

# EXPEDITION NORTH POLE 2018



## IIØPN/MM SAILING VESSEL "MELORIA"

The Greeks of the 4th century BC they were aware of the existence of the Arctic regions, which at that time were inhabited by Inuit and American Indians. At the beginning of the ninth century AD some Irish monks founded a small colony in Iceland. The Vikings, coming from Scandinavia, arrived shortly thereafter in the same century. Around 982 the Viking leader Erik the Red sighted and gave the name to Greenland, discovering it green and welcoming, in fact Grønland in Danish means "Green Earth". Over the next four centuries the Vikings reached the Canadian Arctic. The Arctic explorations that followed the Viking ones were solicited by the need of Europeans to look for alternative sea routes to the East: the passage of North-East along the coasts of North Asia, and the passage of North-West, through the Arctic islands of North America. Many were the explorers, but only a few Italians include: Giovanni Caboto, an Italian navigator (at the service of the English), at the end of the 16th in the search for the North-West passage, which was not lucky, as well as many others they followed in the footsteps. In May 1926 Amundsen, Lincoln Ellsworth and our Umberto Nobile completed a flight of over seventy hours on

the airship Norge, from the Spitzbergen island through the North Pole to Alaska, covering about 5460 km. In 1928 Umberto Nobile again flew over the pole with the airship Italia, which on the way back came crashing; the search and rescue of the survivors were dramatic and difficult and led, among other things, to the disappearance of Amundsen, who generously engaged in the relief work. We arrive at the end of the seventies where the traditional exploration of the Arctic territories has been replaced by scientific research activities. The region is now easily accessible, thanks to more effective technical means of the past (planes, submarines, icebreakers) and new methods of land transport, while surveys are mostly carried out by satellites. In 1997 the CNR at Ny-Ålesund, in the Svalbard islands inaugurates the scientific base "Dirigibile Italia". The pollution of the industrialized world is progressively reaching and damaging even the distant territories of the Arctic, as well as Antarctica. The discovery in 1987 of the 'hole' in the ozone layer above the Arctic testifies. The Council National Research, Enea, the National Institute of Oceanography and Experimental Geophysics, the NATO Center for Maritime Research and



Experimentation supported the High North campaign of the Navy and the Hydrographic Institute, penetrating the seas of the Arctic for the first time after the historical expeditions of Umberto Nobile in 1928. The research activities of the Italian Navy Ship Alliance began in Reykjavik on 9 July and ended in Tromsø on 29 July 2017, covering 650 km<sup>2</sup> of unexplored areas for collecting data to the atmosphere, the masses of water and the seabed of the Arctic. One of the last Italian explorers, Prof. Simone Orlandini was the protagonist from 25 August to the beginning of September, on a scientific mission and research in the article called "POLAR4".

## WHAT IS POLAR 4

La spedizione Polar 4 è un proThe Polar 4 expedition is a project of the World Arctic Fund.

The aim of Polar 4 is to explore the Arctic with sailing boats, spearheaded by Capt. Simone Orlandini,

and a group of professional arctic explorers and researchers plus a special media crew. Each team has its own mission to fulfill:

Polar North 4 Discovery, Polar South 4 Science, Polar East for Media and Polar West for mapping.

The expedition will be 4 weeks long.

The idea for this project was born, when Orlandini and a team of filmmakers went to the Arctic in May 2014 to shoot a documentary on climate change, directed by Teresina Moscatiello. The film documented the lives of researchers living in the northernmost permanent settlement in the world: the village of Ny-Ålesund in Svalbard, 78°56'N - 011°55'E. This former mining site has been turned into the largest laboratory in the Arctic and has become a paradise for polar researchers from all over the world.

Kim Holmén, International Director of the Norwegian Polar Institute (NPI), said in an interview, that the most important thing we need to do is to "spread the word to the world" concerning the climate change in the Arctic and the problems arising from it. Kim Holmén inspired Orlandini and the filmmaking team to create this project in supporting the researchers to initially expand their knowledge of the Arctic by exploring its unknown areas and on the other hand to spread that knowledge to the public.

## POLAR NORTH 4 DISCOVERY

On the discovery team, a group of historians and salvors are on the mission to find a piece of history.

In 1928, the airship Italia, commanded by Umberto Nobile, one of the founding fathers of Arctic exploration, crashed on the way back from the North Pole, killing part of the crew and leaving the survivors stranded on the pack

ice. In the largest sea-and-air rescue mission in history, eight of them were saved seven weeks later. After almost nine decades, our team on this boat will pioneer the search for the wreck of this historic aircraft.

## POLAR SOUTH 4 SCIENCE

The science team is composed of of arctic researchers who focus on gathering scientific data about the life and condition

of the unexplored part of the Arctic. Taking samples for the study of geophysical properties of the polar cap and observation of bioacoustics in this area will also be conducted under this team. It will cover the effects of man-made pollution on the North and how it will make an impact on our lives. The beneficiary of this mission is us, the inhabitants of planet Earth, as it seeks to uncover critical information that we need to know in relation to global warming and climate change.

## POLAR EAST 4 MEDIA

The media team is responsible for recording and then broadcasting the daily activities of the explorers. This team will make a documentary about the expedition, a 360° virtual reality project and will stream daily short footage of the important events

that occur. It will also be frequented by the VIP's, who support this expedition and advocates for climate change.

## POLAR WEAST 4 MAPPING

The expedition members in the mapping team will be cartographers, who aim to update the map of Arctic

to give the world a vivid and accurate picture of it. The future of arctic navigation is in their hands as they bring the map of this fascinating region to the next level.

## AISE 2018

AISE 2018 is a continuation of the Polar 4 and consists of the Research Shipment of the Italian Airship which will start in August 2018 and last for 4-5 weeks. About 30 members (researchers, historians and media) of the crew will travel north of the Svalbard islands on two boats to look for

the remains of the airship Italy. The mission will be exactly 90 years after the collapse of the airship in 1928, where 8 members of the Italian airship crew lost their lives on their way back from the North Pole, most of the remains were never found, and the survivors lived for 49 days on the Arctic glaciers before being rescued. A total of 19 people died in the crash and looking for the wreck.

The crew will be divided into two ships, one of which will be an icebreaker, will open the track so that the glacier does not prevent the crew from carrying out their mission. While the other ship (a schooner named Meloria) will sail sailing. Both ships will be equipped with nautical and technical equipment in addition to the EdgeTech sonar scanner, which will be used to detect aluminum even at the bottom of the sea, to locate the airship.

The EdgeTech scanner will allow the crew to identify the exact position of the airship. After the remains have been discovered, a special underwater camera will be used to photograph the remains as the remains are found.

The AISE will look for the structure of the airship that flew away. Since the efforts to find the survivors were abandoned in 1928, no one has ever sought the remains of the airship at least until now.

## COMUNICAZIONI HF

The communications on this expedition will be fundamental, as in addition to letting the entire world of the radio know the activity we are going to carry out, we will be constantly in contact with various Italian radio operators who will support us during the outward and return journey. We will establish radio contacts in short waves and we will have the opportunity to make ourselves heard all over the globe supported by the Radio Amateurs of the ARMI, an association that counts a thousand amateur radio operators in Italy and in the world.

This is similar to what was done in 1928 between the ship of the Royal Navy "Citta di Milano" IGJ (ship used for the radiotelegraphic support to the dirigible ITALY) that kept the radio contacts in short waves, with the radiotelegraphic station of the Royal Navy Rome-San Paolo (IDO) and the airship ITALY.

Now modern means are avant-garde and allow us real-time communications with totally different emission modes since then. The equipment is very low, for example we will use an ICOM transceiver an IC-7300 with a radiating power of 100 watts, and a myriad of functionalities, from digital communications to those in voice or in clamps.

Our transceiver is very compact and not bulky, about 25 cm wide, not much less than 10 cm high and 23 cm deep, imagine that the ONDINA transceiver used by Biagi to send the emergency call (SOS) from the Red Tent from similar dimensions to a wooden trunk.

The antenna that we will use on board is a vertical glass fiber resistant to wind and cold icy Arctic, is 7.50 meters long and is functional across the spectrum of HF (1.3 to 30 MHz) .

The radio contacts with our station on board the Mea Lux, will be confirmed by postcards called QSL which in radioamateur jargon means "confirmation of radio contact" and will be sent to all the radio amateurs who will have connected us. It's a way to get a confirmation from these polar latitudes that unfortunately they are not inhabited by any amateur radio.

### **WORLD RECORDS**

The World Arctic Fund focuses on activities to preserve and draw attention to the Arctic and its nature and inhabitants. Along the way, the non-profit organization has already set a world record and is currently preparing to set more during its next Arctic adventures.

#### **Mapping north of 80 degrees latitude (World Record established in September 2017)**

The World Arctic Fund set its first world record in 2017 when the Polar4 crew mapped up to 80 degrees of latitude for the first time in the history of the world. We did it with the help of Google Trekker to map the Svalbard region and along the road traveled by boat, plane, car and even on foot!

#### **Systematic search for Airship Italia (World Record to be established in August 2018)**

The World Arctic Fund is preparing to begin the first systematic search for the Italian airship from 1928, the year of its original accident, with the help of a side scanner and a submarine drone. We provide excellent tools to help us perform the search, including a side scanner from our partner EdgeTech that is powerful enough to see at the bottom of the ocean, as well as a submarine drone, which we will use to display the remains as well as documenting the search for them .

#### **Sailboat guided with the mind (World record to be established in August 2018)**

The World Arctic Fund will use EMOTIV's brain machine interface technology to drive a sailboat with the mind on a research expedition in the Arctic waters to find Airship Italy. This will be the first time in world history that a sailboat will be mentally driven, thanks to EPOC +, the EMOTIV 14-channel wireless EEG. EMOTIV is the leading mobile neuroinformatics company that promotes understanding of the human brain. Captain Orlandini will literally make his way through the mind while using technology to guide the boat with the power of the mind.

#### **Sailboat Navigating up to 82 degrees of latitude (World record to be established in August 2018)**

During the AISE mission, the World Arctic Fund will sail on a sailboat up to 82 degrees latitude, setting the world record along the way. The crew will take advantage of the warmer climate of the Arctic in August to travel in an area that is usually full of ice.

#### **Mapping over 80 degrees**

(World record to be established in August 2018)

The World Arctic Fund will set a

world record when it will perform a 360-degree mapping of the Svalbard region over 80 degrees. The team of sailors, researchers and scientists will face the icy weather to explore only the area above 80 degrees, but also to record it at 260 degrees and map to the rest of the world.

#### **IIOPN - NORTH POLE**

This is the special call-sign issued by the Ministry of Economic Development, the Telecommunications Department for shipping to the "North Pole".

During the journey from Germany to Svalbard and vice versa, and during stops the name will be used as follows:

- at sea: IIOPN/mm
- Germany: DL/IIOPN/mm
- Norway: LA/IIOPN/mm
- Svalbard: JW/IIOPN/mm

The following transmission methods will be used:

A1A - J3E - F3E - PSK-31

The frequencies where it will operate based on the propagation tables (August 2018) are:

20 meter: 14333 MHz (J3E)  
20 meter: 14033 MHz (A1A)  
20 meter: 14133 MHz (PSK)

30 meter: 10133 MHz (A1A)  
30 meter: 10143 MHz (PSK)

40 meter: 7133 MHz (J3E)  
40 meter: 7033 MHz (A1A)  
40 meter: 7043 MHz (PSK)

80 meter: 3773 MHz (J3E)  
80 meter: 3503 MHz (A1A)  
80 meter: 3603 MHz (PSK)

Communications hours: they will be operational within 24 hours of routine work and scheduled searches.

WORLDARCTICFUND



# IIØPN NORTH POLE EXPEDITION AUGUST 2018



AISE 2018

AIRSHIP ITALIA SEARCH EXPEDITION

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