

Progress Report No. 1-2002



for

Norwegian National Seismic Network

January 1st to June 30th, 2002.

Supported by

University of Bergen, Faculty of Mathematics and Natural Sciences

and

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Prepared by

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1. Introduction

This progress report, under the project Norwegian National Seismic Network (NNSN), covers the first half of 2002. The purpose is to describe the current technical operation of the stations and the data recorded for the first half of 2002. The costs will be given up to October 1st.

2. Operation

The operational stability for each station is shown in Table 1. The stations have been divided into high priority and low priority stations. The average downtime for all stations during this reporting period is 1,6 %, compared to 8,8 % for 2001. This is within acceptable limits, with respect to the goal of average downtime below 2%.

Table 1a. Downtime in % for the time period January to June 2002 for the high priority stations of the NNSN. Downtime marked with an * is estimated.

Station	Downtime in %
Karmøy (KMY)	2
Odda (ODD1)	1
Blåsjø (BLS)	0
Kongsberg (KONO)	1*
Rundemannen (RUND)	1
Høyanger (HYA)	0
Sulen (SUE)	0
Molde (MOL)	0
Florø (FOO)	0
Namsos (NSS)	6*
Mo i Rana (MOR8)	10*
Lofoten (LOF)	0
Tromsø (TRO)	3
Kautokeino (KTK)	0
Jan Mayen BB (JMI)	0
Kings Bay (KBS)	2*
Average	1,6

Table 1b. Downtime in % for the time period January to June 2002 for the low priority stations of the NNSN.

Oslo (OSL)	1
Stavanger (STAV)	2
Espegrend (EGD)	1
Askøy (ASK)	1
Bergen (BER)	1
Dombås (DOMB)	6
Bjørnøya (BJO)	3
Jan Mayen SP (JMI)	0
Jan Mayen (JNE)	0
Jan Mayen (JNW)	0
Average	1,5

Table 1c. The average downtime for all stations.

Total average	1,6
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3. Field stations and technical service

The technical changes for each seismic station are listed below. It is noted if these changes are not related to a visit from the technical staff at the University of Bergen. When a station stops working, tests are made to locate the problem. Sometimes the reason cannot be found and the cause of the problem will be marked as unknown.

Bjørnøya (BJO1)

No visit or technical changes.

Blåsjø (BLS)

No visit or technical changes.

Florø (FOO)

No visit or technical changes.

Høyanger (HYA)

No visit or technical changes.

Karmøy (KMY).

07.01.02. The PC was restarted by the local operator. The station was down for

3.5 days.

24.04.02 The station was down for 2.5 days due to power failure by the local power company.

Lofoten (LOF)

No visit or technical changes.

Mo i Rana (MOR8)

22-23.01.02 Visit

The station was down for 11 days due to current leakage in 220V power supply connected to digitiser and sensor.

The 220V was disconnected and a new power supply 12-30V was installed.

16.04.02. The station was down for 1 day due to power failure by the local power company.

19-21.06.02 Visit.

From 21.05 the recording became unstable. One reason might be drop in DC voltage to the digitiser (ED24) due to a long cable (300m). 1 sec. spikes were observed on all channels.

After several tests to remove the spikes, a new digitiser (ED24) was installed. The signals were improved, but spikes were observed on channel 2 (NS).

Molde (MOL)

No visit or technical changes.

Namsos (NSS)

04-05.02.02 Visit

The spikes have not been eliminated since last report. Started to install new PC and digitiser, no improvement was observed. When disconnecting GPS the spikes disappeared. By installing a new GPS,

the

signal and timing was ok.

Installed a new Guralp Broadband CMG-40T sensor, since the EW channel was hanging in the old sensor.

Odda (ODD1)

03.04.02 Installed a new version (8.42) of Seislog.

14.05.02 Visit.

A new digitiser ED24 was installed indoors. The old one was installed in the aluminium box outdoors.

Unfortunately the damping resistors were not reinstalled.

previous

13.06.02. Damping resistors installed by the local operator. During the

week, the output from Z channel in the digitiser was -300 000 counts.

Some tests confirmed there was a malfunction.

20.06.02. A new digitiser installed by the local operator. The old one was returned to Bergen.

Tromsø (TRO)

for

18.02.02. The PC was restarted by the local operator. The station was down

4 days.

for

22.06.02. The PC was restarted by the local operator. The station was down

1 day.

Sulen (SUE)

No visit or technical changes.

Kautokeino (KTK)

No visit or technical changes.

Stavanger (STAV)

07-13.03.02 Software problems. Unstable operation.

14.03.02 Installed a new version (8.42) of Seislog.

WNN network: stations: Bergen (BER), Espegrend (EGD), Ask (ASK)

11.03.02. A new PC with windows version of Seislog and a new Nanometrics digitiser was installed, at local recording site at Bergen.

Rundemanen (RUND)

No visit or technical changes.

Trondheim (TRON)

08-23.01.02 The PC was unstable, reason unknown

08.02.02 The PC was restarted by the local operator. The station was down for 1.5 days.

12.02.02 A new PC was installed by the local operator.

18.02.02 The PC was restarted by the local operator. The station was down for 1 day.

02.03.02 The PC was restarted by the local operator. The station was down for 1 day.

Oslo (OSL)

25.02.02 The station code was changed from OSLO to OSL.

08.03.02 The PC was restarted by the local operator. The station was down for 1 day.

Dombås (DOMB)

13.05.02. Visit: Installation of a new station.

PC QNX-system with Seislog vers. 8.42.

Garmin GPS Clock HVS-35

Digitiser model no. TDT3C24.

1 SS Ranger seismometer

Telecommander.

The equipment was installed in the same building as the Magnetic Station.

11.06.02. The PC was restarted by the local operator. The station was down

for

8,5 days.

Jan Mayen (JMI)

No visit or technical changes.

Kongsberg (KONO)
No visit

Kings Bay (KBS)
No visit

4. Data

The data recorded by the seismic stations were collected and monthly bulletins were prepared and distributed. Figure 1 shows earthquakes and explosions recorded during the first half of 2002 and located within the shown area. Most events are recorded by NNSN stations but also some data from NORSTAR and the British Geological Survey (BGS) are included.

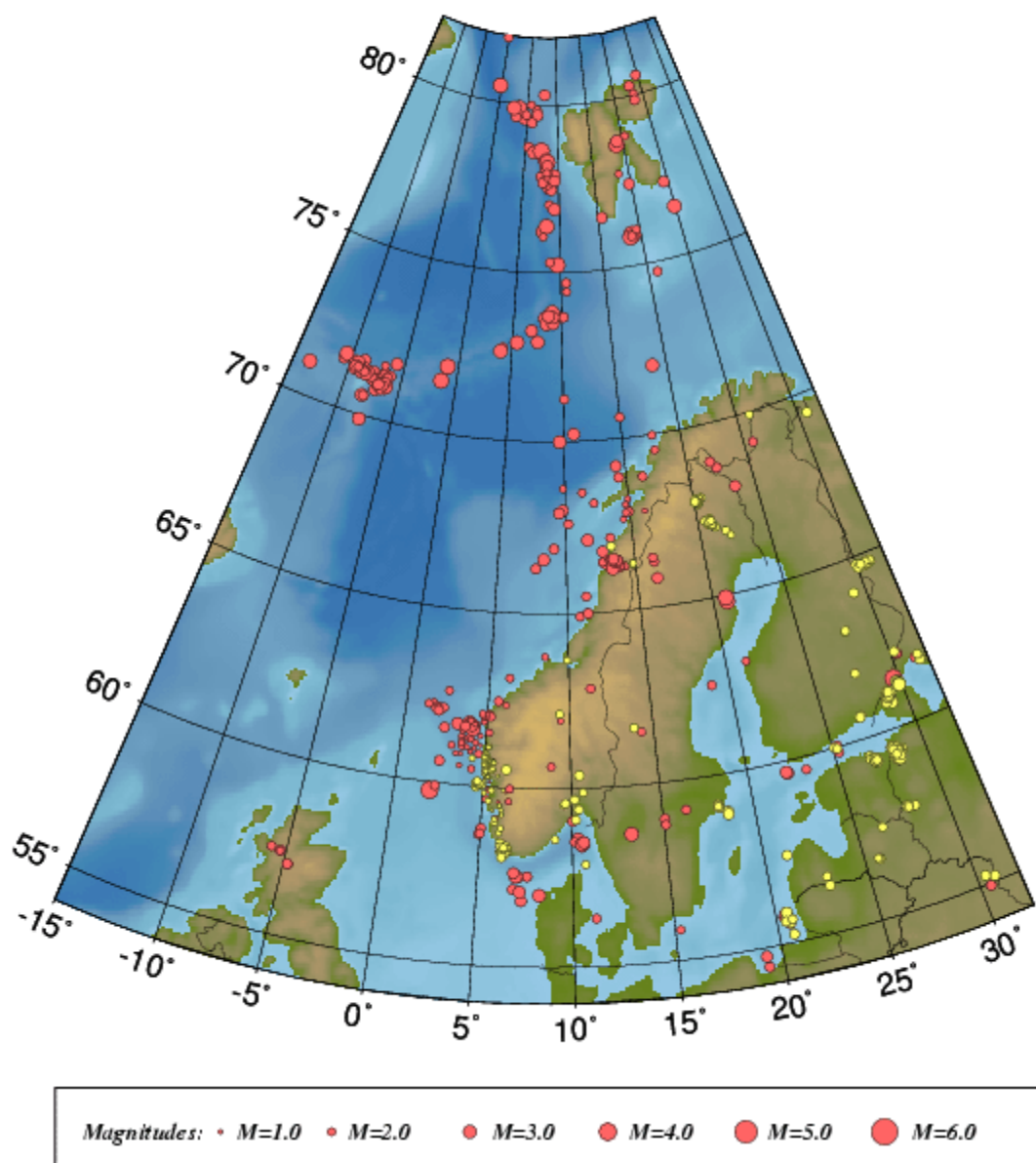


Figure 1. Epicentre distribution of located events recorded during January – June 2002.
Earthquakes are plotted in red and presumed and known explosions in yellow.