirements and model correlation gave reviewers clear evidence. That clarity helped close findings without confusion.

Design communication
Technical reports and review presentations turned complex thermal decisions into concise discussions that earned stakeholder confidence.

SKILLS

Thermal analysis | Thermal Desktop | Spacecraft systems | CubeSat design | Thermal vacuum testing | Model correlation | Requirements verification

SolidWorks CAD

Ground support equipment

Flight hardware integration

Passive thermal control

Active thermal control

Hardware procurement

Technical reviews

Proposal analysis

LANGUAGES

English — Native

Spanish — Intermediate

MY CAREER

- Senior Thermal Engineer at Summit Orbital Instruments (3.5 Years)
- Thermal Engineer III at Pioneer Spaceworks (2.1 Years)
- Thermal Engineer II at High Plains Aerospace (1.5 Years)
- Thermal Engineer at Mesa Flight Engineering (1.9 Years)

- Defined **spacecraft** electronics and structures scope, assumptions, and traceable inputs for formal thermal **design reviews**.
- Created **Thermal Desktop** models and verified analytical inputs against spacecraft drawings, requirements, and approved design data.
- Resolved thermal interfaces with mechanical and systems engineers while preserving structural, electrical, and mission objectives.
- Supported thermal vacuum procedures, **ground support equipment** reviews, instrumentation planning, and **post test model correlation**.
- Prepared SolidWorks inputs, engineering calculations, technical reports, and presentations for procurement and **integration** activities.
- Closed review findings through refined models, documented changes, test comparisons, and cross functional technical reviews.

Thermal Engineer

Mesa Flight Engineering June 2017 - May 2019 Colorado Springs, CO

Supported instrument and optical support hardware programs through thermal analysis, CAD coordination, test preparation, technical documentation, and design verification.

- Established instrument and optical hardware scope, assumptions, and traceable inputs for early technical review discussions.
- Developed **thermal analyses** for instrument assemblies and checked model inputs against drawings, requirements, and design records.
- Coordinated thermal constraints with mechanical, optical, electrical, and systems engineering stakeholders during design development.
- Supported thermal vacuum test preparation, instrumentation review, data interpretation, and analytical model comparison activities.
- Prepared **CAD** inputs, calculations, technical reports, and presentations documenting thermal design and **verification** decisions.
- Closed technical findings through design revisions, model refinement, test correlation, and engineering peer review.

PROJECTS

CubeSat Payload Thermal Verification 2023

Led a distinct payload verification effort using Thermal Desktop, requirements traceability, test evidence, and model correlation. Work connected scientists, systems engineers, and test personnel around defensible thermal decisions.

Optical Instrument Thermal Vacuum Readiness 2021

Prepared thermal vacuum readiness material for optical support hardware, including procedures, instrumentation reviews, ground support equipment inputs, staffing needs, and post test correlation planning.

LEADERSHIP & AWARDS

- Technical Leadership Recognition for Spaceflight Thermal Analysis and Review Ownership
- Peer Recognition for Thermal Vacuum Planning, Correlation, and Cross Team Support
- Engineering Review Contribution Award for Clear Verification Evidence and Design Decisions

EDUCATION

Bachelor's Degree in Aerospace Engineering

University of Colorado Colorado Springs GPA: 3.5 2017 Colorado Springs, CO

Coursework: *Thermal sciences, spacecraft design, heat transfer, systems engineering*

CERTIFICATIONS

- Thermal Desktop Advanced Modeling Training 2020
- Spacecraft Thermal Vacuum Test Practices 2021

TECHNICAL SKILLS

- **Thermal Analysis Software:** Thermal Desktop, SINDA/FLUINT, Excel

- **CAD and Modeling:** SolidWorks, 3D CAD, engineering drawings
- **Spaceflight Hardware:** Spacecraft instruments, CubeSats, spacecraft electronics
- **Thermal Control:** Passive thermal control, active thermal control, optical thermal design
- **Thermal Vacuum Testing:** TVAC, test procedures, test execution
- **Test Infrastructure:** Ground support equipment, instrumentation, staffing
- **Requirements Engineering:** Requirements generation, requirements traceability, verification planning
- **Model Verification:** Model correlation, analytical predictions, measured data
- **Hardware Delivery:** Procurement specifications, hardware installation, assembly integration
- **Engineering Communication:** Technical reports, design reviews, review presentations
- **Program Analysis:** Proposal analysis, spacecraft analysis, instrument analysis
- **Systems Collaboration:** Systems engineering, multidisciplinary coordination, stakeholder reviews

PROFESSIONAL AFFILIATIONS

- American Institute of Aeronautics and Astronautics, aerospace engineering member
- International Astronautical Federation, space systems engineering participant
- Society of Automotive Engineers, thermal engineering community participant

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST