



Jammertest 2024 Transmission Plan

Jammertest Consortium

2024-08-19
13:49:38

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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.

Table 1.1: Monday

Monday 2024-09-09	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	13:00	13:00	13:00
08:00			
09:00			
10:00			
11:00			
12:00			
13:00	13:00-13:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	13:00-13:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	13:00-13:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)
14:00	14:00-14:10 - 1.2.1 50 W CW: L1 Power: 20W Contact: Nicolai Gerrard (NKOM) <hr/> 14:20-14:30 - 1.2.4 50 W CW: L1, G1, L2, L5 Power: 20W Contact: Nicolai Gerrard (NKOM) <hr/> 14:40-14:50 - 1.3.1 50 W sweep: L1, 100 kHz Power: 20W Contact: Nicolai Gerrard (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 - 1.3.4 20 W sweep: L1, G1, L2, L5, 100 kHz Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>15:20-15:30 - 1.4.1 50 W PRN: L1 Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>15:40-15:50 - 1.4.4 50 W PRN: L1, G1, L2, L5 Power: 20W Contact: Nicolai Gerrard (NKOM)</div></div>		
16:00	<div><div>16:00-16:14 - 1.6.1 0.1 µW to 20 W at 2 dB increments PRN: L1 Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>16:25-16:39 - 1.6.4 0.1 µW to 20 W at 2 dB increments PRN: L1, G1, L2, L5 Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>16:50-18:05 - 1.8.1 20 W PRN pyramid: E6, E5b, L5, G2, L2, B1I, G1, L1 Power: 20W Contact: Nicolai Gerrard (NKOM)</div></div>		
17:00			
18:00	<div>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Contact: Christian Skjetne (NPRA)</div>		
19:00			

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Table 1.1: Monday (Continued)

Monday			
2024-09-09	Bleik(1)	Grunnvatn(2)	Motorcade(3)
20:00			
21:00			
22:00			

Tuesday

Location 1 Bleik

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

Table 2.1: Tuesday

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)
09:00	09:00-09:05 - 3.1.1 RX1 at 1 W Power: 1W Contact: Nicolai Gerrard (NKOM) <hr/> 09:15-09:25 - 3.1.2 RX1 at 1 W with initial jamming Power: 1W Contact: Nicolai Gerrard (NKOM) <hr/> 09:35-09:40 - 3.1.3 RX1 at 10 W Power: 10W Contact: Nicolai Gerrard (NKOM) <hr/> 09:50-10:00 - 3.1.4 RX1 at 10 W with initial jamming Power: 10W Contact: Nicolai Gerrard (NKOM)		
10:00	10:10-10:15 - 3.1.5 RX2 at 10 W Power: 10W Contact: Nicolai Gerrard (NKOM) <hr/> 10:25-10:35 - 3.2.1 RX1+RX2 at 10 W Power: 10W Contact: Nicolai Gerrard (NKOM) <hr/> 10:45-11:00 - 3.2.2 RX1+RX2 at 10 W with initial jamming Power: 10W Contact: Nicolai Gerrard (NKOM)		

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	<div>11:10-11:25 - 3.2.3 RX1+RX2 at 10 W at different times Power: 10W Contact: Nicolai Gerrard (NKOM)</div> <div>11:35-11:45 - 3.2.4 RX1+RX2 at 10 W alternating Power: 10W Contact: Nicolai Gerrard (NKOM)</div> <div>11:55-12:15 - 3.2.5 RX1+RX2 at 10 W alternating with breaks Power: 10W Contact: Nicolai Gerrard (NKOM)</div>		
12:00	<div>12:25-12:57 - 3.3.1 RX1 with ramping power Power: 10W Contact: Nicolai Gerrard (NKOM)</div>		
13:00	<div>13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)</div>		
14:00	<div>14:00-14:32 - 3.3.2 RX1 at constant 5 W and RX2 with ramping power Power: 10W Contact: Nicolai Gerrard (NKOM)</div> <div>14:45-14:55 - 3.2.3 RX1+RX2 at 10 W at different times Power: 10W Contact: Nicolai Gerrard (NKOM)</div>		

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<div><div>15:00-15:10 - 3.2.4 RX1+RX2 at 10 W alternating Power: 10W Contact: Nicolai Gerrard (NKOM)</div><div>15:15-15:35 - 3.2.5 RX1+RX2 at 10 W alternating with breaks Power: 10W Contact: Nicolai Gerrard (NKOM)</div></div>		
16:00	<div><div>16:00-16:01 - 1.18.4 20 W drift: 1545 to 1620 MHz, with CW and sweep time of 1 minute Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>16:10-16:25 - 1.18.5 20 W drift: 1545 to 1620 MHz, with CW and sweep time of 15 minutes Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>16:35-16:50 - 1.18.7 20 W drift: 1620 to 1545 MHz, with CW and sweep time of 15 minutes Power: 20W Contact: Nicolai Gerrard (NKOM)</div></div>		

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Table 2.1: Tuesday (Continued)

Tuesday 2024-09-10	Bleik(1)	Grunnvatn(2)	Motorcade(3)
17:00	<div><div>17:00-17:01 - 1.18.8 20 W drift: 1545 to 1620 MHz, with BW of 500 kHz and sweep time of 1 minute Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>17:10-17:25 - 1.18.13 20 W drift: 1150 to 1300 MHz, with CW and sweep time of 15 minutes Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>17:35-17:50 - 1.18.15 20 W drift: 1300 to 1150 MHz, with CW and sweep time of 15 minutes Power: 20W Contact: Nicolai Gerrard (NKOM)</div><div>17:59-18:00 - 1.18.16 20 W drift: 1150 to 1300 MHz, with BW of 500 kHz and sweep time of 1 minute Power: 20W Contact: Nicolai Gerrard (NKOM)</div></div>		
18:00	<div>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Contact: Christian Skjetne (NPRA)</div>		
19:00	<div>19:15-22:00 - 1.16.4 200 W PRN: L1, G1, L2, L5 Power: 200W Contact: Nicolai Gerrard (NKOM)</div>		
20:00			
21:00			
22:00			

Wednesday

Location 1 Bleik

Wednesday will be used for position and SBAS spoofing.

Table 3.1: Wednesday

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)
09:00	09:00-09:40 - 2.1.1 Large position and time jump, with power ramp Power: 0.316W Contact: Nicolai Gerrard (NKOM)		
10:00	10:00-10:15 - 2.1.3 Large position and time jump. Galileo E1 only Power: 0.316W Contact: Nicolai Gerrard (NKOM) <hr/> 10:20-10:35 - 2.1.2 Large position and time jump. GPS L1 C/A only Power: 0.316W Contact: Nicolai Gerrard (NKOM) <hr/> 10:40-10:55 - 2.1.4 Large position and time jump. GPS L1 and Galileo E1 only Power: 0.316W Contact: Nicolai Gerrard (NKOM)		

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Table 3.1: Wednesday (Continued)

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
11:00	<div><div>11:25-11:40 - 2.1.9 Simulated driving (route 1). GPS L1 C/A and Galileo E1, with initial jamming Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div>11:45-12:00 - 2.1.10 Simulated driving (route 1), with initial jamming Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div></div>		
12:00	<div><div>12:30-12:40 - 2.8.1 EGNOS with "Do Not Use GPS" commands Power: 1W Contact: Nicolai Gerrard (NKOM)</div><div>12:45-13:00 - 2.8.1 EGNOS with "Do Not Use GPS" commands Power: 1W Contact: Nicolai Gerrard (NKOM)</div></div>		
13:00	<div><div>13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)</div></div>		
14:00	<div><div>14:00-14:15 - 2.3.2 Small position jump with initial and continuous jamming Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div><div>14:30-14:45 - 2.3.3 Small position jump Power: 0.316W Contact: Nicolai Gerrard (NKOM)</div></div>		

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Table 3.1: Wednesday (Continued)

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
15:00	<p>15:00-15:10 - 2.3.4 Simulated driving (route 1). GPS L1 C/A only Power: 0.316W Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p>15:25-15:40 - 2.3.5 Simulated driving (route 1). GPS only Power: 0.316W Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p>15:55-16:05 - 2.3.8 Simulated driving (route 1). Galileo only Power: 0.316W Contact: Nicolai Gerrard (NKOM)</p>		
16:00	<p>16:20-16:35 - 2.3.9 Simulated driving (route 1). Galileo only, with initial and continuous jamming. Power: 0.316W Contact: Nicolai Gerrard (NKOM)</p> <hr/> <p>16:50-17:10 - 2.3.10 Simulated driving (route 1) Power: 0.316W Contact: Nicolai Gerrard (NKOM)</p>		
17:00	<p>17:25-18:00 - 2.3.12 Flying (route 4) - "drone scenario" GPS L1 C/A only Power: 0.316W Contact: Nicolai Gerrard (NKOM)</p>		
18:00	<p>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)</p>		
19:00			

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Table 3.1: Wednesday (Continued)

Wednesday 2024-09-11	Bleik(1)	Grunnvatn(2)	Motorcade(3)
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.

Table 4.1: Thursday

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)
09:00	09:00-09:25 - 2.4.2 Time offset 15 minutes from real time, with power ramp Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> 09:40-09:55 - 2.4.3 Time offset -3 minutes from real time, with power jump Power: 0.0316W Contact: Nicolai Gerrard (NKOM)		
10:00	10:10-10:25 - 2.4.12 Static + Pseudorange error Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> 10:40-10:55 - 2.4.13 Static + Pseudorange error, with initial and continous jamming Power: 0.001W Contact: Nicolai Gerrard (NKOM)		
11:00	11:25-11:40 - 2.5.6 Time offset 15 minutes from real time Power: 0.001W Contact: Nicolai Gerrard (NKOM) <hr/> 11:55-12:10 - 2.5.3 Time offset -3 minutes from real time, with power jump Power: 0.001W Contact: Nicolai Gerrard (NKOM)		

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Table 4.1: Thursday (Continued)

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
12:00	12:25-13:00 - 2.5.25 Static + UTC-parameter nav. data manipulation (adding leap seconds), with initial and continuous jamming Power: 0.001W Contact: Nicolai Gerrard (NKOM)		
13:00	13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)		
14:00	14:00-14:15 - 2.5.5 Time offset 15 minutes from real time. Galileo E1 Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> 14:20-14:35 - 2.5.4 Time offset 15 minutes from real time. GPS L1 C/A Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> 14:40-14:55 - 2.5.6 Time offset 15 minutes from real time Power: 1e-05W Contact: Nicolai Gerrard (NKOM)		
15:00	15:25-15:40 - 2.5.13 Static + Pseudorange error. GPS L1 and Galileo E1 only Power: 0.001W Contact: Nicolai Gerrard (NKOM) <hr/> 15:45-16:00 - 2.5.15 Static + Pseudorange error Power: 1e-05W Contact: Nicolai Gerrard (NKOM)		

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Table 4.1: Thursday (Continued)

Thursday 2024-09-12	Bleik(1)	Grunnvatn(2)	Motorcade(3)
16:00	<div><div>16:15-16:40 - 2.5.16 Static + Pseudorange error, with initial and continuous jamming Power: 1e-05W Contact: Nicolai Gerrard (NKOM)</div><div>16:55-17:20 - 2.5.26 Static + UTC-parameter nav. data manipulation (removing leap seconds). GPS L1 C/A Power: 1e-05W Contact: Nicolai Gerrard (NKOM)</div></div>		
17:00	<div>17:30-18:00 - 2.5.27 Static + UTC-parameter nav. data manipulation (removing leap seconds) Power: 1e-05W Contact: Nicolai Gerrard (NKOM)</div>		
18:00	<div>18:30-19:00 - 0.0.2 Mandatory afternoon (de)briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)</div>		
19:00	<div>19:00-22:00 - 3.1.3 RX1 at 10 W Power: 10W Contact: Nicolai Gerrard (NKOM)</div>		
20:00			
21:00			
22:00			

Friday

Location 1 Bleik

Friday will be used for time spoofing and testing with invalid ephemerides. Time after lunch will be used for tearing down and packing up equipment.

Table 5.1: Friday

Friday 2024-09-13	Bleik(1)	Grunnvatn(2)	Motorcade(3)
Start time:	08:00	08:00	08:00
08:00	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)	08:00-08:30 - 0.0.1 Mandatory morning briefing Comment: MANDATORY Contact: Christian Skjetne (NPRA)
09:00	09:00-09:25 - 2.7.12 Static + Time manipulation (2 years forwards), with power ramp Power: 0.0316W Contact: Nicolai Gerrard (NKOM) <hr/> 09:55-10:20 - 2.9.6 Static + Nav. data manipulation (invalid ephemerids), with power ramp Power: 0.0316W Contact: Nicolai Gerrard (NKOM)		
10:00	10:30-13:00 - 0.1.1 Grace period Comment: Adhoc tests and repeat of previous tests Contact: Nicolai Gerrard (NKOM)		
11:00			
12:00			
13:00	13:00-14:00 - 0.1.1 Grace period Comment: Lunch Contact: Christian Skjetne (NPRA)		
14:00	14:00-14:30 - 0.0.2 Mandatory afternoon (de)briefing Comment: Summary briefing and closing of event Contact: Christian Skjetne (NPRA)		
15:00			
16:00			

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Table 5.1: Friday (Continued)

Friday 2024-09-13	Bleik(1)	Grunnvatn(2)	Motorcade(3)
17:00			
18:00			
19:00			
20:00			
21:00			
22:00			