CELLSIUS

The future of aviation Project e-Sling and Project H2

Mario Camenzind, Rafael Sutter, Joël Meyer Project Team



CELLSIUS - Who We Are

Founded by electrical and mechanical engineering students at ETH Zurich

50 members

Goal: enable sustainable aviation

-}-

Implementation & supervision of focus projects with ETH Zurich

ETH Zurich Focusproject



÷

÷

公 公



Design/ Engineering



Simulation Pro

Production





Testing













÷

公 - 分

÷

÷

÷

53

42

÷

÷

 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *
 *

42

53

÷

公 令

ት ት ÷ + + + + + + + + + ት ት ት ÷ \$ \$ \$ \$÷ ÷ ት ረጉ **MeteoSwiss** 상 순 4 ÷ ÷ ÷ \$\$ ÷ ф ... 순 фф _ф ÷ ት ት ትት ት ተታት ÷

÷

53

÷

÷

С С

÷

÷

 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

 +
 +
 +
 +
 +

÷

÷

÷

53

 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +

Phase 2 – Flight Characteristics

Phase 2 – Flight Characteristics

ф Ф ራ ት 4 49 49 ÷ ÷ 4 ÷

42

Flight testing - results

- Opened complete envelope
- Challenges:
 - Limited endurance
 - Battery cooling
- ~14h Flight time, 46 Landings

Flight testing – weather challenges

- Strict weather constraints due to flight conditions
 - VFR Day
 - 20Nm away from active CB
 - No precipitation
- Homebase Dübendorf prone to fog during winter
- Calm air needed for performance and calibration flights

Collaboration with MeteoSwiss

- How will the weather be in Dübendorf?
- When should we schedule the next test flights?
- When will the fog be gone the day after tomorrow?
- When can we fly to AERO Friedrichshafen?

Q

Collaboration with MeteoSwiss

WETTERENTWICKLUNG fuer die naechsten drei Tage Am DIENSTAG im Norden und in den Alpen zunaechst meist tiefe Bewoelkung und besonders am Alpennordhang einige Niederschlaege. Maessige Vereisungsgefahr oberhalb 7000 ft/msl. Alpenuebergaenge in Wolken. Am Nachmittag im Flachland meist trocken und Bewoelkungsabnahme, spaeter auch in den Alpen. Ueber den Alpen teils maessige Westwindturbulenz. Im

Sueden meist heiter. Am MITTWC Aufhellungen. Sonst meist star Tageshaelfte verbreitet Nieder oberhalb von etwa 6000 ft/msl. Norden maessige, gegen Abend] Am DONNERSTAG im Flachland am aufgelockerte Bewoelkung, sons oft bewoelkt und einige Schaue Teils auch Gewitter mit Graupe meist trocken und maessige Nor

 +

 +
 +
 +
 +
 +
 +
 +

 +
 +
 +
 +
 +
 +
 +

 +
 +
 +
 +
 +
 +
 +

 +
 +
 +
 +
 +
 +
 +

 +
 +
 +
 +
 +
 +
 +

 +
 +
 +
 +
 +
 +
 +

 +
 +
 +
 +
 +
 +
 +

´ + ´ **MeteoSwiss** ++ +++ + + + +

ኑ ትት ትት ትት ትት

Collaboration with MeteoSwiss

- How will the weather be in Dübendorf?
- When should we schedule the next test flights?
- When will the fog be gone the day after tomorrow?
- When can we fly to AERO Friedrichshafen?
- Solution: MeteoSwiss Phone-based aviation weather advice
 0900 162 737

• Professional meteorologists competently answer questions

Become a patron now!

https://cellsius.aero/goenner/

Thank you

 +
 ×
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +
 +</t