



End of H2020 ASPIRE and Final Review Meeting Outcomes

Title: End of H2020 ASPIRE and Final Review Meeting Outcomes

Location: Pisa, Italy (Hybrid Format)

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Pisa, Italy – The ASPIRE project consortium is announcing its end with two events of **Final Dissemination Event** (17/4/2024) and the **Final Review Meeting** (18/4/2024) marking the successful conclusion of our project.

The events showcased the remarkable progress, results and valuable lessons learned throughout the ASPIRE project. The entire ASPIRE Consortium was present, including SITAEL, Thales Alenia Space, AST Advanced Space Technologies GmbH, Microtest SpA, Imperial College London, Universidad Carlos III de Madrid, Università di Pisa, SME4SPACE, ASPIRE's Project Officer Florence Beroud, External Reviewer Cosmo Casaregola (Eutelsat).

Day 1 – 17th April 2024: Final dissemination and networking event

The event was scheduled for **April 17, 2024, from 15:00 to 19:00 CEST**, and took place in Pisa, Italy, with both in-person and online attendance. The event was successful and highlighted the remarkable outcomes of the ASPIRE project, with the special focus on the development of a Very High-Power Hall Effect Thruster, in advancing space propulsion technologies. Attendees gained insights into the significant achievements and innovative breakthroughs made by the ASPIRE project consortium over its active years.

Event Agenda

15:00 – 15:10 | Welcome and Introduction

15:10 – 15:40 | Presentation of key ASPIRE project results

15:40 – 16:10 | Presentations on qualification strategies

16:10 – 17:50 | Round table | A panel discussion on possible applications and scenarios for the utilisation of the Very High Power Hall Effect Thruster among representatives from:

- Matteo Angarano - SITAEL Project Manager and ASPIRE Coordinator - Moderator
- Christos Ampatzis - EC/DG DEFIS Policy Officer
- Cosmo Casaregola - Eutelsat Spacecraft Systems Manager
- Claudio Bottiglieri - OHB System AG System Engineering Space Exploration and Transportation, Predevelopment, Space System Studies & Proposals
- Markus Peukert - OHB Systems Head of Propulsion Systems & STS Engineering
- Gilles Bouhours - Thales Alenia Space Electric Engineer (in person)
- Roberto Bertacin - Italian Space Agency Space Transportation Unit Technologist

17:50 – 18:00 | Conclusion and wrap-up

18:00 – 19:00 | Networking Cocktail (In-person)

Day 2 – 18th April 2024: Final Review Meeting

The ASPIRE project concluded its final review meeting on April 18th, the day after its final dissemination and networking event, presenting a significant stride in European space technology. The meeting, lasting the entirety of the working day, highlighted the project's key achievements and set a precedent for testing methodologies of Electric Propulsion in Europe.

During the review meeting, it was presented the various objectives which have been successfully achieved Throughout the life of the ASPIRE project. Notably, the Electric Propulsion System was characterized under different background pressures using xenon and krypton, and the Thrust Unit (TU) was also characterized with argon. Moreover, a comprehensive engineering assessment of the program results has been conducted. System trade-offs have been thoroughly analysed, setting a clear path forward for qualification.

Additionally, focal point of the project was the Alternative Qualification Strategy (AQS), a pioneering initiative by the academic partners of ASPIRE. This strategy employs a unique simulation approach to significantly reduce the time required to identify risks and evaluate the lifetime of thrusters. It is crucial to understand that AQS aims to enhance testing

processes by introducing more extensive diagnostic techniques that extend beyond just macroscopic evaluations.

The ASPIRE project also introduces a vision for a specific program designed to robustly predict the impacts on thruster lifespan and indicate potential risks. This initiative is considered a pivotal first step toward maturing this technology for future applications.

During the review, Reviewer Cosmo Casaregola (Eutelsat) emphasised the necessity of a consensus among thruster manufacturers, academia, and end users to validate the model effectively. Such collaboration will ensure that the model is not only theoretically sound but also practically viable. Once proven in high-power, these technological advancements can then potentially be adapted for low-power applications.

In their concluding remarks, Florence Beroud (European Commission) underlined the importance of bringing industry stakeholders to the forefront of new missions within the evolving space ecosystem. This approach could be instrumental in enabling future space transportation missions, potentially marking the missions to Mars using space propulsion technologies.

About the ASPIRE Project

ASPIRE (Advanced Space Propulsion for Innovative Realization of Space Exploration) is a Horizon 2020 project coordinated by SITAEL (Italy) and it is consisted by Advanced Space Technologies (Germany), Imperial College London (UK), Microtest (Italy), SME4SPACE (Belgium), Thales Alenia Space (France), Universidad Carlo III de Madrid (Spain), University of Pisa (Italy).

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Visual and Gallery

ADVANCED SPACE PROPULSION FOR INNOVATIVE REALIZATION OF SPACE EXPLORATION

Final Dissemination Event
17th April 2024, 3-7 pm CEST
📍 Pisa, Italy (Hybrid)



Final Dissemination and Networking Event gallery





Final Review Meeting gallery

