



ANTARCTICA OPERATIONS

in cooperation with White Desert

White Desert Antarctica 2019

Avcon Jet is the only operator covering all 7 continents. In cooperation with White Desert, we operated 31 flights in 2019 to the Earth's southmost continent. By the way, it was also the first Austrian aircraft touching ground in Antarctica. Read more on this extraordinary operations on the next pages.





Giving us an exclusive interview on the challenges and amazing impressions of the Antarctica Operation, Jürgen Körber gives us a brief overview of the extensive preparations that went into this most impressive and remote operation.



JÜRGEN KÖRBER

Head of Trainings Department and Captain on Gulfstream G550 with a total of 6.500 flight hours

Can we land on a Runway which consist of Blue Ice, like a glacier?

After many online meetings with the charter client responsible for the "White Desert" Airfield we had an extensive insight into the challenges

of landing at the only private airfield in Antarctica. No country has jurisdiction which makes the flight that more interesting.

The only private airfield in Antarctica.



Before any upcoming flight to this most remote region the global weather situation is under constant supervision and at least 48 hours before departure a detailed plan is started.

White Dessert prepares the runway for the flight for which runway specialists from different countries were hired to ensure a perfect surface.



Two snow trucks (Pist Bully) were brought there before the season. The goal is to get snow on the blue ice runway in order to get an adequate braking coefficient for the operation in and out. A three kilometer long strip is prepared which takes them roughly 24 hours to complete. To get an idea, the Gulfstream G550 used for the operation requires a minimum landing distance of 844 meters. Friction tests are conducted hourly to make sure that the runway is in perfect condition for the upcoming landing. The average temperature during the "Antarctic Summer" is about -8°C . Indeed it is quite cold but the air is

very dry therefore the feeling without any wind is brisk but comfortable. The temperature has an important factor for the operation. Should the temperature rise up to -4°C the flights has to be cancelled. The colder the temperature is the better for landing, this has to do with the friction between the blue ice and the prepared snow layer which increases the colder the temperature is. Upon warming up to -4° the landing is not safe anymore and we will not go ahead with the flight. Utmost safety is paramount. That's the reason why the arrival at Wolf Fangs Runway/White Desert is scheduled for the morning, where temperatures are still low.

Wind

Another consideration taking into account is the wind. The runway is build north-south. Landing and Take-off is possible to the south only due to the terrain and the slope of the runway. Crosswinds affects the aerodynamics of the aircraft and this together with the special runway surface mean we reduce the maximum crosswind limitations considerably.



Crosswinds affect the aerodynamics.

Light conditions

Antarctica Operations are only conducted during the summer season, which is from November till February. During summer in Antarctica, the sky is never dark – the sun is visible 24 hours a day.

As the sun is deep in the morning, the snow reflects the sun, which makes it more challenging for the pilots to assess the altitude at the approach.

In flight a similar challenge arises, a weather condition called white-out. As the clouds and the ground are white, the contours and landmarks become almost indistinguishable.

Pilots needed to be trained for that special case.

WHITE-OUT

The clouds and the ground are white.



Communication

Normally flying over Europe the pilots are in constant contact with the applicable ATC controllers. This is done normally via VHF, voice communication. In the case of Antarctica the VHF coverage ends around 30 minutes from leaving South Africa. A back up used is a so called HF communication which allows the flight crew to stay

in contact with the controller over greater distances. Due to the remote location, aircraft flying towards Antarctica would use the system named Datalink. This allows the flight crew to send a position report every 30 minutes – similar to writing a “What’s App” on your mobile.

Solar radiation

Do not underestimate solar radiation in latitudes of more than 60 south. Not only is high solar radiation not healthy to humans but also the aircraft equipment may be disturbed.

Avcon Jet used an App which permanently observed the current radiation. Above a certain threshold flights were delayed to make sure crew and passengers are not subject to any radiation which could affect health.

We permanently observed the current radiation.



Preparations for Emergency Cases

THERE IS ONLY A LIMITED AMOUNT OF FUEL AVAILABLE IN WOLF`S FANG AND WHICH IS FOR “EMERGENCY CASES” ONLY.

Therefore the fuel planning must be done really carefully. The Gulfstream G-550, which was used for this project, has a special approval which takes some diversion scenarios into account which might be calculated in case of an engine failure or other major malfunctions. Avcon Jet is one of the few operators worldwide having a special authorization by the Austrian Civil Aviation Authority conducting flights within 180 minutes out of an airport suitable for landing. In a detailed Risk Assessment some emergency scenarios were analyzed and thereafter mitigating actions developed to assure a safe operati-

on.

Another topic which was covered during the preparation was the additional equipment which must be carried onboard. For all crew members a polar suit was packed onboard in case the aircraft had to remain on ground for any length of time.

A recovery plan was also part of the mitigation action. Avcon Jet was able to recover the passengers with another Gulfstream G550 was more or less on standby. A small airfield was close by, which is owned by Russia which would be able to help out in some extraordinary situations.

Dispatch and pilot training

Dispatch and Pilot training was one of the most important topics to be satisfactorily covered.

This started already with the selection of the pilots. Only experienced Avcon Jet crew members were elected to accomplish this mission. As this project is very unique a lot of pilots showed their interest in this most interesting project.

Extensive Simulator training, Online CBT training as well as classroom training was required to be finally assigned for a flight. Pairing crews always factor in the requirement that one pilot had visited Antarctica before. Upon first flight this was not possible therefore the crew consisted of three pilots, one more than required to supervise the situation on the cockpit jump seat.

Only experienced Avcon Jet crew members were elected to accomplish this mission.



Finally - The First Flight

The first Austrian registered aircraft landed safely in Antarctica on 09 November 2019 after 05:30 hours flight time. Over the following weeks Avcon Jet conducted more than 30 flights onto the Ice. A special thanks goes to all the team members invol-

ved in this operations – both Avcon Jet and White Desert - proving their high level of expertise, their priority for safety and their passion for aviation. We are looking forward to the next season!



THE LEADING TEAM FOR THE ANTARCTICA OPERATION AT AVCON JET ARE:

JUAN STOLTZ

Managing Director
Avcon Jet South Africa

JÜRGEN KÖRBER

Head of Trainings
Department and
Captain on Gulfstream
G550 with a total of
6.500 flight hours

PHILIPP SCHUSTER

Director Flight Operation,
San Marino and Captain
on Gulfstream G550 with
a total of 3.000 flight
hours

ANDRÉ WEBER

Head of Dispatch and
Ground Operations
(not pictured)



We are looking forward to the next season!



For detailed information on this travel experience to the first and only luxury camp in Antarctica go to page 356.

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