DEPARTMENT OF THE AIR FORCE
Headquarters Air Force Technical Applications Center
Patrick AFB FL 32925-6001

CENTER REGULATION 55-2
Volume IV
13 July 1987

# SPECIFIC STATION REQUIREMENTS FOR BELBASI SEISMIC RESEARCH STATION

This regulation establishes the procedures for station unique operations and analysis. It applies to all active duty Air Force members assigned to the station. Personnel who violate the specific prohibitions and requirements of this regulation may be prosecuted under the Uniform Code of Military Justice (UCMJ).

**Distribution limited to DoD and DoD contractors only; to protect information and technical data which advance the state-of-the-art or describe new technology in an area of significant or potentially significant military application, 1 July 1987. Other requests shall be referred to HQ/DOSB.**

1. Station Designator. The station designator for Belbasi Seismic Research Station is BEAR.

2. Timing Standard. WWV, WWVH, and RTA.

3. Routine Calibrations. Perform SPS and LPS calibrations sequentially, commencing immediately after 0730Z.

4. Edit tape registration numbers are 5900 - 5999.

5. Training Outage. Outage authorized in CENR 55-2, Vol I is granted for Tuesday of each week from 1200Z thru 1500Z.

6. Special Data Reports. Submit special data reports in accordance with CENR 55-2, Vol I. In addition, submit special data reports for all teleseismic signals received with an azimuth between 175 and 205 degrees. Overlays are not available.

7. Summation Channel. Individual vertical array channel(s) may be manually lined out of analog summation(s) (but not from processed data) when cultural or wind noise increases trace background on the individual channel(s) to more than twice the background average of other array channels. Monitor individual channels lined out because of high background to determine when the background has subsided enough to return the channels to summation(s).

8. SPS Develocorder Presentations:

a. Primary Develocorder:

| TRACE | DATA | MAG |
|---|---|---|
| 1 | SZ1BP36008 | 2000K |
| 2 | SZ1BP06008 | 2000K |
| 3 | SZ1BP12008 | 2000K |
| 4 | SZ1BP18008 | 2000K |
| 5 | SZ1BP24008 | 2000K |
| 6 | SZ1BP30008 | 2000K |
| 7 | SZ1BP00099 | 2000K |
| 8 | SZ1BP06513 | 2000K |
| 9 | SZ1BP03320 | 2000K |
| 10 | SZ1ST | 1000K |
| 11 | SZ1I61H | 250K |

Supersedes CENR 55-2, Vol IV, 1 May 1985.
No. of Printed Pages: 7
OPR: DOSB (TSgt C. W. Stephens)
Approved By: Lt Col D. W. Adams)
Editor: SSgt D. M. Pless
Distribution: X

| TRACE | DATA | MAG |
|---|---|---|
| 12 | SN1I61H | 250K |
| 13 | SE1I61H | 250K |

b. Secondary Develocorder.

| TRACE | DATA | MAG |
|---|---|---|
| 1 | SZ1I03 | 500K |
| 2 | SZ1I16 | 500K |
| 3 | SZ1I15 | 500K |
| 4 | SZ1I10 | 500K |
| 5 | SZ18P00099 | 2000K |
| 6 | SZ18P01013 | 2000K |
| 7 | SPARE | - |
| 8 | SZ1ST | 1000K |
| 9 | SZ1I61L | 5K |
| 10 | SZ1I61H | 250K |
| 11 | SZ1I61M | 50K |
| 12 | SN1I61M | 50K |
| 13 | SE1I61M | 50K |

NOTE: Do not include SZ1I01 in SZ1ST.

8. LPS Develocorder Presentation.

| TRACE | DATA | MAG |
|---|---|---|
| 1 | LZ1I61M | 10K |
| 2 | LN1I61M | 10K |
| 3 | LE1I61M | 10K |
| 4 | LZ1I61H | * |
| 5 | LN1I61H | * |
| 6 | LE1I61H | * |
| 7 | LZ1I61L | 1K |

* MAG parameters are listed in CENR 55-2, Vol I.

9. STPR Designator/Channel Identifier Cross Reference.

| STPR DESIGNATOR | CHANNEL ID | INPUT SENSITIVITY |
|---|---|---|
| SPRW01 | SZ1I01 | N/A |
| SPRW02 | SZ1I02 | 4.88* |
| SPRW03 | SZ1I03 | 4.88* |
| SPRW04 | SZ1I04 | 4.88* |
| SPRW05 | SZ1I05 | 4.88* |

| STPR DESIGNATOR | CHANNEL ID | INPUT SENSITIVITY |
|---|---|---|
| SPRW06 | SZ1I06 | 4.88* |
| SPRW07 | SZ1I07 | 4.88* |
| SPRW08 | SZ1I08 | 4.88* |
| SPRW09 | SZ1I09 | 4.88* |
| SPRW10 | SZ1I10 | 4.88* |
| SPRW11 | SZ1I11 | 4.88* |
| SPRW12 | SZ1I12 | 4.88* |
| SPRW13 | SZ1I13 | 4.88* |
| SPRW14 | SZ1I14 | 4.88* |
| SPRW15 | SZ1I15 | 4.88* |
| SPRW16 | SZ1I16 | 4.88* |
| SPRW17 | SZ1I61H | 4.88* |
| SPRW18 | SN1I61H | 4.88* |
| SPRW19 | SE1I61H | 4.88* |
| SPRW20 | SZ1I61L | 0.0976* |
| SPRW21 | SN1I61L | 0.0976* |
| SPRW22 | SE1I61L | 0.0976* |
| SPRW23 | SZ1ST | N/A |
| LPSC1Z | LZ1I61H | 10+ |
| LPSC1N | LN1I61H | 10+ |
| LPSC1E | LE1I61H | 10+ |
| LPSC2Z | LZ1I61L | 1.0+ |
| LPSC2N | LN1I61L | 1.0+ |
| LPSC2E | LE1I61L | 1.0+ |
| SPB360 | SZ1BP36008 | N/A |
| SPB060 | SZ1BP06008 | N/A |
| SPB120 | SZ1BP12008 | N/A |
| SPB180 | SZ1BP18008 | N/A |
| SPB240 | SZ1BP24008 | N/A |
| SPB300 | SZ1BP30008 | N/A |
| SPZ000 | SZ1BP00099 | N/A |
| SPL010 | SZ1BP01013 | N/A |
| SPU033 | SZ1BP03320 | N/A |
| SPL065 | SZ1BP06513 | N/A |

* Volts peak-to-peak for a 100 millimicron equivalent DF as measured at the output of the SCC or KS36000 filter.

+ Volts peak-to-peak for a 10 micron equivalent DF as measured at the output of the KS36000 filter.

NOTE: Do not include SZ1101 and SZ1106 in beam processing. Initialize STPR operational software to delete SZ1101 and SZ1106 (SPRW01 and SPRW06) from processing using the CHNUSE function.

10. STPR Frequency Response Voltages and Normalizing Factors:

a. Short Period:

| FREQUENCY | STPR VOLTAGE UAS | STPR VOLTAGE KS36000 | NORMALIZING FACTOR |
|---|---|---|---|
| *1.0 | 1.708 | 0.854 | 1 |
| 0.5 | 1.708 | 0.854 | 1 |
| 0.8 | 1.708 | 0.854 | 1 |
| 1.5 | 1.708 | 0.854 | 1 |
| 2.0 | 1.708 | 0.854 | 1 |
| 2.5 | 1.708 | 0.854 | 1 |
| 3.0 | 1.708 | 0.854 | 1 |
| 4.0 | 1.708 | 0.854 | 1 |

b. Long Period:

| FREQUENCY | STPR VOLTAGE | NORMALIZING FACTOR |
|---|---|---|
| *0.040 | 0.666 | 1 |
| 0.100 | 4.662 | .1429 |
| 0.067 | 0.666 | 1 |
| 0.050 | 0.666 | 1 |
| 0.033 | 0.666 | 1 |
| 0.025 | 0.666 | 1 |
| 0.020 | 0.666 | 1 |

* Reference Frequency

NOTE: To normalize the frequency response, multiply the RGAIN by the normalizing factor for each frequency. The results can then be compared with the values listed in CENR 55-2, Vol I to determine if the channel is within tolerances.

11. STPR CPU Configuration Parameters:

a. CPU1:

```
CONFIGURATION IDENTIFICATION = Cxxxx-1LS
OPERATE1 IDENTIFICATION = OPERATE1
SITE IDENTIFICATION = 301
LP DATA AND INSTRUMENT TYPE (A,31,36) = A
NUMBER OF SHORT PERIOD ARRAY CHANNELS = 16
NUMBER OF SHORT PERIOD OTHER CHANNELS = 7
NUMBER OF LONG PERIOD ARRAY CHANNELS = 6
NUMBER OF LONG PERIOD OTHER CHANNELS = 0
NUMBER OF SHORT PERIOD PROCESSES = 10
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NUMBER OF LONG PERIOD PROCESSES = 1
SHORT PERIOD FREQUENCY FILTER LENGTH = 99
LONG PERIOD FREQUENCY FILTER LENGTH = 1
AMOUNT OF SHORT PERIOD TIME DELAY REQUIRED = 0
AMOUNT OF LONG PERIOD TIME DELAY REQUIRED = 0
SP COORDINATES:
0,0,0
1,0.0,0.0
2,0.403,0.710
3,0.735,0.247
4,0.38,-0.494
5,-0.546,-0.68
6,-0.878,0.093
7,-0.688,0.71
8,1.731,0.803
9,0.806,-1.452
10,-0.261,-1.421
11,-1.162,-1.544
12,-1.257,-0.68
13,-1.874,-0.958
14,-2.253,-0.587
15,-1.826,0.216
16,-0.878,1.544
LP COORDINATES:
0,0,0
1,0,0,C
2,0,0,C
SP FREQUENCY FILTER PARAMETERS:
0.0001,-.0001,-.0005,-.0011,-.0016,-.0020,-.0020,-.0017,0.0014,-.0012
-.0011,-.0013,-.0014,-.0011,-.0004,0.0007,0.0019,0.0027,0.0030,0.0029
0.0027,0.0028,0.0034,0.0043,0.0050,0.0049,0.0038,0.0017,-.0007,-.0027
-.0037,-.0041,-.0045,-.0065,-.0103,-.0162,-.0221,-.0266,-.0273,-.0254
-.0224,-.0237,-.0315,-.0481,-.0653,-.0731,-.0456,0.0324,0.2035,0.3910
0.2035,0.0324,-,0456,-.0731,-.0653,-.0481,-.0315,-.0237,-.0224,-.0254
-.0273,-.0266,-.0221,-.0162,-.0103,-.0065,-.0045,-.0041,-.0037,-.0027
-.0007,0.0017,0.0038,0.0049,0.0050,0.0043,0.0034,0.0028,0.0027,0.0029
0.0030,0.0027,0.0019,0.0007,-.0004,-.0011,-.0014,-.0013,-.0011,-.0012
-.0014,-.0017,-.0020,-.0020,-.0016,-.0011,-.0005,-.0001,-.0001
LP FREQUENCY FILTER PARAMETERS:
0
0.9999
SP BEAM PARAMETERS:
SPB360,0,000,8.0,B
SPB060,0,060,8.0,B
SPB120,0,120,8.0,B
SPB180,0,180,8.0,B
SPB240,0,240,8.0,B
SPB300,0,300,8.0,B
SPZ000,0,0,0,0,B
SPL065,0,065,13.0,B
SPU033,0,033,20.0,B
SPL010,0,010,13.0,B
LP BEAM PARAMETERS:
LPB36Z,1,000,3.5,B
SP PROCESSING DELAY = 60
LP PROCESSING DELAY = 1
SECONDS PER RECORD = 4
```

b. CPU2:

```
CONFIGURATION IDENTIFICATION = Cxxxx-2LS
OPERATE2 IDENTIFICATION = OPERATE2
SITE IDENTIFICATION = 301
LP DATA AND INSTRUMENT TYPE (A,31,36) = A
NUMBER OF SHORT PERIOD ARRAY CHANNELS = 16
NUMBER OF SHORT PERIOD OTHER CHANNELS = 7
NUMBER OF LONG PERIOD ARRAY CHANNELS = 6
NUMBER OF LONG PERIOD OTHER CHANNELS = 0
NUMBER OF SHORT PERIOD PROCESSES = 10
NUMBER OF LONG PERIOD PROCESSES = 1
NO SP CHANNELS TO BE TRANSMITTED VIA MS.1 = 0
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NO LP CHANNELS TO BE TRANSMITTED VIA HSM = 0
NUMBER OF CONTACT SENSOR MONITORS = 2
NUMBER OF A/D CHANNEL CHANNEL MONITORS = 1
AMOUNT OF SP EDIT TIME DELAY REQUIRED = 0
AMOUNT OF LP EDIT TIME DELAY REQUIRED = 0

SP COORDINATES:
0,0,0
1,0.0,0.0
2,0.403,0.710
3,0.735,0.247
4,0.38,-0.494
5,-0.546,-0.68
6,-0.878,0.093
7,-0.688,0.71
8,1.731,0.803
9,0.806,-1.452
10,-0.261,-1.421
11,-1.162,-1.544
12,-1.257,-0.68
13,-1.874,-0.958
14,-2.253,-0.587
15,-1.826,0.216
16,-0.878,1.544
LP COORDINATES:
0,0,0
1,0,0,C
2,0,0,C
SP CALIBRATION DEFAULT PARAMETERS:
0.833,1.000,25,1,073000,0.9,1.1,2.928,8
1.00,1.708
0.5,1.708
0.8,1.708
1.5,1.708
2.0,1.708
2.5,1.708
3.0,1.708
4.0,1.708
LP CALIBRATION DEFAULT PARAMETERS:
1.333,0.04,10,1,080000,0.9,1.1,3.751,7,3
0.040,0.666
0.100,4.666
0.067,0.666
0.050,0.666
0.033,0.666
0.025,0.666
0.020,0.666
SP CHANNEL CONFIGURATION FOR CALIBRATION SYSTEM:
1,1
1,2
1,3
1,4
1,5
1,6
1,7
1,8
1,9
1,10
1,11
1,12
1,13
1,14
1,15
1,16
1,19
1,19
1,19
1,19
1,19
1,19
1,24

LP CHANNEL CONFIGURATION FOR CALIBRATION SYSTEM:
1,1
1,1
1,1
1,1
1,1
1,1
SP BEAM PARAMETERS:
SPB360,0,000,8.0,B
SPB060,0,060,8.0,B
SPB120,0,120,8.0,B
SPB180,0,180,8.0,B
SPB240,0,240,8.0,B
SPB300,0,300,8.0,B
SPZ000,0,0,0,0,B
SPL065,0,065,13.0,B
SPU033,0,033,20.0,B
SPL010,0,010,13.0,B
LP BEAM PARAMETERS:
LPB36Z,1,000,3.5,B
RELAY INDENTIFIERS AND NORMAL STATUS FOR EACH CONTACT SENSOR MONITOR:
LOWBAT,1
ACFAIC,1
IDENTIFIERS AND LIMITS FOR EACH A/D CHANNEL MONITOR:
LNPOWR,-9.5,9.5
SECONDS PER RECORD = 1

OFFICIAL

BILLY J. BINGHAM, Colonel, USAF
Commander

WALLACE L. HUFFAKER, CMSgt, USAF
Director of Administration

SUMMARY OF CHANGES
Rewrote in active voice. Incorporated IMC 85-1. Added purpose statement. Added limited distribution paragraph. Added summation channel paragraph. Deleted references to specific paragraphs to Vol I. Added configuration parameters. SP array coordinates updated.