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Data Retrieval System

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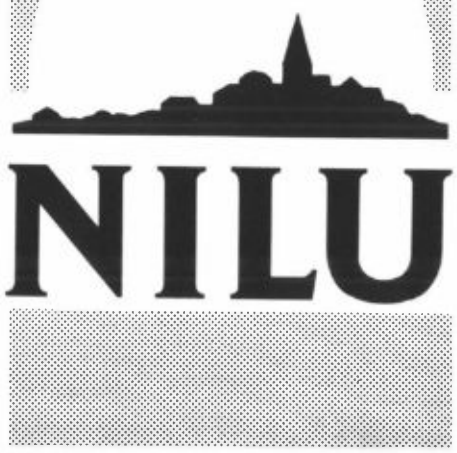

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Contents

Page

Data Retrieval System

1. CONTAINER DATA COLLECTION SYSTEM

The data collection system is controlled by a timer programme CONTRUN. This timer starts a sequence every 5 minutes (xx00, xx05, xx10 etc.) for collection of data from the FOX and from meteorological sensors mounted on the container.

Data from the gammaspectrometer on the container are collected once an hour at xx33. The minute time 33 is chosen to avoid coincidence with the 5 minute data collection.

The timer programme is again a part of a batch sequence BATCONT.BAT (Appendix A). Output from the timer with errorlevel 0 starts the 5 minute cycle (:ARUN) and errorlevel 1 starts the 1 hour cycle (:BRUN).

All programmes receive their instructions from a file AUTOBAT.RUN. To be able to operate different versions of AUTOBAT.RUN a set of *.RUN files: CONTBAT.RUN, CONTBAT2.RUN, CONTBAT3.RUN and CONTBAT4.RUN (Appendix B, C, D, E) is copied to AUTOBAT.RUN before the respective programme is to be started.

The data are stored in *.SYM files as follows:

- MCONTAIN.SYM contains 5 minutes data from the Aanderaa meteorological system
- GCONTAIN.SYM contains 5 minutes data from the GILL meteorological system
- BCONTAIN.SYM contains 5 minutes data from the FOX.
- ACONTAIN.SYM is a spare 5 minutes 4 channel analogue data system.
- CONTAINE.SYM contains 60 minutes radiation data from the gamma spectrometer.

A description of the different programmes in BATCONT.BAT follows:

1.1 Programme RESET 2

This is a help programme that closes COMPORT no. 2. The use of the programme is to be sure that the COMPORT is closed before next programme starts. If a programme for some reason is aborting, the next programme cannot work properly if the COMPORT is not closed.

1.2 Programme CONTLOGG

The programme collects data from the datalogger by COMPORT No. 2.

Instructions for the operation is read from AUTOBAT.RUN between line -23 and -24. These instructions refer to the line number, i.e. station number, in the file TELEFON.SYM (Appendix F).

The programme CONTLOGG performs a reading of data from the datalogger from date and time given in SKJOTLOG.SYM (Appendix G) for the given station to date and time up to the reading time. The result is presented in a corresponding file KLxxxx.OUT when xxxx is the station number.

1.3 Programme COMPSKJO

This programme adds KLxxxx.OUT files to the corresponding storage file for a station. Station number is a four digit xxxx in the KL-file. The storage file has the corresponding name of the station as listed in the file TELEFON.SYM. Example KL 1001.OUT is corresponding with the storage file MCONTAIN.SYM. The first line in the KLxxxx.OUT file is always the same as the last line in the storage file. If not, the programme will refuse to make the addition. When a successful addition is performed, SKJOTLOG.SYM is adjusted for the respective station.

Instructions for controlling the COMPSKJO programme is given in AUTOBAT.RUN between line -25 and -26. The programme can make ajouring of as many storage files as wanted in sequence. The only instruction needed from AUTOBAT.RUN is a list of KLxxxx.OUT files.

1.4 Programme MEMCONV

This programme is converting the storage files "STATION".SYM to a number of corresponding files with only one parameter in each. These files is named xxxxyyyy. Ø5M. Station number is xxxx, and yyyy is the name of the parameter using 1-4 letters.

Instructions to the programme is given in AUTOBAT.RUN between line -34 and -35. Here is given a list of storage files which is going to be converted. In addition a parameter list is given for each station in the file ENSILOGG.INP.

1.5 Programme TOGCONV

This programme is creating input files to the display programme. It does the same as MEMCONV except that it outputs only the last line from the *.SYM files. Station number is added with 1000 to mark the difference from the output of MEMCONV.

1.6 Programme CONT1Ø1

This programme collects data from a gamma spectrometer Canberra model S10 Plus. The spectrometer is connected to COMPORT no. 1 and it is read by the programme every 60 minutes. The programme starts by stopping the counting on the spectrometer. Then the data for 1024 channels are read before a clear data order and a start order is given.

The data is stored in the storage file CONTAINE.SYM as a new line added to the previous lines. A complete spectrum is also stored in the directory C:\MCA\ in binary from suited to a Canberra display programme MCAE.

Instructions to the CONT1Ø1 programme is given in AUTOBAT.RUN between line -29 and -30. Here is the order given for collection of data from station number to station number.

1.7 Programme CONTSTAT

Programme CONTSTAT uses the storage file CONTAINE.SYM with the gammaspectrum data as input. The programme makes a statistical survey over the total gamma radiation for "yesterday" values, "today's" values and last 10 days mean values. The data is written in the file CONT.RAD.

APPENDIX A

BATCONT.BAT

```
CD\RING
:START
type skjotlog.sym
type cont.rad
CONTRUN
IF ERRORLEVEL 1 GOTO BRUN
IF ERRORLEVEL 0 GOTO ARUN
:ARUN
copy contbat.run autobat.run
reset 2
contlogg
copy contbat2.run autobat.run
reset 2
contlogg
reset 2
copy contbat3.run autobat.run
contlogg
reset 2
copy contbat4.run autobat.run
contlogg
reset 2
compskjo
memconv
togconv
GOTO START
:BRUN
copy contbat.run autobat.run
reset 2
conts101
reset 2
contstat
reset 2
reset 2
GOTO START
```

APPENDIX B

CONTBAT.RUN

```
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15
-16
-17
-18
-19
-20
-21
-22
-23
2
2
0
-24
-25
KL1001.OUT
KL1002.OUT
KL1003.OUT
KL1004.OUT
-26
-27
-28
-29
1
1
-30
-31
-32
-33
-34
ACONTAIN.SYM
MCONTAIN.SYM
GCONTAIN.SYM
BCONTAIN.SYM
-35
-36
```

APPENDIX C

CONTBAT2.RUN

```
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15
-16
-17
-18
-19
-20
-21
-22
-23
3
3
0
-24
-25
KL1001.OUT
KL1002.OUT
KL1003.OUT
KL1004.OUT
-26
-27
-28
-29
1
1
-30
-31
-32
-33
-34
ACONTAIN.SYM
BCONTAIN.SYM
GCONTAIN.SYM
MCONTAIN.SYM
-35
-36
```

APPENDIX D

CONTBAT3.RUN

```
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15
-16
-17
-18
-19
-20
-21
-22
-23
4
4
0
-24
-25
KL1001.OUT
KL1002.OUT
KL1003.OUT
KL1004.OUT
-26
-27
-28
-29
1
1
-30
-31
-32
-33
-34
MCONTAIN.SYM
BCONTAIN.SYM
GCONTAIN.SYM
ACONTAIN.SYM
-35
-36
```

APPENDIX E

CONTBAT4.RUN

```
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
-11
-12
-13
-14
-15
-16
-17
-18
-19
-20
-21
-22
-23
5
5
0
-24
-25
KL1001.OUT
KL1002.OUT
KL1003.OUT
KL1004.OUT
-26
-27
-28
-29
1
1

-30
-31
-32
-33
-34
MCONTAIN.SYM
GCONTAIN.SYM
BCONTAIN.SYM
ACONTAIN.SYM
-35
MCONTAIN.SYM
GCONTAIN.SYM
BCONTAIN.SYM
ACONTAIN.SYM
-36
```

APPENDIX F

TELEFON.SYM

```
1000 CONTAINER      00000000 000 4 0 35 0
1001 MCONTAINER     00000000 000 3 0 10 0 1 0 21 1 1
1002 GCONTAINER     00000000 000 0 0 7 0 1 0 22 1 1
1003 BCONTAINER     00000000 000 0 0 7 0 1 0 23 1 1
1004 ACONTAINER     00000000 000 0 0 7 0 1 0 19 1 1
0000
```

APPENDIX G

SKJOTLOG.SYM

```
1000  950719  0130    1.0  247028
1001  951213  1200     .0  000000
1002  951213  1300     .0  000000
1003  951205  0855     .0  000000
1004  951213  1350     .0  000000
```

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ABSTRACT

Description of a Data Retrieval System for collecting data from a datalogger and controlling a gamma spectrometer.

NORWEGIAN TITLE

Datainnsamlingssystem

KEYWORDS		
Data programme	Data retrieval	Datalogger

ABSTRACT (in Norwegian)

Beskrivelse av datainnsamlingssystem for innhøsting av data fra en datalogger og kontroll av gammaspektrometer.

** Classification*

- *A Unclassified (can be ordered from NILU)*
- *B Restricted distribution*
- *C Classified (not to be distributed)*