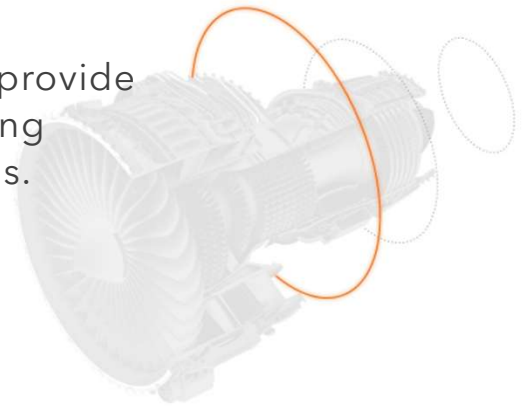




Airborne Vehicle and Rocket Analysis

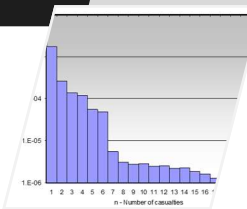
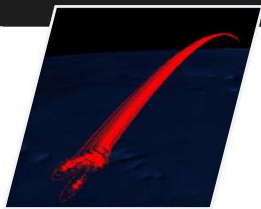
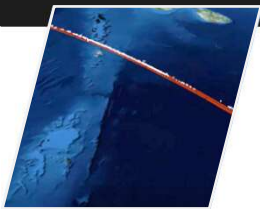
AVRA is a commercially available suite of tools which provide launch and re-entry risk analysis capabilities, supporting analysis against RCC-321 and FAA Part 450 regulations.

Powered by the same computation engines used to ensure safety at government ranges for decades in Range Risk Analysis Tool (RRAT) and Trajectory Toolkit (TTK).



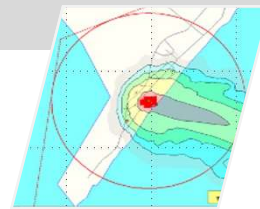
AVRA-T

- Load trajectory data (nominal, Monte Carlo, 3-sigma, failures)
- Simulate failures with simple models: stick turn, random attitude, loss of thrust
- Ballistically propagate state vectors
- Simulate trapping for structural limits and flight safety system activation



AVRA-DR

- Assign failure probability to state vectors
- Propagate debris from breakup to impact
- Compute risk measures to people as probability of casualty and fatality in the open and in buildings
- Incorporate global population sheltering using global population density models and sheltering assignment algorithms



ADD-ON MODULES

- Maximum Probable Loss: provides probability estimations for high consequence events
- Ship Risk: calculate ship risk contours and hazard areas using assigned vulnerability models
- Aircraft risk: calculate aircraft risk contours and hazard areas

COMPUTATION REQUIREMENTS

- Primary application targets 64-bit Windows 11
- Analysis capability requires separate Linux compute cluster
- AWS GovCloud offered for on-demand compute managed by Arctos
- On-site certified hardware offered through partners at higher initial capital investment

Arctos Technology Solutions, LLC

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Serving federal and industrial customers since 1961.



AVRA Support Offerings

The AVRA suite of tools are complex and highly specialized.

Not sure if you have the in-house capability to set up AVRA properly for your use case? Want to ensure you've configured things correctly for your mission analysis?

Ask us about the **AVRA Support Offerings**.



Training Workshop

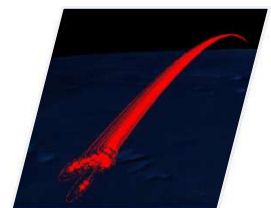
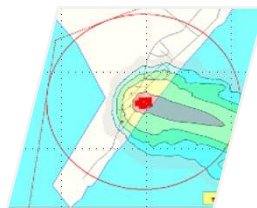
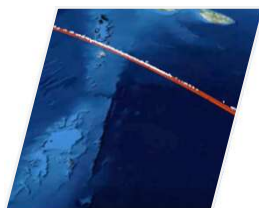
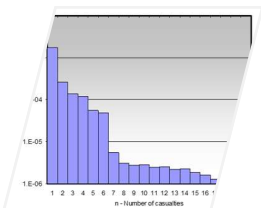
- Overview training on flight safety analysis and the AVRA Suite
- Focused on basic principles and software operation, does not include mission specific analysis
- Provided virtually over two 8-hour or four 4-hour blocks

Advanced Support Package

- Specialized advanced support for the AVRA suite
- Direct support setting specific analysis configurations
- Hands on training and validation of configuration for specific missions
- Offered in blocks of up to 10-hours

NOTES

- Both support offerings require a valid maintenance or support agreement for the AVRA suite.
- Advanced Support Packages require approval of a Technical Assistance Agreement from the US State Department for non-US customers.



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