



# Jammertest 2024 Transmission Plan

Jammertest Consortium

2024-09-03  
11:09:46

# Contents

Monday	3
Tuesday	9
Wednesday	17
Thursday	23
Friday	31

# Monday

## **Location 1 Bleik**

Monday morning before lunch will be used for setting up equipment and checking that all systems are operational. After lunch the testing will start with high power jamming.

## **Location 2 Grunnvatn**

No activity before lunch. Testing of low-power handheld jammers after lunch.

## ∞ **Location 3 Motorcade**

No activity before lunch. Testing of low-power handheld jammers inside and outside vehicles after lunch.

Table 1.1: Monday

Monday 2024-09-09	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	11:00	11:00	11:00
08:00			
09:00			
10:00			
11:00	<b>11:00-13:00 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)	<b>11:00-13:00 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>11:00-13:00 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
12:00			
13:00	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch Contact: Christian Skjetne (NPRA)	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch @ Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch @ Bleik (Site 1) Contact: Christian Skjetne (NPRA)
14:00	<b>14:00-14:10 - 1.2.1</b> <b>Jammer F8.1 "Porcus Major": 50 W CW: L1</b> Power: 50W Contact: Nicolai Gerrard (NKOM) <hr/> <b>14:20-14:30 - 1.2.4</b> <b>Jammer F8.1 "Porcus Major": 50 W CW: L1, G1, L2, L5</b> Power: 50W Contact: Nicolai Gerrard (NKOM) <hr/> <b>14:40-14:50 - 1.3.5</b> <b>Jammer F8.1 "Porcus Major": 50 W sweep: L1, sweep rate: 1 kHz, BW: 6 MHz</b> Power: 50W Contact: Nicolai Gerrard (NKOM)	<b>14:00-14:12 - 1.1.1</b> <b>Jammer S1.1</b> Power: 0.0316W Contact: Øystein Karlsen (NKOM) <hr/> <b>14:16-14:28 - 1.1.4</b> <b>Jammer S2.1</b> Power: 0.1W Contact: Øystein Karlsen (NKOM) <hr/> <b>14:32-14:44 - 1.1.8</b> <b>Jammer U1.1</b> Contact: Øystein Karlsen (NKOM) <hr/> <b>14:48-15:00 - 1.1.12</b> <b>Jammer H1.1</b> Power: 0.1W Contact: Øystein Karlsen (NKOM)	

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Table 1.1: Monday (Continued)

Monday 2024-09-09	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<div><div>15:00-15:10 - 1.3.8 Jammer F8.1 "Porcus Major": 50 W sweep: L1, sweep rate: 1 kHz, BW: 6 MHz Power: 50W Contact: Nicolai Gerrard (NKOM)</div><div>15:20-15:30 - 1.4.1 Jammer F8.1 "Porcus Major": 50 W PRN: L1, Chiprate: 3 MHz Power: 50W Contact: Nicolai Gerrard (NKOM)</div><div>15:40-15:50 - 1.4.4 Jammer F8.1 "Porcus Major": 50 W PRN: L1, G1, L2, L5, Chiprate: 3 MHz Power: 50W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div>15:04-15:16 - 1.1.13 Jammer H1.2 Power: 0.0631W Contact: Øystein Karlsen (NKOM)</div><div>15:20-15:32 - 1.1.16 Jammer H3.1 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div><div>15:36-15:48 - 1.1.18 Jammer H3.3 Power: 1W Contact: Øystein Karlsen (NKOM)</div><div>15:52-16:04 - 1.1.19 Jammer H4.1 Power: 0.631W Contact: Øystein Karlsen (NKOM)</div></div>	<div><div>15:00-16:15 - 1.11.7 Driving with multi-band jammer in vehicle in front of the test vehicle Power: 1.58W Contact: Jahn Erik Røhme (NPRA)</div></div>

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Table 1.1: Monday (Continued)

Monday 2024-09-09	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div><b>16:00-16:14 - 1.6.1</b> Power ramping with Jammer F8.1 ”Porcus Major”: 0.2 μW (-37dBm) to 50 W (47dBm) with 2 dB increments PRN: L1 Power: 50W Contact: Nicolai Gerrard (NKOM)</div><div><b>16:25-16:39 - 1.6.4</b> Power ramping with Jammer F8.1 ”Porcus Major”: 0.2 μW (-37dBm) to 50 W (47dBm) with 2 dB increments PRN: L1, G1, L2, L5 Power: 50W Contact: Nicolai Gerrard (NKOM)</div><div><b>16:50-18:05 - 1.8.1</b> Jammer F8.1 ”Porcus Major”: 50 W PRN pyramid: E6, E5b, L5, G2, L2, B1I, G1, L1 Power: 50W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>16:08-16:20 - 1.1.20</b> Jammer H6.1 Power: 0.631W Contact: Øystein Karlsen (NKOM)</div><div><b>16:24-16:36 - 1.1.21</b> Jammer H6.2 Power: 1W Contact: Øystein Karlsen (NKOM)</div><div><b>16:40-16:52 - 1.1.22</b> Jammer H6.3 Power: 1W Contact: Øystein Karlsen (NKOM)</div><div><b>16:56-17:08 - 1.1.23</b> Jammer H6.4 Power: 1W Contact: Øystein Karlsen (NKOM)</div></div>	<div><b>16:30-17:45 - 1.11.8</b> Driving with multi-band jammer in vehicle behind the test vehicle Power: 1.58W Contact: Jahn Erik Røhme (NPRA)</div>
17:00		<div><div><b>17:12-17:24 - 1.1.26</b> Jammer H8.1 Power: 0.631W Contact: Øystein Karlsen (NKOM)</div><div><b>17:28-17:40 - 1.1.27</b> Jammer F6.1 Power: 6.31W Contact: Øystein Karlsen (NKOM)</div><div><b>17:44-17:56 - 1.1.29</b> Jammer H2.1 Contact: Øystein Karlsen (NKOM)</div></div>	

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Table 1.1: Monday (Continued)

Monday 2024-09-09	Bleik(1)	Grunnvatn(2)	Motorcade(3)
18:00	<b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Contact: Christian Skjetne (NPRA)	<b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
19:00			
20:00			
21:00			
22:00			





# Tuesday

## **Location 1 Bleik**

Tuesday will be used for meaconing and unintentional RFI test. During the evening there will be very high power jamming running untill 22:00.

## **Location 2 Grunnvatn**

Test of multiple low-power handheld jammers in circular configuration. Could be usefull for testing of CRPA antennas.

## **Location 3 Motorcade**

Testing of low-power handheld jammers inside and outside vehicles.

Table 2.1: Tuesday

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
09:00	<b>09:00-09:05 - 3.1.1</b> <b>Meacon F1.1 "Porcellus": RX1 at 1 W</b> Power: 1W Contact: Nicolai Gerrard (NKOM) <hr/> <b>09:15-09:25 - 3.1.2</b> <b>Meacon F1.1 "Porcellus": RX1 at 1 W with initial jamming</b> Power: 1W Contact: Nicolai Gerrard (NKOM) <hr/> <b>09:35-09:40 - 3.1.3</b> <b>Meacon F1.1 "Porcellus": RX1 at 10 W</b> Power: 10W Contact: Nicolai Gerrard (NKOM) <hr/> <b>09:50-10:00 - 3.1.4</b> <b>Meacon F1.1 "Porcellus": RX1 at 10 W with initial jamming</b> Power: 10W Contact: Nicolai Gerrard (NKOM)	<b>09:00-09:10 - 1.19.1</b> <b>3 jammers at 50 meters from center S1.1, S1.2 and S1.3</b> Power: 0.171W Contact: Øystein Karlsen (NKOM) <hr/> <b>09:16-09:26 - 1.19.2</b> <b>3 jammers at 100 meters from center S1.1, S1.2 and S1.3</b> Power: 0.171W Contact: Øystein Karlsen (NKOM) <hr/> <b>09:32-09:42 - 1.19.3</b> <b>3 jammers at 150 meters from center S1.1, S1.2 and S1.3</b> Power: 0.171W Contact: Øystein Karlsen (NKOM) <hr/> <b>09:48-09:58 - 1.19.4</b> <b>3 jammers at 50 meters from center S2.1, S2.2 and S2.3</b> Power: 1.26W Contact: Øystein Karlsen (NKOM)	

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
10:00	<div><div><b>10:10-10:15 - 3.1.5</b> <b>Meacon F1.1 "Porcellus": RX2 at 10 W</b> Power: 10W Contact: Nicolai Gerrard (NKOM)</div><div><b>10:20-10:35 - 3.2.6</b> <b>Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with decreasing durations without breaks</b> Power: 10W Contact: Nicolai Gerrard (NKOM)</div><div><b>10:45-11:00 - 3.2.7</b> <b>Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with different switching frequencies.</b> Power: 10W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>10:04-10:14 - 1.19.5</b> <b>3 jammers at 100 meters from center S2.1, S2.2 and S2.3</b> Power: 1.26W Contact: Øystein Karlsen (NKOM)</div><div><b>10:20-10:30 - 1.19.6</b> <b>3 jammers at 150 meters from center S2.1, S2.2 and S2.3</b> Power: 1.26W Contact: Øystein Karlsen (NKOM)</div><div><b>10:36-10:46 - 1.19.7</b> <b>3 jammers at 50 meters from center U1.1, U1.2 and U1.3</b> Contact: Øystein Karlsen (NKOM)</div><div><b>10:52-11:02 - 1.19.8</b> <b>3 jammers at 100 meters from center U1.1, U1.2 and U1.3</b> Contact: Øystein Karlsen (NKOM)</div></div>	<div><div><b>10:00-11:00 - 1.10.6</b> <b>Driving while passing three consecutive parked cars with multi-band jammer</b> Power: 1W Contact: Jahn Erik Røhme (NPRA)</div></div>

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	<div>11:10-11:30 - 3.2.3 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W turned on and off at different times Power: 10W Contact: Nicolai Gerrard (NKOM)</div> <div>11:35-11:45 - 3.2.4 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating Power: 10W Contact: Nicolai Gerrard (NKOM)</div> <div>11:55-12:15 - 3.2.5 Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with breaks Power: 10W Contact: Nicolai Gerrard (NKOM)</div>	<div>11:08-11:18 - 1.19.9 3 jammers at 150 meters from center U1.1, U1.2 and U1.3 Contact: Øystein Karlsen (NKOM)</div> <div>11:24-11:34 - 1.19.10 3 jammers at 50 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)</div> <div>11:40-11:50 - 1.19.11 3 jammers at 100 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)</div> <div>11:56-12:06 - 1.19.12 3 jammers at 150 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)</div>	<div>11:00-12:00 - 1.10.6 Driving while passing three consecutive parked cars with multi-band jammer Power: 1W Contact: Jahn Erik Røhme (NPRA)</div>
12:00	<div>12:25-12:59 - 3.3.1 Meacon F1.1 "Porcellus": RX1 with ramping power Power: 10W Contact: Nicolai Gerrard (NKOM)</div>	<div>12:12-12:22 - 1.19.13 3 jammers at 50 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div> <div>12:28-12:38 - 1.19.14 3 jammers at 100 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div> <div>12:44-12:54 - 1.19.15 3 jammers at 150 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div>	<div>12:00-13:00 - 1.11.6 (Deprecated - Not available) Driving with multi-band jammer in test vehicle Power: 1W Contact: Jahn Erik Røhme (NPRA)</div>

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
13:00	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch Contact: Christian Skjetne (NPRA)	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)
14:00	<b>14:00-14:20 - 3.3.3</b> <b>Meacon F1.1 "Porcellus": RX1 at less than 1 W, adding RX2 at 10 W after 5 minutes</b> Power: 10W Contact: Nicolai Gerrard (NKOM) <hr/> <b>14:35-14:55 - 3.2.3</b> <b>Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W turned on and off at different times</b> Power: 10W Contact: Nicolai Gerrard (NKOM)	<b>14:00-15:00 - 1.20.13</b> <b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5 turned on sequentially</b> Power: 0.0592W Comment: Requires booking for drones Contact: Øystein Karlsen (NKOM)	<b>14:00-14:30 - 1.10.3</b> <b>Vehicle starting in dual-band denied environment</b> Power: 0.1W Contact: Jahn Erik Røhme (NPRA) <hr/> <b>14:30-15:00 - 1.10.4</b> <b>Vehicle starting in multi-band denied environment</b> Power: 1.58W Contact: Jahn Erik Røhme (NPRA)
15:00	<b>15:00-15:10 - 3.2.4</b> <b>Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating</b> Power: 10W Contact: Nicolai Gerrard (NKOM) <hr/> <b>15:15-15:35 - 3.2.5</b> <b>Meacon F1.1 "Porcellus": RX1 and RX2 at 10 W alternating with breaks</b> Power: 10W Contact: Nicolai Gerrard (NKOM)	<b>15:20-16:20 - 1.20.14</b> <b>3 jammers at 150 meters from center H1.1, H1.4 and H1.5 turned on sequentially</b> Power: 0.0592W Comment: Requires booking for drones Contact: Øystein Karlsen (NKOM)	<b>15:00-15:30 - 1.10.3</b> <b>Vehicle starting in dual-band denied environment</b> Power: 0.1W Contact: Jahn Erik Røhme (NPRA) <hr/> <b>15:30-16:00 - 1.10.4</b> <b>Vehicle starting in multi-band denied environment</b> Power: 1.58W Contact: Jahn Erik Røhme (NPRA)

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div><b>16:00-16:01 - 1.18.4</b> <b>Jammer F8.1 "Porcus Major": 50 W</b> <b>drift: 1545 to 1620 MHz, with CW and</b> <b>sweep time of 1 minute</b> Power: 50W Contact: Nicolai Gerrard (NKOM)</div><div><b>16:10-16:25 - 1.18.5</b> <b>Jammer F8.1 "Porcus Major": 50 W</b> <b>drift: 1545 to 1620 MHz, with CW and</b> <b>sweep time of 15 minutes</b> Power: 50W Contact: Nicolai Gerrard (NKOM)</div><div><b>16:35-16:50 - 1.18.7</b> <b>Jammer F8.1 "Porcus Major": 50 W</b> <b>drift: 1620 to 1545 MHz, with CW and</b> <b>sweep time of 15 minutes</b> Power: 50W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><b>16:40-17:40 - 1.20.15</b> <b>3 jammers at 150 meters from center</b> <b>H1.1, H1.4 and H1.5 turned on</b> <b>sequentially</b> Power: 0.0592W Comment: Requires booking for drones Contact: Øystein Karlsen (NKOM)</div>	<div><b>16:00-16:30 - 1.10.3</b> <b>Vehicle starting in dual-band denied</b> <b>environment</b> Power: 0.1W Contact: Jahn Erik Røhme (NPRA)</div> <div><b>16:30-17:00 - 1.10.4</b> <b>Vehicle starting in multi-band denied</b> <b>environment</b> Power: 1.58W Contact: Jahn Erik Røhme (NPRA)</div>

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
17:00	<p><b>17:00-17:01 - 1.18.8</b>  <b>Jammer F8.1 "Porcus Major": 50 W</b>  <b>drift: 1545 to 1620 MHz, with BW of</b>  <b>500 kHz and sweep time of 1 minute</b>  Power: 50W  Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p><b>17:10-17:25 - 1.18.13</b>  <b>Jammer F8.1 "Porcus Major": 50 W</b>  <b>drift: 1150 to 1300 MHz, with CW and</b>  <b>sweep time of 15 minutes</b>  Power: 50W  Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p><b>17:35-17:50 - 1.18.15</b>  <b>Jammer F8.1 "Porcus Major": 50 W</b>  <b>drift: 1300 to 1150 MHz, with CW and</b>  <b>sweep time of 15 minutes</b>  Power: 50W  Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p><b>17:59-18:00 - 1.18.16</b>  <b>Jammer F8.1 "Porcus Major": 50 W</b>  <b>drift: 1150 to 1300 MHz, with BW of</b>  <b>500 kHz and sweep time of 1 minute</b>  Power: 50W  Contact: Nicolai Gerrard (NKOM)</p>		
18:00	<p><b>18:30-19:00 - 0.0.2</b>  <b>Mandatory afternoon (de)briefing</b>  Contact: Christian Skjetne (NPRA)</p>	<p><b>18:30-19:00 - 0.0.2</b>  <b>Mandatory afternoon (de)briefing</b>  Comment: MANDATORY attendance at Bleik (Site 1)  Contact: Christian Skjetne (NPRA)</p>	<p><b>18:30-19:00 - 0.0.2</b>  <b>Mandatory afternoon (de)briefing</b>  Comment: MANDATORY attendance at Bleik (Site 1)  Contact: Christian Skjetne (NPRA)</p>
19:00	<p><b>19:15-22:00 - 1.16.4</b>  <b>High Power PRN jamming: L1, G1,</b>  <b>L2, L5</b>  Power: 100W  Contact: Nicolai Gerrard (NKOM)</p>		
20:00			

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Table 2.1: Tuesday (Continued)

Tuesday			
2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
21:00			
22:00			



# Wednesday

## **Location 1 Bleik**

Wednesday will be used for position and SBAS spoofing.

## **Location 2 Grunnvatn**

Booking of timeslots available for custom testing.

## **Location 3 Motorcade**

Booking of timeslots available for custom testing.

Table 3.1: Wednesday

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
09:00	<b>09:00-09:40 - 2.1.1</b> <b>Large position and time jump, with power ramp</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)	<b>09:00-10:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Øystein Karlsen (NKOM)	
10:00	<b>10:00-10:15 - 2.1.3</b> <b>Large position and time jump. Galileo E1 only</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM) <hr/> <b>10:20-10:35 - 2.1.2</b> <b>Large position and time jump. GPS L1 C/A only</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM) <hr/> <b>10:40-10:55 - 2.1.4</b> <b>Large position and time jump. GPS L1 and Galileo E1 only</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)	<b>10:00-11:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Øystein Karlsen (NKOM)	<b>10:00-11:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Jahn Erik Røhme (NPRA)

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Table 3.1: Wednesday (Continued)

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	<p><b>11:25-11:40 - 2.1.9</b>  <b>Simulated driving (route 1). GPS L1 C/A and Galileo E1, with initial jamming</b>                      Power: 0.316W                      Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p><b>11:45-12:00 - 2.1.10</b>  <b>Simulated driving (route 1), with initial jamming</b>                      Power: 0.316W                      Contact: Nicolai Gerrard (NKOM)</p>	<p><b>11:00-12:00 - 0.2.1</b>  <b>Jamming booking slot</b>                      Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog)                      Contact: Øystein Karlsen (NKOM)</p>	<p><b>11:00-12:00 - 0.2.1</b>  <b>Jamming booking slot</b>                      Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog)                      Contact: Jahn Erik Røhme (NPRA)</p>
12:00	<p><b>12:30-12:40 - 2.8.1</b>  <b>EGNOS with "Do Not Use GPS" commands</b>                      Power: 1W                      Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p><b>12:45-13:00 - 2.8.1</b>  <b>EGNOS with "Do Not Use GPS" commands</b>                      Power: 1W                      Contact: Nicolai Gerrard (NKOM)</p>	<p><b>12:00-13:00 - 0.2.1</b>  <b>Jamming booking slot</b>                      Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog)                      Contact: Øystein Karlsen (NKOM)</p>	<p><b>12:00-13:00 - 0.2.1</b>  <b>Jamming booking slot</b>                      Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog)                      Contact: Jahn Erik Røhme (NPRA)</p>
13:00	<p><b>13:00-14:00 - 0.1.1</b>  <b>Grace period</b>                      Comment: Lunch                      Contact: Christian Skjetne (NPRA)</p>	<p><b>13:00-14:00 - 0.1.1</b>  <b>Grace period</b>                      Comment: Lunch @ Stave (Site 3)                      Contact: Christian Skjetne (NPRA)</p>	<p><b>13:00-14:00 - 0.1.1</b>  <b>Grace period</b>                      Comment: Lunch @ Stave (Site 3)                      Contact: Christian Skjetne (NPRA)</p>

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Table 3.1: Wednesday (Continued)

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
14:00	<div><div><b>14:00-14:15 - 2.2.3</b> <b>Position jump</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>14:20-14:35 - 2.3.3</b> <b>Small position jump</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>14:40-14:55 - 2.3.2</b> <b>Small position jump with initial and continuous jamming</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>14:00-15:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Øystein Karlsen (NKOM)</div></div>	<div><div><b>14:00-15:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Jahn Erik Røhme (NPRA)</div></div>
15:00	<div><div><b>15:25-15:35 - 2.3.8</b> <b>Simulated driving (route 1). Galileo only</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>15:40-15:50 - 2.3.5</b> <b>Simulated driving (route 1). GPS only</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>15:55-16:05 - 2.3.9</b> <b>Simulated driving (route 1). Galileo only, with initial and continuous jamming.</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>15:00-16:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Øystein Karlsen (NKOM)</div></div>	<div><div><b>15:00-16:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Jahn Erik Røhme (NPRA)</div></div>

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Table 3.1: Wednesday (Continued)

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div><b>16:10-16:25 - 2.3.11</b> <b>Simulated driving (route 1) with initial and continuous jamming.</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>16:55-17:05 - 2.3.12</b> <b>Flying (route 4) - "drone scenario"</b> <b>GPS L1 C/A only</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>16:00-17:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Øystein Karlsen (NKOM)</div></div>	<div><div><b>16:00-17:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Jahn Erik Røhme (NPRA)</div></div>
17:00	<div><div><b>17:10-17:20 - 2.3.13</b> <b>Flying (route 4) - "drone scenario"</b> Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>17:30-17:40 - 2.3.15</b> <b>Flying (route 2) - "helicopter scenario"</b>  Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div><b>17:45-18:00 - 2.3.15</b> <b>Flying (route 2) - "helicopter scenario"</b>  Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>17:00-18:00 - 0.2.1</b> <b>Jamming booking slot</b> Comment: Pre-booking required. Inform staff of required jammer equipment (see Appendix G of test catalog) Contact: Øystein Karlsen (NKOM)</div></div>	
18:00	<div><div><b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)</div></div>	<div><div><b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</div></div>	<div><div><b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)</div></div>
19:00			
20:00			
21:00			
22:00			



# Thursday

## **Location 1 Bleik**

Thursday will be used for time spoofing. During the evening there will be long time meaoning running untill 22:00.

## **Location 2 Grunnvatn**

Test of multiple low-power handheld jammers in circular configuration. Could be usefull for testing of CRPA antennas.

## **Location 3 Motorcade**

Mobile SDR spoofing. Timeslot after lunch is still not decided.

Table 4.1: Thursday

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
09:00	<b>09:00-09:25 - 2.4.2</b> <b>Time offset 15 minutes from real time, with power ramp</b> Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> <b>09:40-09:55 - 2.4.3</b> <b>Time offset -3 minutes from real time, with power jump</b> Power: 0.0316W Contact: Nicolai Gerrard (NKOM)	<b>09:00-10:00 - 1.20.10</b> <b>3 jammers at 50 meters from center H1.1, H1.4 and H1.5</b> Power: 0.0592W Comment: Requires booking for drones Contact: Øystein Karlsen (NKOM)	
10:00	<b>10:10-10:25 - 2.4.12</b> <b>Static + Pseudorange error</b> Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> <b>10:40-10:55 - 2.4.13</b> <b>Static + Pseudorange error, with initial and continous jamming</b> Power: 0.001W Contact: Nicolai Gerrard (NKOM)	<b>10:30-11:30 - 1.20.11</b> <b>3 jammers at 100 meters from center H1.1, H1.4 and H1.5</b> Power: 0.0592W Comment: Requires booking for drones Contact: Øystein Karlsen (NKOM)	<b>10:00-10:20 - 2.6.1</b> <b>Spoofers (in vehicle with roof mounted antenna) stationary with dynamic spoofed position.</b> Power: 0.01W Contact: Anders Rødningsby (FFI) <hr/> <b>10:45-11:05 - 2.6.2</b> <b>Spoofers (in vehicle with roof mounted antenna) stationary and then moving with fixed spoofed position.</b> Power: 0.01W Contact: Anders Rødningsby (FFI)

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Table 4.1: Thursday (Continued)

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	<div><div><b>11:25-11:40 - 2.5.6</b> Time offset 15 minutes from real time Power: 0.001W Contact: Nicolai Gerrard (NKOM)</div><div><b>11:55-12:10 - 2.5.3</b> Time offset -3 minutes from real time, with power jump Power: 0.001W Contact: Nicolai Gerrard (NKOM)</div></div>		<div><div><b>11:30-11:05 - 2.6.3</b> Spoofers (in vehicle with roof mounted antenna) moving with fixed spoofed position. Power: 0.01W Contact: Anders Rødningsby (FFI)</div><div><b>11:30-11:50 - 2.6.3</b> Spoofers (in vehicle with roof mounted antenna) moving with fixed spoofed position. Power: 0.01W Contact: Anders Rødningsby (FFI)</div></div>
12:00	<div><div><b>12:25-13:00 - 2.5.25</b> Static + UTC-parameter nav. data manipulation (adding leap seconds), with initial and continuous jamming Power: 0.001W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>12:00-13:00 - 1.20.12</b> 3 jammers at 150 meters from center H1.1, H1.4 and H1.5 Power: 0.0592W Comment: Requires booking for drones Contact: Øystein Karlsen (NKOM)</div></div>	<div><div><b>12:15-12:35 - 2.6.4</b> Spoofers (in vehicle with roof mounted antenna) stationary and then moving with first fixed and then dynamic spoofed position. Power: 0.01W Contact: Anders Rødningsby (FFI)</div></div>
13:00	<div><div><b>13:00-14:00 - 0.1.1</b> Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)</div></div>	<div><div><b>13:00-14:00 - 0.1.1</b> Grace period Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)</div></div>	<div><div><b>13:05-14:00 - 0.1.1</b> Grace period Comment: Lunch @ Stave (Site 3) Contact: Christian Skjetne (NPRA)</div></div>

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Table 4.1: Thursday (Continued)

Thursday			
2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
14:00	<b>14:00-14:15 - 2.5.5</b> Time offset 15 minutes from real time. Galileo E1 Power: 0.0316W Contact: Nicolai Gerrard (NKOM)	<b>14:00-14:10 - 1.19.1</b> 3 jammers at 50 meters from center S1.1, S1.2 and S1.3 Power: 0.171W Contact: Øystein Karlsen (NKOM)	<b>14:00-14:20 - 2.6.1</b> Spoofers (in vehicle with roof mounted antenna) stationary with dynamic spoofed position. Power: 0.01W Contact: Anders Rødningby (FFI)
	<b>14:20-14:35 - 2.5.4</b> Time offset 15 minutes from real time. GPS L1 C/A Power: 0.0316W Contact: Nicolai Gerrard (NKOM)	<b>14:16-14:26 - 1.19.2</b> 3 jammers at 100 meters from center S1.1, S1.2 and S1.3 Power: 0.171W Contact: Øystein Karlsen (NKOM)	<b>14:45-15:05 - 2.6.2</b> Spoofers (in vehicle with roof mounted antenna) stationary and then moving with fixed spoofed position. Power: 0.01W Contact: Anders Rødningby (FFI)
	<b>14:40-14:55 - 2.5.6</b> Time offset 15 minutes from real time Power: 1e-05W Contact: Nicolai Gerrard (NKOM)	<b>14:32-14:42 - 1.19.3</b> 3 jammers at 150 meters from center S1.1, S1.2 and S1.3 Power: 0.171W Contact: Øystein Karlsen (NKOM)	
		<b>14:48-14:58 - 1.19.4</b> 3 jammers at 50 meters from center S2.1, S2.2 and S2.3 Power: 1.26W Contact: Øystein Karlsen (NKOM)	

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Table 4.1: Thursday (Continued)

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<b>15:25-15:40 - 2.5.13</b> <b>Static + Pseudorange error. GPS L1 and Galileo E1 only</b> Power: 0.001W Contact: Nicolai Gerrard (NKOM)	<b>15:04-15:14 - 1.19.5</b> <b>3 jammers at 100 meters from center S2.1, S2.2 and S2.3</b> Power: 1.26W Contact: Øystein Karlsen (NKOM)	<b>15:30-15:50 - 2.6.3</b> <b>Spoofers (in vehicle with roof mounted antenna) moving with fixed spoofed position.</b> Power: 0.01W Contact: Anders Rødningsby (FFI)
	<b>15:45-16:00 - 2.5.15</b> <b>Static + Pseudorange error</b> Power: 1e-05W Contact: Nicolai Gerrard (NKOM)	<b>15:20-15:30 - 1.19.6</b> <b>3 jammers at 150 meters from center S2.1, S2.2 and S2.3</b> Power: 1.26W Contact: Øystein Karlsen (NKOM)	
		<b>15:36-15:46 - 1.19.7</b> <b>3 jammers at 50 meters from center U1.1, U1.2 and U1.3</b> Contact: Øystein Karlsen (NKOM)	
		<b>15:52-16:02 - 1.19.8</b> <b>3 jammers at 100 meters from center U1.1, U1.2 and U1.3</b> Contact: Øystein Karlsen (NKOM)	

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Table 4.1: Thursday (Continued)

Thursday			
2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div><b>16:15-16:40 - 2.5.16</b> Static + Pseudorange error, with initial and continuous jamming Power: 1e-05W Contact: Nicolai Gerrard (NKOM)</div><div><b>16:55-17:20 - 2.5.26</b> Static + UTC-parameter nav. data manipulation (removing leap seconds). GPS L1 C/A Power: 1e-05W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>16:08-16:18 - 1.19.9</b> 3 jammers at 150 meters from center U1.1, U1.2 and U1.3 Contact: Øystein Karlsen (NKOM)</div><div><b>16:24-16:34 - 1.19.10</b> 3 jammers at 50 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)</div><div><b>16:40-16:50 - 1.19.11</b> 3 jammers at 100 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)</div><div><b>16:56-17:06 - 1.19.12</b> 3 jammers at 150 meters from center H6.4, H6.5 and H6.6 Power: 1.58W Contact: Øystein Karlsen (NKOM)</div></div>	<div><div><b>16:15-16:35 - 2.6.4</b> Spoofers (in vehicle with roof mounted antenna) stationary and then moving with first fixed and then dynamic spoofed position. Power: 0.01W Contact: Anders Rødningsby (FFI)</div></div>
17:00	<div><div><b>17:30-18:00 - 2.5.27</b> Static + UTC-parameter nav. data manipulation (removing leap seconds) Power: 1e-05W Contact: Nicolai Gerrard (NKOM)</div></div>	<div><div><b>17:12-17:22 - 1.19.13</b> 3 jammers at 50 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div><div><b>17:28-17:38 - 1.19.14</b> 3 jammers at 100 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div><div><b>17:44-17:54 - 1.19.15</b> 3 jammers at 150 meters from center H1.1, H1.4 and H1.5 Power: 0.1W Contact: Øystein Karlsen (NKOM)</div></div>	

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Table 4.1: Thursday (Continued)

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
18:00	<b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)	<b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>18:30-19:00 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
19:00	<b>19:00-22:00 - 3.1.3</b> <b>Meacon F1.1 "Porcellus": RX1 at 10 W</b> Power: 10W Contact: Nicolai Gerrard (NKOM)		
20:00			
21:00			
22:00			



# Friday

## **Location 1 Bleik**

Friday will be used for time spoofing and repetitions of previous tests. Time after lunch will be used for tearing down and packing up equipment.

## **Location 2 Grunnvatn**

Testing of low-power handheld jammers.

## **Location 3 Motorcade**

There will be no testing on this site on Friday.

Table 5.1: Friday

Friday 2024-09-13	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)	<b>08:00-08:30 - 0.0.1</b> <b>Mandatory morning briefing</b> Comment: MANDATORY attendance at Bleik (Site 1) Contact: Christian Skjetne (NPRA)
09:00	<b>09:00-09:25 - 2.7.12</b> <b>Static + Time manipulation (2 years forwards), with power ramp</b> Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> <b>09:55-10:25 - 2.7.16</b> <b>Static + Time manipulation (April 2019), with initial and continuous jamming</b> Power: 0.0316W Contact: Nicolai Gerrard (NKOM)	<b>09:00-09:12 - 1.1.1</b> <b>Jammer S1.1</b> Power: 0.0316W Contact: Øystein Karlsen (NKOM) <hr/> <b>09:16-09:28 - 1.1.4</b> <b>Jammer S2.1</b> Power: 0.1W Contact: Øystein Karlsen (NKOM) <hr/> <b>09:32-09:44 - 1.1.8</b> <b>Jammer U1.1</b> Contact: Øystein Karlsen (NKOM) <hr/> <b>09:48-10:00 - 1.1.12</b> <b>Jammer H1.1</b> Power: 0.1W Contact: Øystein Karlsen (NKOM)	

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Table 5.1: Friday (Continued)

Friday 2024-09-13	Bleik(1)	Grunnvatn(2)	Motorcade(3)
10:00	<b>10:30-13:00 - 0.1.1</b> <b>Grace period</b> Comment: Adhoc tests and repeat of previous tests Contact: Nicolai Gerrard (NKOM)	<b>10:04-10:16 - 1.1.13</b> <b>Jammer H1.2</b> Power: 0.0631W Contact: Øystein Karlsen (NKOM) <hr/> <b>10:20-10:32 - 1.1.16</b> <b>Jammer H3.1</b> Power: 0.1W Contact: Øystein Karlsen (NKOM) <hr/> <b>10:36-10:48 - 1.1.18</b> <b>Jammer H3.3</b> Power: 1W Contact: Øystein Karlsen (NKOM) <hr/> <b>10:52-11:04 - 1.1.19</b> <b>Jammer H4.1</b> Power: 0.631W Contact: Øystein Karlsen (NKOM)	
11:00		<b>11:08-11:20 - 1.1.20</b> <b>Jammer H6.1</b> Power: 0.631W Contact: Øystein Karlsen (NKOM) <hr/> <b>11:24-11:36 - 1.1.21</b> <b>Jammer H6.2</b> Power: 1W Contact: Øystein Karlsen (NKOM) <hr/> <b>11:40-11:52 - 1.1.22</b> <b>Jammer H6.3</b> Power: 1W Contact: Øystein Karlsen (NKOM) <hr/> <b>11:56-12:08 - 1.1.23</b> <b>Jammer H6.4</b> Power: 1W Contact: Øystein Karlsen (NKOM)	

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Table 5.1: Friday (Continued)

Friday 2024-09-13	Bleik(1)	Grunnvatn(2)	Motorcade(3)
12:00		<b>12:12-12:24 - 1.1.26</b> <b>Jammer H8.1</b> Power: 0.631W Contact: Øystein Karlsen (NKOM)	
		<b>12:28-12:40 - 1.1.27</b> <b>Jammer F6.1</b> Power: 6.31W Contact: Øystein Karlsen (NKOM)	
		<b>12:44-12:56 - 1.1.29</b> <b>Jammer H2.1</b> Contact: Øystein Karlsen (NKOM)	
13:00	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch Contact: Christian Skjetne (NPRA)	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch @ Bleik (Site1) Contact: Christian Skjetne (NPRA)	<b>13:00-14:00 - 0.1.1</b> <b>Grace period</b> Comment: Lunch @ Bleik (Site1) Contact: Christian Skjetne (NPRA)
14:00	<b>14:00-14:30 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: Summary briefing and closing of event Contact: Christian Skjetne (NPRA)	<b>14:00-14:30 - 0.0.2</b> <b>Mandatory afternoon (de)briefing</b> Comment: Summary briefing and closing of event @ Bleik (Site1) Contact: Christian Skjetne (NPRA)	
15:00			
16:00			
17:00			
18:00			
19:00			
20:00			
21:00			
22:00			