

DLR Falcon 20 Research Aircraft

Concept Proposal for Transfer to U.S. Airborne Research Fleet

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University of North Dakota Airborne Research

- UND Citation II Aircraft
- Operational History: 1981 – 2005
- Agencies: Interior, FAA, NOAA, DOE, NSF, NASA, AID, EPA, DoD, Private Industry
- Studies: Cloud Microphysics, Turbulence, Air Chemistry, Aerosol, Water Vapor, Electric Field, Boundary Layer, Thunderstorms, Icing, Wind Shear, Photogrammetry



University of North Dakota Airborne Research

- Education Programs
 - B.S., M.S., Ph.D.
- Research
 - Cloud Microphysics, Aerosol, Aviation Weather, Electric Field
- Replacement Aircraft
 - Citation II
 - Falcon 20

DLR Falcon 20



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DLR Falcon vs. Citation II

	Falcon 20-E5	Citation II
Max Altitude	13.7 km (45,000')	13.1 km (43,000')
Max Range	2000 nm	1200 nm
Max Endurance	5.5 hours	4.5 hours
Max Payload	4600 lbs.	1380 lbs.
Cabin Volume	700 ft ³	263 ft ³
Max Airspeed	495 knots	340 knots
Min Airspeed	160 KIAS	140 KIAS
Research Power	16.8 KW	4.3 KW

DLR Falcon 20 Mods



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Proposed DLR Falcon Acquisition Schedule

- 2007-2009 Shared Operational Use
- 2009 Transfer to U.S.
- 2009 - Operated by University of North Dakota

Transition/Shared Use

- Two projects per year
- U.S. scientists may propose use
- UND personnel actively involved in deployment/operation

Costs

- Transition
 - UND personnel
 - Ferry
- Acquisition
 - Final cost
 - UND cost share
- Operating
 - Multi-agency support

Issues

- Airworthiness Certificate
- Ownership
- Shared Use Transition
- Costs

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