

# FERRAM AEROSPACE RESEARCH

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License: GPLv3



Game Version: 1.3.1



Source code: <https://github.com/ferram4/Ferram-Aerospace-Research> ([https://g...](https://github.com/ferram4/Ferram-Aerospace-Research))



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Author: [ferram4 \(/profile/ferram4\)](/profile/ferram4)



Mod Website: [Forum Thread \(http://forum.kerbalspaceprogram.com/index.php?/...](http://forum.kerbalspaceprogram.com/index.php?/...)



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## OUTDATED MOD

This mod is not known to work with the latest version of Kerbal Space Program. Proceed with caution.

Information

Changelog

Stats

If stock KSP's aerodynamics leave out too many aerodynamic features, have too many game-like aspects, or just seem too easy, this is the mod for you.

## Features

- **Shape-Based, Vessel-Centered, Aerodynamics** - Long, thin shapes drag less than wide, flat shapes, and smooth changes in body width reduce drag. The shape of the vessel as a whole, not individual parts, controls drag, so shape the vessel as you see fit.
- **Emergent Fairings and Cargo Bays** - The voxel model method FAR uses allows for the actual shape of the vehicle to play a role in how lift and drag are applied. Build a hollow shell, and close it up, and everything inside it will be protected from the airflow as it should.
- **Wing Effects** - Realistically adjusts lift based on wing position and configuration: wingtips lift less and drag more than wing roots.
- **Stall** - Passing the critical angle of attack suddenly reduces lift and greatly increases drag. Can put planes into tailspins, flat spins, and cause crashes.
- **Mach Effects and Area Ruling** - Lift and drag will vary as expected with Mach number. Supersonic planes will need to properly area rule themselves for optimum flight characteristics.
- **Body lift** - All parts lift: a fast enough brick will fly, if not that well.
- **Aerodynamic Failures** - Going sideways at high speeds will rip rockets apart, pulling up too hard in a dive will rip plane's wings off.
- **Advanced Editor Tools and Flight Info** - For helping to analyze your planes and figuring out how they'll behave before you fly them and what's happening as you fly them; intended for advanced players, not necessary if you're starting out.

Scott Manley Videos:

Playing around with aerodynamic failures:



Trying stuff with the editor tools:



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[Source Code \(https://github.com/KSP-SpaceDock/KerbalStuff\)](https://github.com/KSP-SpaceDock/KerbalStuff)

[API \(https://github.com/KSP-SpaceDock/KerbalStuff/blob/master/api.md\)](https://github.com/KSP-SpaceDock/KerbalStuff/blob/master/api.md)

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