



INTERNATIONAL COURT OF JUSTICE

SPECIAL AGREEMENT

BETWEEN

PRINCIPALITY OF THEMISTO
(APPLICANT)

AND

REPUBLIC OF BERGELMIR
(RESPONDENT)

JOINTLY NOTIFIED TO THE COURT ON 2 MAY 2023

COUR INTERNATIONALE DE JUSTICE

COMPROMIS

ENTRE

PRINCIPAUTÉ DE THEMISTO
(DEMANDEUR)

ET

RÉPUBLIQUE DU BERGELMIR
(DÉFENDEUR)

NOTIFIÉ CONJOINTEMENT À LA COUR LE 2 MAI 2023

Case concerning Scientific Investigation and Nuclear Power Use on Orbital Space Stations

Themisto v. Bergelmir

STATEMENT OF AGREED FACTS

Background

1. The Principality of Themisto is a technologically advanced country with one of the largest economies in the world. It is an archipelago straddling some of the major shipping lanes in the world, enabling it to become a major maritime and aviation transport hub as well as a thriving centre of international business and finance. It was a founding member of the United Nations.
2. The Republic of Bergelmir is a continental state and one of the world's most populous countries. It has a centralised and state-directed economy that has embarked on free market liberalisation and reforms. It was also founding member of the United Nations.
3. Themisto and Bergelmir fought on opposing sides in the Third Atlantic War in the 1970s. Since then, the two countries have re-established diplomatic relations but increasing economic rivalry between them has caused long-standing diplomatic initiatives, such as negotiations over a free trade agreement, to stall in their tracks.
4. In particular, Themisto and Bergelmir have become rivals in the space sector, competing heavily in investments focusing on the development of launch vehicles, spacecraft, human spaceflight, as well as the deployment of satellite applications. Both States have thriving space industries that supply space launch, satellite construction, and satellite operation services worldwide.

Launch of *Halimede* and *Oberon*

5. In 2014, Themisto completed construction of an orbital space station named *Halimede*. The space station, described as being no more than a research facility, comprised two (2) habitation modules and three (3) scientific laboratories and was capable of accommodating eight people at any given time. *Halimede* has four (4) large solar panels and, unknown to the public until recently, it also carried an experimental gas-cooled nuclear fission reactor that is rated at one megawatt (1 MWe) in one of the laboratory modules. Each of the modules was launched with the *Miranda III* expendable launch vehicle that is designed and built by Burton Aerospace & Defence Co. Ltd. ("**BAD**") under contract from the Space Exploration Authority of Themisto ("**SEAT**").
6. BAD is a public company registered in Themisto and is listed on the Themisto-Atlantic Securities & Trade Exchange ("**TASTE**"). Originally founded by former engineers employed by SEAT, it is subject to regulation under the *Companies Ordinance 1944* and the *Aerospace Contractors Ordinance 1986*, the latter of which requires the "controlling interest", defined as 65% of all of the issued equity, to be held by Themisto nationals at all times. In fact, the share register of BAD shows that no less than 82% of all its shares are held by domestic investors, mostly institutional investors such as investment banks and various managed investment funds.

7. In 2016, Bergelmir completed construction of its own orbital space station, *Oberon*. Unlike *Halimede*, *Oberon* was designed to be both a research facility and a construction and staging platform for proposed human landing missions on the Moon. The space station contained two (2) laboratory modules, three (3) habitation modules, three (3) engineering modules, and a large fuel pod. At all times, *Oberon* accommodated no less than ten people and was capable of carrying up to eighteen people. All of the electrical power on *Oberon* is supplied by solar panels, but the heating of some of the components and systems is supplied by radioisotopic heater units containing grams of Pt-238.
8. Each of the modules was launched using the reusable launch vehicle *Setebos* and *Nereid*, which were designed, built, and launched internally within the Bergelmir Space Agency (“**BSA**”), the governmental authority established by the Bergelmiran Government to undertake activities in civilian space exploration. Funding for the *Oberon* was partly provided by the auction of radio frequency spectra to television broadcasters and mobile telephone operators, four (4) of which were domestic operators and three (3) of which were owned by interests based in Themisto.

The “Research for the Stars” Funding Contest

9. After the global financial crises of 2008 and 2015 had placed particular strain on the economy in Bergelmir, the space program was losing support, both in the public and in its legislature. Along with a structural failure at re-entry that caused the loss of the *Nereid*, the number of people on-board the *Oberon* was reduced to ten.
10. In March 2018, the BSA introduced an initiative that it called “Research for the Stars”, in which university and other advanced research institutions were invited to submit proposals for the conduct of space-related research, with the opportunity for the proposed experiments to be flown and for two (2) researchers had the institution to join the crew of *Oberon* to conduct the experiment. Once the proposals have been reviewed by an expert panel, a shortlist of proposals would then be voted on by the public, either online or by a smartphone application.
11. Numerous proposals and entries were submitted throughout Bergelmir. Many institutions also mounted intensive social media campaigns to raise publicity and research profile for themselves as well as to gather public support for the proposal. Eventually, a proposal from the Centre for Aerospace Science and Engineering (“**CASE**”) of the National University of Technology (“**NUT**”) was successful with their proposal to research the comparative effects of microgravity on growth and reproduction of the bacteria *Escherichia coli* and *Salmonella typhimurium*.
12. The CASE team from NUT entered into a contract with a television production company to produce a six-part documentary television series about their preparations for their scientific research on *Oberon*. The show was a ratings success and turned the scientists, particularly Drs. Susan Hunter and Thomas Redhorn, who had been selected to accompany the experiment into space, into local celebrities.

Public Disclosure of the WFOM-3 Experiments

13. On 24 April 2019, *Setebos* was launched with Drs. Hunter and Redhorn on-board with their experiment. They also brought with them video recording equipment to both record the conduct

of the experiment and to provide footage for a second series of the documentary to be produced on their return to Earth after their three-week stay on *Oberon*.

14. While on board *Oberon*, Drs. Hunter and Redhorn were told that the largest of the laboratory modules on *Oberon*, labelled “WFOM-3”, was off limits at all times. It soon became apparent to them that only three (3) of the existing personnel on *Oberon* had access to WFOM-3 and the other seven (7) personnel did not have access to that module. The three who did have access also refused to be shown on video and did not have any conversation with either Dr. Hunter or Dr. Redhorn while they were on *Oberon*.
15. On 3 May 2019, Dr. Redhorn removed an access card from one of the *Oberon* personnel and gained access to the WFOM-3 module without permission. With his video camera, Dr. Redhorn captured images of the setup, equipment, and some of the documents contained within the module. However, his presence in the module was detected by a motion-activated sensor, which alerted the crew. Capt. George Anderson, commander of the *Oberon*, ordered the confiscation of the video camera and transferred Dr. Redhorn to the *Setebos*, where he remained for the remainder of his time in space. Dr. Hunter was allowed to continue with the experiment on *Oberon*. At the time, Capt. Anderson was not aware that the video camera, in addition to having a memory card, it also had a transmitter that sent the captured video and images to Dr. Redhorn’s laptop computer.
16. On their return to Earth, but before possible charges were brought against Dr. Redhorn on which he was to be arrested, Dr. Redhorn absconded to the Embassy of Themisto, which in turn secreted him to Themisto and granted him political asylum. On 25 May 2019, while safely in Themisto, Dr. Redhorn placed on the Internet the video footage and images captured on his camera, particularly images of documents that showed that the WFOM-3 module was a testing facility for small-scale testing of kinetic impacts in microgravity in order to develop methods for reducing impact debris in space that are to be incorporated into the design of anti-satellite weapons.
17. Dr. Redhorn’s assertions regarding the WFOM-3 module were vehemently denied by the Government of Bergelmir, which insisted that the module was being used for the exclusively peaceful pursuit of researching mitigation of orbital debris.
18. Themisto, which was at the time a non-permanent member of the Security Council of the United Nations, proposed a resolution condemning the military use of outer space by Bergelmir. The resolution was lost, having obtained only eight (8) of the fifteen (15) votes. Diplomatic efforts by Themisto to introduce the same resolution in the following session of the General Assembly were abandoned before the resolution could be put to a vote.

Attempted Visit of a *Miranda IV* to *Oberon*

19. On 22 November 2019, the Grand Chancellor of Themisto sent a letter to the President of Bergelmir, a copy of which was sent to the Secretary-General of the United Nations and circulated to all members of the U.N. Committee on the Peaceful Uses of Outer Space, which stated:

The great strides made by both Themisto and Bergelmir in the exploration and use of outer space have pushed back the final frontier of human knowledge. It is in the best interests of both our countries and the world at large that we continue our efforts in outer space in the spirit of comity and international cooperation. Excellency, it is in this spirit

that we propose a visit by the crew of the next Miranda IV mission, currently slated for early January 2020, to Oberon en route to Halimede.

20. On 2 January 2020, a day before *Miranda IV* was due to launch, a letter in reply containing the following statement was transmitted through diplomatic channels:

We note with gratitude that you have proposed to honour Bergelmir, particularly the Bergelmir Space Agency, with a visit by your astronaut crew of the next Miranda IV mission to Oberon. However, we regret to advise that repairs and upgrades are being carried out on-board the space station and may present an unsafe environment that would pose a danger to your crew. Further, as a majority of the announced crew of that Miranda IV mission are serving military personnel of Themisto, the proposed visit would best be characterised as a military exchange rather than a civilian visit. Accordingly, we suggest that a mutual exchange of visits to Halimede and Oberon be arranged with a different crew at a later, and more opportune, time.

21. On 3 January 2020, *Miranda IV* was launched with a crew of six and, a day later, approached *Oberon*. The crew of *Miranda IV* was refused permission to dock with *Oberon* on the basis that the untested coupling of their respective docking systems posed an unacceptable risk to both crews. When the crew of *Miranda IV* offered to leave and enter *Oberon* by extra-vehicular “spacewalk”, permission was again refused by Capt. Anderson but no reason was given.
22. On 16 January 2020, the Grand Chancellor of Themisto sent a letter of protest in relation to the refusal to allow the visit of the *Miranda IV* crew to the President of Bergelmir through diplomatic channels. Again, a copy of the letter was sent to the Secretary-General of the United Nations and circulated to all members of the Committee on the Peaceful Uses of Outer Space.

Explosion on *Halimede* and Consequential Impacts

23. On 4 March 2020, what was believed to be a piece of orbital debris of unknown origin collided with *Halimede*. The piece of debris, although small in both size and mass, caused a small rupture to the gas coolant tank of the nuclear reactor on-board *Halimede*. The loss of the coolant was not noticed by the crew or by mission control in Themisto for three (3) hours until it became apparent that *Halimede* was drifting away from its intended orbit. The leaking gas coolant was quickly identified as the cause, especially as the core temperature of the nuclear reactor began to rise.
24. At the time, *Halimede* had a crew of six (6) on-board.
25. Desperate attempts were made by the crew to repair the coolant leak and to keep the core temperature under control, including a significant number of extravehicular activities on the part of the crew. However, the loss in coolant was too great and eventually, on 6 March 2020, the order was given by ground control to abandon the *Halimede* and for the crew to take to the *Miranda IV* docked with the station to escape.
26. Although the emergency with the nuclear reactor was discovered on 4 March 2020, it was not until after the crew of the *Halimede* had abandoned the space station on 6 March 2020 that a media conference was called at the headquarters of SEAT. Despite repeated assurances from the Director-General of SEAT, worldwide panic followed, with the real threat not only of an imminent

reactor meltdown and explosion that would cause radioactive materials to return to the surface of the Earth, but also of substantial damage, including loss of life, that would be posed by any explosion to nearby orbital installations, include but not limited to *Oberon*.

27. At that time, the *Oberon* had a crew of ten (10) on-board.
28. Almost four (4) hours after the departure of its crew, the nuclear reactor exploded. While the dispersal of radioactive material was largely contained, pieces of debris from the space station were shot into space at high speed, one of which scraped by the *Miranda IV* and damaged its re-entry heat shield. One other piece of debris collided with one of the solar panels of *Oberon*, destroying the panel and reducing the electrical power output available to the station for four months until a replacement panel could be launched into orbit by the BSA.
29. One of the large habitation modules of the *Halimede* broke off from the rest of the station and, two (2) weeks later, re-entered the atmosphere. While the module broke up on re-entry, pieces of significant mass survived re-entry and resulted in the destruction of fourteen (14) homes, six (6) motor vehicles, and three (3) small factories in Bergelmir. Nineteen (19) people were killed and twenty-five (25) people were injured and, in addition to the property damage, the area had to be evacuated and considerable expense was incurred by local authorities to clean up the damage and to ensure that there was no significant increase in radiation resulting from the returned debris.
30. Themisto has not requested and does not seek the return of any of the re-entered debris.

Late Rescue of *Miranda IV*

31. Unable to return to Earth, the crew of *Miranda IV* approached *Oberon* to seek refuge.
32. Efforts by SEAT in Themisto to prepare another *Miranda IV* for emergency launch was not expected to be ready any earlier than 9 March 2020, which would have gone beyond the life support supplies and capabilities of *Miranda IV*.
33. Despite being informed of the difficult situation, Capt. Anderson refused permission for *Miranda IV* to dock with *Oberon* or for the crew of the former to transfer themselves to the latter. This refusal was affirmed by ground control at BSA, which gave explicit orders for Capt. Anderson and his crew not to allow any member of the *Miranda IV* crew from entering *Oberon*. Accordingly, repeated pleas for help from *Miranda IV* were refused.
34. Late on 8 March 2020, after distress calls from *Miranda IV* ceased and calls from *Oberon* were in turn unanswered, Capt. Anderson sought permission from ground control at BSA to rescue the crew of *Miranda IV* before it was too late. When permission was denied, Capt. Anderson and a majority of his crew decided to disobey the order and manoeuvred *Oberon* to dock with *Miranda IV*. The crew of the latter were all found to be unconscious and, despite the best efforts of the crew of *Oberon*, four (4) of the six (6) crew members died.
35. The two (2) survivors of *Halimede* and *Miranda IV* were rescued by another *Miranda IV*. While on *Oberon*, they were confined to the habitation module where they remained from the time they came on-board until the rescuing *Miranda IV* docked with *Oberon*.

36. On 1 April 2020, on return to Earth, Capt. Anderson and those of the crew that joined him in rescuing the crew of *Miranda IV* were arrested and charged with a number of crimes ranging from disobedience of a direct order and acting against national security and state interests. They were tried by courts martial, convicted, and sentenced to terms of imprisonment ranging from three (3) to ten (10) years.

The Dispute

37. After years of diplomatic efforts having failed to resolve the disputes between the States, including the use of the good offices of the Secretary-General of the United Nations, Themisto and Bergelmir agreed to refer the dispute to the International Court of Justice.
38. Themisto claims that:
- (i) Bergelmir acted unlawfully in the conduct of military research and use of outer space;
 - (ii) Bergelmir acted unlawfully in refusing access by the crew of *Miranda IV* to *Oberon* in January 2020;
 - (iii) Bergelmir is liable for failing to make reasonable and necessary efforts to rescue the crew of *Miranda IV* until it was too late and for the death of four (4) members of that crew; and
 - (iv) the claims and assertions made by Bergelmir are untenable.
39. Bergelmir claims that:
- (i) Themisto is liable for the damage caused to *Oberon*;
 - (ii) Themisto is liable for the death, injury, and property damage caused by the returned debris from the *Halimede*;
 - (iii) Themisto is liable for the costs incurred in the evacuation and clean-up of the returned debris from the *Halimede* due to their possible radioactivity;
 - (iv) Themisto acted unlawfully in failing to warn and consult with Bergelmir and other States as to the imminent threat posed by a nuclear reactor meltdown on *Halimede*; and
 - (v) the claims and assertions made by Themisto are untenable.
40. Both Themisto and Bergelmir are party to all five United Nations space treaties as well as the Vienna Convention on the Law of Treaties.