KAM97

Kamchatka 1997 Deployment:
Karymsky volcano & Kliuchevskoi/Bezymyanni

Jonathan M. Lees
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PASSCAL Data Report 01-002

IRIS DATA MANAGEMENT SYSTEM

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March 20, 2001

Jim Fowler
IRIS PASSCAL Instrument Center
100 East Road
Tech Industrial Park
Socorro, NM 87802

Dear Jim,

Enclosed is a TAR tape with an assembled data set from 1997. I did these deployments as tests in Kamchatka prior to our main deployment in 1998-1999. However, we recorded some pretty amazing data at the exploding Karymsky volcano and at the great Kliuchevskoi volcano in the north. The tar tape is written with the command:

tar cvf /dev/rst12 KAM97.notes KAM97.nc Kar97 Kliu97

where KAM97.notes KAM97.nc are ascii text files (attached below) and Kar97 Kliu97 are data directories described in KAM97.notes. There is about 3.5 Gb of data on this tape. See attached record of the du command.

KAM97.notes includes a description of the deployment and KAM97.nc is a network configuration file in PDB format. Since I did not archive this data using refdump we only have the data in PASSCAL segy format. I am including the log files that I have available.

Please inform me if there are any problems with this assembled data set. Also can you tell me when it is finally archived at the DMC so I can tell others who ask for the data where to get it.

Sincerely,

Jonathan Lees
Associate Professor

KAMCHATKA 1997 -   VOLCANO DEPLOYMENT
PASSCAL SEKS EXPERIMENT
ASSEMBLED DATA

To determine the amount of data on the Tar tape of the
Kamchatka97 data, I executed the following du command:

```
du -k -s KAM97.notes KAM97.nc Kliu97 Kar97

3       KAM97.notes
2       KAM97.nc
566242  Kliu97
2872225 Kar97
```

So there is about .5 Gb data in the kliuchevskoi deployment
and about 3 Gb in the Karymsky deployment

Tar file created with command:

```
tar cvf /dev/rst12 KAM97.notes KAM97.nc Kar97 Kliu97
```

==========

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KAMCHATKA 1997 -   VOLCANO DEPLOYMENT
PASSCAL SEKS EXPERIMENT
ASSEMBLED DATA

KAMCHATKA 1997 PASSCAL DEPLOYMENT

The data collected in Kamchatka 1997 included
2 deployments: one at Karymsky volcano from
August 13 through August 22
(08:13:1997 to 08:22:1997) and the other from
Kliuchevskoi/Bezymyanni on
August 29 through Sept 1, 1997.

Data is stored in SUN PASSCAL SEGY format,
produced by ref2segy in the field.
Data was recorded in Continuous mode.
Timing Corrections were not applied.

**********FILE STRUCTURE**********
The Karymsky data is stored in
****
Kar97/
in 7 directories, sorted by station:
kar1 kar2 kar3 kar4 kar5 kar6 kar7

with Log files:

97:225:11:01.7099.log 97:229:09:36.0764.log 97:235:22:58.0764.log
97:226:08:22.0764.log 97:231:10:22.0764.log 97:235:23:35.7111.log
97:227:21:04.0764.log 97:231:10:32.0764.log 97:272:14:15.7099.err
97:227:21:11.0764.log 97:234:07:56.7111.log 97:272:14:15.7099.log

****
Kliu97/
BZY/   APA/   ZLY/
97:249:00:29.7111.err
97:248:23:39.0764.log
97:249:00:29.7111.log
****
****
STATION LOCATIONS

derived from the log files:

KAR1 54.035529 159.451052 0.879300
KAR2 54.038888 159.428454 0.937500
KAR3 54.044758 159.420979 0.907900
KAR4 54.055351 159.416846 0.879100
KAR5 54.065228 159.431102 0.867800
KAR6 54.067352 159.457626 0.846200
KAR7 54.052671 159.458661 0.953100

Estimated Coordinates of Karymsky's Exploding Vent:
VENT 54.047955 159.441101 -1.460

The Karymsky data is stored by station,
KAR1 to KAR7. Since only three stations were
available, station KAR1 remained fixed while
the other two were leap-frogged around the volcano
alternating deployments.
At Station KAR1 we deployed an infrasonic sensor provided
by Maurizio Ripepe to record explosions from the vent
on channel 1.
We do not have calibration information from this sensor.

Stations KAR2-KAR7 only had three componenets recorded
each on channels 1-3.

Kliuchevskoi/Bezymyanni

STATION LOCATION (from log files)

BZY 55.93964 160.6941   1.161621
ZLY 56.01689 160.8032   1.06754
APA 55.99532 160.8408   0.7767317

Station APA was set up initially, but it died.
Station ZLY and BZY ran the length of the
deployment. Station BZY had an infrasonic microphone
recording on channel 1.

****
Published References for Karymsky:

Johnson, J., J. M. Lees and E. Gordeev (1998): Degassing explosions at
Karymsky Volcano, Kamchatka, Russia, Geophys. Res. Lett. 25(21), 3999-4002.

Johnson, J. B., and J. M. Lees (2000), Plugs and Chugs - Strombolian activity at
Karymsky, Russia, and Sangay, Ecuador, J. Volc. Geotherm. Res. 101, 67-82.

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```
Network Configuration file
for Karymsky deployment 1997

START   1997:225
name    DAS/Chan          sensor/model    chan/dip/azi
KAR1      0764/456        4466/CMG40T     default
KAR1      0764/1          9999/Mic        0/0/0
KAR2      7111/123        4463/CMG40T     default
END

START   1997:227
name    DAS/Chan          sensor/model    chan/dip/azi
KAR1      0764/456        4466/CMG40T     default
KAR1      0764/1          9999/Mic        0/0/0
KAR2      7111/123        4463/CMG40T     default
KAR3      7099/123        4425/CMG40T     default
END

Move station KAR2 to position KAR4

START   1997:228
name    DAS/Chan          sensor/model    chan/dip/azi
KAR1      0764/456        4466/CMG40T     default
KAR1      0764/1          9999/Mic        0/0/0
KAR4      7111/123        4463/CMG40T     default
KAR3      7099/123        4425/CMG40T     default
END

Move station KAR3 to position KAR5


START   1997:229
name    DAS/Chan          sensor/model    chan/dip/azi
KAR1      0764/456        4466/CMG40T     default
KAR1      0764/1          9999/Mic        0/0/0
KAR4      7111/123        4463/CMG40T     default
KAR5      7099/123        4425/CMG40T     default
END

Move station KAR4 to position KAR6


START   1997:230
name    DAS/Chan          sensor/model    chan/dip/azi
KAR1      0764/456        4466/CMG40T     default
KAR1      0764/1          9999/Mic        0/0/0
KAR6      7111/123        4463/CMG40T     default
KAR5      7099/123        4425/CMG40T     default
END

Move station KAR6 to position KAR7; KAR5 dies

START   1997:232
name    DAS/Chan          sensor/model    chan/dip/azi
KAR1      0764/456        4466/CMG40T     default
KAR1      0764/1          9999/Mic        0/0/0
KAR7      7111/123        4463/CMG40T     default
END

Apaxonchitch & Zilionny (Kliuchevskoi) 1997
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```
START    1997:241
APA      7099/123        4425/CMG40T        default
ZLY      7111/123        4463/CMG40T        default
END

ADD station At Bezymyanni with microphone

START    1997:242
ZLY      7111/123        4463/CMG40T        default
BZY      0764/456        4466/CMG40T        default
BZY      0764/1          9999/Mic           0/0/0
END
```