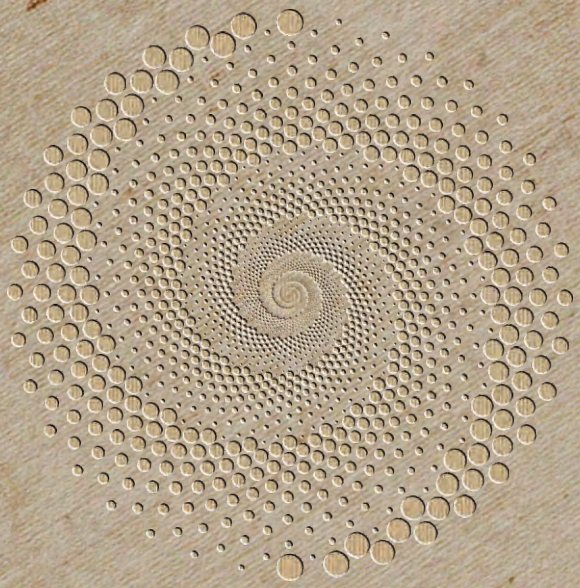
We are Diecaros



DIECAROS

Science and Technology Corp.

Easter edition - Vol. 19 - April 2025

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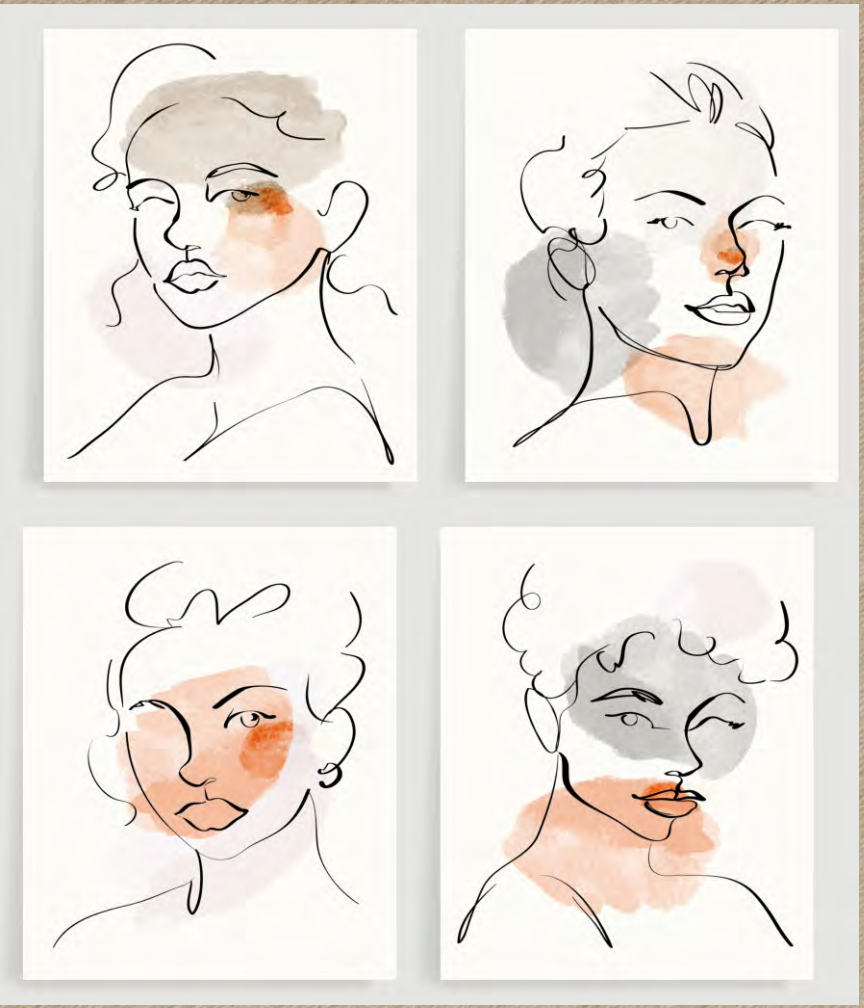
New people



BENOIT GARY

Benoit has joined AVS France in January and works as Project Manager at AVS | FR on Science projects. He is based in French Basque Country, in Biarritz, and in our premises in Elgoibar on a weekly basis.
He holds a Msc (Eng.) degree from French national engineering school: Arts et Métiers Institute of technology.

Before joining AVS, Benoit accumulated nearly a decade of experiences in the aeronautics and aircraft engines sectors, where he held various roles such as Design and Test Engineer, Project Manager, Commercial Engineer, and Team Manager.

After these years, he dedicated his expertise to support highly innovative start-ups and businesses for the French Basque country, supporting innovation and growth.
At present, he is in charge of delivering a new jaws system for ChipIR instrument at ISIS and he actively collaborates with other members of the team in projects such as the Small Angle Analyser of IN16B (ILL) and the Space Simulation Chamber (Leybold).
With him you can speak French, Spanish, Basque, and English. Outside the office, he his passionate about mountaineering, and van refurbishing.

PRAKRITI KAPILAVAI

She holds a Master's degree in Aerospace Engineering from Sapienza University of Rome and specializes in finite element analysis (FEA), computational simulations, and real-time system modeling and Analysis for space applications.

During her time at GAUSS Srl, Italy, Prakriti worked extensively on simulation and modeling, developing real-time dynamic simulations for CubeSats and nanosats using MATLAB & Simulink. Her work enabled precise modeling of spacecraft attitude control and maneuverability, optimizing mission performance.

She also conducted in-depth FEA and thermal analysis of spacecraft components to assess their performance under extreme space conditions. Prakriti has co-authored research papers on reaction wheel system analysis, mission design and analysis for space systems, thermal analysis for space shuttle re-entry systems, and satellite navigation.

A key highlight of her career includes the design and real-time analysis of a reaction wheel subsystem, which is now onboard the UNISAT-7 satellite.

BORJA GAMBOA

Borja studied Mechanical Engineering and Industrial Design Engineering at TECNUN and was involved in the Formula Student world as part of the Tecnun eRacing electric Formula Student team.

There, he worked on various aspects of aerodynamics and cooling systems, both in CFD and design, as well as mechanical components. Additionally, he participated in multiple competitions at the European level.

Currently, he is working on the ROLLA Project, which focuses on flexible solar panels.

GERARDO DIAZ

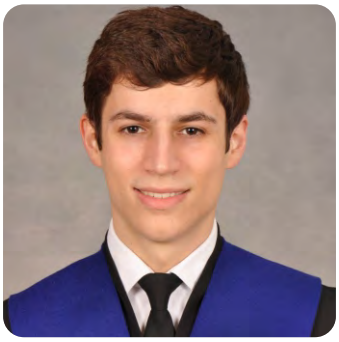
Gerardo holds an MSc degree in Space Engineering from the University of Surrey and a BSc in Aeronautical Engineering from the National University of La Plata.

He has experience in mechanical testing and design, and along the way he found his passion for the space industry, which led him to join AVS | UK as a Mechanical Engineer for the TRUTHS HPA project where he aims to collaborate to the fullest not only on this project but on many others.

GREGOR ARBUCKLE

Gregor started working with URA Thrusters in January as a mechanical engineer.
He will be working primarily on the Hall Effect Thruster that URA is developing.

In the past, he worked in the railway and aerospace industries, so he finds it refreshing to take on the challenge of a different industry, in space.



SERGIO CAVIA

Sergio holds a Master's degree in Space Systems Engineering from the Ignacio Da Riva Institute. He also obtained a Bachelor's degree in Aerospace Engineering with a focus on Aerospace Vehicles from the Polytechnic University of Madrid (UPM).

He is currently working as a Space Systems Engineer at AVS FR. He has participated in the European Space Agency's workshops on Concurrent Engineering and Space Debris and he won the 2023 edition of the ESA/CNES Space Cost Estiamtion Challenge.

Sergio possesses skills in ESATAN-TMS, Matlab, CATIA and STK.

RICARDO ARNAIZ

Ricardo holds a Bachelor's degree in Aerospace Engineering and a Master's degree in Aeronautical Engineering from the Polytechnic University of Valencia (UPV).

He has been working for more than three years as a systems engineer in various sectors, mainly aerospace, focusing on requirement analysis, testing, and verification of software applications. He also has experience modelling and simulating complex systems as well as coding and debugging.

He always dreamed of working in the space sector, and he has fulfilled his dream by joining AVS in Miñano.

CORAL SANCHEZ

Coral holds a Bachelor's degree in Aerospace Engineering from the University Rey Juan Carlos.

Now, she is a Master's students in the same field in the same university.

Coral is an AOCS & GNC Engineer that has gained experience in the field doing a trainership in AVS.

JAVIER SANZ

Javier Sanz is a telecommunications engineer with over 8 years of experience in various technological areas. He graduated in Engineering of Specific Telecommunications Technologies at Valladolid university and holds multiple certifications from Cisco and LPI Linux.

Throughout his career, he has focused on IoT development, particularly in M2M communications through embedded programming. He has also participated in the implementation of various standards, such as 5G in mobile environments and security standards for mission-critical services.

He has dedicated most of his career to programming in C/C++, specializing in communication protocols between devices. Furthermore, Javier has experience with Continuous Integration tools and software testing.

ISMAEL EL BAKOURI

Ismael El Bakouri is a recently graduated Aerospace Engineer especializing in Aerospace Vehicles. He obtained his degree from the Universidad Rey Juan Carlos and is currently pursuing a Master's in Aeronautical Engineering.

He previously completed an 11-month internship at AVS, where he gained valuable experience as an AOCS/GNC Engineer, working on various projects related to space systems.

Ismael has now joined AVS as an AOCS/GNC Engineer, contributing to the company's advancements in space technology.

MIGUEL YAGÜES

Miguel Yagües holds a PhD in International Security from the Instituto General Gutiérrez Mellado and Saint Petersburg State University, specializing in space law and policy.

He has professional experience in both industrial and institutional environments, having worked for the aerospace company PLD Space (Elche, Spain) as a Legal and Regulatory Manage and as a Contracts Officer for ESA at ESTEC (Noordwijk, Netherlands).

He recently joined AVS to take over the contractual and regulatory area.

SCIENTIFICA

PAUL ARAMBERRI

Paul completed his bachelor's degree in Telecommunication Systems Engineering. In his final thesis he developed a planar antenna array for Chipless RFID technology. He also studied for half a year Electronic Engineering and Computer Science at Wayne State University in Detroit.

He also completed his Master of Science in Telecommunications Engineering where he developed a software for a SDR-based Chipless RFID reader as his Master's thesis.

He has been an intern in CAF Signaling (as a Python developer) and CEIT (where he developed a MATLAB algorithm to compute any antenna's spatial directivity along frequency). His background mainly focuses in programming (C++, C, Python, MATLAB...) and he is willing to be part of innovative projects and multidisciplinary teams.

JON EGURRECHEA

SCIENTIFICA

Jon Egurrechea holds a degree in Industrial Electronics and Automation Engineering, along with a Master's in Embedded Systems Development from the University of the Basque Country.

He has a strong passion for embedded Linux and SoCs, with a particular interest in hardware-software co-design for complex systems.

At Ikerlan, he contributed to the development of a secure embedded GNU/Linux distribution aligned with IEC 62443-4-2 SL 1 standards, using the Yocto Project.

For nearly three years, Jon has worked at Alor-Tech, where he has been involved in both hardware and software development, focusing mainly on firmware and software implementation, including driver development for microcontrollers and application development for bare-metal and RTOS environments.

SCIENTIFICA

EÑAUT IGARTUA

Eñaut holds a degree in Business Administration and Management from the University of Mondragon. He studied a dual degree, which allowed him to gain experience.

He is ambitious and eager to keep growing, he likes challenges and adapts to projects in different fields. He worked 6 months in a Marketing project at KRD Global Group in Warsaw (Poland).

Then he worked at Tenneco (Indirect Purchasing, Direct Purchasing, Demand Planning and Customer Logistics) getting into every phase of the Supply Chain and understanding the importance of teamwork.

He has been in contact with strong companies in the Automotive sector such as Mercedes, Volkswagen or Volvo, which has made him acquire knowledge of communication with suppliers and customers. He also has skills of SAP ERP.

New projects

ARRAKIHS

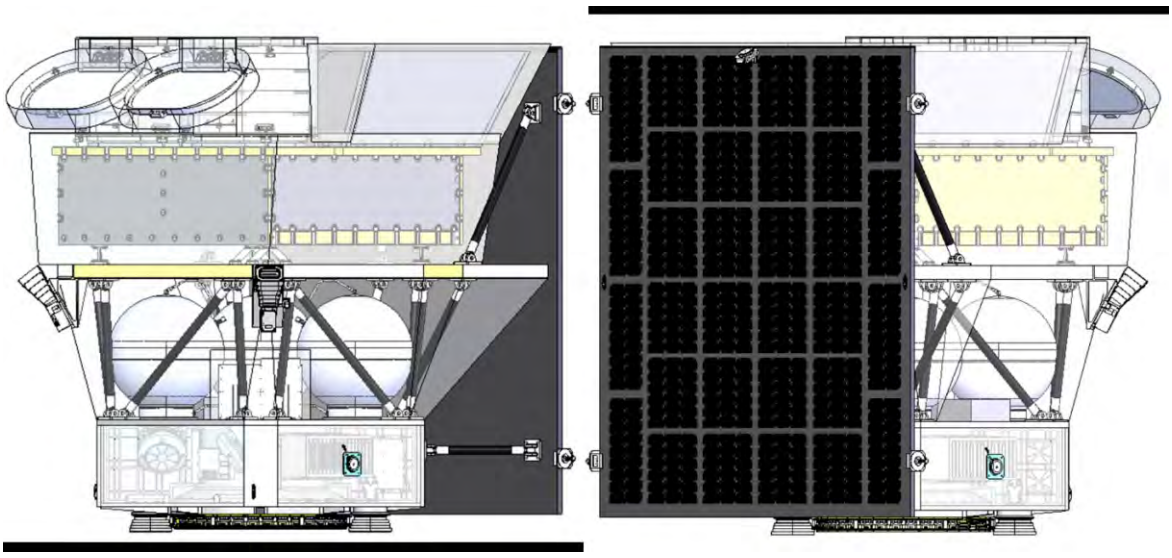
ARRAKIHS (Analysis of Resolved Remnants of Accreted galaxies as a Key Instrument for Halo Surveys) has been presented as the second Fast-Implementation mission (F2) under the European Space Agency (ESA) Science Programme Committee. This mission is designed to investigate how well the Λ-Cold Dark Matter (ΛCDM) model aligns with observations of smaller-scale structures, such as galaxy halos.
To achieve this, the ARRAKIHS spacecraft will operate in a low Earth orbit (LEO) with a dawn-dusk sun-synchronous trajectory, featuring a local time of the ascending node at either 6 AM or 6 PM and an altitude yet to be defined, ranging between 650 and 800 km. The scientific instrument is provided by a consortium funded by ESA Member States, while ESA is responsible for procuring the detectors and the Earth thermal shield. The instrument consists of two binocular optical systems, each containing two nearly identical telescopes with a 150 mm diameter.

AVS has been selected for the platform design of Phase 1, including all sub-systems and required equipment to operate the complete spacecraft, supporting the instrument operations and including the Sun shield. Its proposal design for this mission is based on the LUR family of S/Cs and its standardized and modular avionics, enabling the delivery of custom S/C-level solutions by selecting the number of modules and their configuration. For this mission, the LUR-100 platform has been proposed, incorporating the following modules: avionics, propulsion, payload, and Sun shield. Each module will be connected to the avionics module through dedicated interfaces.

The Arrakihs PRR design consists of a spacecraft with an approximate mass of 549.7 kg, which most external preliminary dimensions, are:

- For stowed configuration: 1483.3x1713.6x1750.1mm
- For deployed configuration (of the Payload binoculars): 1660.3x1713.6x1742.3mm

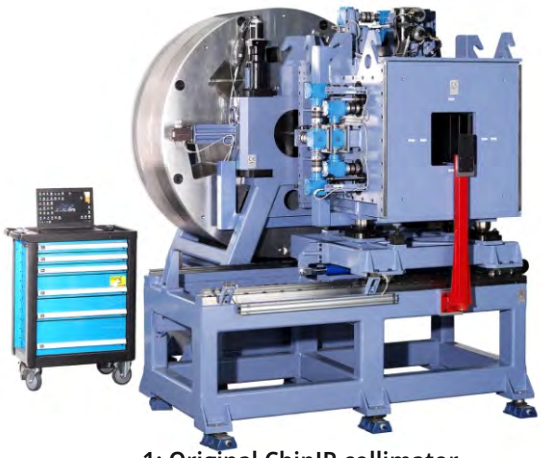
In the next figures, it can be showed how the spacecraft design is structured around four distinct modules. Each of them is designed to be manufactured, assembled and tested as independently as possible to enhance S/C level integration flexibility and minimize complete S/C necessary tests.



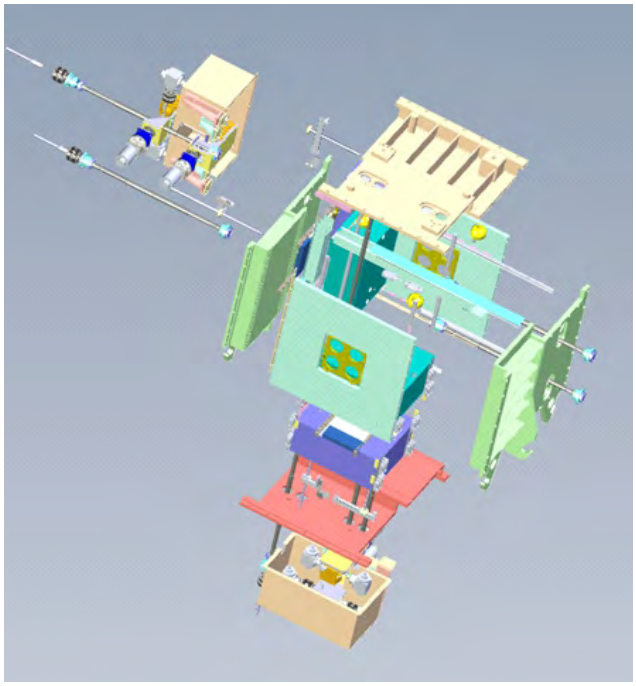
New Jaws set for the ChipIR beam line of the ISIS Neutron and Muon source

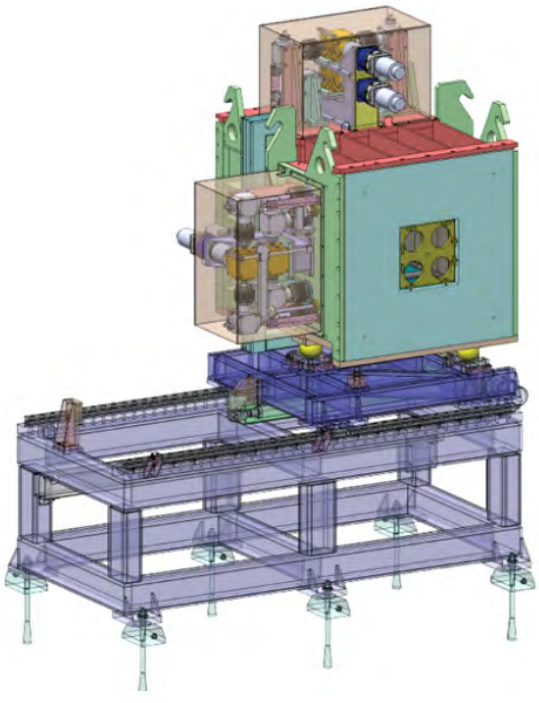
AVS is responsible for the redesign and rebuild of the Jaws set assembly of the ChipIR instrument at ISIS. In order to improve the operability, the entire actuation line has been modified and recalculated.
The project started early January and has now successfully passed the Final Design Review. Assembly and testing phases are scheduled in June and July.
The ChipIR beam line is used to test small electronic with fast neutrons.
Original collimator has been built by AVS in 2012, and consists in 2 independent assemblies:

- a beam selector which is a rotary block with different apertures that allow to select the beam shape
- a jaws set witch can reduce the overall beam profile



1: Original ChipIR collimator





2: New design

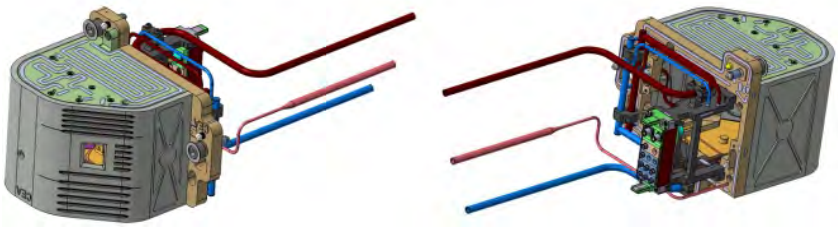
FUS095.2 In vessel WAVS (Vis/IR Wide Angle Viewing System)

The ITER EP-WAVS is an optical diagnostic that will provide real-time measurements of the visible and infrared emission from the Divertor and the main chamber wall. These measurements will contribute to machine protection, to basic and advanced control and to physics investigations of ITER. One of the main roles of the EP-WAVS is to provide information about the temperature of the plasma-facing components, thus protecting them from damage.

AVS has been awarded (4.26 M€) with the contract to supply the WAVS Port Plug components in Equatorial Port #12: First Mirror Unit (FMU) and Hot Dog Leg (HDL). A series production is expected after the closure of this contract.

First Mirror Unit (FMU)

The First Mirror Unit (FMU) is the first sub-system in the optical chain of components facing the plasma. There is one FMU per view (two tangential and one Divertor), and each FMU features two mirrors (M1 and M2). Its main function is to collect and transmit light from the torus to the Hot Dog Leg.



First Mirror Unit (FMU) Right; Front view (left), rear view (right).

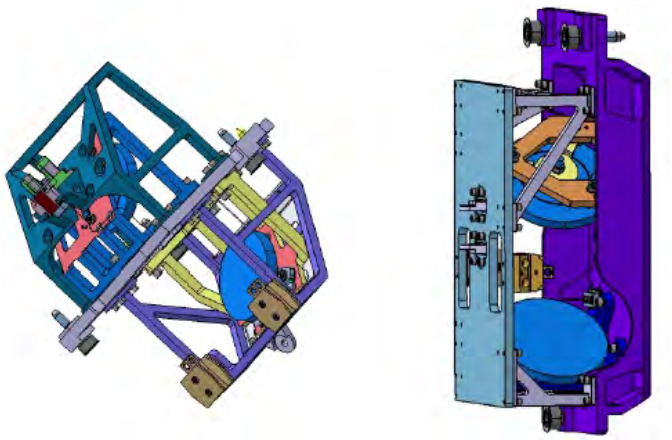
The FMU includes a shutter mechanism, which is pneumatically actuated. The Shutter mechanism includes a vacuum bellow and a shutter arm acting as a blade that closes or opens the optical aperture.

Hot Dog Leg (HDL)

The Hot Dog Leg unit is the second sub-system in the beam path. There are two HDL for tangential views and one for the Divertor view.

The HDL unit features two flat folding mirrors (M3 and M4). Its function is to transmit the light coming from the First Mirror Unit to the interspace (exvessel part) through the vacuum window.

The HDL unit has also a second function, which is to minimize neutron streaming.



HDL Right (left) and HDL Divertor (right).

FUS120 E4XTREME

AVS has signed a four-year contract to design the irradiation module for the Medium Flux Test Module (MFTM) as part of the IFMIF DONES project. This module will contain capsules used to test different regenerative technology systems, which are critical for the future DEMO fusion reactor.

In parallel, the FASTER facility (Facility to Support Tritium breeding Technology Experimental Research) will be developed. An initial phase of this facility will be built, which will not include all the functionalities of the final installation, but space will be reserved for future integration of these capabilities.

Finally, several regenerative blanket technology capsules will be built and tested within the FASTER facility to validate their design and performance.

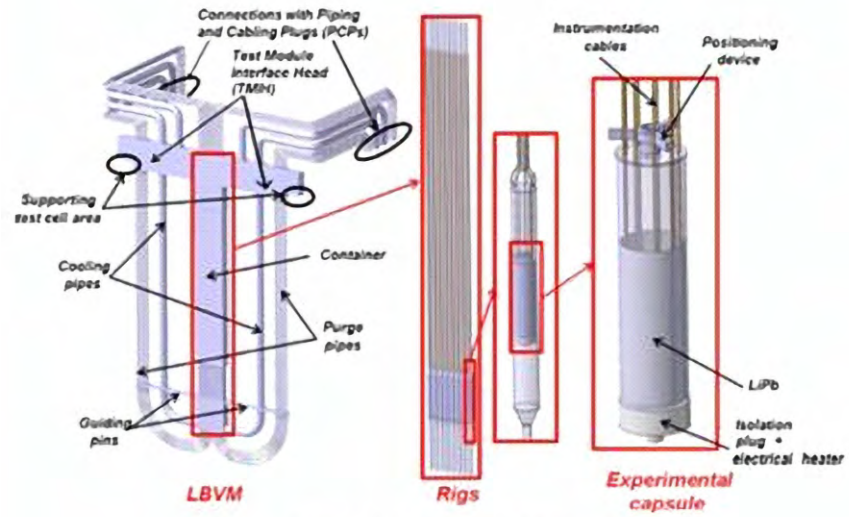


Fig. 1. Present configuration of the LBVM.

CCP VATIAC

AVS has been awarded the **CPP VATIAC** contract to develop an Integrated Technological Validator in the field of high-intensity hadron accelerator systems, for an amount of €26,174,725 and a maximum duration of 40 months.

In January 2025, Phase 1 began, which corresponds to the design and engineering phase of the components.

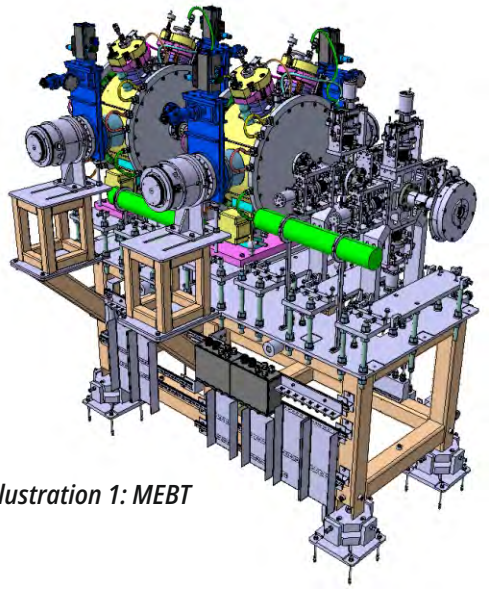


Illustration 1: MEBT

As part of the project led by AVS, the following components of the IFMIF-DONES linear particle accelerator will be designed and manufactured, including:

- A 175MHz radiofrequency amplifier system, with solid-state amplifiers of 200kW power for the RFQ and 16kW for the MEBT.
- A medium-energy beam transport line (MEBT) system, between a radiofrequency quadrupole and a set of cryomodules of a superconducting accelerator.
- A high-energy beam transport line (HEBT) system, between the end of the superconducting accelerator and the particle target.
- A diagnostics bench system (DPlate), which serves for the characterization and testing of the radiofrequency quadrupoles, the MEBT, and the superconducting accelerator during the commissioning phases.
- An integrated control system for monitoring and controlling all VATIAC components.

AVS is in charge of the coordination and management of the project, as well as being responsible for the development of the MEBT, HEBT, DPlate, and control system.

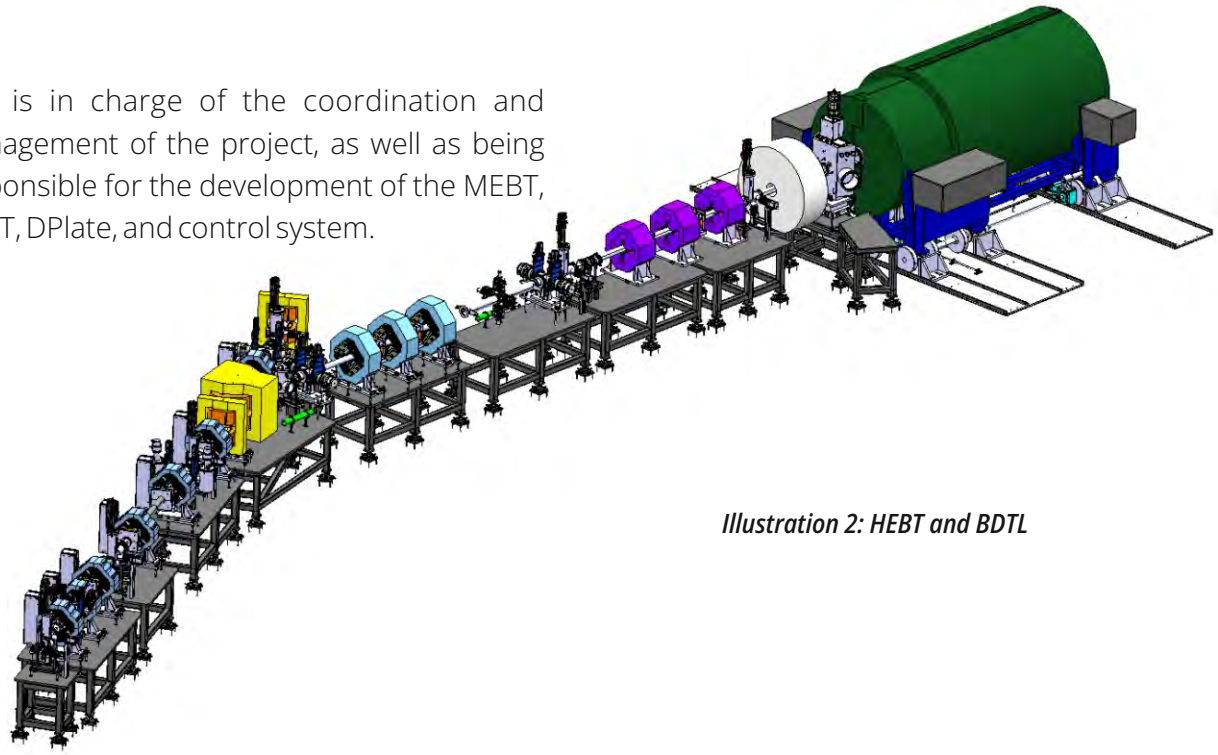
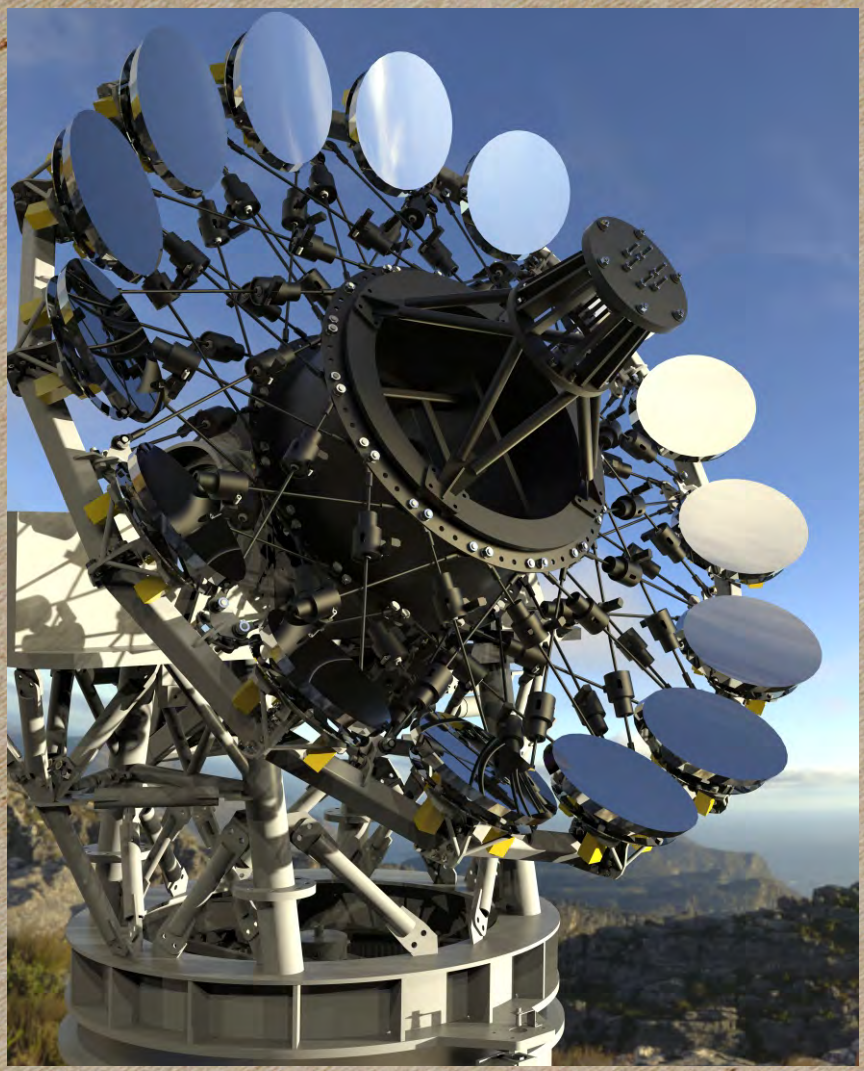


Illustration 2: HEBT and BDTL

Ongoing projects



LINAC6+

Compact linear ion accelerators are emerging as a highly effective future therapy in cancer radiotherapy. Protons and ions allow for precise tumor irradiation, causing less damage to healthy tissue than conventional radiotherapy. Ion therapy is particularly recommended for pediatric cases and radio-resistant tumors, also exhibiting greater radiobiological efficacy, lower toxicity, and a more favorable immune response than protons. Generalizing its accessibility is challenging due to the current scarcity and high cost of equipment.

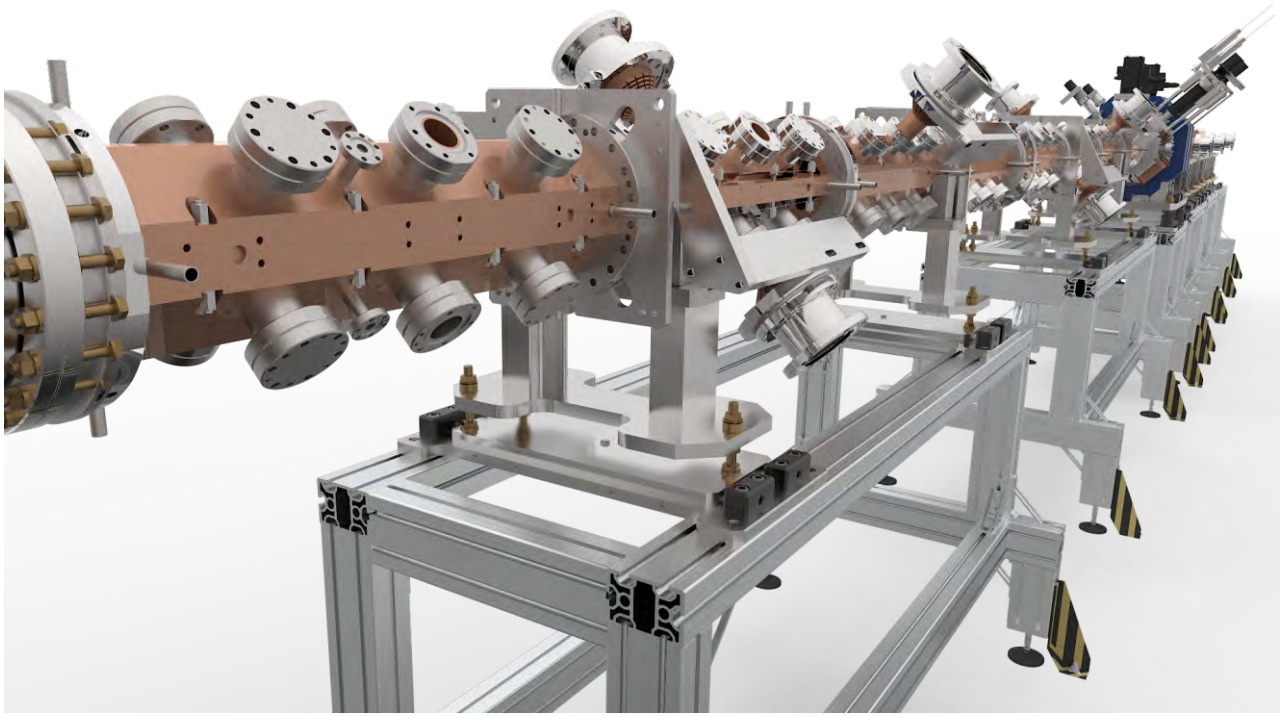
This initiative, financed by ERDF (€18 million + VAT), will span approximately 5 years, including design, prototype development, and pre-operational validation phases. AVS, will develop this carbon ion linear accelerator, to be located at IFIC (Valencian Community), in collaboration with the University of Valencia and the CSIC.

Phase 1 was completed successfully in april 2024! Phase 2 started in may 2024.

The linear accelerator (LINAC) is being optimized not only for carbon ions (C6+) but also for proton beams (H+), with a view to achieving greater versatility in operation and end applications.

The Electron Cyclotron Resonance Ion Source (ECRIS), the radio frequency quadrupole acceleration cavity (RFQ) and the radio frequency power equipment (RF) are currently in the manufacturing stage and are scheduled for delivery at the intermediate milestone of Phase 2 (february 2026).

Concurrent engineering efforts are now focused on both Low and Medium Energy Beam Transportation Lines (MEBT; LEBT): beam dynamics, electromagnetic simulations and the detailed design of complete subsystems. The target date for the release of LEBT and MEBT is the end of May.



E111 – DP&MS

The aim of this activity is to design and manufacture the Dust Protection covers that will protect the Perception Unit cameras of the Sample Transfer Arm (STA), which is installed in the Sample Return Lander (SRL), from the pebbles that could reach the cameras during the EDL (Entry Descent and Landing) process on Mars.

The Dust Protection covers consist on a hinge-like mechanism in which a spring-driven rotary cover, held in place by an HDRM (Hold Down Release Mechanism), protects the PU camera optics by covering them.

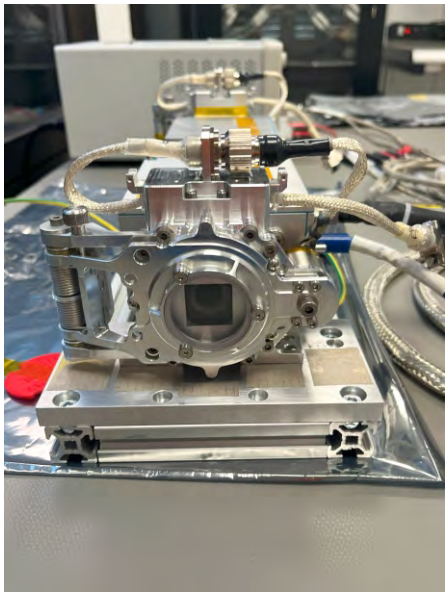
These covers will be opened once the SRL reaches the surface of Mars by the release of the HDRM and driven by a hinge mechanism. A transparent cover made of Lexan polycarbonate has been included in the DP design so that if there are any problems opening the DP covers in Mars, the cameras can see through them.

Recently, AVS has delivered the STM (Structural and Thermal Model) and the EM (Engineering Models) to our client so that they can perform the testing at their level. For the EM model, we have performed functional testing of the DP opening before delivering the hardware to the customer, so that they could integrate it with the EM model of the cameras. Once the client has completed the testing at their level, we will be ready to start the process of preparing the CDR.

DP STM model

DP EM model

DP EM integrated with the camera EM



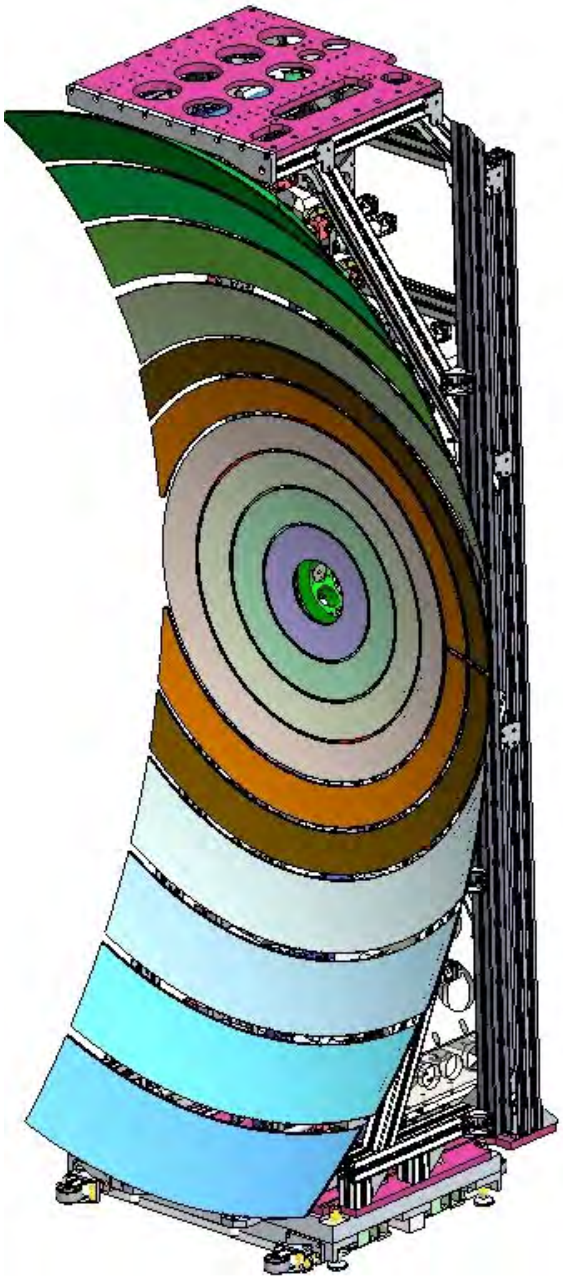
Small Angle Analyzer for the IN16b instrument at ILL laboratory

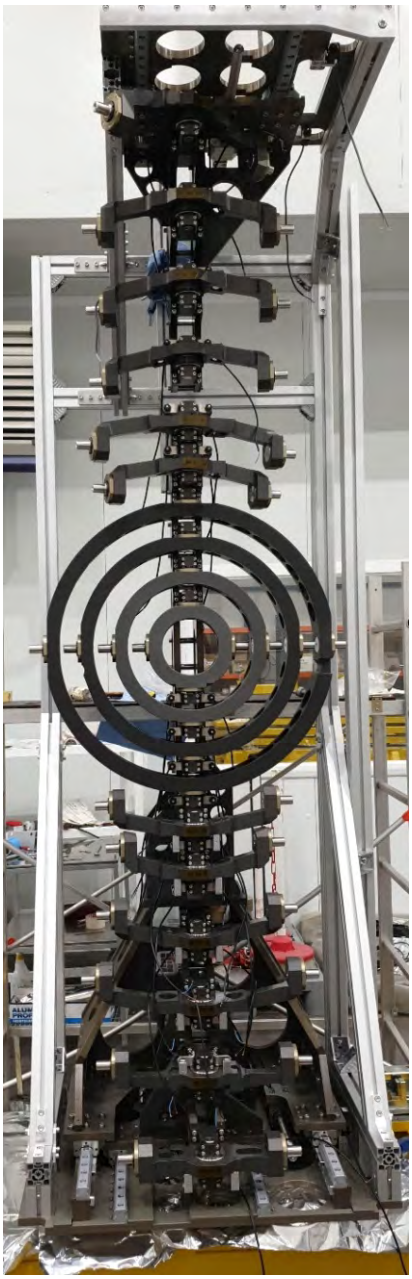
The IN16b instrument is a backscattering spectrometer used at the Institut Laue Langevin.

AVS is responsible for the conception and assembly of the small angle analyzer and one unit of large angle analyzer. In this project AVS used some Carbon fiber reinforced panels in order to propose very light and stiff panels. The system is fully motorized with numerous motors on every axis. It will replace the old analyzer, smaller made from aluminum.

Next steps, are mounting, final tests with every panel installed and expected delivery during the second trimester of 2025.

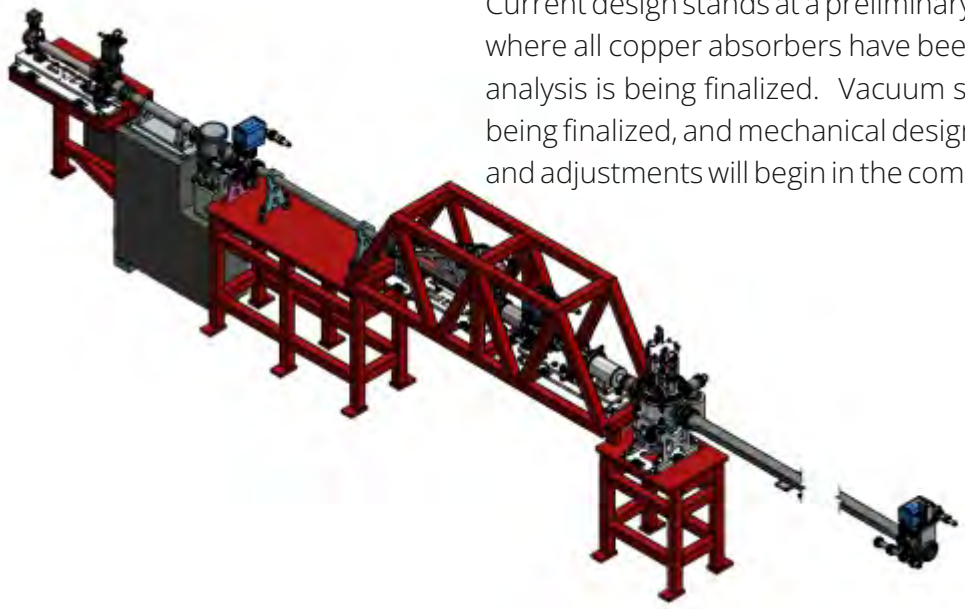
SAA Final design view and mechanical structure





SECTOR 6 FRONT END FOR CHESS

The S6 Front End comprises a series of apertures and devices whose primary purposes are to safely absorb the x-ray beams when required or transport them to the beamline optics while constraining their spatial acceptance and providing shielding for bremsstrahlung radiation. It occupies the longitudinal distance of 6.98m to 22.98m measured from the center of the Sector 6 insertion device straight. Two undulators canted at +/-1mrad induce a total power load of approximately 14kW at the design machine conditions.



Current design stands at a preliminary design review stage where all copper absorbers have been sized, and thermal analysis is being finalized. Vacuum system design is also being finalized, and mechanical design of support systems and adjustments will begin in the coming weeks.

HEBT Collimating Slits for Nusano (Project 24-037, contract awarded 2024-11-15)

Nusano is building a large manufacturing facility that will use a particle accelerator to produce radionuclides for medical applications. Within this facility, the High Energy Beam Transport (HEBT) System is the branching portion of the accelerator lattice dividing and guiding the particle beam from the linac to four target stations. Adjustable collimators (slits) are required at several locations on each branch of the HEBT to protect against mis-steered beam. AVS|US has completed the design and met with the client for the final design review on 2025-03-13. Production documentation and ordering is underway with a delivery target to the client in the summer of 2025.

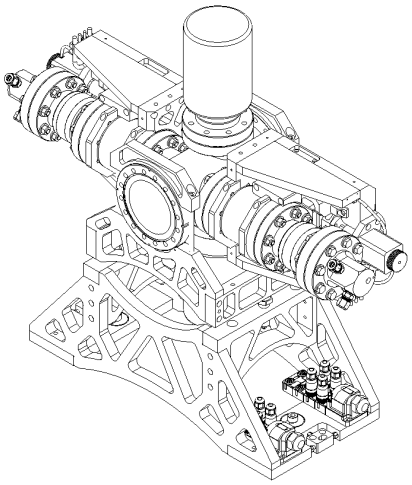


Figure 1-1: Collimating slit horizontal configuration

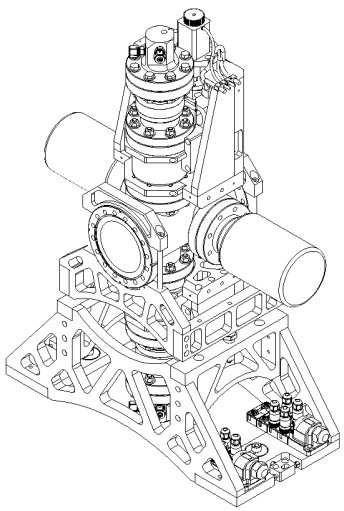


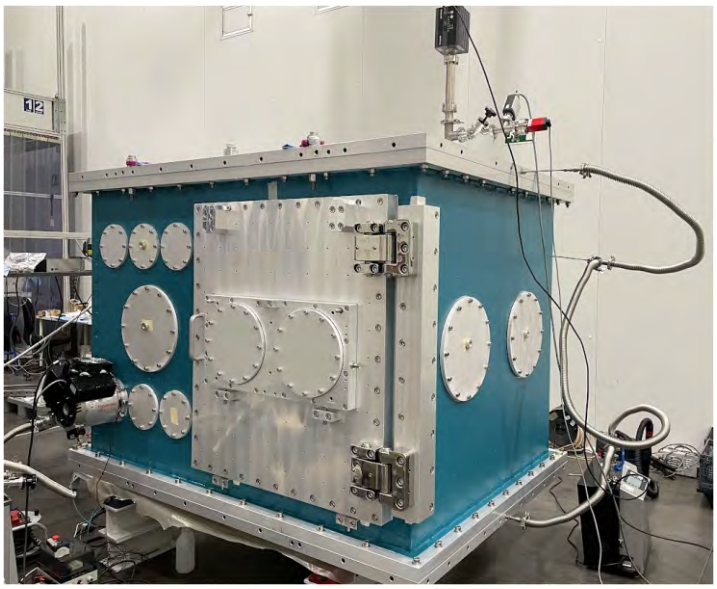
Figure 1-2: Collimating slit vertical configuration

XL023 EPAC EA2 AO Chamber (CLF/STFC/UKRI)

The AO Chamber is part of the equipment in Experimental Area 2 of EPAC, and will house a variety of optics and beam conditioning equipment for user experiments.

The chamber operate at or below 1 × 10-6 mbar.

AVS is finishing the internal test for pass the Factory Acceptance Testing and then continue with the delivery and installation at client premises.

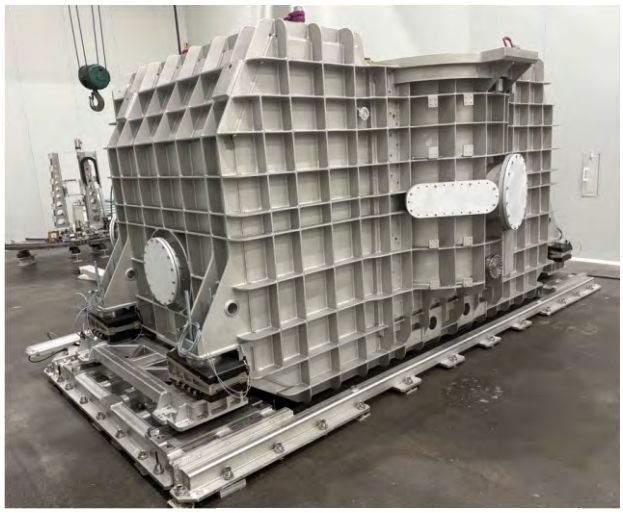


UK Research and Innovation

X076 CHESS HMF Endstation (Cornell University, USA)

The High Magnetic Field (HMF) X-ray Beamline at the Cornell High Energy Synchrotron Source (CHESS) will be a world-class high-energy X-ray beam- line. It will feature a custom low-temperature superconducting (LTS) magnet generating continuous fields as high as 20 Tesla. This magnet will be placed in top of the HMF vacuum chamber.

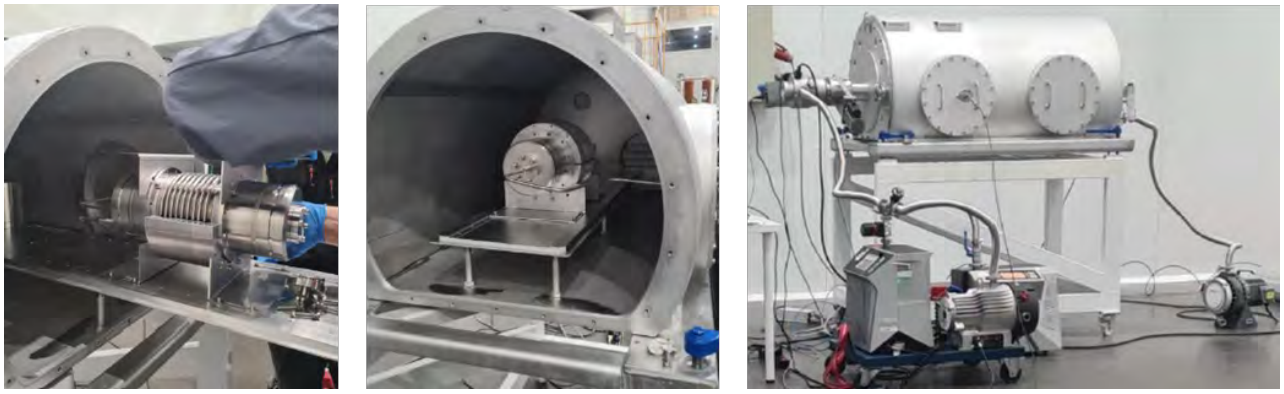
The Manufacture and assembly phase is currently in the last days with the goal of the Factory Acceptance Testing after Easter.



CHESS
CORNELL HIGH ENERGY SYNCHROTRON SOURCE

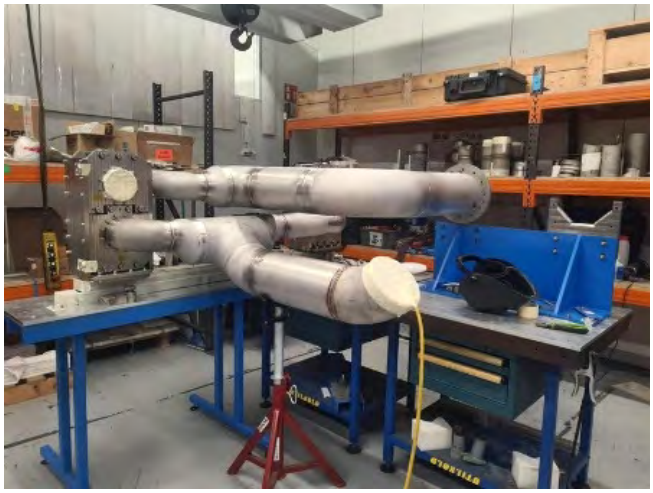
CALORIMETER

The Calorimeter is still at AVS facilities, at Elgoibar.
We received the first bellows part of the cooling pipework from our UK supplier Teddington and performed the pressure, leak and outgassing/RGA tests at the workshop.



Bellows pressure, leak and outgassing / RGA tests.

After the acceptance tests of the bellows, we were ready to start with the welding of the cooling pipework. At this moment the welding of the cooling pipework outside the CAL is being completed. The tolerances required for the welding, as usual for the MITICA project, are very tight and if we add the 100% radiography requested for each weld, this is again a challenging activity.



Cooling pipework being welded outside the CAL

But speaking about challenging activities, the most difficult at this moment is the adjustment of the CuCrZr tubes (STEs) already welded in the CAL, where the required tolerances are not realistic. AVS's assembly and metrology teams are doing their best to catch this unicorn.

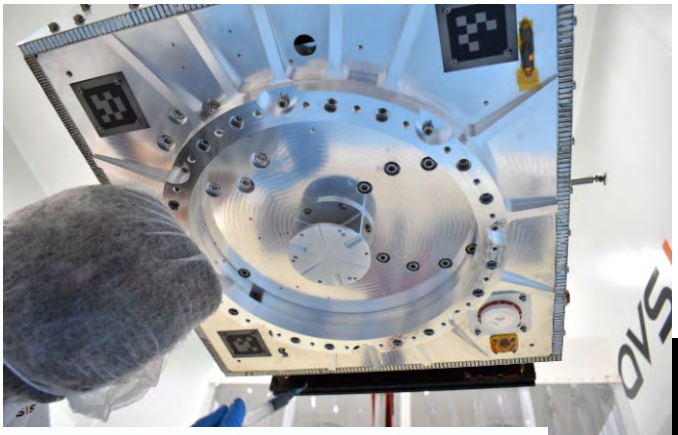
Delivered projects

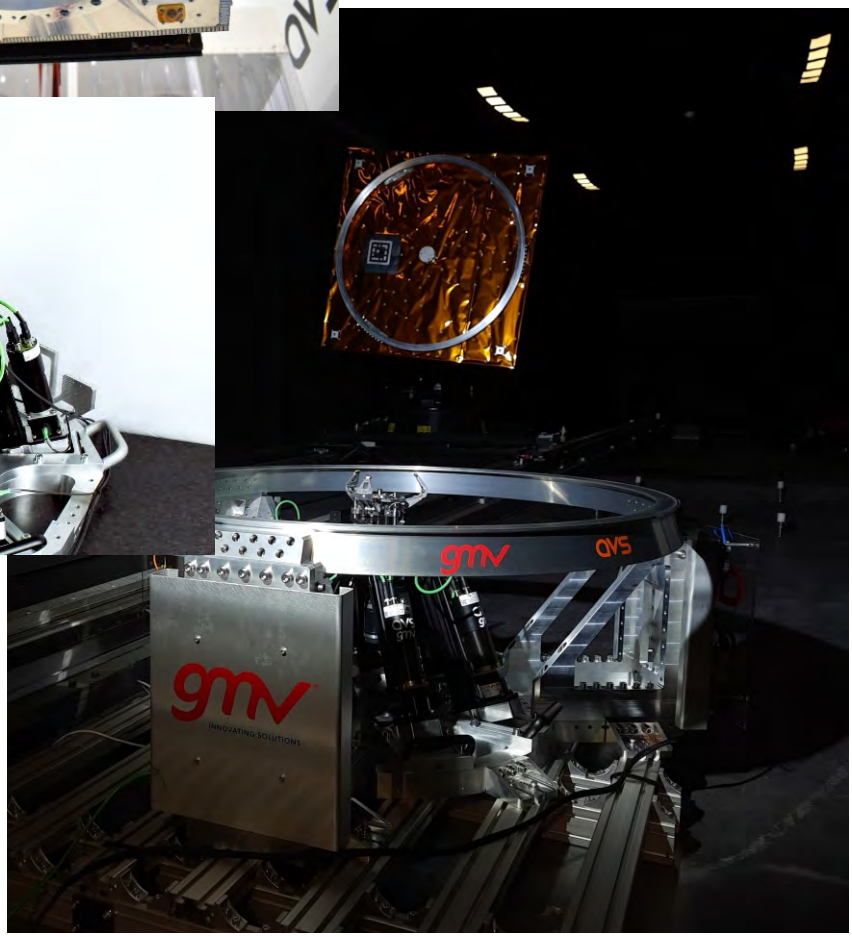
CAPTURE PAYLOAD BAY (CAT)

The Capture Payload Bay (CAT) system is a robotic capture system designed to enable spacecraft to autonomously capture prepared space objects, both cooperative and noncooperative, equipped with ESA's Design for Removal (D4R) standard interfaces.

This system is a critical element for future space missions involving debris removal and rendezvous with active or inactive spacecraft, particularly at the end of their mission lifecycle.

By supporting these Active Debris Removal (ADR) application scenarios, the CAT system contributes to ensuring the long-term sustainability of space operations by addressing the growing challenge of space debris.



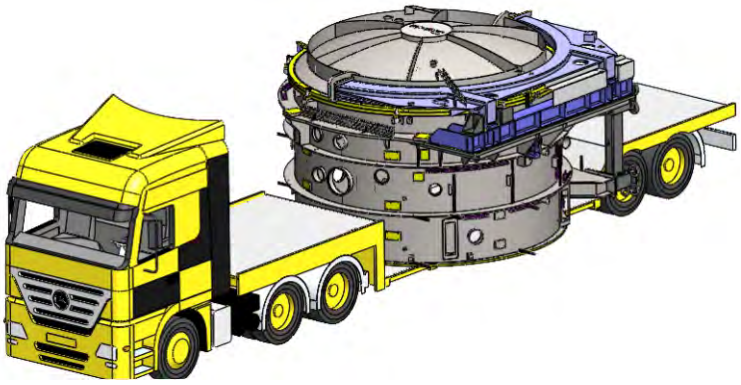


Delivery of large-scale space simulation chamber for L3HARRIS

AVS is developing a long-term partnership with the company Leybold to supply space simulation chambers for clients all around the world. The first project is currently very close to final acceptance.

This large-scale chamber (approx. dimension: diam. 5mter, lengh: 7m, weight 60 tons) will be used by the final client to test various space equipment.

During spring 2024, AVS went through an important step, it consisted of shipment to Germany, assembly of chamber, and Factory acceptance test.



In January, chamber has been dismounted and prepared for shipment to USA. This last step became a critical one, allowing AVS to demonstrate their mastery of adaptability.

AVS team successfully installed the chamber on customer site. After a careful inspection of the system, full compliance with the specs has been confirmed and final acceptance is scheduled in April 2025.

Delivery of the beam line components for MITICA

Contract closed for the Neutraliser and Ion Dumps

After the delivery and site acceptance testing of both NED and ERID BLCs at the Neutral Beam Test Facility (NBTF), hosted in Padua (Italy) by Consorzio RFX in September, the Acceptance Data Package and Final Technical Report was prepared.

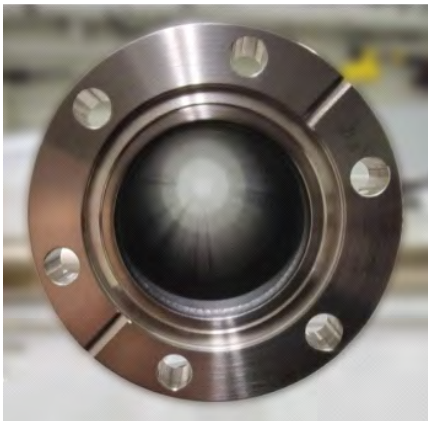
More than 700 management and 450 technical documents have been delivered by AVS and approved by F4E.

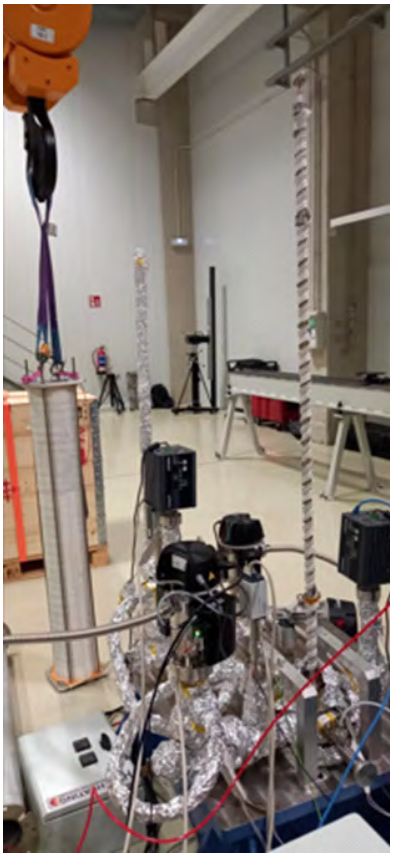
After the approval of the Acceptance Data Package, the contract for both BLCs NED and ERID has been successfully closed.

INT035 ROAD2DEMO

Successful completion of the last year's certification thanks to the efforts of TEKNIKER and AVS.

The most relevant outcome of this project is the development of a coating procedure for the inside of vacuum components that increases its vacuum homogeneity and overall vacuum level as it acts as a passive pump (getter).



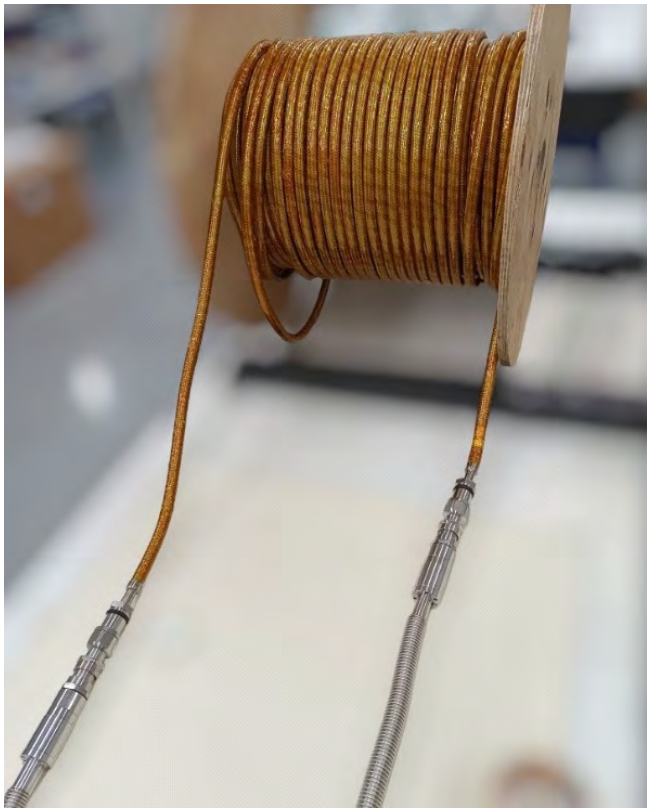


FUS102 FOCS IO 2

Fiber Optical Current Sensor (FOCS) clamping system deliverable D2 (Fasteners & pipes) has been delivered to ITER Organization. D3 deliverable (Feedthrough kit i.e. air-vacuum interface) is expected to be delivered in the following months.

FUS098 FOCS FBC

Successful completion of the Factory acceptance tests of the second batch of the IO Fiber Optical Current Sensor (FOCS) fiber bundle connector thanks to the efforts of AVS and SCIENTIFICA team. Second batch is expected to be delivered during April'25.



Events

At the **Space Mobility Conference**, **Ramón Blanco** contributed to high-level discussions on enhancing space logistics and mobility. His participation supported the broader mission of fostering collaboration between industry and government to advance assured access to space, rapid payload delivery, and in-orbit operations. The event, held in **Orlando, Florida, from January 28 to 30,** served as a strategic platform to align commercial innovation with national defense priorities.

On February 5th, Miguel Ángel Carrera presented the latest advancements and updates on the projects currently being developed by the company at the "**Jornada de Industria y Ciencia**" organized by the AEE at the **University of Alcalá de Henares.** Their presentations highlighted AVS's commitment to innovation and collaboration in the space and technology sectors, showcasing cutting-edge developments and fostering valuable discussions with industry professionals and academic experts

Ignite Space 2025 was held at the National Space Centre in Leicester **on February 5-6,** 2025.

The conference focused on fostering innovation and collaboration within the UK's space industry, addressing topics such as skills development, investment opportunities, emerging technologies, and sustainability.

It brought together industry leaders, investors, and researchers to drive growth and unlock new opportunities in the sector.

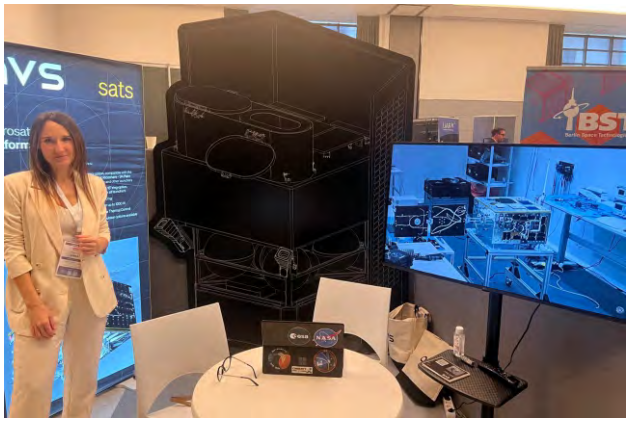
BasqueTrade & Investment
Agencia Vasca de Internacionalización
Nazioartekotzeko Euskal Agentzia

GRUPO spri TALDEA

EUSKO JAURLARITZA
GOBIERNO VASCO
BASQUE GOVERNMENT

At the **SATELLITE 2025** conference, held **from March 10 to 13 in Washington, D.C.**, AVS was represented by **Miguel Ángel Carrera, Cristina Ortega, and Ramón Blanco**. Alongside their active presence at the event, the AVS team joined a delegation led by Basque Trade & Investment (**Basquetrade**), part of the Basque Government, on a **visit to aerospace companies in Orlando**.

This initiative aimed to strengthen ties between the Basque and U.S. space industries, promoting international collaboration and opening new opportunities for innovation and business development.



At the **Small Satellites & Services International Forum (SSSIF)** held **in Málaga, Spain, from February 18 to 20,** AVS actively showcased its latest projects and innovations. The AVS team, including CEO **Miguel Ángel Carrera, Rainer Díaz de Cerio, and Cristina Ortega**, engaged with attendees at the exhibition stand, providing insights into the company's advancements in space technology.

In the conference sessions, Cristina Ortega presented the **ARRAKIHS project**, highlighting its scientific and technological objectives, while Rainer Díaz de Cerio discussed the **LUR** project, focusing on Earth observation and sustainability. Their participation underscored AVS's commitment to innovation and collaboration within the small satellite sector.

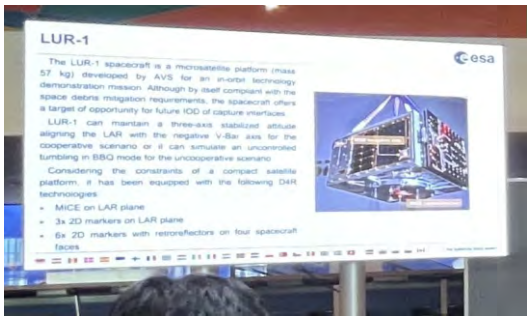
From **March 12 to 14**, **Transfiere**, the European Forum for Science, Technology, and Innovation, took place at the **Palacio de Ferias y Congresos de Málaga, Spain.** This premier event serves as a vital platform for sharing scientific and technological knowledge, fostering innovation, and strengthening connections between the scientific community and the business sector. **José Miguel Carmona,** Head of the Fusion and Beams area, attended as a visitor, engaging with industry leaders and exploring the latest advancements in research and development.

On March 20, the European Space Agency's (ESA) **ESTEC facility in Noordwijk**, the Netherlands, hosted the **M-IND Workshop,** focusing on the industrialization and competitiveness of mid-size satellite integrators for Low Earth Orbit (LEO) constellations.

Cristina Ortega attended the event, engaging with industry leaders and contributing to discussions on optimizing satellite production for telecom, navigation, and Earth observation applications

On March 31 and April 1, the European Space Agency's **ESTEC facility in Noordwijk**, the Netherlands, hosted the **Compliant Mechanisms Design Course.** This specialized training focused on the design, analysis, manufacturing, assembly, and testing of compliant mechanisms for space applications, emphasizing their benefits such as frictionless motion, high precision, and durability in harsh environments.

Representing AVS, **Asier Iglesias and Pierre Van Vaerenbergh** attended the course, enhancing their expertise in this critical area of space engineering.



The **9th European Conference on Space Debris** was held from **April 1 to 4**, at the **World Conference Center Bonn in Bonn, Germany.** This event brought together scientists, engineers, and experts from around the world to discuss various aspects of space debris.

Our colleague **Sergio Salata** actively participated in the conference by delivering a presentation, contributing to the exchange of knowledge and advancements in this critical area of the space industry.

Cristina Ortega, Iñigo Sard, and Pierre Van Vaerenbergh attend the **Space Mechanisms Workshop and Final Presentation days** at ESA-ESTEC from **April 2 to 4.**

Cristina Ortega, attend the **SME Forum** at ESA-ESTEC on **April 2.**

Iñigo Sard, and Xabier Uribarri attend the **ESA Future Space Transportation** at ESA HQ Nikis, **Paris** on **April 2.**

Cristina Ortega attend the **Cm25 Industry Event** at ESA-ESTEC from **April 3 to 4.**

The **DONES Xcitech School**, held in **Dubrovnik from April 6-11**, offers courses focused on radiation effects on fusion materials and the IFMIF-DONES project. It brings together experts to discuss the impact of neutron irradiation on materials and advances in fusion energy, providing valuable insights and networking opportunities for professionals in the field. **Cristina Battaglia and Michel López** are participating in the event.

The **40th Space Symposium,** taking place from **April 7 to 10**, 2025, at **The Broadmoor in Colorado Springs,** is a premier event uniting global space professionals from various sectors. It offers a unique platform to explore critical space issues, foster dialogue, and drive innovation across the industry.

Ramón Blanco is attending this event, which attracts thousands of representatives from military, civil, and commercial space sectors worldwide.

Beyond Diecaros

AVS Added Value Solutions has been included in the prestigious **CEPYME500 ranking,** recognizing us as one of the 500 fastest-growing companies in Spain.

CEPYME500 is an initiative by CEPYME (Spanish Confederation of Small and Medium Enterprises) that identifies and promotes the **500 leading Spanish companies in business growth, innovation, and international expansion.**

Companies are selected based on rigorous economic and financial criteria, including revenue growth, profitability, and competitive potential at both national and international levels.

Being part of this ranking is a testament to our commitment to excellence, innovation, and sustainable development. We are proud of this recognition, which would not have been possible without the hard work and dedication of our team, partners, and clients.

The COPE Vitoria Awards: An endless cycle that makes it increasingly difficult for COPE Vitoria to choose the recipients of the Álava Awards, an honor the network has been presenting for over three decades.

The awardees in each edition become part of the region's history. All of them have exemplified resilience and excellence in their respective fields. This year, solidarity takes center stage in more than one category, art becomes a religious experience, an anniversary is celebrated in the mountains, data leads us into Artificial Intelligence, and we take flight into space.

COPE Vitoria Award of the year: AVS, Added Value Solutions

Stay in touch

Stay in touch

Exploring the unknown: The power of human curiosity.

From the moment we gazed at the stars, curiosity has driven us forward. It's led us to build telescopes that unveil the universe's secrets, land rovers on distant planets, and create groundbreaking technology that expands human knowledge.

As AI, quantum computing, and space exploration advance, one thing remains true: innovation is about people. It's about those who ask "What if?" and the teams that turn bold ideas into reality.

Great discoveries don't happen alone. They take teamwork, persistence, and a willingness to explore the unknown. In a fast-changing world, adaptability is key. Whether designing precision instruments for space or pushing scientific boundaries here on Earth, our curiosity fuels progress.

So, let's keep asking, exploring, and innovating. Because beyond every challenge, there is an opportunity, and beyond every limit, a new frontier waiting to be discovered.

Cheers to curiosity, discovery, and shaping the future together!

DIECAROS
Science and Technology Corp.

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