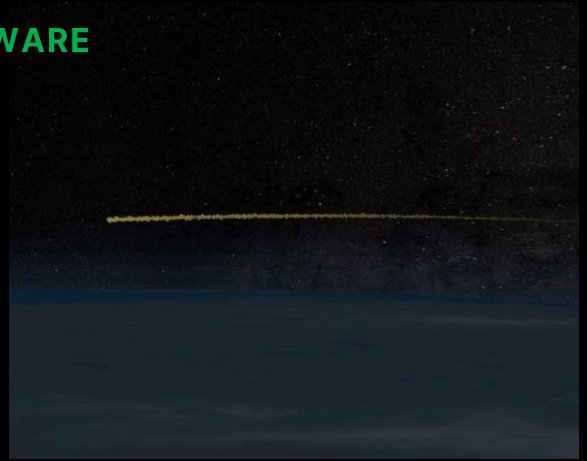


END-TO-END HYPERSONIC MISSION DESIGN SOFTWARE

From launch conditions to terminal constraints.

One software suite.

hyperFLIGHT is the professional workflow for end-to-end hypersonic mission design. Configure the vehicle and mission, model boost, glide, and terminal flight, optimize against performance constraints, and export a complete flyout trajectory from one environment.



3 FLIGHT PHASES

Integrated boost, aerodynamic glide, and terminal dive modeling capabilities.

3-DOF DYNAMICS

Physics-based models across powered ascent, hypersonic glide, and terminal guidance.

ONE ENVIRONMENT

Mission configuration, optimization, visualization, comparison, and export capabilities all in one product.

THE PIPELINE

Six steps that normally take several tools.

CONFIGURE

Set the launch and hypersonic vehicles, site, targets, and ICs.

BOOST

Powered ascent using VOA or PEG guidance laws or import your own.

GLIDE

Model HGV flight, weave strategies, bank and lift commands.

DIVE

Target terminal velocity, impact angle, and heading states.

OPTIMIZE

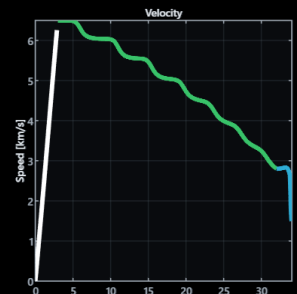
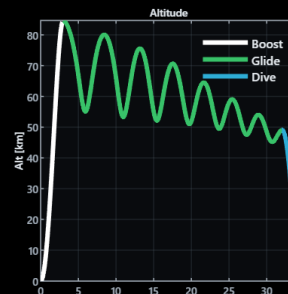
Search mission parameters while enforcing performance bounds.

ANALYZE

Compare trajectories and export complete mission results for counter-hypersonics.

EVERY RUN PROVIDES MISSION INSIGHT

- Comprehensive trajectory and ground track
- Bank angle, lat accel, heating, pressure, loading
- Optimal Initial and final conditions between each phase
- Multiple boost and glide control algorithms
- Custom boost phase ephemeris support



HOW YOU ENGAGE

You run the suite. We keep expanding it.

MISSION-DESIGN WORKFLOW

hyperFLIGHT suite

Run inside your organization with your vehicle parameters, mission data, constraints, and results.

TECHINCAL ENABLEMENT

Training & onboarding

Analyst user guides, technical training, and workflow demonstrations built around a representative mission you care about performing.

SCOPED PER ENGAGEMENT

Custom development

Add vehicle models, guidance laws, constraints, outputs, data formats, and system interfaces needed for mission success.

Requires a current MATLAB license. Prefer that we run the analysis? Coorbital Mission services can deliver the same pipeline as a fixed-price decision package.

Darin Koblick, PhD
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MEMBER
ORGANIZATION