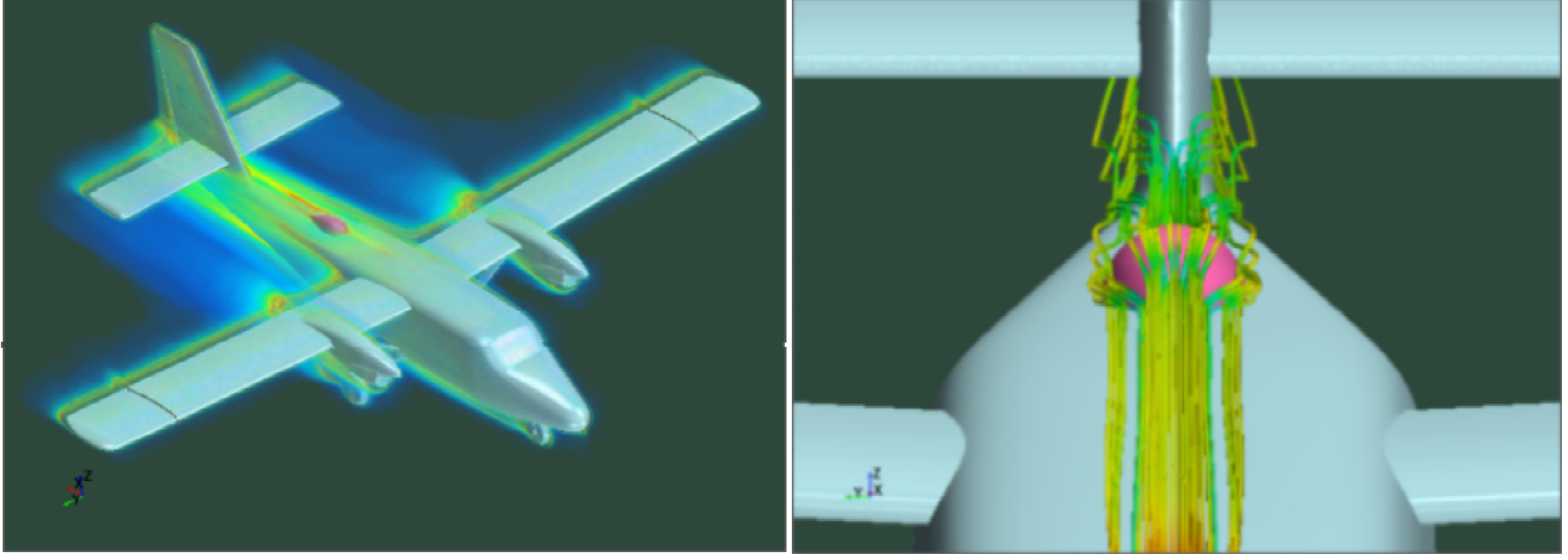


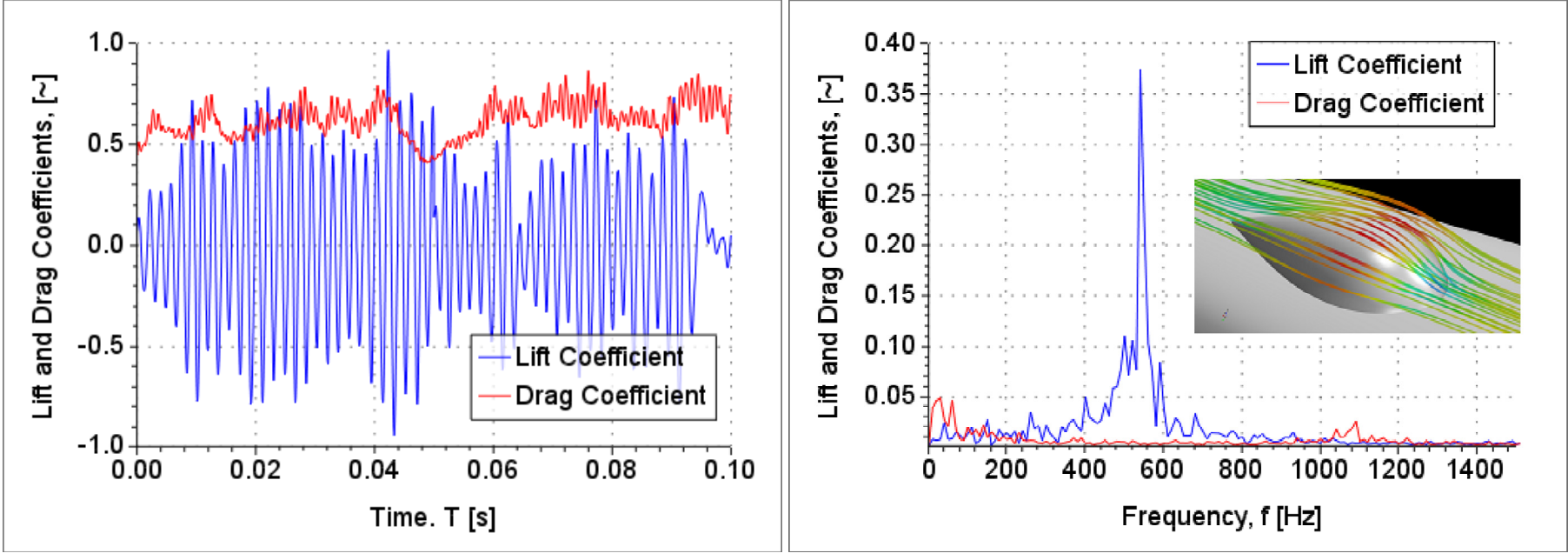
## Featured Service

### Radome/Antenna Unsteady CFD

DARcorporation engineers have the capability to model and simulate aircraft external installations (e.g., radomes and stores) in various flow regimes including subsonic and transonic. Also modeled are both steady and unsteady flow characteristics to explore loads and the fluctuation of loads.



A generic radome antenna system on a twin engine aircraft is shown as an example for analyzing the unsteady flow behavior and potential flow separation. The computational fluid dynamics (CFD) simulation of the radome/antenna provides detailed pressure distribution. The unsteady vortex shedding is captured by the vorticity and streamline plots. The frequency and the magnitude of the flow fluctuation are predicted in CFD to help with structural analysis to guide potential material fatigue and controllability analyses, thus providing higher confidence in the radome/antenna integration to the aircraft.



## Software Tutorials and Interoperability



### New Tutorials

- [Graphical User Interface](#)
- [Help on Windows 10](#)
- [Suggested Values](#)
- [Settings and Notes](#)
- [Goto Buttons](#)
- [Flight Conditions](#)
- [Aerodynamics Lift Module](#)

### Updated Tutorials

- [How to Input Fuselage Geometry from CAD](#)
- [How to Input Fuselage Geometry from AAA Examples](#)
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- [pyAPP Performance Chart Files](#)

## DARcorporation Software Interoperability

[Advanced Aircraft Analysis \(AAA\)](#) is the core in the DARcorporation suite of software with its design capability from conceptual design to detailed design, including weight and balance, performance sizing, aerodynamics, stability and control and flying qualities analysis. [SharkCAD PRO-AP](#) provides quick aircraft component generation with its robust 3D modeling capabilities including mesh modeling, solid modeling and surface modeling. [FlightStream](#)® provides a vorticity based, high fidelity analysis of aircraft aerodynamics, propellers, high-lift devices and jet engine effects. The [Aircraft Performance Program \(APP\)](#) is designed for speed, simplicity and flexibility in the evaluation of thrust, fuel flow, lift, drag, SEP, turn rate and other aircraft performance parameters. The [FAR 23 LOADS](#) software calculates aircraft loads in accordance with the guidelines defined in 14 CFR Part 23. Advanced Aircraft Analysis (AAA) provides the central platform to connect with all the other software.

