

Information about the MilSpace2 satellite network.

We refer to the special section API/A/12904 of BR IFIC dated October 5th 2021.

The MilSpace2 satellite system consists of three 6U cubesats (10 cm x 20 cm x 30 cm) developed at FFI. The satellites will be launched in 2022. The orbital height will be in the range of 500 – 575 km. There will be propulsion systems on board on two of the satellites.

The MilSpace2 satellites and ground stations will operate with the following frequency bands:

Frequency usage		
Direction	Frequency band	Service
s-E	401 – 402 MHz	Space operation
E-S	401 – 403 MHz	Earth exploration
s-E	2200 – 2290 MHz	Space operation
E-s	2025 – 2110 MHz	Space operation
S-E	8215 – 8400 MHz	Earth exploration

Transmissions between the satellites and Earth will mainly be done when the Kjeller ground station (59.97 N, 11.05 E) is visible. Additional ground stations in Inuvik, NT, Canada (68.36 N, 133.72 W) and Punta Arenas, Chile (53.15 S, 70.91 W) may be used. The satellites can cease transmission if needed. The MilSpace2 satellites will operate towards the ground station at Kjeller as shown in the figure below. They will only transmit when the elevation angle is above 5 degrees with respect to its ground station, and the ground coverage for one of the satellites at orbital height at 500 km is shown in figure 1 below. Figure 2 shows the satellite passes within the circle (radius of 2000 km for orbital height of 500 km).



Figure 1: Kjeller ground station and coverage for orbital height of 500 km.



Figure 2: Satellite passes inside the circle for orbital height of 500 km.

The ground coverage with radius 2 150 km for the two other satellites at orbital height at 575 km is shown in figure 3 below.

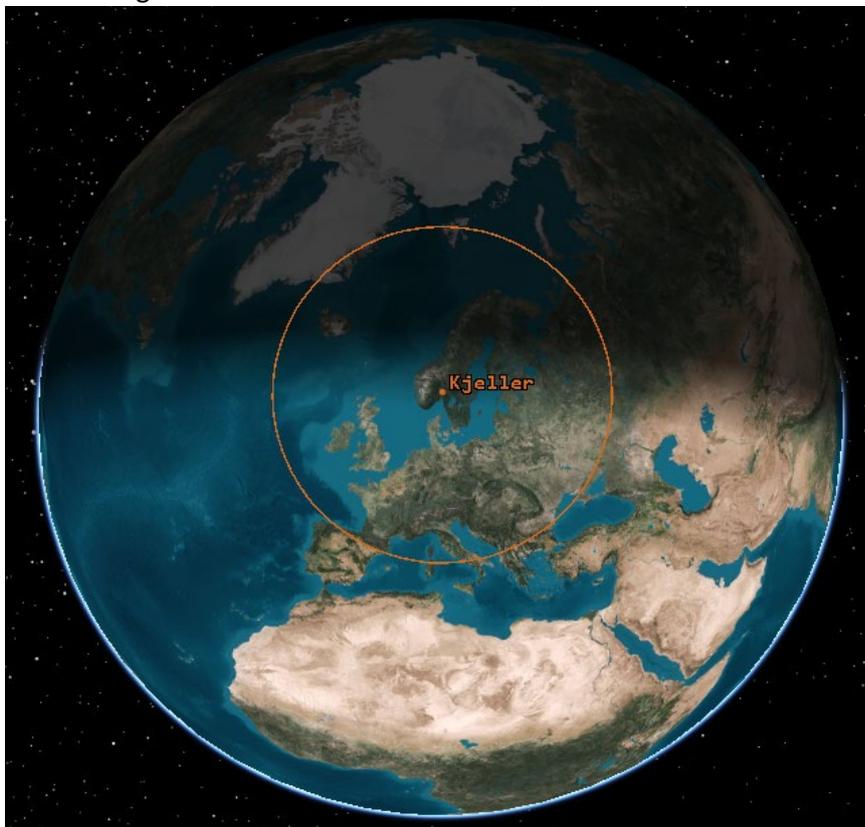


Figure 3: Kjeller ground station for orbital height 575 km.

We hope this information will give enough clarification to any concerns, and we look forward to communicate with you if you have any other questions.

For further information, direct contact may be established with the operator of MilSpace2 satellites, the Norwegian Defence Research Establishment (FFI).

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