

PROJECT

AOrbit

Orbiting Journal Bearing Experiment

Funding: European (Horizon 2020)

Duration: Mar 2017 - Dec 2019

Status: Complete

Total project cost: €1,099,841

EU contribution: €1,099,841



Call for proposal: H2020-CS2-CFP03-2016-01

[CORDIS RCN : 208043](#)

Objectives:

This proposal addresses call JTI-CS2_2016-CFP03-ENG-03-09 entitled “Orbiting Journal Bearing Rig Test”.

The objectives of this project correspond exactly to those stated in the call for proposals. Overall, the call requires that the project will design, build and operate a test rig for journal bearings and process the data obtained to provide the most useful information possible to support the development of suitable bearing systems for high-performance, high-reliability and low-weight speed reduction gearboxes for ultra-high bypass ratio aero-engines of the future. Our overarching aim is to meet this requirement and additionally to propose engineering refinements where appropriate to enhance the development of such journal bearings for the context in light of lessons emerging from the experimentation.

AOrbit will deliver a facility for the operation of a journal bearing in conditions which are representative of a Power Gear Box (PGB) in a future large civil geared turbofan aero engine.

Work will be managed by the Institute for Aerospace Technology Core Team, which oversees the University’s Aerospace portfolio of live research, innovation and technology demonstration projects worth over €70m in collaboration with leading companies such as Airbus, Rolls-Royce, Liebherr, Dassault Aviation, Meggitt and Safran. The team has a dedicated EU management function that administers over €20m of Clean Sky projects including the University’s involvement as Associate Partner in Clean Sky and as Core Partner in Systems and Airframe ITD in Clean Sky2 as well as FP7 and Horizon2020 projects related to aerospace.

Parent Programmes:

[H2020-EU.3.4. - Horizon 2020: Smart, Green and Integrated Transport](#)

Institute type: Public institution

Institute name: European Commission

Funding type: Public (EU)

Lead Organisation:

The University Of Nottingham

Address:

University Park
Nottingham
NG7 2RD
United Kingdom

EU Contribution: €1,099,841

Technologies:

Aircraft propulsion
Lubrication system technologies

Development phase: Research/Invention

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport

Transport policies: Other specified

Geo-spatial type: Other