

# VISION

THE FUTURE OF PERSONAL TRANSPORTATION



## Vision SF50 Personal Jet: Q2 2010 Update

June 2, 2010; 11AM CDT

Duluth, Minnesota via webinar

*Email Questions during presentation to:*  
[gblack@cirrusaircraft.com](mailto:gblack@cirrusaircraft.com)



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Dale Klapmeier

## Co-Founder & Chairman



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING



**Brent Wouters**  
**President & Chief Executive Officer**



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING



**Mike Stevens**  
**Chief Test Pilot**



**Gary Black**  
**Jet Sales Director**



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# June 2010: Recent Milestones

---

- ✓ Flight Testing: **440+ Engine Run Hours, 270+ Flight Hours**
- ✓ V1 undergoing FIKI testing in actual conditions
- ✓ Lots of real world flying experience





# Flight Testing – Cross Country in V1 (N280CJ)

---

## Items that have worked well:

- ✓ Cruise at 300KTAS at FL280
- ✓ Ice Testing
  - Favorable testing overall.
  - Initial development flights have been satisfactory and we have encountered some severe icing very early in the program.
  - Boot design needs to be altered as our intercycle ice shapes are larger than desired.
  - Windscreen and radome protection schemes are still under development – characteristics now well understood.



## Autopilot integration.

- ✓ Autopilot continues to work very well.



# Flight Testing – Cross Country in V1 (N280CJ)

---

Some things we have learned:

- Flying a VFR non-FIKI jet around the CONUS in the winter is challenging.
- Starting experiences will allow further refinement to improve starting reliability and avoid hot starts.
- Ramp appeal is very high.
- Cabin heat capacity required for maximum passenger comfort.
- Non pressurized flight at FL280 is for the birds.
- Flight above FL280 (RVSM restrictions limit ability to go higher than 28000 ft. ATC gets cranky if you fly above FL280).







**Dave Rathbun**  
**Chief Engineer, Vision SF50 Jet**



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Progress: June 2010

---

## Dry Ice Shapes



# Progress: June 2010

---

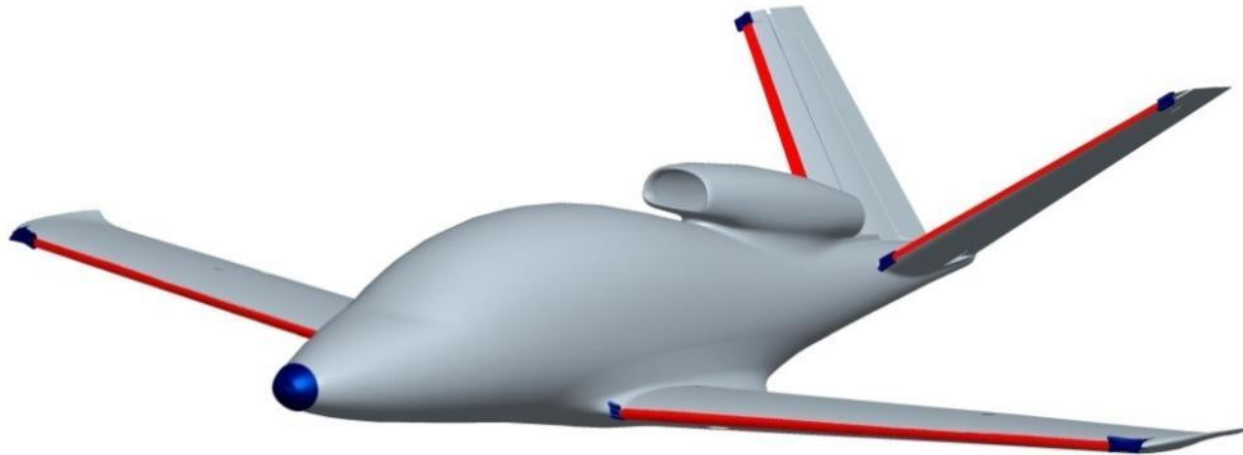
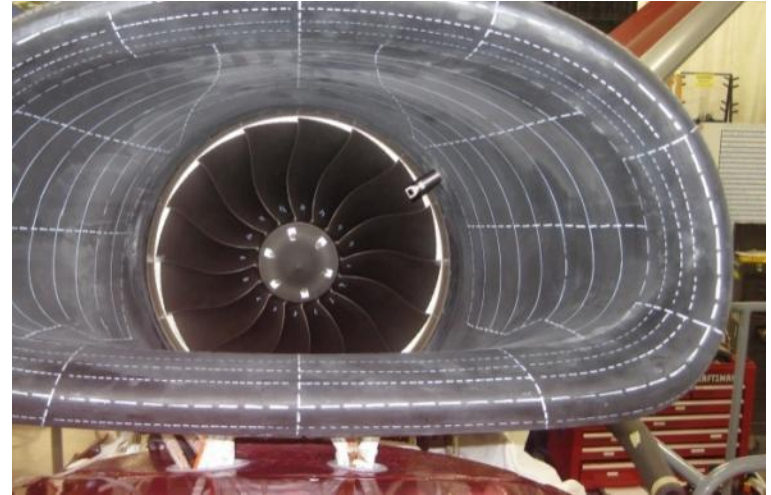
## New Pneumatic Boots



# Ice Protection Testing

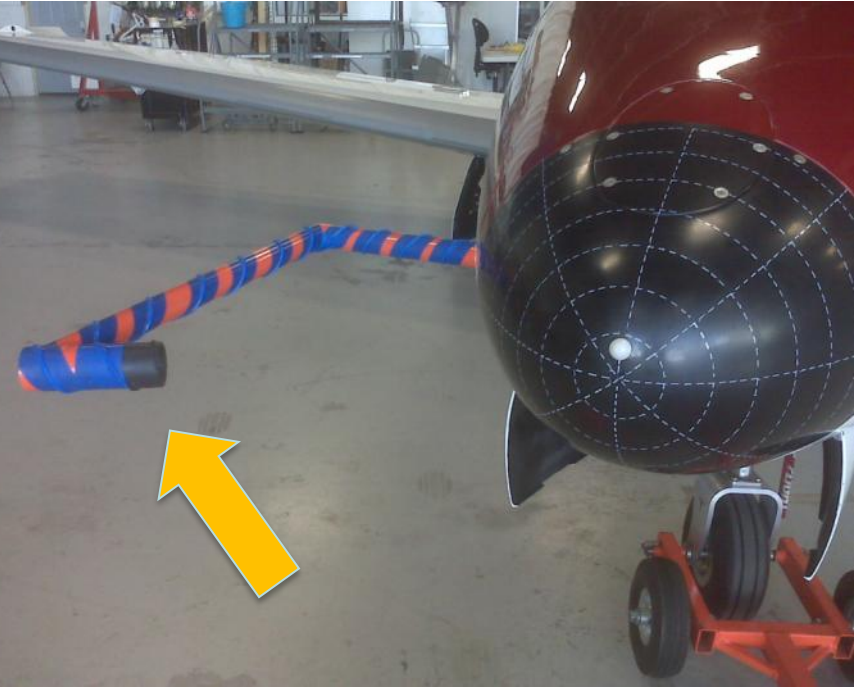
---

- ✓ Dry Air flight testing
- ✓ Electro-Thermal Engine Inlet
- ✓ Natural Ice Flight Testing underway
- ✓ Cameras to assess ice accretions/trajectories mounted on...
  - Nose
  - Wing tip (fuselage view)
  - Top of fuselage (inlet view)
  - Inside inlet barrel



# Ice Protection Testing: Cameras

## Nose



# Ice Protection Testing: Cameras

---

## Wing tip (fuselage view)



# Ice Protection Testing: Cameras

---

## Top of fuselage (inlet view)

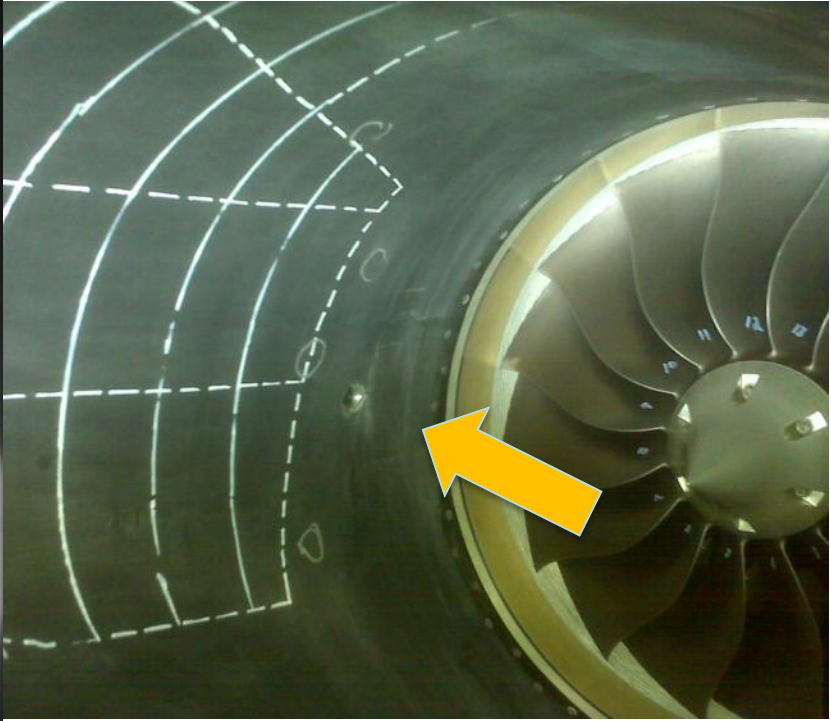
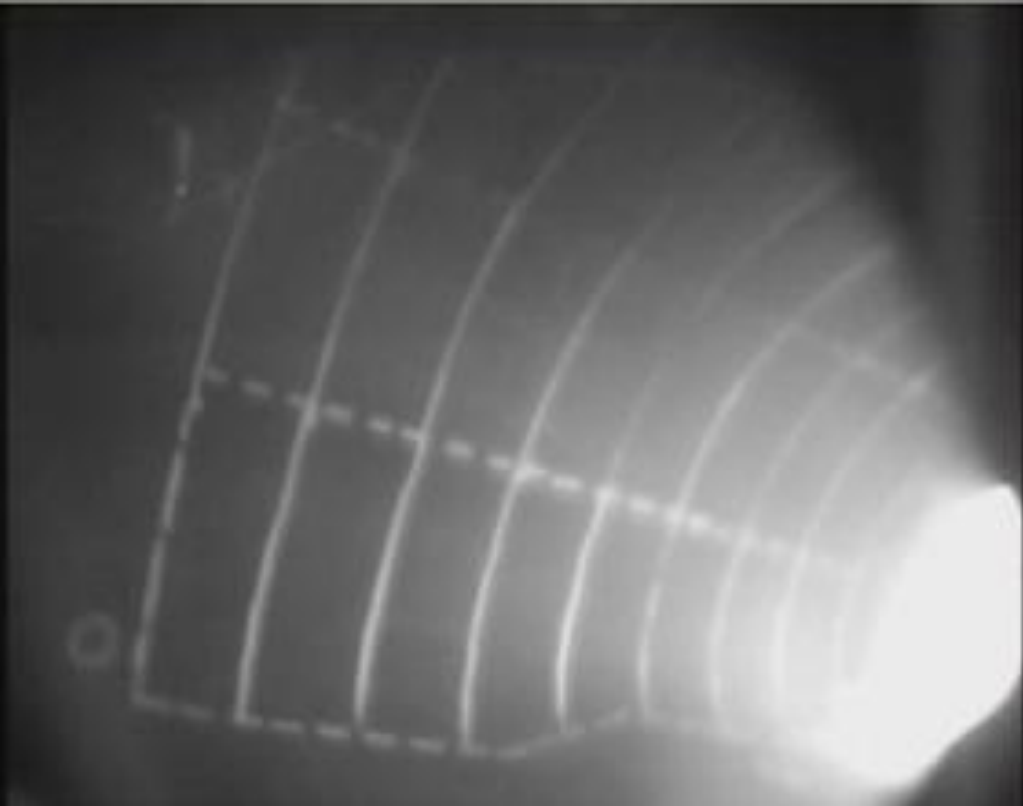


WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Ice Protection Testing: Cameras

---

## Inside Inlet (barrel view)



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING



# Ice Protection Testing: Telemetry

The screenshot displays the Cirrus Proprietary telemetry interface. At the top, there is a menu bar with various system controls and a status bar showing 'Cirrus Proprietary'. Below the menu bar, there are several video feeds and a data table. The top-left video feed shows a close-up of the aircraft's nose in a foggy environment. The top-right video feed shows the aircraft's side profile. The bottom-left video feed shows another view of the aircraft's nose. The bottom-middle video feed shows a close-up of the aircraft's wing. The bottom-right video feed shows a close-up of the aircraft's wing with a grid overlay. In the center, there is a circular sensor view and a data table with the following values:

KCAS	111.2
ALT_PRESS	3310.0
AOA	7.76

At the bottom of the interface, there is a status bar with the following information: Threshold: Normal, CS, 123:15:33:47, Data Edit Disabled, FCS: See message log, map DataAW, Parameter Tool, Display Builder, Change Desktop, Performance, Global Time, Message Log, Save Config, Log Off.



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Ice Protection Testing: On Board V1 (N280CJ)

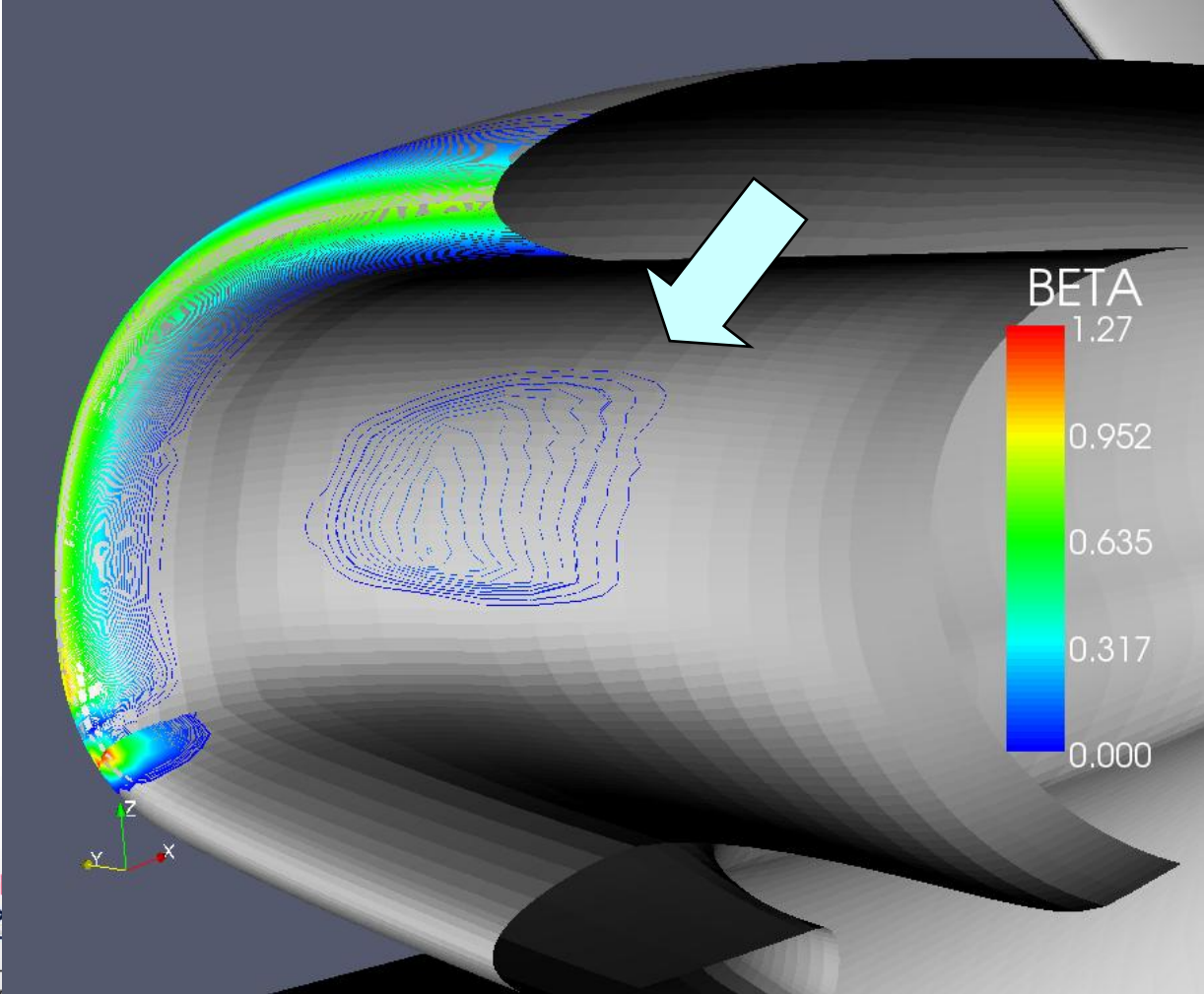


WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

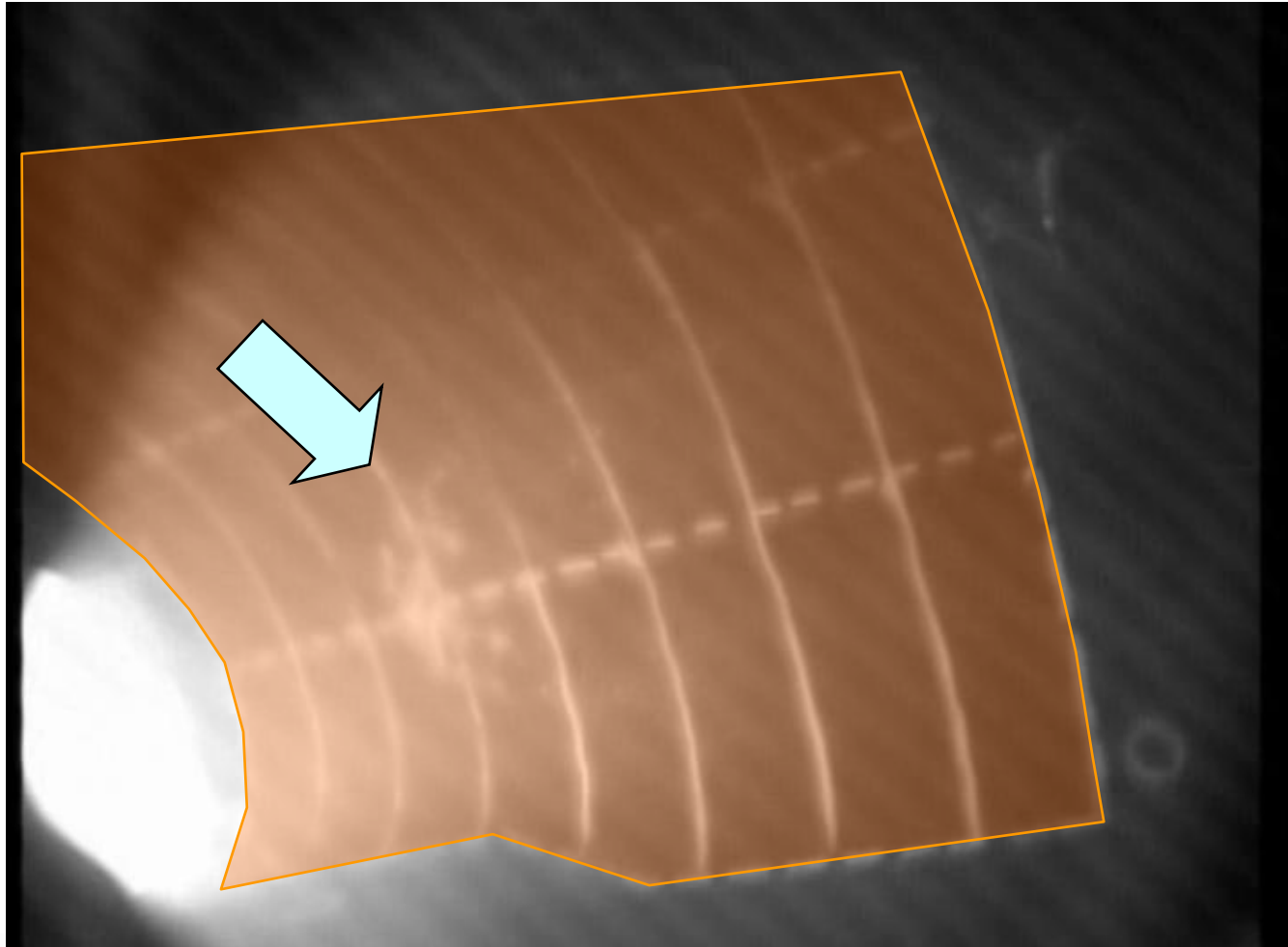
# Ice Protection Testing: Modeling

Inlet barrel ice accretion analysis

Predicted icing on barrel inlet



# Ice Protection Testing on V1 (N280CJ)



 **CIRRUS**  
AIRCRAFT



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

- ✓ Inlet barrel ice accretion validates predictions
- ✓ Large internally heated area

# Ice Protection Testing on V1 (N280CJ)



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# New Ice Boots Testing on V1 (N280CJ)



 **CIRRUS**  
AIRCRAFT



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# New Ice Boots Testing on V1 (280CJ)

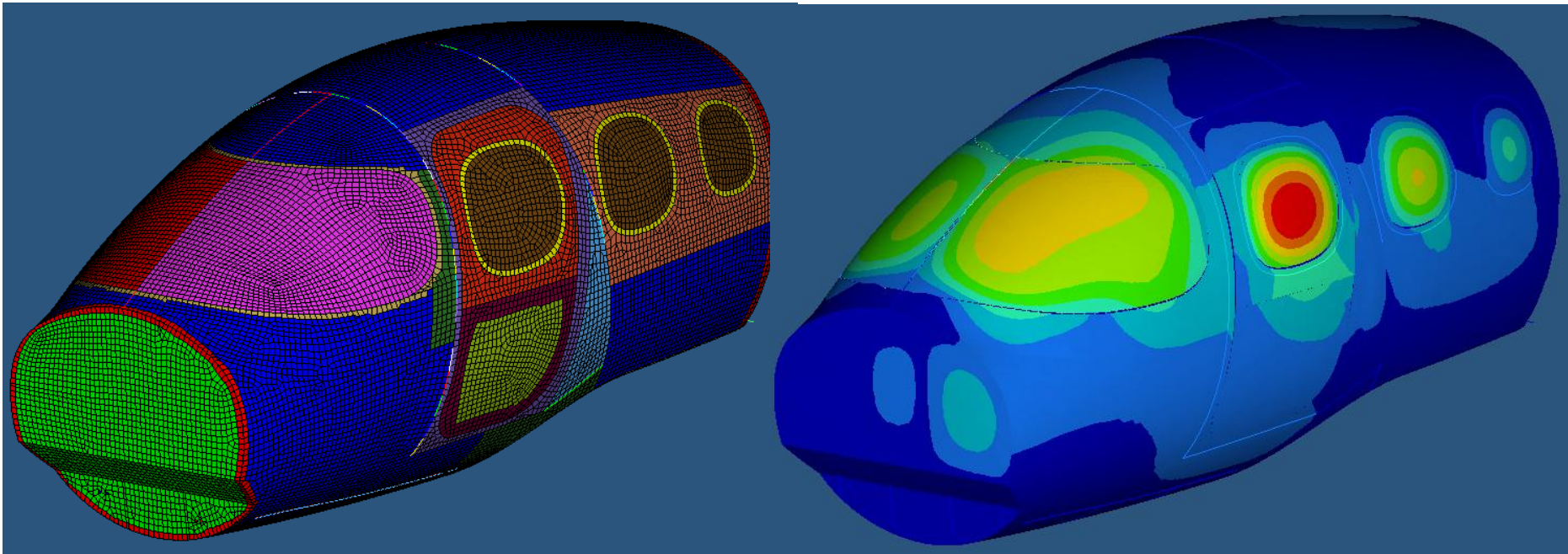


WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Next Steps

---

- Full Scale Fuselage Pressure Tests
- Validates Computer Models (FEA)



 **CIRRUS**  
AIRCRAFT



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

Build of test article is in process  
Testing of fuselage and door structure starting soon



# Progress with our Key Vision Partners: 82% of Supplier Selections have been finalized, up from 65% earlier this year.

---



Williams International



AVOX Systems



Triumph Aerospace Systems Group



MEGGITT



GOODRICH



# Vision Jet Flight Training

Robert Haig and Paul Fiduccia



 **CIRRUS**  
AIRCRAFT



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Vision Jet Training Mission Statement

---

*Develop the required knowledge, skill and judgment to safely and confidently operate the Vision Jet - while maximizing the aircraft's utility - through a training program that is tailored to individual experience levels.*



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING



# Requirements for Vision Type Rating

---

- ✓ Private Pilot with Instrument
- ✓ 3<sup>rd</sup> class medical
- ✓ High Altitude endorsement
  - Integrated into type rating
- ✓ Type Rating practical test
- ✓ ATP not required



 **CIRRUS**  
AIRCRAFT



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING

# Roadmap to Successful Ownership

## Preparation

SR22 w/ Perspective

Professional skills and habits

Pre-training program, tailored to pilot experience

## Type Rating

Integrated simulator and aircraft training

FAA Practical Test

Focused on Type rating

Integrated High Altitude Endorsement

## Mentorship

Fly with mentor pilot in real world environment

Personalized instruction

Training integrated into Actual aircraft usage

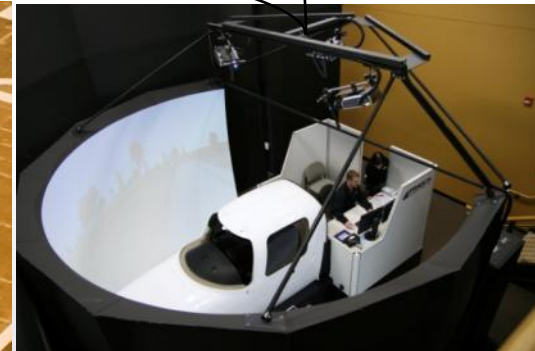
## Recurrent

Reinforce knowledge and skills

Maximize aircraft utility

Use of simulation

Meet insurance Requirements



# From now to your Vision delivery...

Start preparing today:

- ✓ Fly Cirrus Perspective by Garmin™ avionics suite
- ✓ Fly IFR frequently and strive for excellence
- ✓ Complete IPC with Cirrus training partner every 6 months
- ✓ Consistently adhere to SOPs
  - Cirrus Flight Operations Manual
- ✓ Gain confidence in airspace / terrain that you intent to operate the jet
- ✓ Complete the *Jet Transition* course found at <https://www.kingschoolsonline.com/>
- ✓ High altitude chamber training- UNDAF, SAMA, FAA
  - Completes ground portion of high altitude endorsement
  - [rhaig@cirrusaircraft.com](mailto:rhaig@cirrusaircraft.com) for more information
- ✓ Upgrade from Private to Commercial to ATP in SR22





## See the SF50 in person and flight demonstration:

<b>Wed</b>	<b>June 9</b>	<b>St. Louis, MO</b>	<b>Inside Cirrus Event</b>
<b>Sat &amp; Sun</b>	<b>June 5-6</b>	<b>Detroit/Windsor</b>	<b>RedBull Air Race</b>
<b>Sat &amp; Sun</b>	<b>June 19-20</b>	<b>New York City</b>	<b>RedBull Air Race</b>
<b>Thur</b>	<b>June 24</b>	<b>Chicago, IL</b>	<b>Inside Cirrus Event</b>
<b>Fri</b>	<b>June 25</b>	<b>Minneapolis, MN</b>	<b>Inside Cirrus Event</b>
<b>Sun-Sat</b>	<b>July 25-31</b>	<b>Oshkosh, WI</b>	<b>EAA AirVenture</b>



Contact: [gblack@cirrusaircraft.com](mailto:gblack@cirrusaircraft.com)

# VISION

THE FUTURE OF PERSONAL TRANSPORTATION



---

## Vision 'Personal Jet': Q&A



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING



# VISION

THE FUTURE OF PERSONAL TRANSPORTATION



---

Today's presentation and new video of natural ice testing will be on our website [www.cirrusaircraft.com/vision](http://www.cirrusaircraft.com/vision) on Wednesday June 9th, 2010.

Thanks again and see you soon!



WORLD CLASS LIFESTYLE MEETS WORLD CLASS RACING