SUCCESS: Themis: Europe’s reusable rocket stage demonstrator passes key integration fit-check

In December 2024, Europe’s groundbreaking reusable rocket first stage, Themis, reached a significant milestone with a successful 'full fit-check' at ArianeGroup’s facility in Les Mureaux, France. One of the partners implemeting this project is company based in Latvia 'SIA WIT Berry'.

Europe’s groundbreaking reusable rocket first stage, Themis, reached a significant milestone with a successful ‘full fit-check’. Standing 28 meters tall, this demonstrator confirmed that all its primary components integrate seamlessly, a critical step in its development journey. The Horizon Europe SALTO project is coordinated by ArianeGroup and implemented by 25 consortium partners and one affiliated entity. **'SIA WIT Berry', a company based in Latvia, is one of the partners responsible for communication activities and support for disseminating of project results**.

The fit-check verified the mechanical connections and interfaces between key sections of the rocket, including the engine bay, fuel tanks, flight control bay and the upper structure. This successful integration ensures that the rocket’s parts fit and function

together as intended, paving the way for further testing and development.

Innovative Design and Propulsion

Themis is powered by Prometheus®, a next-generation European cryogenic engine. Running on liquid methane and liquid oxygen, Prometheus® features a throttleable design, essential for precision control during landing. This engine represents a major technological advancement, aligning with Europe's ambitions for reusable and cost-effective space exploration.

Preparing for First Flight

This integration test marked one of the final steps in Themis' development phase, known as T1H (Themis 1-engine Hop). The rocket stage is now ready for transport to the Esrange Space Center in Sweden, where it will undergo its first flight test next year. The initial flight, part of the European Commission's SALTO project, will be a short "hop" test. During this test, the Themis stage will lift off, perform a controlled flight, and land at the same location, demonstrating its reusability capabilities.

Preparations at Esrange are already in full swing. The landing legs for Themis have been delivered, and work on the launch pad is well underway to support the upcoming test campaign.

A Step Toward Reusability

The successful mechanical integration of Themis represents a major milestone in Europe's push towards a reusable rocket programme. By validating the design and assembly process, the project takes a crucial step forward in advancing reusable launcher technology, setting the stage for its debut flight and further development.

Source: https://salto-project.eu/

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