



**ASTROLAND**  
INTERPLANETARY  
AGENCY

DOSSIER

MISSIONS FOR SPECIFIC  
SCIENTIFIC RESEARCH



# About us

**Astroland Interplanetary Agency** is a private Spanish company based in **Cantabria**. Fully funded by private investment, it is framed in the **development of analogue missions**, researching on the technology and skills needed to deploy possible habitats for both the Moon and Mars, the psychology and survival of human beings in isolation and their resolution skills in hostile situations.

Astroland Interplanetary Agency is a research organization, a multidisciplinary think tank, and innovation hub whose main objective is to envision future living capabilities on Mars / Moon

We develop protocols and operational scenarios in a subsurface Mars & Moon analogue environment inside a cave in Arredondo (Cantabria), in the north of Spain.

According to previous scientific research it looks as if the most sensible thing to do for the first human colonies on Mars / Moon will be to settle underground in the old Martian lava tubes.

So, it makes all the sense to run analog missions in the most similar scenarios possible.

At Astroland, we have a unique asset that allows us to get as close to this as possible.

Thanks to the authorisation of the Spanish administrations, we count on a **permanent plug- and -play analogue subsurface station**:

## **ARES STATION**

Here we can test possible life forms and conditions for future interplanetary travellers. Therefore, validating the coexistence and survival of human beings away from planet Earth may be much easier.

We have established and procured the necessary means to validate mission outcomes (e.g. facilities, habitat, survival and coexistence in an off-Earth environment). **Ares Station** is a truly underground space training living lab, offering a variety of programmes that challenge our skills. Astroland has successfully conducted over 15 missions since its inception in 2019.



# What we do

A person wearing a red jacket with a white logo on the back is seen from behind, working in a laboratory. They are positioned at a desk with various scientific instruments, including a microscope and several petri dishes. The scene is lit with a cool blue light, creating a professional and scientific atmosphere.

**Astroland provides the preparation, management, coordination and accomplishment of analogue missions at Ares Station.**

We want to develop protocols, skills and technology that may help not only in establishing the first human colonies **on Mars**, but also to find direct applications that can have a positive impact on people's lives right here, right now, on Planet Earth.

Astroland uses analogue missions to be actively prepared for human settlement outside planet Earth, as we can test in a realistic, but controlled environment the skills, technology, and protocols needed to develop scientific research, gathering valuable data that once analysed is turned into knowledge to act upon.

Our goal is to become a relevant testing ground for the future, and comply with the high fidelity standards as any official mission. Obviously, we are not alone, as our idea is to gather relevant travel companions for such a challenging journey, which means integrating with academia to register and assess all the findings.

We are in constant contact with several scientists, universities, research groups, and centers developing projects at Astroland to study possible technological and scientific applications in an analogue environment, **testing new technologies, robotic equipment, vehicles, habitats, communications, power generation, waste management, mobility, infrastructure, life-support systems, food production and storage**, as well as **the psychological effects of human behaviour, such as isolation, confinement spaces, team dynamics, food fatigue** and so on.

Analogue missions reveal important information about the limitations and validity of planned human exploration operations. They also help define and test ways to combine human efforts to improve scientific exploration.



# Ares Station





# Ares Station



After years of thorough research and having discarded more than 50 caves over this, we have chosen this one as the perfect scenario for the purpose, since this is not a cave system, but rather a single cavity with one single way in and out, easy to prevent intruders and contamination of the station.

We obviously comply with the corresponding laws and protocols, as we operate under the permission from the environmental and legislative Spanish administrations.

**Ares Station has been closed and totally isolated from human contact and external interference.** As it is fully dedicated to the sole use of the research conducted by ASTROLAND.

Ares Station is located underground **inside a stunning natural cavity of about 1 mile long and 60 metres high**. This makes it an ideal operational scenario, complemented by a fully equipped Space Center to monitor each mission remotely.

**Ares Station is equipped with the technologies and requirements sufficient to develop, verify and report on the performance and human survival reactions of up to ten people in an off-earth location, and to demonstrate possible settlement and survival capabilities in places such as the Moon and Mars.**

Ares Station is therefore, is a unique testbed for reproducibly testing and troubleshooting in a realistic but controlled environment always ready to support analogue research on the environment and survival conditions targets such as those future sites off-Earth.

Becoming a state-of-the-art LIVING LAB for Mars & Moon analogue research, in a hostile but controlled environment, that enables and facilitates the monitoring of human conditions and behaviour.



# Facilities

**Connection:** Infrastructure created by CISCO MERAKI, offers WIFI connection throughout the station, distributed in 4 sectors, which among other aids, allows us to know the positioning of each astrolander at all times.

On the other hand, this connection allows us to have, not only communications, but also to be able to remotely manage any element with internet access, all with a speed of 50gb symmetrical.

The infrastructure is formed by a fibre optic network from CISCO Switch and routers, the entire infrastructure is ruggedised and arranged in such a way that it is completely protected against the harsh Ares environment (high levels of Humidity,..).

**Communications:** on-board headset (located inside helmet) enables individual voice communication. This system applies to Alpha base as well.

**Laboratory:** Two MOTIC (500x magnification) microscopes, with all the necessary utensils: test tubes, Petri dishes, tweezers, sampling... Hydroponic culture laboratory, autonomous energy and water production systems, 3D printers, meters, sensors.

**Kitchen:** Microwave, washing area, glass-ceramic hob, recycling system....  
**bedrooms:** single beds, pillows, sleeping bag, bathroom...

**Gym:** TRX system, mats, weights, elastic bands, double ended boxing, dodge punching ball...





# Astrogate

The image shows a cave interior. In the background, a bright red, glowing lava flow is visible through a dark opening. The cave walls are rugged and dark. In the foreground, a floor made of large, square, blue-tinted tiles leads towards the lava. A small, dark, rectangular object is visible on the floor near the lava.





# Alpha Base

At about 500 metres from the **Astrogate** (the main entrance), there is **Alpha Base**, the main habitat with a capacity for 8 Astrolanders (that's what we call the crew members).

It is a fully equipped research lab, with custom-made **Astrolander suits**, specially designed and developed by Astroland in collaboration with ESNE university with the **latest technology in 3D textile printing**, a **hydroponic culture laboratory**, **energy generation**, and **water production systems**, **waste management**, **3D printers**, **kitchen**, **leisure areas**, **gym**, **survival kits**, and even **freeze-dried lyophilised food adapted to the specific needs of each member of the crew**, along with all the relevant sensors and actuators.

Please see the map, it actually looks like a kind of Micky mouse's silhouette, the main dome area is connected to two smaller domes at the back both for the sleeping cubicles equipped with bunk beds, toilets and welfare facilities.









redlink

Microsoft Video Surveillance

10/18/2019 04:25:30

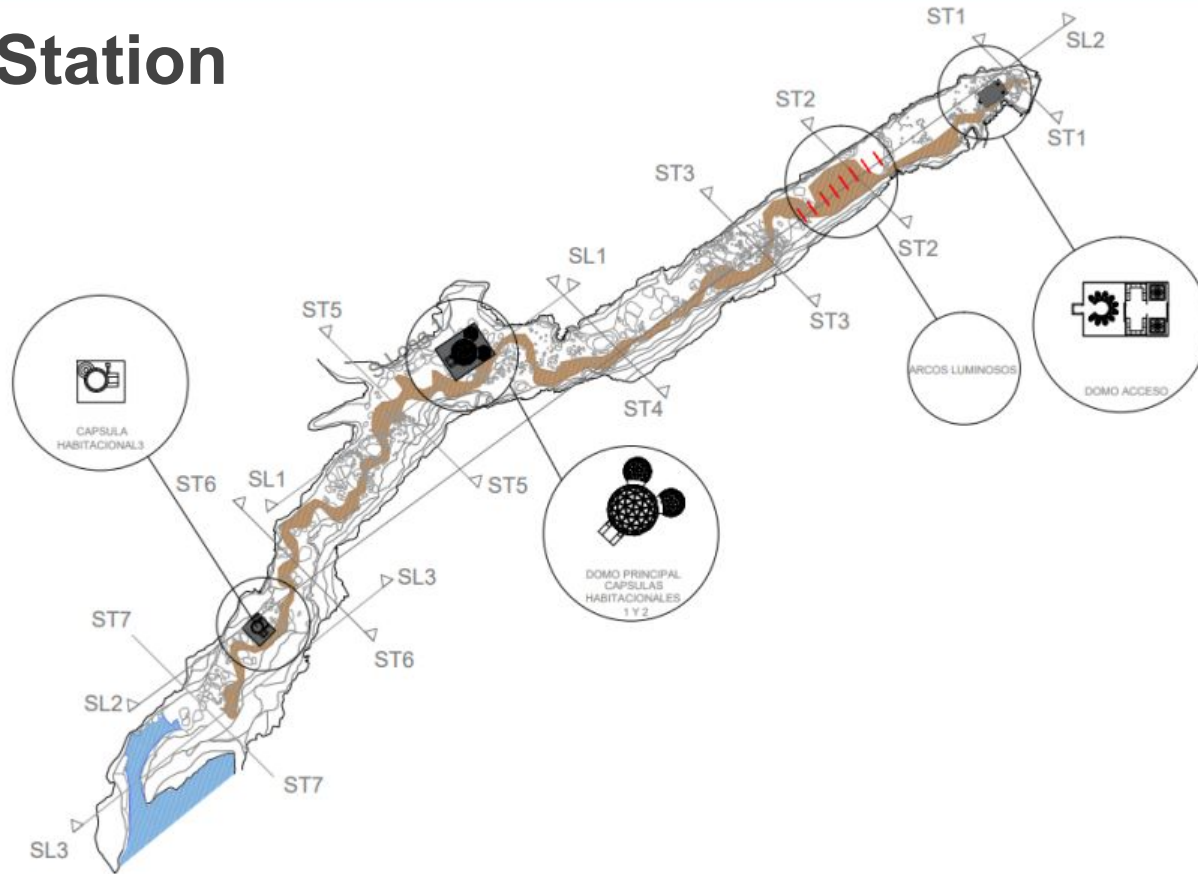
Jim TTHU

TeamViewer

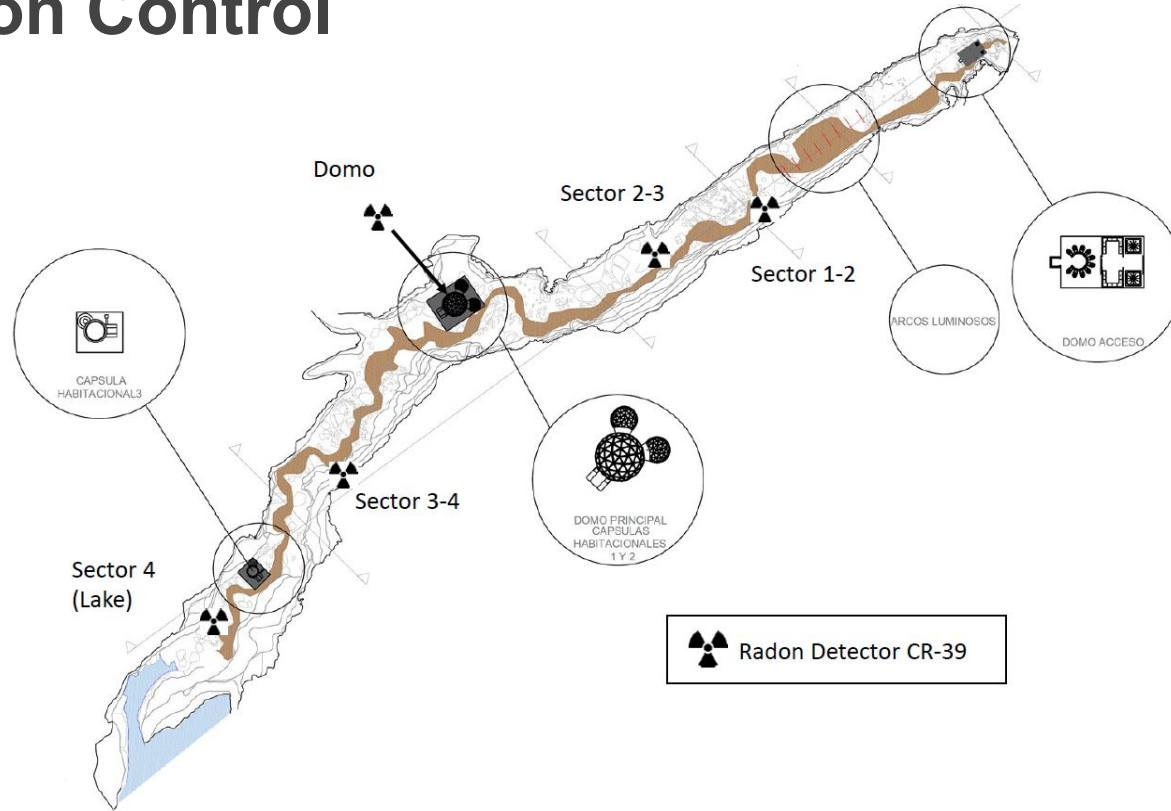


18:25:23  
RAM  
Antivirus  
Device Manager

# Ares Station



# Radon Control



# Xplorer Base

Further back from **Alpha Base** there is a tricky route where the astrolanders must show their best skills and capabilities acquired in their training as there are sections that can only be overcome by rope climbing and abseiling.

Moving **towards the deep end** of the cave **there is an inner lake.**

This is actually one of the most interesting areas for astrobiology experiments in the line of searching for life.

Just before this lake, there is another small habitat, an exploration outpost: **Xplorer base: an inflatable life capsule with a capacity for 2 astrolanders.**







# Space center





# Space center



## **MISSION CONTROL CENTER**

Communications and monitoring of every single aspect of the mission to ensure and facilitate safe and successful accomplishment.

## **ASTROLAB**

### **LABORATORY OF TECHNOLOGY AND COWORKING**

R&D&I projects are developed here, and subsequently tested in a specific research centre at the Ares Station.

## **ORIGIN AND DESTINY**

An information space focusing on human evolution and development driven by space exploration.

## **AUGMENTED HUMANITY**

A space for reflection and sociological study of what the humanity of the future will be like and its adaptability to hostile environment such as those on Mars.



# Mission Control Center

To monitor the safety and performance of the astrolanders while on a mission, we also count on our own Space Center, located in Santander technological park, at about **1 hour and a half from the Astrogate** (the entrance to the station).

Located inside one of the modules that form part of the Astroland Space Center, the Mission Control Centre is where the **CAPCOM, the analog flight director, and the mission operations manager ensure the mission is executed safely, and everything goes nominal.** They lead the planning, coordinate all activities, and approve any procedures to protect the Ares station and of course the crew.

And the rest of the personnel (**5 workstations, extendable depending on the duration and levels of control required for each mission**) work here during the missions monitoring in real time the operability of the entire mission, as well as the vital signs, metabolic and psychological behaviour and other essential parameters to ensure the health and safety of the crew as well as constant audio and visual contact.

Missions are carried out in the most rigorous possible manner, risks are calculated, and **communications with the station are time delayed** to simulate the time it takes for each message to travel from Earth to Mars. This **communication latency is easily customisable**, depending on the movement of the planets or the specific requirements of each mission (Earth - Mars approx. between 4 and 24 min depending on positioning), **the standard time delay is usually set to 8 minutes each way.**

On each mission we have expert profiles in **Psychology, Engineering and Biology**, all in order to follow the steps of the mission.





# Missions

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Biology  
Engineering  
Psychology







# Mission Objectives

**Astroland** works with numerous experts in various scientific fields, from fitness training and nutrition to neuroscience, space exploration, genetics, human and social sciences. Our continuously updated programmes are designed to make space exploration have a high-value impact on improving life on Earth.

The main objectives of the programme are:

**Improve productivity and psychological well-being.** To provide a global and specific view of human interaction in space.

To create a collective mind-set that strengthens the bonds between the group, building and maintaining mutual trust.

**To boost communication and cooperation skills,** studying in detail the human styles of communication, perception and understanding of oneself within the group, as well as of the other members.

**Increasing internal and group listening skills** through the development of mechanisms that help us to manage concepts such as expectations, needs and concerns.

Capacity for rapid learning under pressure, rationality and capacity for resolution in extreme conditions of survival.

Coping with highly demanding daily routines, application of **high and low awareness techniques, positive self-instructions and the practice of stress management.**

**Be resilient,** deal with unexpected changes, face risks and uncertainty with innovation, ingenuity and cognitive curiosity generating personal autonomy related to group goals.







# Biology

**MICROBIAL BIODIVERSITY  
AND ASTROBIOLOGY  
SURROUNDING ARES  
STATION**

40μm



# Biology

The astrobiology programme is one of the fundamental bases for training and research activities. The astrobiology programme summarises work protocols specifically designed for ,elaborated and coordinated by our scientific director, **Phd Antonio Guillén**, always **in direct contact** with many **other research centers and contributors**. This programme has been designed and developed based on the unique possibilities offered by the Ares Station (**Ares Biodiversity**)

This allows us to put into practice protocols for searching for life, by looking into environmental subsurface conditions, indicators such as fossils, footprints, remains, shells, and faeces.  
And of course the study of living organisms at a macroscopic and microscopic level where we are constantly analysing groundbreaking findings

This astrobiology programme is actually one of our strongest lines of investigation, we are extremely happy with our latest findings so far, inspiring possibilities that, who knows, maybe one day some or part of these protocols might be applied to search for life on Mars.

Biotechnology to capture CO<sub>2</sub> in low light intensity conditions would contribute to adopting new strategies to reverse global warming from a new perspective.

Also, the direct use of cyanobacterial cultures for the absorption and fixation of CO<sub>2</sub> could be implemented with the treatment of wastewater as a culture medium with the aim of obtaining secondary products such as bioplastics.

In addition, "ARES STATION" has made significant progress in the research detailed above. These investigations are closely related to the adaptability of organisms to live in extreme conditions and to the **discovery of microorganisms**, which are related to primitive forms of life on our planet, in the vicinity of the cave and in its interior.

Both the water and the solid and wet surfaces of the cave walls surrounding Ares Station, where biofilms develop under extreme conditions, are the subject of research initially in situ and in the laboratory inside the station.

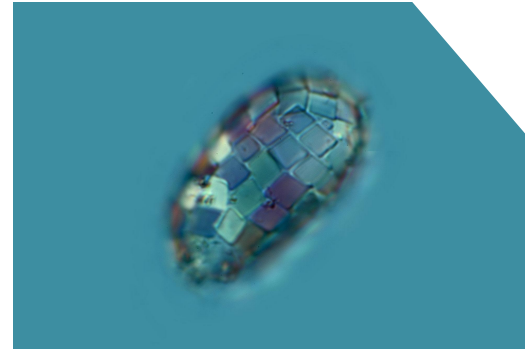


# Exploring Ares Biodiversity



In the frame of the research for purely astrobiological needs, we also count on **ARES BIODIVERSITY**.

It is very remarkable that the ecosystems found inside caves have been very little studied before and that makes us face a double challenge, that of discovering new forms of life and survival strategies of which very little is known on Earth, and that of opening a path on how the research of these characteristics should be, hypothetically, developed on Mars.







# Sampling on EVA





# Engineering

SCIENTIFIC INVESTIGATION,  
RESOURCE OPTIMIZATION,  
TROUBLESHOOTING











# Engineering



Extensive research on human missions to the Moon/Mars has been focused on surface operations. However, the lack of a magnetic field, solar radiation, Mars' thin atmosphere that cannot filter out ultraviolet rays, and cycles of extreme temperature and dust storms will leave crews exposed at the mercy of lethal risk. Nonetheless, such risks from the harsh Martian environment can be evaded through underground settlements that will remain permanently below the surface. Therefore, more data and research are needed to determine the specific requirements and challenges of subsurface habitability and operational performance.

Through this program, we evaluate how the mission affects at individual and team levels. Specific technical training based on each candidate's profile is required. According to their assigned role, **each candidate will be instructed how to operate certain devices, lab equipment such as sensors, meters, actuators, indicators...** they will have to rely on in their **EVA (Extravehicular activities)**. Some of the tools required have been used, calibrated and validated, not only for us in Ares station, but also by external third parties at different locations.

**Decision making and troubleshooting skills, resources optimization and engineering skills are pushed to the limit** to overcome the difficult situations and setbacks that may arise while on a mission. The Astrolanders must be autonomous and self-sufficient, as well as show dexterity in designing and understanding the control systems in place, the need for maintaining all operational gadgets in perfect working order, operate and facilitate the communications protocol, and good team working skills.

We want to create a **circular ecosystem without relying on terrestrial resources.**



# Troubleshooting on EVA



# Psychology

A woman with curly hair and a man are shown in profile, looking at a laptop screen. The scene is dimly lit with a strong blue and purple color cast, suggesting a late-night or focused work environment. The woman is in the foreground, and the man is slightly behind her.

NEUROPSYCHOLO  
GY AND EXPERIMENTAL  
PSYCHOLOGY





# Psychology

ASTROLAND Agency develops the **Neuropsychology and Experimental Psychology programme** as one of the three fundamental axes of its activity (both training and research) in collaboration with the University of Cadiz, whose team is made up of researchers in areas such as Neuropsychology, Health Psychology and Experimental Psychology. .

ASTROLAND **ARES LAB** is part of the **PAIDI HUM1010 Neuropsychology and Experimental Psychology research group**, according to the Andalusian Research and Development Plan and the Neurotek Lab Group of the Biomedical Research Institute of Cadiz. Research in Cadiz - INIBICA). The Neuropsychology and Experimental Psychology programme is carried out by the only research team in Spain dedicated to the study of the psychological and neurocognitive aspects of space travel with crews and space travel simulations. This group is coordinated, with the support of the ASTROLAND team and system, by **Professor Gabriel G. De la Torre**, a neuropsychologist specialising in psychological human factors, such as the psychological and neurocognitive aspects of space travelling.

The success of our programs is supported by the collaboration of numerous experts from various scientific areas, from physical and nutritional training to neuroscience, space exploration, genetics, and human and social sciences. These experts have designed a unique training plan, Astrolanders undergo high impact sessions before the mission:

Well-known tools like NASA's **WINSCAT**, and many others, are used to draw psychological profiles

Short term -memory evaluation

Neuroscience of high-impact teams.

Action plans in extreme environments.

Manifestation of values, determination, and commitment in real-time & decision making

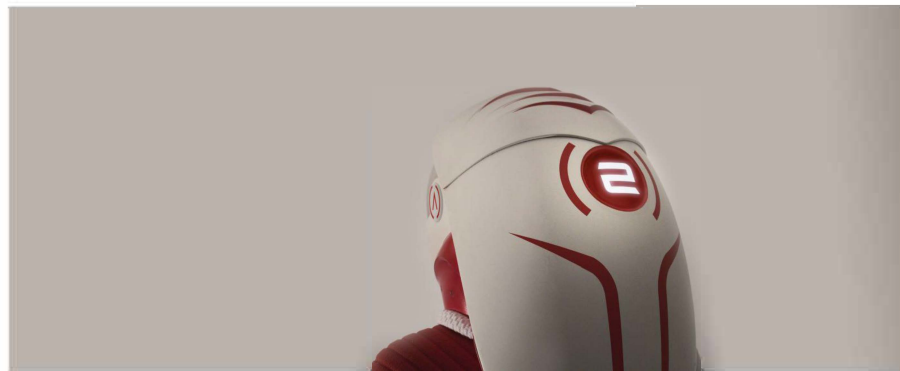
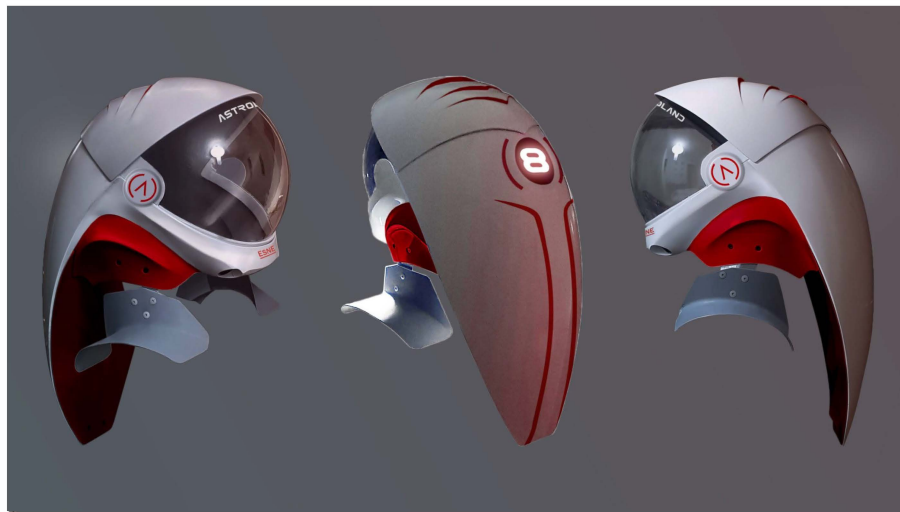
Methodologies to systematize our advances in personal development, and as a team in space.

High and low-level techniques to consolidate discoveries and awareness.



# Astrosuit & Kit









# Astrolander kit

NAME	ITEM	SPECIFICATIONS
	INTEGRAL PPE	MALE / FEMALE
	GLOVES	MALE / FEMALE
	SPACESUIT	MALE / FEMALE
	BADGES:	NAME, FLAG, MISSION
	PHONE STRAP	
	PHONE	BATTERY
	HELMET	SIZE
	HEADLAMPS	BATTERIES
	TORCH	BATTERIES
	VITAL SIGNS MONITOR	

NAME	ITEM	SPECIFICATIONS
	BOOTS	SIZE:
	TRAINERS	SIZE:
	SLIPPERS	SIZE:
	SOCKS	SIZE:
	LEGGINGS	SIZE:
	(BLACK) TOPS	SIZE:
	HOODS	SIZE:
	BLUE OVERALLS	MALE / FEMALE
	RED OVERALLS	MALE / FEMALE
	T-SHIRT	MALE /FEMALE
	PERSONAL HYGIENE KIT	TOOTHPASTE & TOOTHBRUSH

NAME	ITEM	SPECIFICATIONS
	HARNESS	
	UPPER HARNESS	
	CARABINER	
	AUTO-LOCKING DESCENT	
	SLINGS	
	PETZL CROLL CHEST (ASCENDER)	











# Programmes



# Sample Programmes

T+1	WAKE UP	ALPHA BASE	7:30	0:15:00	7:45
T+1	HYGIENE CARE	ALPHA BASE	7:45	0:15:00	8:00
T+1	BREAKFAST	ALPHA BASE	8:00	0:30:00	8:30
T+1	MORNING WORK OUT	ALPHA BASE	8:30	1:00:00	9:30
T+1	EQUIPMENT CHECK-UP	ALPHA BASE	9:30	0:30:00	10:00
T+1	TEAM MEETING: REVISE DAY'S SCHEDULE	ALPHA BASE	10:00	1:00:00	11:00
T+1	EVA ACCORDING TO SCHEDULE	ARES STATION	11:00	2:00:00	13:00
T+1	WORKING ON TASKS ACCORDING TO SCHEDULE	ALPHA BASE	13:00	1:00:00	14:00
T+1	LUNCH TIME -TEAM GATHERING	ALPHA BASE	14:00	1:00:00	15:00
T+1	BREAK	ALPHA BASE	15:00	0:30:00	15:30
T+1	WORKING ON TASKS ACCORDING TO SCHEDULE	ALPHA BASE	15:30	1:30:00	17:00
	TIME FOR INDIVIDUAL REPORTS & TESTING	ALPHA BASE	17:00	1:00:00	18:00
	WORK OUT	ALPHA BASE	18:00	1:00:00	19:00
T+1	END OF DAY ASSIGNED TASKS	ALPHA BASE	19:00	0:30:00	19:30
	BREAK	ALPHA BASE	19:30	0:30:00	20:00
T+1	REPORT TIME (CONCLUSIONS UPON A DAY'S WORK)	ALPHA BASE	20:00	1:00:00	21:00
T+1	DINNER TIME (LYOPHILIZED)	ALPHA BASE	21:00	1:00:00	22:00
T+1	RELAX & LEISURE TIME	ALPHA BASE	22:00	0:50:00	22:50
T+1	PERSONAL HYGIENE PRE- SLEEP	ALPHA BASE	22:50	0:10:00	23:00
T+1	END OF T+1				
T+1	REST	ALPHA BASE	23:00	8.5h	7:30
T+2	WAKE UP	ALPHA BASE	7:30	0:15:00	7:45
T+2	HYGIENE CARE	ALPHA BASE	7:45	0:15:00	8:00

Día	PSYCHOLOGY MISSION - SCHEDULE	Lugar	Inicio	Duración H	Fin
T0	VISITA SPACE CENTER	SPACE CENTER	9:30	0:00:00	9:30
T0	WELCOME -COFFEE BREAK & HEALTHY SNACKS	SPACE CENTER	9:30	0:15:00	9:45
T0	RECEPTION	SPACE CENTER	9:45	0:15:00	10:00
T0	MODULE 01 ORIGIN & DESTINATION	SPACE CENTER	10:00	0:20:00	10:20
T0	MODULE 02 ASTROLAB	SPACE CENTER	10:20	0:15:00	10:35
T0	MODULE 03 H+	SPACE CENTER	10:35	0:15:00	10:50
T0	MODULE 04 MISSION CONTROL	SPACE CENTER	10:50	0:30:00	11:20
T0	CYBERHUT	CYBERHUT	11:20	0:30:00	11:50
T0	SALIDA HACIA ARES STATION - PARKING ARREDONDO	SPACE CENTER	11:50	1:00:00	12:50
T0	TREKKING PARKING - ARES STATION	ARREDONDO	12:50	0:30:00	13:20
T0	DONNING + INSTRUCTION	ASTROGATE	13:20	0:20:00	13:40
T0	TRANSFER TO ALPHA BASE	ARES STATION	13:40	0:30:00	14:10
T0	"PRESSURIZATION" + DOFFING	AIRLOCK	14:10	0:10:00	14:20
T0	WELCOME VIDEO	ALPHA BASE	14:20	0:10:00	14:30
T0	LUNCH TIME (LYOPHILIZED) TRAINING ON BIOLOGY TESTING (Phd ANTONIO)	ARES STATION	14:30	1:00:00	15:30
T0	GUILLEN	ALPHA BASE	15:30	0:30:00	16:00
T0	MARS TEAM & SPACE ANALOGS (IÑIGO MUÑOZ)	ALPHA BASE	16:00	0:45:00	16:45
T0	CONNECTION TO MISSION CONTROL	ALPHA BASE	16:45	0:10:00	16:55
T0	TASK ASSIGNMENT (BASED ON ROLES) PRE-EVA	ALPHA BASE	16:55	0:15:00	17:10
T0	DONNING	ALPHA BASE	17:10	0:10:00	17:20
T0	"DEPRESSURIZATION"	AIRLOCK	17:20	0:10:00	17:30
T0	EVA (TBA)	ARES STATION	17:30	2:00:00	19:30
T0	"PRESSURIZATION" + DOFFING	AIRLOCK	19:30	0:10:00	19:40
T0	PERSONAL HYGIENE POST- EVA	ALPHA BASE	19:40	0:20:00	20:00
T0	REPORT TIME (CONCLUSIONS UPON A DAY'S WORK)	ALPHA BASE	20:00	1:00:00	21:00
T0	DINNER TIME (LYOPHILIZED)	ALPHA BASE	21:00	1:00:00	22:00
T0	RELAX & LEISURE TIME	ALPHA BASE	22:00	0:50:00	22:50
T0	PERSONAL HYGIENE PRE- SLEEP	ALPHA BASE	22:50	0:10:00	23:00
T0	END OF T0				
T0	REST	ALPHA BASE	23:00	8.5h	7:30



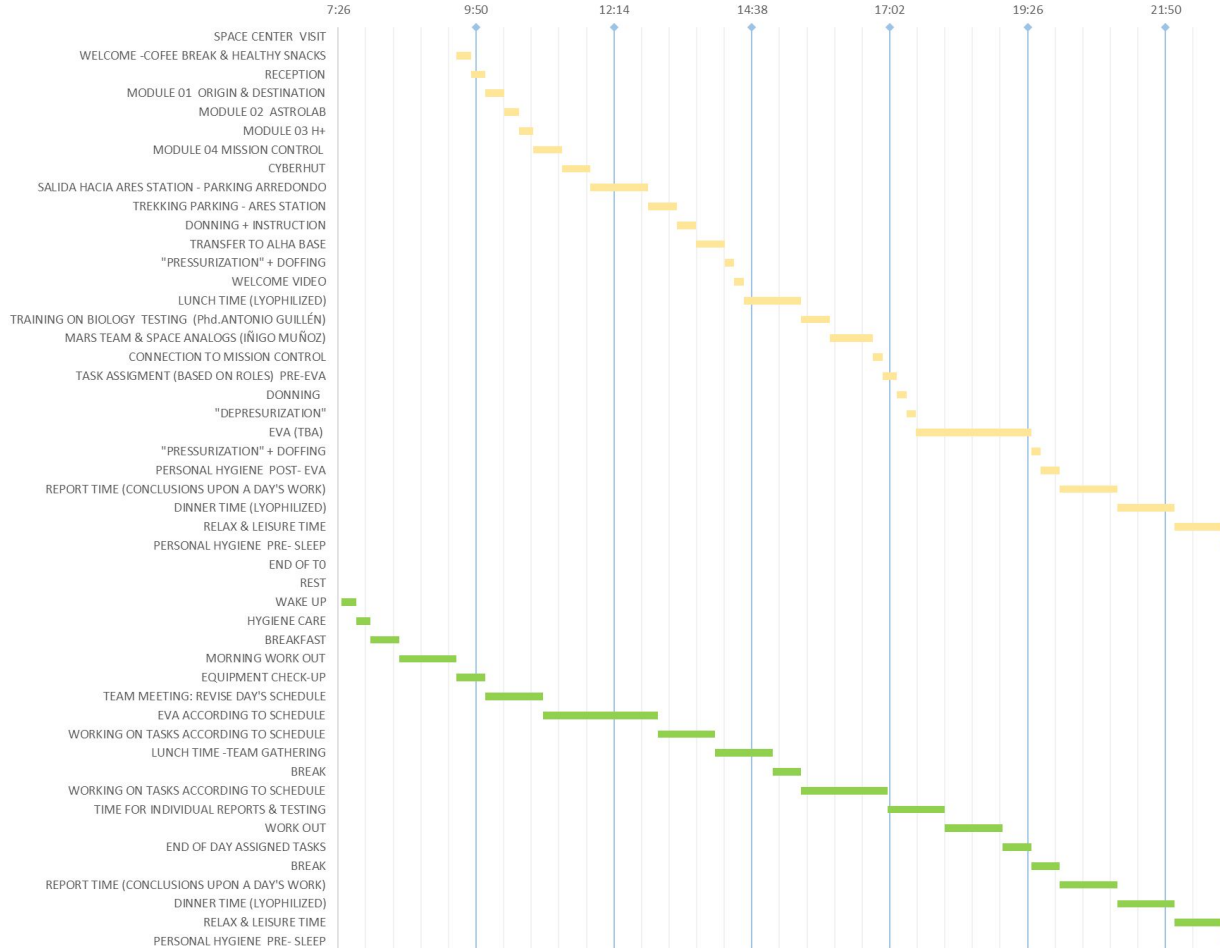


# Sample Programmes

Día	PSYCHOLOGY MISSION - SCHEDULE	Lugar	Inicio	Duración H	Fin
T0	VISITA SPACE CENTER	SPACE CENTER	9:30	0:00:00	9:30
T0	WELCOME - COFFEE BREAK & HEALTHY SNACKS	SPACE CENTER	9:30	0:15:00	9:45
T0	RECEPTION	SPACE CENTER	9:45	0:15:00	10:00
T0	MODULE 01 ORIGIN & DESTINATION	SPACE CENTER	10:00	0:20:00	10:20
T0	MODULE 02 ASTROLAB	SPACE CENTER	10:20	0:15:00	10:35
T0	MODULE 03 H+	SPACE CENTER	10:35	0:15:00	10:50
T0	MODULE 04 MISSION CONTROL	SPACE CENTER	10:50	0:30:00	11:20
T0	CYBERHUT	CYBERHUT	11:20	0:30:00	11:50
T0	SALIDA HACIA ARES STATION - PARKING ARREDONDO	SPACE CENTER	11:50	1:00:00	12:50
T0	TREKKING PARKING - ARES STATION	ARREDONDO	12:50	0:30:00	13:20
T0	DONNING + INSTRUCTION	ASTROGATE	13:20	0:20:00	13:40
T0	TRANSFER TO ALFA BASE	ARES STATION	13:40	0:30:00	14:10
T0	"PRESSURIZATION" + DOFFING	AIRLOCK	14:10	0:10:00	14:20
T0	WELCOME VIDEO	ALPHA BASE	14:20	0:10:00	14:30
T0	LUNCH TIME (LYOPHILIZED)	ARES STATION	14:30	1:00:00	15:30
T0	TRAINING ON BIOLOGY TESTING (Phd.ANTONIO GUILLÉN)	ALPHA BASE	15:30	0:30:00	16:00
T0	MARS TEAM & SPACE ANALOGS (NIGO MUÑOZ)	ALPHA BASE	16:00	0:45:00	16:45
T0	CONNECTION TO MISSION CONTROL	ALPHA BASE	16:45	0:10:00	16:55
T0	TASK ASSIGNMENT (BASED ON ROLES) PRE-EVA	ALPHA BASE	16:55	0:15:00	17:10
T0	DONNING	ALPHA BASE	17:10	0:10:00	17:20
T0	"DEPRESSURIZATION"	AIRLOCK	17:20	0:10:00	17:30
T0	EVA (TBA)	ARES STATION	17:30	2:00:00	19:30
T0	"PRESSURIZATION" + DOFFING	AIRLOCK	19:30	0:10:00	19:40
T0	PERSONAL HYGIENE POST- EVA	ALPHA BASE	19:40	0:20:00	20:00
T0	REPORT TIME (CONCLUSIONS UPON A DAY'S WORK)	ALPHA BASE	20:00	1:00:00	21:00
T0	DINNER TIME (LYOPHILIZED)	ALPHA BASE	21:00	1:00:00	22:00
T0	RELAX & LEISURE TIME	ALPHA BASE	22:00	0:50:00	22:50
T0	PERSONAL HYGIENE PRE- SLEEP	ALPHA BASE	22:50	0:10:00	23:00
T0	END OF T0				
T+1	BRAINSTORMING DEL EQUIPO	ALPHA BASE	20:30	1:30:00	22:00
T+1	TIEMPO PARA CENA Y OCIO	ALPHA BASE	22:00	1:00:00	23:00
T+1	FIN DÍA MISIÓN T0		23:00	0:00:00	23:00
T+1	HIGIENE PERSONAL	ALPHA BASE	7:30	0:30:00	8:00
T+1	DESAYUNO	ALPHA BASE	8:00	0:30:00	8:30
T+1	VÍDEO DE BUENOS DÍAS	ALPHA BASE	8:30	0:15:00	8:45
T+1	REUNIÓN DEL EQUIPO, REPASO DEL ORDEN DEL DÍA	ARES STATION	8:45	0:30:00	9:15
T+1	DONNING (PONER TRAJE)	ALPHA BASE	9:15	0:30:00	9:45
T+1	PROTOCOLO DESCOMPRESIÓN	AIRLOCK	9:45	0:10:00	9:55
T+1	EVA DE EXPLORACIÓN/MISIÓN (procedimiento TBD)	ARES STATION	9:55	1:35:00	11:30
T+1	PROTOCOLO COMPRESIÓN	AIRLOCK	11:30	0:10:00	11:40
T+1	DOFFING ( QUITAR TRAJE)	ALPHA BASE	11:40	0:10:00	11:50
T+1	HIGIENE PERSONAL - post EVA	ALPHA BASE	11:50	0:10:00	12:00
T+1	REUNIÓN DEL EQUIPO, RECAPITULACIÓN Y	ARES STATION	12:00	2:00:00	14:00
T+1	PREPARACIÓN PARA LA SALIDA Y HOUSEKEEPING	ARES STATION	14:00	0:30:00	14:30
T+1	SALIDA	ARES STATION	14:30	0:30:00	15:00
T+1	FIN DÍA MISIÓN T+1		15:00	0:00:00	15:00



## SAMPLE MISSION -SCHEDULE



# Services included

Transfer airport / train - hotel on arrival and departure

Reception, (coffee & healthy snacks)

Training & instruction

Technical clothing + ASTROSUIT + PPE+HELMET

Skid resistance safety boots

Accommodation @ Alpha Base (Ares Station), max 8 crew members

Lyophilised breakfast, lunch, and dinner, specific diet or nutritional needs.

Detailed planning with on-mission tests (biology, engineering, psychology )

Monitoring (Mission Control + COMMS)

Lab equipment + expert instruction.

Instruction on safety, rescue, and self-rescue techniques

Training on caving & rope climbing, and abseiling

Smartphones for on mission applications

Extras/videos/ photos







\* We will only pick you up from Santander (airport, bus or train station).

if you fly to Bilbao, you will need to make your way to Santander at your own expenses.\*

Many thanks in advance and apologies for any inconvenience.



# Space Center



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# Useful contacts

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Ares Station Manager	Marcos Gandiaga +34 673 313 416
Coordinator for International Relations	Manuel Leira +34 645 449 152
<b>EMERGENCY</b>	
Guardia Civil	+34 942 211 117
National Police	+34 942 359 000
Local Police	+34 942 200 615
Pharmacy Pontejos	+34 942 275 064
Valdecilla Hospital	+34 942 202 520
<b>Emergencies</b>	<b>112</b>
<b>OTHER SERVICES</b>	
Taxi Santander	+34 942 333 333
Gold Car Rent a Car	+34 918 344 064
Avis Rent a Car	+34 942 251 014
Hertz Rent a Car	+34 942 254 144
Europcar Rent a Car	+34 942 262 546
Santander Bus Station	+34 942 211 995
Santander Train Station	+34 942 018 270







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