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```
          AZM FROM EPIC=  45.1 BONIN ISLANDS REGION

          IP          20 45 15.4 SPZ  -0.0   0.0     0.2    2.0
            ILPBP     20 45 25.4 SPZ   2.5   0.0            -1.5
            EPP       20 48 48.2 SPZ   2.5   0.0             5.3

12 28 65 22  4 51.7   3.2S  77.1W  13.KM 5.5 DELTA =  50.2
          AZM FROM EPIC= 331.8 PERU ECUADOR BORDER

          IP          22 13 50.0 SPZ   1.0   0.0     0.1    0.8
            ILPBP     22 13 54.6 SPZ   1.0   0.0             0.7

12 30 65  2  6 29.0  54.1N 164.3W  13.KM 5.7 DELTA =  41.4
          AZM FROM EPIC=  85.0 UNIMAK ISLANDS REGION

          IP           2 14 17.7 SPZ   1.2   0.0    -0.3    1.4

12 30 65  6 16  4.1  16.8S  71.1W 112.KM 5.7 DELTA =  64.9
          AZM FROM EPIC= 331.5 SOUTHERN PERU

          E(P)         6 26 32.6 SPZ   0.8   0.0     0.0   -0.9
          IP           6 26 33.6 SPZ   0.6   0.0     0.0    0.1
            ELPBP      6 27  0.0 SPZ  -0.0   0.0            -1.4
          E            6 27 11.8 SPZ  -0.0   0.0
          E            6 27 24.4 SPZ  -0.0   0.0

12 30 65 16 33 43.8  58.2N 152.4W  33.KM 5.3 DELTA =  34.9
          AZM FROM EPIC= 100.5 KODIAK ISLAND REGION

          EP          16 40 45.3 SPZ   1.2   0.0    -0.3   11.2
THIS PHASE IS PROBABLY LPBP
          AZM FROM EPIC=  47.8 AROE ISLANDS REGION

          EPKP1        4  3 31.0 SPZ  -0.0   0.0     0.5   -0.8
-------------------------------------------------------------------------------

 1  1 66 13 23 38.8  42.8N  78.2W  10.KM 4.7 DELTA =  20.5
          AZM FROM EPIC= 271.4 NEW YORK

          EP          13 28 16.9 SPZ  -0.0   0.0    -0.1   -2.3
            EPCP      13 32 30.2 SPZ   1.0   0.0            -0.8
          E           13 32 54.7 SPZ  -0.0   0.0
          E           13 34 22.9 SPNS -0.0   0.0

 1  2 66 NO EPICENTER DATA

          DERBY EARTHQUAKE  GOL MAG 2.3

          IP           0 13 49.3 SPZ  -0.0   0.0
          IS          00 13 53.8 SPNS

          A NICE SIZE EARTHQUAKE FOR THIS GAIN.


 1  2 66 11 51 48.0  74.6N  71.2W  33.KM 4.7 DELTA =  38.1
          AZM FROM EPIC= 224.2 BAFFIN BAY

          IP          11 59  5.7 SPZ   0.6   0.0  999.0    0.4
            ELPBP     11 59 13.7 SPZ  -0.0   0.0           -1.8
          ELR         12 12  4.7 SPZ   2.0   0.0    3.5KM/SEC
```

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```
1 28 66 19  7 14.4  51.7N 177.0W  54.KM 5.2 DELTA =  49.4
        AZM FROM EPIC=  73.9 ANDREANOF IS ALEUTIANS

        IP          19 16  2.0 SPZ  -0.0   0.0    -0.2    1.8

1 28 66 22 38 12.2  51.6N 157.0E 107.KM 5.6 DELTA =  64.1
        AZM FROM EPIC=  57.8 NEAR EAST COAST OF KAMCHA
        TKA
        IP          22 48 39.2 SPZ  -0.0   0.0    -0.2    2.1

1 29 66 11 21 52.6  37.0N 107.0W  10.KM-0.0 DELTA =   3.3
        AZM FROM EPIC=  23.8 DULCE, NEW MEXICO
        EP          11 22 51.6 SPZ  -0.0   0.0    -0.0    6.2
        EP          11 22 53.4 SPZ  -0.0   0.0    -0.0    8.0
        EP          11 22 57.1 SPZ  -0.0   0.0    -0.0   11.7
        IS          11 23 35.8 SPNS -0.0   0.0    -0.0   10.4
        ES          11 23 40.5 SPNS -0.0   0.0    -0.0   15.1
        IS          11 23 46.0 SPEW -0.0   0.0    -0.0   20.6

1 29 66 14 40 26.5  16.6N  91.2W   7.KM 5.3 DELTA =  26.3
        AZM FROM EPIC= 335.1 MEXICO GUATEMALA BORDER

        IP          14 46 11.6 SPNS -0.0   0.0     0.1    6.7

1 31 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.7

        E(P)        11 30 35.9 SPZ  -0.0   0.0
        IS          11 31 40.4 SPNS -0.0   0.0

1 31 66 14  1 25.4  24.8S  64.4W  43.KM 5.8 DELTA =  74.9
        AZM FROM EPIC= 328.6 SALTA PROVINCE, ARGENTINA

        IP          14 13  4.3 SPZ  -0.0   0.0    -0.0    0.9

2  1 66 15 19 35.0  16.2N  96.4W  65.KM 4.4 DELTA =  24.9
        AZM FROM EPIC= 343.7 OAXACA,MEXICO

        IP          15 24 55.2 SPZ  -0.0   0.0     0.1    1.4

2  2 66  5 34  1.8  17.8S 173.2W  33.KM 5.2 DELTA =  85.4
        AZM FROM EPIC=  45.6 TONGA ISLANDS

        IP           5 46 38.4 SPZ  -0.0   0.0     0.1    1.3
          EPCP       5 46 41.5 SPZ  -0.0   0.0             1.0
          ELPBP      5 46 50.2 SPZ  -0.0   0.0             1.3
        ELSBP        5 46 56.0 SPZ  -0.0   0.0     0.1   18.9
        E            5 47  6.9 SPZ  -0.0   0.0
        E            5 47 13.0 SPZ  -0.0   0.0

2  2 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.5

        IS          20  4 31.1 SPNS -0.0   0.0

2  2 66 NO EPICENTER DATA
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```
          IS          15 27 40.4 SPZ  -0.0   0.0
          E           15 27 59.0 SPNS -0.0   0.0

1 27 66   7 48 29.0   36.9N 106.9W    5.KM-0.0 DELTA =    3.4
          AZM FROM EPIC=  21.9 DULCE, NEW MEXICO

          E(P)         7 49 23.3 SPZ  -0.0   0.0    -0.0    0.1
          EP           7 49 28.5 SPZ  -0.0   0.0    -0.0    5.3
          EP           7 49 33.8 SPZ  -0.0   0.0    -0.0   10.6
          ES           7 49 13.8 SPNS -0.0   0.0    -0.0  -50.3

1 27 66 NO EPICENTER DATA
          DULCE NEW MEXICO DOUBLE EVENT

          EP           7 49 49.2 SPZ  -0.0   0.0
          IS           7 50 29.4 SPEW -0.0   0.0
          ES           7 50 33.0 SPEW -0.0   0.0

1 27 66   9 29  1.0   36.9N 107.2W    5.KM-0.0 DELTA =    3.5
          AZM FROM EPIC=  25.4 DULCE, NEW MEXICO

          EP           9 30  3.8 SPZ  -0.0   0.0    -0.0    7.2

1 27 66 19 39  4.5   51.1N 178.1E   41.KM 5.4 DELTA =   52.5
          AZM FROM EPIC=  70.4 RAT ISLANDS, ALEUTIANS

          IP          19 48 16.7 SPZ  -0.0   0.0    -0.2    1.5

1 28 66 NO EPICENTER DATA
          DERBY EARTHQUAKE GOL MAG 1.2

          IS           0  3 42.7 SPNS -0.0   0.0

1 28 66 NO EPICENTER DATA
          DERBY EARTHQUAKE GOL MAG 1.2

          IS           3  9 51.4 SPNS -0.0   0.0

1 28 66   7 59 58.0    2.7N  95.3W   33.KM 5.4 DELTA =   38.2
          AZM FROM EPIC= 347.6 GALAPAGOS ISLANDS REGION

          IP           8  7 18.2 SPZ  -0.0   0.0     0.1    1.6
            ELPBP      8  7 23.4 SPZ  -0.0   0.0            -4.6
            EPP        8  8 53.3 SPZ  -0.0   0.0             5.6

1 28 66   9 27 34.3   17.9S 178.5W  579.KM 5.4 DELTA =   89.1
          AZM FROM EPIC=  47.3 FIJI ISLANDS REGION

          IP           9 39 31.0 SPZ  -0.0   0.0     0.1    1.2
            EPCP       9 39 35.0 SPZ  -0.0   0.0             4.2

1 28 66 NO EPICENTER DATA
          DERBY EARTHQUAKE GOL MAG 1.6

          IS          15 58 31.5 SPNS -0.0   0.0
```

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```
          IP              6 15 14.5 SPZ  -0.0   0.0    -0.0    4.9
          ES              6 15 58.2 SPNS -0.0   0.0    -0.0    7.3
          ES              6 16  2.2 SPZ  -0.0   0.0    -0.0   11.3

1 23 66 11  1  7.8  36.9N 107.2W  10.KM 4.3 DELTA =    3.5
          AZM FROM EPIC=  25.4 DULCE, NEW MEXICO

          E(P)           11  2  1.9 SPZ  -0.0   0.0    -0.0   -1.0
          EP             11  2  6.2 SPZ  -0.0   0.0    -0.0    3.3
          EP             11  2 11.6 SPNS -0.0   0.0    -0.0    8.7
          IS             11  2 50.0 SPNS -0.0   0.0    -0.0    5.4
          ES             11  2 57.5 SPZ  -0.0   0.0    -0.0   12.9
          ELR            11  3 15.0 SPZ  -0.0   0.0     3.0KM/SEC

1 23 66 19 43 19.3  37.0N 107.0W  10.KM 4.4 DELTA =    3.3
          AZM FROM EPIC=  23.8 DULCE, NEW MEXICO

          EP             19 44 19.3 SPZ  -0.0   0.0    -0.0    7.2
          EP             19 44 24.6 SPZ  -0.0   0.0    -0.0   12.5
          ES             19 45  3.1 SPZ  -0.0   0.0    -0.0   11.0

1 23 66 23 48  9.0  36.9N 107.0W  10.KM 4.6 DELTA =    3.4
          AZM FROM EPIC=  23.1 DULCE, NEW MEXICO

          IP             23 49  3.3 SPZ  -0.0   0.0    -0.0    0.2
          EP             23 49  8.7 SPZ  -0.0   0.0    -0.0    5.6
          IS             23 49 52.8 SPEW -0.0   0.0    -0.0    8.7

1 25 66 10 38  6.0  36.9N 107.2W  10.KM 4.0 DELTA =    3.5
          AZM FROM EPIC=  25.4 DULCE, NEW MEXICO

          E(P)           10 38 58.3 SPZ  -0.0   0.0    -0.0   -2.8
          EP             10 39  5.2 SPZ  -0.0   0.0    -0.0    4.1
          EP             10 39  9.1 SPZ  -0.0   0.0    -0.0    8.0
          ES             10 39 37.5 SPEW -0.0   0.0    -0.0   -5.3
          IS             10 39 48.1 SPEW -0.0   0.0    -0.0    5.3
          ES             10 39 58.4 SPEW -0.0   0.0    -0.0   15.6

1 25 66 NO EPICENTER DATA

          DERBY EARTHQUAKE GOL MAG 1.8

          IS             21 45 36.7 SPNS -0.0   0.0

1 25 66 NO EPICENTER DATA

          DERBY EARTHQUAKE GOL MAG 1.8

          IS             23 22  6.8 SPNS -0.0   0.0

1 25 66 NO EPICENTER DATA

          DERBY EARTHQUAKE DOUBLE EVENT GOL MAG 2.1

          IS             23 44 46.8 SPNS -0.0   0.0
          IS             23 44 51.1 SPNS -0.0   0.0

1 26 66 NO EPICENTER DATA
          IP             15 27 13.2 SPZ  -0.0   0.0
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          IP              1 57 15.3 SPZ    1.0   0.0    -0.0     1.6
            EPCP          1 57 19.3 SPZ   -0.0   0.0                0.6

1 20 66 14 46  6.2  53.0N 171.8E  29.KM 5.4 DELTA =  55.4
          AZM FROM EPIC=  67.8 NEAR ISLANDS ALEUTIAN ISL
          ANDS
          IP              14 55 41.7 SPZ   -0.0   0.0    -0.3     1.6
            ILPBP         14 55 49.6 SPZ   -0.0   0.0                -1.0

1 21 66 18 20 24.4   5.6N  77.6W  14.KM 4.7 DELTA =  42.3
          AZM FROM EPIC= 328.0 NEAR WEST COAST OF COLUMB
          IA
          IP              18 28 21.9 SPZ   -0.0   0.0     0.1     2.1

1 22 66  7 36 49.3  17.4N  94.1W 139.KM 4.9 DELTA =  24.5
          AZM FROM EPIC= 339.0 CHIAPAS, MEXICO

          IP              7 41 59.1 SPZ    0.5   0.0     0.1     2.0
            ELPBP         7 42 30.6 SPZ    1.4   0.0                2.9
            EPP           7 42 43.3 SPNS  -0.0   0.0                3.4
          E               7 44  3.3 SPZ   -0.0   0.0

1 22 66  7 47 44.8  18.8N 101.2W 115.KM 4.1 DELTA =  21.4
          AZM FROM EPIC= 351.4 GUERRERO, MEXICO

          IP              7 52 25.6 SPZ   -0.0   0.0     0.1     0.8
            ELPBP         7 52 41.2 SPZ   -0.0   0.0                -7.6

1 22 66 11  1  5.3  17.9S 178.5W 598.KM 5.3 DELTA =  89.1
          AZM FROM EPIC=  47.3 FIJI ISLANDS REGION

          EP              11 13  0.4 SPZ   -0.0   0.0     0.1     1.3
            EPCP          11 13  4.6 SPZ   -0.0   0.0                4.5

1 22 66 14 27  7.9  56.0N 153.7W  33.KM 5.8 DELTA =  35.3
          AZM FROM EPIC=  96.1 SOUTH OF ALASKA

          IP              14 34  2.5 SPZ   -0.0   0.0    -0.3     1.0

1 23 66  0 57 22.0  16.3N  94.9W  32.KM 4.6 DELTA =  25.3
          AZM FROM EPIC= 341.1 OAXACA, MEXICO

          IP               1  3  0.2 SPZ   -0.0   0.0     0.1    13.1

THIS PHASE IS PROBABLY LPBP

1 23 66  1 56 38.0  37.0N 106.9W  10.KM 5.5 DELTA =   3.3
          AZM FROM EPIC=  22.6 DULCE, NEW MEXICO

          IP              1 57 32.6 SPZ   -0.0   0.0    -0.0     2.2
          EP              1 57 38.5 SPZ   -0.0   0.0    -0.0     8.1

1 23 66  2  8 35.0  37.0N 106.9W  10.KM-0.0 DELTA =   3.3
          AZM FROM EPIC=  22.6 DULCE, NEW MEXICO

          EP              2  9 35.6 SPZ   -0.0   0.0    -0.0     8.2
          IS              2 10 18.3 SPEW  -0.0   0.0    -0.0    11.3

1 23 66  6 14 15.0  36.9N 107.1W  10.KM 4.3 DELTA =   3.4
          AZM FROM EPIC=  24.3 DULCE, NEW MEXICO
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```
          EP          14 19  2.0 SPZ  -0.0   0.0     0.1    0.8

1 11 66 14 16 32.2  33.7N 137.2E  33.KM 5.7 DELTA =  86.7
        AZM FROM EPIC=  43.0 NEAR HONSHU JAPAN

          EP          14 29 15.8 SPZ  -0.0   0.0     0.1    1.9

1 12 66 12 29 29.1  15.3N  94.4W  51.KM 4.7 DELTA =  26.4
        AZM FROM EPIC= 341.0 NEAR OAXACA MEXICO

          IP          12 35  4.5 SPZ   0.6   0.0     0.1    1.9
            IPP       12 35 43.3 SPZ   1.0   0.0             -3.6

1 13 66 10 30 51.1  19.1N  64.7W  41.KM 5.0 DELTA =  40.5
        AZM FROM EPIC= 309.8 VIRGIN IS

          IP          10 38 29.1 SPZ   1.2   0.0     0.1    1.1
            IPCP      10 40 32.0 SPZ   1.3   0.0             1.6

1 13 66 10 41 11.0  52.9N 172.0E  14.KM 5.6 DELTA =  55.4
        AZM FROM EPIC=  67.8 NEAR ISLS. ALEUTIAN IS

          IP          10 50 47.4 SPZ   1.0   0.0    -0.2    0.8
       ILPBP          10 50 54.9 SPZ   1.2   0.0             3.2

1 15 66 11 16 19.0  19.7N 108.8W  33.KM 4.5 DELTA =  20.5
        AZM FROM EPIC=   7.8 REVILLA GIGEDO ISLANDS RE
        GION
        E(P)        11 20 56.6 SPZ  -0.0   0.0     0.1    0.2
        EP          11 20 59.4 SPZ   2.0   0.0     0.1    3.0
          ELPBP     11 21  6.0 SPZ  -0.0   0.0             -2.2

1 15 66 11 59 58.6  59.5N 144.6W  33.KM 5.1 DELTA =  31.4
        AZM FROM EPIC= 110.7 GULF OF ALASKA

          EP          12  6 18.4 SPZ  -0.0   0.0    -0.3    0.3
            EPP       12  7 19.7 SPZ  -0.0   0.0            -2.7

1 16 66  9 11 50.0  52.9N 171.9E  25.KM 5.7 DELTA =  55.4
        AZM FROM EPIC=  67.8 NEAR ISLANDS ALEUTIAN ISL
        ANDS
        IP           9 21 25.2 SPZ   1.7   0.0    -0.2    0.8
          ILPBP      9 21 32.8 SPZ   1.0   0.0            -0.1

1 16 66 19 44 39.5  54.9N 165.8E  15.KM 5.6 DELTA =  57.9
        AZM FROM EPIC=  65.0 KOMANDORSKY ISLANDS REGIO
        N
        EP          19 54 34.8 SPZ   0.8   0.0    -0.3    1.6
          ELPBP     19 54 39.8 SPZ   0.8   0.0             0.4
        ELSBP       19 54 45.8 SPZ   0.8   0.0    -0.3   12.6

01 18 66 NO EPICENTER DATA

          EP          18 37 13.3 SPZ  -0.0   0.0
          ES          18 37 48.6 SPZ   -0.0   0.0

 1 20 66  1 44 49.5  37.9N 138.0E  33.KM 5.5 DELTA =  83.2
        AZM FROM EPIC=  43.7 NEAR WEST COAST HONSHU JA
        PAN
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1  2 66 NO EPICENTER DATA

        SLOAN PEAK COLORADO QUESTION MARK

        IP          23 30 32.5 SPZ  -0.0   0.0
        IS          23 30 50.7 SPNS -0.0   0.0
        ILR         23 30 57.8 SPZ  -0.0   0.0

1  3 66 NO EPICENTER DATA
        E(P)         6 17 24.4 SPZ  -0.0   0.0
        EP           6 17 26.5 SPZ  -0.0   0.0
        E            6 17 32.9 SPZ  -0.0   0.0

1  3 66 18 16  5.9   4.7N  76.0W 103.KM 4.8 DELTA =  44.0
        AZM FROM EPIC= 327.2 COLUMBIA

        EP          18 24 07.1 SPZ  -0.0   0.0     0.1   2.7

1  4 66 12 48 13.2  15.4S  70.9W 189.KM 5.4 DELTA =  63.7
        AZM FROM EPIC= 331.1 SOUTHERN PERU

        IP          12 58 27.0 SPZ  -0.0   0.0     0.1   0.2
        ILPBP       12 59 14.5 SPZ  -0.0   0.0           2.5

1  5 66 NO EPICENTER DATA

        DERBY EARTHQUAKE  GOL MAG 3.5

        IP           0 22 25.2 SPZ  -0.0   0.0
        IS           0 22 29.0 SPNS -0.0   0.0

1  6 66  4 19 59.3   6.8N  73.1W 168.KM 5.3 DELTA =  43.9
        AZM FROM EPIC= 323.8  NORTHERN COLUMBIA

        IP           4 27 52.2 SPZ   0.7   0.0     0.2   1.6

1  8 66 NO EPICENTER DATA

        DERBY EARTHQUAKE  GOL MAG 1.8

        IS          21 20 46.4 SPNS -0.0   0.0

1  9 66  9 11 30.3  11.5N  62.3W 156.KM 5.1 DELTA =  47.3
        AZM FROM EPIC= 314.6 WINDWARD IS

        IP           9 19 49.7 SPZ  -0.0   0.0     0.2  -0.5
          IPCP       9 21 19.0 SPZ  -0.0   0.0           0.3

1 10 66 11 13  7.5   7.4N  72.4W  87.KM 4.7 DELTA =  43.8
        AZM FROM EPIC= 323.0 NORTHERN COLUMBIA

        IP          11 21  8.0 SPZ  -0.0   0.0     0.2   1.6

1 11 66  9 51 46.0   6.8S 155.2E  69.KM 5.0 DELTA = 101.6
        AZM FROM EPIC=  50.7 SOLOMON IS

        ELR         10 31 56.6 SPZ   2.5   0.0     4.7KM/SEC

1 11 66 14  6 20.5  34.0N 137.0E  37.KM 4.7 DELTA =  86.6
        AZM FROM EPIC=  42.9 NEAR HONSHU JAPAN
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          DERBY EARTHQUAKE GOL MAG 1.4

          IS          23 47 23.1 SPNS -0.0   0.0

2  2 66 NO EPICENTER DATA

          DERBY EARTHQUAKE GOL MAG 2.3

          IP          23 48 13.7 SPZ  -0.0   0.0
          IS          23 48 18.0 SPNS -0.0   0.0

2  3 66   0 47 19.2   21.7S   68.4W 116.KM 5.3 DELTA =   70.4
          AZM FROM EPIC= 330.7 CHILE-BOLIVIA BORDER

          IP           0 58 22.6 SPZ  -0.0   0.0    -0.0    0.3
            ELPBP      0 58 51.9 SPZ  -0.0   0.0            0.2

2  3 66   5 48   6.1    0.1N 123.5E 131.KM 5.9 DELTA = 120.3
          AZM FROM EPIC=  42.0 NORTHERN CLEBES

          EPKP1        6  6 45.2 SPZ  -0.0   0.0     0.6    2.8
            EPP        6  8 17.7 SPZ  -0.0   0.0            4.1

2  4 66   4  2 46.0   15.2S 173.4W  33.KM 5.0 DELTA =  83.7
          AZM FROM EPIC=  45.8 TONGA ISLANDS

          IP           4 15 18.3 SPZ  -0.0   0.0     0.2    5.3

2  5 66   2  1 48.3   39.2N  22.0E  38.KM 5.8 DELTA =  87.6
          AZM FROM EPIC= 322.3 GREECE

          IP           2 14 34.2 SPZ  -0.0   0.0    -0.1    0.5
            EPCP       2 14 37.2 SPZ  -0.0   0.0            1.1
            ELPBP      2 14 44.7 SPNS -0.0   0.0           -1.3

2  5 66 16 16   1.0   50.2N 155.1E  98.KM 5.8 DELTA =  65.9
          AZM FROM EPIC=  56.0 KURILE ISLANDS

          IP          16 26 39.9 SPZ  -0.0   0.0    -0.2    1.5
            ILPBP     16 26 46.4 SPZ  -0.0   0.0           -18.3

2  5 66 23 34 24.7   19.6S   69.6W  87.KM 5.4 DELTA =  68.0
          AZM FROM EPIC= 331.1 NORTHERN CHILE

          IP          23 45 17.2 SPZ  -0.0   0.0     0.0    0.7
            EPCP      23 45 52.7 SPZ  -0.0   0.0            10.5

2  6 66   4 12 26.9   15.9N   93.6W  92.KM 5.2 DELTA =  26.1
          AZM FROM EPIC= 339.3 NEAR COAST OF CHIAPAS, ME
          XICO
          IP           4 17 54.6 SPZ  -0.0   0.0     0.1    0.9
            ILPBP      4 18 16.2 SPZ  -0.0   0.0            1.1
          ELSBP        4 18 28.8 SPZ  -0.0   0.0     0.1   35.1

2  6 66 10 16 18.0   40.2N 127.3W  33.KM 4.8 DELTA =  16.9
          AZM FROM EPIC=  83.5 OFF COAST OF N. CALIFORNI
          A
          E(P)        10 20 17.9 SPZ  -0.0   0.0    -0.0    5.0
            EPP       10 20 27.6 SPZ  -0.0   0.0            0.3
            EPPP      10 20 36.3 SPZ  -0.0   0.0            1.0
```

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```
2  6 66 12  3 53.0  36.9N 107.1W  10.KM-0.0 DELTA =   3.4
       AZM FROM EPIC=  24.3 NEW MEXICO

       E(P)        12  4 51.5 SPZ  -0.0  0.0   -0.0   3.9
       IP          12  4 56.3 SPZ  -0.0  0.0   -0.0   8.7
       IS          12  5 35.0 SPNS -0.0  0.0   -0.0   6.1
       ES          12  5 37.4 SPZ  -0.0  0.0   -0.0   8.5

2  7 66  4 26 13.9  29.8N  69.7E  33.KM 6.0 DELTA = 110.4
       AZM FROM EPIC= 355.9 WEST PAKISTAN

       EPKP1        4 44 49.0 SPZ  -0.0  0.0    0.0   6.5
         IPP        4 45 22.6 SPZ  -0.0  0.0         -0.0
       E            4 45 26.0 SPZ  -0.0  0.0
       E            4 45 31.0 SPZ  -0.0  0.0

2  7 66  7 40 22.0  19.0N 108.3W  33.KM 4.9 DELTA =  21.1
       AZM FROM EPIC=   6.5 REVILLA GIGEDO ISLANDS

       IP           7 45  6.0 SPZ  -0.0  0.0    0.1   0.0
         ELPBP      7 45 12.7 SPZ  -0.0  0.0         -2.3

2  7 66  8 48 35.0  51.2N 130.0W  25.KM 4.5 DELTA =  20.5
       AZM FROM EPIC= 113.4 QUEEN CHARLOTTE ISLANDS

       IP           8 53 13.7 SPZ  -0.0  0.0   -0.1   0.0
       EP           8 53 15.8 SPZ  -0.0  0.0   -0.1   2.1
         ELPBP      8 53 25.7 SPZ  -0.0  0.0         3.2

2  7 66 12 50 29.0  53.3N 162.0W  33.KM 4.6 DELTA =  40.1
       AZM FROM EPIC=  85.8 SOUTH OF ALASKA

       IP          12 58  4.2 SPZ  -0.0  0.0   -0.3   1.6
         ILPBP     12 58 14.2 SPZ  -0.0  0.0         0.2

2  8 66 NO EPICENTER DATA
       IP          17 11 31.3 SPZ  -0.0  0.0

2  9 66  0 55 19.8  14.3N  93.0W  53.KM 5.2 DELTA =  27.8
       AZM FROM EPIC= 339.5 NEAR COAST OF CHIAPAS, ME
       XICO
       IP           1  1  7.0 SPZ  -0.0  0.0    0.1   1.1

2  9 66  6 22 38.1  12.8N  87.5W  33.KM 4.5 DELTA =  31.3
       AZM FROM EPIC= 333.2 NEAR COAST OF NICARAGUA

       IP           6 28 58.4 SPZ  -0.0  0.0    0.1   0.9

2  9 66 NO EPICENTER DATA
       E(P)         7 37 57.9 SPZ  -0.0  0.0
       IP           7 38  2.2 SPZ  -0.0  0.0
       I            7 41 23.4 SPZ  -0.0  0.0

2  9 66 13 57 48.7  35.3S 106.0W  33.KM 5.4 DELTA =  74.9
       AZM FROM EPIC=   0.6 EASTER ISLAND CORDILLERA

       EP          14  9 28.7 SPZ  -0.0  0.0   -0.3   0.8

2  9 66 15 13 30.1  15.2S  75.2W  54.KM 5.5 DELTA =  61.6
```

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```
        AZM FROM EPIC= 334.1 NEAR COAST OF PERU

        IP          15 23 44.6 SPZ  -0.0  0.0     0.1   -0.1
          ILPBP     15 23 55.7 SPZ  -0.0  0.0           -3.7

2 10 66  5 29 13.3  31.1N 141.6E  33.KM 5.3 DELTA =  86.0
        AZM FROM EPIC=  45.1 SOUTH OF HONSHU, JAPAN

        EP           5 41 53.8 SPZ  -0.0  0.0     0.1    2.4
          EPCP       5 41 56.0 SPZ  -0.0  0.0            1.4
          ELPBP      5 42  1.9 SPZ  -0.0  0.0           -2.4

        LOCAL BLASTING OR SONIC BOOM AT 0916


2 10 66 14 21 10.9  20.8N 146.3E  43.KM 6.2 DELTA =  90.1
        AZM FROM EPIC=  46.8 MARIANAS ISLANDS REGION

        IP          14 34  9.0 SPZ  -0.0  0.0     0.3    1.3
          ELPBP     14 34 20.3 SPZ  -0.0  0.0           -1.7
          EPP       14 37 59.0 SPZ  -0.0  0.0           15.7

2 11 66 20 36 25.9  42.1N 111.4W  68.KM 3.3 DELTA =   5.1
        AZM FROM EPIC= 112.2 EASTERN IDAHO

        IP          20 37 55.5 SPZ  -0.0  0.0    -0.0   14.1
        ES          20 38 59.7 SPNS -0.0  0.0    -0.0   20.2

2 13 66  4 57 57.7  49.8N  78.1E   0.KM 6.3 DELTA =  90.5
        AZM FROM EPIC=   2.6 EASTERN KAZAKH SSR

        IP           5 11  3.5 SPZ  -0.0  0.0    -0.3    1.0

2 13 66  6  7 24.1  14.1N  61.4W 192.KM 5.0 DELTA =  46.2
        AZM FROM EPIC= 312.5 WINDWARD ISLANDS

        IP           6 15 32.9 SPZ  -0.0  0.0     0.2    1.4
        E            6 15 51.1 SPZ  -0.0  0.0
          ILPBP      6 16 14.9 SPZ  -0.0  0.0           -0.1

2 15 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 0.9

        IS           6 34 25.4 SPNS -0.0  0.0

2 16 66 11 58 14.2  52.4N 169.6W  47.KM 4.8 DELTA =  44.8
        AZM FROM EPIC=  79.4 ANDREANOF ISLANDS, ALEUTI
        AN ISLANDS
        IP          12  6 25.2 SPZ  -0.0  0.0    -0.3    0.6

2 17 66 NO EPICENTER DATA
        EP           0 28 18.9 SPZ  -0.0  0.0
        IS           0 28 56.9 SPZ  -0.0  0.0

2 17 66 11 48  0.8  32.2S  78.9E  33.KM 6.4 DELTA = 171.5
        AZM FROM EPIC=  22.2 MID INDIAN RISE

        EPKP1       12  8  8.4 SPZ   2.0  0.0    -0.1    2.9
        EPKP2       12  9 28.8 SPZ   2.0  0.0    -0.1    0.3
```

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```
          EPP      12 13 22.6 SPZ    3.5   0.0              2.2
          EPPP     12 17 31.8 SPZ    3.0   0.0              3.4

2 17 66 12 43  1.1  32.2S  79.0E  33.KM 5.7 DELTA = 171.5
          AZM FROM EPIC=  22.7 AMSTERDAM-NATURALISTE RID
          GE
          EPKP1    13  3  8.0 SPZ  -0.0   0.0   -0.1   2.2
          EPKP2    13  4 29.1 SPZ  -0.0   0.0   -0.1   0.5

2 22 66 NO EPICENTER DATA

          DERBY EARTHQUAKE GOL MAG 1.8

          IS          4 30 30.8 SPNS -0.0   0.0

2 22 66  5  2 37.2   5.4S 151.5E  28.KM 6.2 DELTA = 103.6
          AZM FROM EPIC=  50.3 NEW BRITAIN REGION

          IP        05 16 39.0 SPZ  -0.0   0.0  999.0   1.9
          I          5 17  1.4 SPZ  -0.0   0.0
          E          5 20 34.3 SPZ  -0.0   0.0
            EPP      5 21  1.3 SPZ  -0.0   0.0              5.3

2 22 66 NO EPICENTER DATA

          DERBY EARTHQUAKE GOL MAGNITUDE 1.3

          IS         22 17 46.6 SPNS -0.0   0.0

2 24 66  5 40  6.8  52.6N 172.5E  65.KM 5.1 DELTA =  55.2
          AZM FROM EPIC=  67.9 NEAR ISLANDS, ALEUTIAN IS

          IP          5 49 37.2 SPZ  -0.0   0.0   -0.2   2.3

2 24 66 NO EPICENTER DATA
          IP        15 57 23.5 SPZ  -0.0   0.0
          E         15 58  0.2 SPZ  -0.0   0.0

          LOOKS LIKE AEC AT IT AGAIN


2 24 66 NO EPICENTER DATA
          I         21  7 13.3 SPZ  -0.0   0.0

          EAST OF PUEBLO, COLORADO

2 25 66 NO EPICENTER DATA
          EP           0 23  7.1 SPNS -0.0   0.0
          IS           0 23 21.8 SPNS -0.0   0.0

          LEADVILLE, COLORADO


2 25 66  2 45 11.0  37.2S  95.3W  33.KM 5.4 DELTA =  77.4
          AZM FROM EPIC= 352.2 SOUTH PACIFIC

          IP          2 57  5.7 SPZ  -0.0   0.0   -0.3   1.7

2 25 66 22 50 47.1  15.1S 173.2W  33.KM 5.5 DELTA =  83.5
```

```
        AZM FROM EPIC=  45.8 TONGA ISLANDS

        IP            23  3 15.2 SPZ  -0.0   0.0     0.2    2.1

2 26 66  0 33 50.1  52.4N 173.6E  51.KM 5.3 DELTA =  54.6
        AZM FROM EPIC=  68.5 NEAR ISLANDS, ALEUTIANS

        EP             0 43 16.6 SPZ  -0.0   0.0    -0.2    0.9
          ILPBP        0 43 25.4 SPZ  -0.0   0.0             -5.1

2 26 66 11 21 57.0  15.4S 173.4W 127.KM 4.9 DELTA =  83.9
        AZM FROM EPIC=  45.8 TONGA ISLANDS

        EP            11 34 16.4 SPZ  -0.0   0.0     0.2    2.7

2 27 66 16 30 17.9  52.1N 175.1E  52.KM 5.2 DELTA =  53.9
        AZM FROM EPIC=  69.3 RAT ISLANDS,ALEUTIANS

        EP            16 39 39.2 SPZ  -0.0   0.0    -0.2    1.3

2 27 66 18  7 52.0  36.9N 107.0W   5.KM-0.0 DELTA =   3.4
        AZM FROM EPIC=  23.1 NEW MEXICO

        EP            18  8 52.2 SPZ  -0.0   0.0    -0.0    5.5
        EP            18  8 55.5 SPZ  -0.0   0.0    -0.0    8.8
        IS            18  9 35.5 SPNS -0.0   0.0    -0.0    7.6
        ES            18  9 44.4 SPNS -0.0   0.0    -0.0   16.5

2 27 66 20 44 59.0  18.8N 102.6W  94.KM 5.3 DELTA =  21.3
        AZM FROM EPIC= 354.3 MICHOACAN,MEXICO

        EP            20 49 40.0 SPZ  -0.0   0.0     0.1    0.8
        E             20 49 51.9 SPZ  -0.0   0.0
        E             20 49 57.4 SPZ  -0.0   0.0
          EPP         20 50 13.7 SPZ  -0.0   0.0             6.5

2 28 66  2  2 13.6  43.7N 139.6E 225.KM 5.5 DELTA =  78.2
        AZM FROM EPIC=  45.3 EASTERN SEA OF JAPAN

        IP             2 13 50.9 SPZ  -0.0   0.0    -0.2    1.4
          ILPBP        2 14 45.0 SPZ  -0.0   0.0             0.2

2 28 66 21 38 52.4  26.0S  70.4W  67.KM 5.7 DELTA =  73.3
        AZM FROM EPIC= 332.7 NEAR COAST OF NORTHERN CH
        ILE
        IP            21 50 19.0 SPZ  -0.0   0.0    -0.1    0.8

3  2 66 11 51 20.7  52.4N 172.3E  40.KM 5.3 DELTA =  55.4
        AZM FROM EPIC=  67.7 NEAR ISLANDS ALEUTIANS

        IP            12  0 54.1 SPZ  -0.0   0.0    -0.2    1.2

3  3 66  3 25 28.0  48.3N 154.3E  45.KM 5.9 DELTA =  67.4
        AZM FROM EPIC=  54.9 KURILE ISLANDS

        IP             3 36 22.2 SPZ  -0.0   0.0    -0.2    1.5
          ILPBP        3 36 33.1 SPZ  -0.0   0.0            -2.1

3  4 66 NO EPICENTER DATA
        IP            23  4 48.9 SPZ  -0.0   0.0
```

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```
          IS          23  5  3.7 SPEW -0.0   0.0


          OX PARK, WYOMING


3  5 66 20 54 45.7   0.0N  18.0W  33.KM 5.2 DELTA =  87.9
          AZM FROM EPIC= 309.9 NORTH OF ASCENSION ISLAND

          EP          21  7 35.6 SPZ  -0.0   0.0     0.4   2.1

3  6 66  2 15 56.7  31.6N  80.5E  44.KM 6.1 DELTA = 108.6
          AZM FROM EPIC=   4.7 TIBET

            EPP       2 34 44.7 SPZ  -0.0   0.0          -6.2
            EPPP      2 36 53.5 SPZ  -0.0   0.0         -15.6
          EPKKP       2 45 45.7 SPZ  -0.0   0.0

3  6 66 NO EPICENTER DATA
          EP         18 16  0.6 SPZ  -0.0   0.0
          E          18 16  5.0 SPZ  -0.0   0.0
          E          18 16 16.4 SPZ  -0.0   0.0

3  7 66  9 10 54.5  14.5N  93.2W  22.KM 5.3 DELTA =  27.5
          AZM FROM EPIC= 339.7 NEAR COAST OF CHIAPAS

          IP          9 16 43.1 SPZ  -0.0   0.0     0.1   1.4

3  7 66 18  9 43.6  46.1N 114.4W  33.KM 4.7 DELTA =   9.0
          AZM FROM EPIC= 129.1 MONTANA

          IP         18 11 59.4 SPZ  -0.0   0.0    -0.1   4.8
          ES         18 13 38.9 SPNS -0.0   0.0    -0.1   2.6

3  7 66 21 29 17.0  37.2N 114.8E  33.KM 5.8 DELTA =  94.8
          AZM FROM EPIC=  29.7 NORTHEASTERN CHINA

          EP         21 42 39.2 SPZ  -0.0   0.0     0.0   2.7

3  8 66  5 41  4.5   1.9N 126.4E  33.KM 5.9 DELTA = 117.1
          AZM FROM EPIC=  42.6 MOLUCCA PASSAGE

          EPKP1       5 59 50.1 SPZ  -0.0   0.0     0.5   3.4
          IPKKP       6 10 18.6 SPZ  -0.0   0.0

3  8 66 11  2 27.0  54.2N  35.2W  33.KM 4.2 DELTA =  47.8
          AZM FROM EPIC= 282.8 NORTH ATLANTIC

          IP         11 11  2.5 SPZ  -0.0   0.0    -0.3  -0.2
            ILPBP    11 11  8.1 SPZ  -0.0   0.0          -4.3

3  8 66 NO EPICENTER DATA
          EP         20 38 11.3 SPZ  -0.0   0.0

          DULCE QUESTION MARK


3  8 66 20 46 12.0  20.0S  68.9W 122.KM 5.9 DELTA =  68.7
          AZM FROM EPIC= 330.7 CHILE-BOLIVIA BORDER
```

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```
          IP          20 57  5.3 SPZ  -0.0   0.0     0.0    1.2

3  8 66 23 26 40.0   53.4N 170.3E  18.KM 4.7 DELTA =  56.1
        AZM FROM EPIC=  67.0 NEAR ISLANDS ALEUTIANS

          IP          23 36 22.9 SPZ  -0.0   0.0    -0.3    2.4

3  9 66  5  8 30.0   16.5N  95.4W  33.KM 4.5 DELTA =  24.9
        AZM FROM EPIC= 341.8 OAXACA,MEXICO

          IP           5 13 53.1 SPZ  -0.0   0.0     0.1    1.3
          ILPBP        05 14 00.5 SPZ  -0.0   0.0             -1.9

3  9 66 14  2 12.8   27.6N 115.0W  33.KM 5.4 DELTA =  14.8
        AZM FROM EPIC=  30.6 BAJA CALIFORNIA

          EP          14  5 43.6 SPZ  -0.0   0.0    -0.0    2.6

3 10 66  4 26 19.6   32.2N 137.5E 382.KM 5.6 DELTA =  87.6
        AZM FROM EPIC=  43.1 SOUTH OF HONSHU JAPAN

          IP           4 38 27.9 SPZ  -0.0   0.0     0.1    1.3
            ILPBP      4 39 58.5 SPZ  -0.0   0.0             2.0

3 11 66  1 32 31.0   15.4N 104.5W  56.KM 4.9 DELTA =  24.5
        AZM FROM EPIC= 358.6 OFF COAST OF MICHOACAN,ME
        XICO
          EP          1 37 49.1 SPZ  -0.0   0.0     0.1    2.6

3 11 66  1 48 34.8   19.5S  69.2W 115.KM 5.3 DELTA =  68.1
        AZM FROM EPIC= 330.8 NORTHERN CHILE

          IP          1 59 24.6 SPZ  -0.0   0.0     0.0    0.5

3 11 66  9 49 27.0   15.3N 104.5W  33.KM 4.6 DELTA =  24.6
        AZM FROM EPIC= 358.6 OFF COAST OF MICHOACAN, M
        EXICO
          IP          9 54 46.2 SPZ  -0.0   0.0     0.1    0.6

3 11 66 10 24 20.0   21.7N  95.4W  46.KM 4.7 DELTA =  20.1
        AZM FROM EPIC= 337.5 GULF OF MEXICO

          IP          10 28 51.6 SPZ  -0.0   0.0     0.1   -0.8
            ILPBP     10 29  4.1 SPZ  -0.0   0.0             1.7

3 12 66 14 19 38.0   15.0S 173.6W  35.KM 5.1 DELTA =  83.7
        AZM FROM EPIC=  45.9 SAMOA ISLANDS REGION

          IP          14 32  6.2 SPZ  -0.0   0.0     0.2    1.4

3 12 66 14 26 57.6   15.7S 173.0W  33.KM 5.2 DELTA =  83.8
        AZM FROM EPIC=  45.6 TONGA ISLANDS

          IP          14 39 26.8 SPZ  -0.0   0.0     0.2    1.8
            ELPBP     14 39 38.9 SPZ  -0.0   0.0             1.6

3 12 66 16 31 21.8   24.1N 122.6E  63.KM 6.7 DELTA = 102.2
        AZM FROM EPIC=  35.6 TAIWAN

          IP          16 45 12.3 SPZ  -0.0   0.0   999.0    1.3
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```
          EPP        16 49 23.0 SPZ  -0.0   0.0                  -2.9
        ESKS1        16 55 50.0 SPNS -0.0   0.0     0.5          6.0
        ES           16 56 57.5 SPEW -0.0   0.0   999.0         12.5

3 13 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.7

        IS           21 11 21.7 SPNS -0.0   0.0

3 13 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.8

        IS           21 30 38.7 SPNS -0.0   0.0

3 14 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.7

        IS            1 33 52.6 SPNS -0.0   0.0

3 14 66 NO EPICENTER DATA

        DULCE, NEW MEXICO QUESTION MARK

        IP           12 57 17.6 SPZ  -0.0   0.0
        EP           12 57 21.2 SPZ  -0.0   0.0
        EP           12 57 25.2 SPZ  -0.0   0.0
        ES           12 57 59.7 SPEW -0.0   0.0
        ES           12 58  5.1 SPEW -0.0   0.0
        ES           12 58 10.8 SPZ  -0.0   0.0

3 16 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 0.8

        IS           10 48 50.6 SPNS -0.0   0.0

3 16 66 12 13  2.4   21.2S 174.3W   66.KM 5.4 DELTA =  88.5
        AZM FROM EPIC=  45.8 TONGA ISLANDS

        EP           12 25 49.6 SPZ  -0.0   0.0     0.1    0.8

3 17 66 11 47 49.0   41.8N 111.4W   38.KM 4.5 DELTA =   5.0
        AZM FROM EPIC= 109.1 UTAH

        IP           11 49  4.3 SPZ  -0.0   0.0    -0.0    1.0
        EP           11 49 15.6 SPZ  -0.0   0.0    -0.0   12.3
        EP           11 49 21.1 SPZ  -0.0   0.0    -0.0   17.8
        ES           11 50  4.4 SPZ  -0.0   0.0    -0.0    4.0
        ES           11 50 21.3 SPZ  -0.0   0.0    -0.0   20.9
        ES           11 50 41.4 SPZ  -0.0   0.0    -0.0   41.0

3 17 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.0

        IS           12  3 30.2 SPNS -0.0   0.0
```

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```
3 17 66 15 50 32.2  21.1S 179.2W 626.KM 6.2 DELTA =  91.8
        AZM FROM EPIC=  47.6 FIJI ISLANDS

        IP          16  2 36.1 SPZ  -0.0  0.0     0.1    0.4
          ILPBP     16  4 52.9 SPZ  -0.0  0.0             2.2
        ESKS        16 12 11.9 SPNS -0.0  0.0     0.1    2.7
        ES          16 12 49.0 SPNS -0.0  0.0     0.2    6.7
        ELPBS       16 14  6.3 SPZ  -0.0  0.0     0.1  690.6

3 18 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.4

        IS           2 51 13.4 SPNS -0.0  0.0

3 18 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.9  INITIAL P PROBABLY
         MISSED
        IP           6  6 46.4 SPZ  -0.0  0.0
        IS           6  6 48.8 SPNS -0.0  0.0

3 18 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 2.5

        IP          14 18 21.4 SPZ  -0.0  0.0
        IS          14 18 25.6 SPNS -0.0  0.0

3 19 66 NO EPICENTER DATA

        DULCE QUESTION MARK

        EP           2  4 26.3 SPZ  -0.0  0.0
        EP           2  4 31.4 SPZ  -0.0  0.0
        EP           2  4 34.7 SPZ  -0.0  0.0

3 20 66  1 42 49.9   0.6N  30.2E  36.KM 6.1 DELTA = 122.7
        AZM FROM EPIC= 320.2 UGANDA

        EPKP1        2  1 47.3 SPZ  -0.0  0.0     0.6    4.6
        ELPPKP       2  1 57.6 SPZ  -0.0  0.0
          EPP        2  3 19.6 SPZ  -0.0  0.0            -5.2
          EPPP       2  6  7.4 SPZ  -0.0  0.0             5.8

3 20 66 NO EPICENTER DATA
        IP           6  3  3.8 SPZ  -0.0  0.0

3 20 66  7 47 50.2  17.0S 174.3W 117.KM 5.7 DELTA =  85.6
        AZM FROM EPIC=  46.0 TONGA ISLANDS

        IP           8  0 18.0 SPZ  -0.0  0.0     0.2    1.3
          ILPBP      8  0 48.6 SPZ  -0.0  0.0             0.2

3 20 66  9  4 31.8  21.0S 174.5W  95.KM 5.2 DELTA =  88.5
        AZM FROM EPIC=  45.9 TONGA ISLANDS

        IP           9 17 15.7 SPZ  -0.0  0.0     0.1    1.0

3 22 66  8 11 33.7  37.5N 115.0E  11.KM 6.0 DELTA =  94.5
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```
          AZM FROM EPIC=  29.9 NORTHEASTERN CHINA

          IP            8 24 57.7 SPZ  -0.0   0.0     0.0    2.5

3 22 66   8 19 33.8  37.5N 115.1E  33.KM 6.0 DELTA =  94.4
          AZM FROM EPIC=  29.9 NORTHEASTERN CHINA

          IP            8 32 52.9 SPZ  -0.0   0.0     0.0    1.3

3 22 66   8 45 52.0  37.3N 115.1E  40.KM 5.8 DELTA =  94.6
          AZM FROM EPIC=  29.9 NORTHEASTERN CHINA

          IP            08 59 11.5 SPZ  -0.0   0.0     0.0    1.7

3 23 66   0  4 34.7  23.8N 122.8E  51.KM 6.3 DELTA = 102.3
          AZM FROM EPIC=  35.8 TAIWAN REGION

            EPP         0 22 34.6 SPZ  -0.0   0.0            -6.6

3 23 66   5 11 32.5  16.8N  85.9W  33.KM 5.3 DELTA =  28.6
          AZM FROM EPIC= 327.8 CARIBBEAN

          EP            5 17 28.8 SPZ  -0.0   0.0     0.1    1.0
            EPP         5 18 15.6 SPZ  -0.0   0.0            -4.7
          EPCS          5 24 26.6 SPNS -0.0   0.0     0.1  418.8

3 24 66   8 24  4.0   37.0N 107.0W   5.KM-0.0 DELTA =   3.3
          AZM FROM EPIC=  23.8 DULCE NEW MEXICO

          IP            8 25  4.9 SPZ  -0.0   0.0    -0.0    7.5
          EP            8 25  9.9 SPZ  -0.0   0.0    -0.0   12.5
          IS            8 25 47.4 SPNS -0.0   0.0    -0.0    9.8

3 25 66  12 54 55.7  51.5N 179.6W  33.KM 4.9 DELTA =  51.0
          AZM FROM EPIC=  72.1 ANDREANOF ISLANDS ALEUTIA
          NS
          IP           13  3 57.2 SPZ  -0.0   0.0    -0.2    1.1

3 26 66 NO EPICENTER DATA
          EP            8 51 28.7 SPZ  -0.0   0.0

3 26 66 NO EPICENTER DATA
          EP           13 32 21.3 SPZ  -0.0   0.0

3 28 66  15 29 18.4   3.9S  80.9W  19.KM 5.1 DELTA =  49.1
          AZM FROM EPIC= 335.2 PERU ECUADOR BORDER

          IP           15 38  8.5 SPZ  -0.0   0.0     0.1    1.7

3 29 66   2 17 38.5  23.7N 142.1E  79.KM 5.9 DELTA =  90.9
          AZM FROM EPIC=  45.2 VOLCANO ISLANDS REGION

          IP            2 30 35.7 SPZ  -0.0   0.0     0.2    1.0
            ELPBP       2 30 58.3 SPZ  -0.0   0.0             0.9
          E             2 31 26.2 SPZ  -0.0   0.0

3 29 66  10 42 15.1  20.0S 175.3W  95.KM 5.1 DELTA =  88.3
          AZM FROM EPIC=  46.2 TONGA ISLANDS

          IP           10 54 58.6 SPZ  -0.0   0.0     0.1    1.2
```

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```
3 30 66 12 40  1.0  49.8N 129.7W  33.KM 5.3 DELTA =  19.8
       AZM FROM EPIC= 110.3 VANCOUVER ISLAND REGION

       IP          12 44 32.0 SPZ  -0.0  0.0   -0.1   0.8
       EP          12 44 33.5 SPZ  -0.0  0.0   -0.1   2.3

       LOCAL EVENT PROBABLY BLAST 1952 05.3 ON 03 31 66

4  2 66  1 52 38.3  16.5N  97.4W  42.KM 5.6 DELTA =  24.4
       AZM FROM EPIC= 345.3 OAXACA,MEXICO

       IP           1 57 56.0 SPZ  -0.0  0.0    0.1   2.0
       I            1 57 57.9 SPZ  -0.0  0.0

4  2 66 NO EPICENTER DATA

       DERBY EARTHQUAKE GOL MAG 1.5

       IS          15 29 46.3 SPNS -0.0  0.0

4  2 66 NO EPICENTER DATA

       DERBY EARTHQUAKE GOL MAG 1.6

       IS          15 50 17.8 SPNS -0.0  0.0

4  2 66 NO EPICENTER DATA

       DERBY EARTHQUAKE GOL MAG 1.6

       IS          17 15 51.0 SPNS -0.0  0.0

4  2 66 NO EPICENTER DATA

       DERBY EARTHQUAKE GOL MAG 1.6

       IS          19 42 21.1 SPNS -0.0  0.0

4  2 66 NO EPICENTER DATA

       DERBY EARTHQUAKE GOL MAG 1.7

       IS          20 59 57.1 SPNS -0.0  0.0

4  2 66 NO EPICENTER DATA

       DERBY EARTHQUAKE GOL MAG 1.6

       IS          21 17 39.7 SPNS -0.0  0.0

4  3 66  4 43 41.1  36.7N 140.8E  68.KM 5.7 DELTA =  82.5
       AZM FROM EPIC=  45.1 EAST COAST OF HONSHU

       IP           4 55 58.8 SPZ  -0.0  0.0   -0.0   1.2
       ILPBP        4 56 14.6 SPZ  -0.0  0.0          -2.9

4  3 66 16 21 33.5  39.3N 106.4W   0.KM 4.6 DELTA =   1.1
       AZM FROM EPIC=  50.6 DYNAMITE SOUTHWEST LEADVI
       LLE,COLORADO
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```
          IP          16 21 54.8 SPZ  -0.0   0.0    -0.0   -1.5
          IS          16 22 10.5 SPNS -0.0   0.0    -0.0   -2.2

4  3 66 19 44 38.0   30.7N 113.7W   33.KM 4.5 DELTA =  11.6
          AZM FROM EPIC=  34.2 GULF OF CALIFORNIA

          ELR         19 50 55.6 SPZ  -0.0   0.0     3.4KM/SEC

4  4 66 19 50  7.6   13.8N  89.7W 108.KM 5.5 DELTA =  29.5
          AZM FROM EPIC= 335.2 EL SALVADOR

          IP          19 56  4.1 SPZ  -0.0   0.0     0.1    0.6

4  6 66  2 59  1.7   45.8S  96.1E   33.KM 5.8 DELTA = 163.3
          AZM FROM EPIC= 102.7 SOUTHEAST INDIAN RISE

          EPKP1        3 19  4.7 SPZ  -0.0   0.0    -0.4    4.8
          E            3 19 33.5 SPZ  -0.0   0.0

4  6 66 NO EPICENTER DATA
          EP          13 59 31.7 SPZ  -0.0   0.0
          EP          13 59 39.5 SPZ  -0.0   0.0
          ES          14  0  8.8 SPZ  -0.0   0.0

4  7 66  5  2 57.0   15.5S 174.1W   33.KM 4.9 DELTA =  84.4
          AZM FROM EPIC=  46.0 TONGA ISLANDS

          EP          5 15 30.1 SPZ  -0.0   0.0     0.2    2.6

4  7 66  9 42 32.1   26.1N 127.4E   46.KM 5.7 DELTA =  98.0
          AZM FROM EPIC=  38.1 RYUKYU ISLANDS

          EP           9 56  5.0 SPZ  -0.0   0.0     0.3    0.3
          ILPBP        9 56 17.8 SPZ  -0.0   0.0             -1.0
          EPP         10  0  8.8 SPZ  -0.0   0.0             2.4
          ELPBPP      10  0 20.5 SPZ  -0.0   0.0     0.3  255.8

4  7 66 NO EPICENTER DATA
          EP          13 25 32.8 SPZ  -0.0   0.0

4  8 66  1 46 44.9   51.2N 157.7E   47.KM 5.9 DELTA =  64.0
          AZM FROM EPIC=  58.0 EAST COAST OF KAMCHATKA

          IP           1 57 15.9 SPZ  -0.0   0.0    -0.2    0.5
          ELPBP        1 57 29.7 SPZ  -0.0   0.0             0.4
          E            2 26  8.1 SPZ  -0.0   0.0

4  8 66  5 24 44.6   51.2N 157.8E   48.KM 5.3 DELTA =  63.9
          AZM FROM EPIC=  58.1 EAST COAST OF KAMCHATKA

          IP           5 35 16.0 SPZ  -0.0   0.0    -0.2    1.3
          ILPBP        5 35 29.4 SPZ  -0.0   0.0            -0.2

4  8 66  5 52 40.4   52.7N  33.2W   33.KM 5.5 DELTA =  49.3
          AZM FROM EPIC= 285.5 NORTH ATLANTIC OCEAN

          EP           6  1 28.2 SPZ  -0.0   0.0    -0.3    0.3
          ELPBP        6  1 39.1 SPZ  -0.0   0.0             1.0

4  8 66 11 10 21.5   15.0S 175.3W   33.KM 5.2 DELTA =  84.9
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      AZM FROM EPIC=  46.4 SAMOA ISLANDS REGION

      EP          11 22 56.0 SPZ  -0.0   0.0    0.2   1.5

4  8 66 14  7 53.9  26.2S 114.4W  33.KM 5.4 DELTA =  66.4
      AZM FROM EPIC=   7.6 EASTER ISLAND REGION

      EP          14 18 42.7 SPZ  -0.0   0.0   -0.1   1.0

4  8 66 23 46 50.8  52.3N 173.5E  45.KM 4.9 DELTA =  54.7
      AZM FROM EPIC=  68.4 NEAR ISLANDS,ALEUTIAN ISL
      ANDS
      EP          23 56 18.9 SPZ  -0.0   0.0   -0.2   1.1
      ELPBP       23 56 29.3 SPZ  -0.0   0.0          -2.3

4  9 66  2 34 23.0   9.4N  84.2W  40.KM 5.3 DELTA =  35.8
      AZM FROM EPIC= 331.8 COSTA RICA

      E(P)         2 41 19.7 SPZ  -0.0   0.0    0.1  -0.8
      EPP          2 42 50.2 SPZ  -0.0   0.0          8.1

4  9 66  2 42  8.7   9.6N  84.1W  30.KM 5.7 DELTA =  35.7
      AZM FROM EPIC= 331.6 COSTA RICA

      IP           2 49  6.8 SPZ  -0.0   0.0    0.1   0.6
      ELPBP        2 49 12.1 SPZ  -0.0   0.0          -3.5
      E            2 49 39.0 SPZ  -0.0   0.0
      EPP          2 50 28.4 SPZ  -0.0   0.0          1.4
      E            2 50 36.9 SPZ  -0.0   0.0

4 10 66 10 33 35.0   6.9N  73.0W 155.KM 5.1 DELTA =  43.8
      AZM FROM EPIC= 323.7 NORTHERN COLUMBIA

      IP          10 41 28.8 SPZ  -0.0   0.0    0.2   1.4

4 10 66 10 39 51.0  53.1N 171.0E  20.KM 5.2 DELTA =  55.8
      AZM FROM EPIC=  67.3 NEAR ISLANDS,ALEUTIANS

      IP          10 49 30.7 SPZ  -0.0   0.0   -0.3   1.5

4 10 66 16 36 14.6  31.5S  71.2W  64.KM 5.7 DELTA =  77.8
      AZM FROM EPIC= 333.9 NEAR COAST OF CENTRAL CHI
      LE
      IP          16 48  7.8 SPZ  -0.0   0.0   -0.1   1.1
      ILPBP       16 48 25.0 SPZ  -0.0   0.0          -0.4
      E           16 48 52.2 SPZ  -0.0   0.0

4 11 66 17 17 33.8  18.4N 102.3W  72.KM 5.7 DELTA =  21.7
      AZM FROM EPIC= 353.8 MICHOACAN,MEXICO

      EP          17 22 22.3 SPZ  -0.0   0.0    0.1   2.1

4 11 66 23  0 24.0  56.6N 152.0W  33.KM 5.4 DELTA =  34.4
      AZM FROM EPIC=  98.6 KODIAK ISLAND REGION

      EP          23  7 10.9 SPZ  -0.0   0.0   -0.3   0.7

4 13 66  3 35 16.3  38.2S  73.2W  40.KM 5.8 DELTA =  83.2
      AZM FROM EPIC= 335.8 COAST OF CENTRAL CHILE
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```
          IP              3 47 41.2 SPZ  -0.0   0.0    -0.3    1.8

4 13 66   3 35 16.3   38.2S  73.2W  40.KM 5.8 DELTA =   83.2
          AZM FROM EPIC= 335.6 COAST OF CENTRAL CHILE

          IPCP            3 47 48.6 SPZ  -0.0   0.0             4.0

4 13 66 NO EPICENTER DATA

          EP             06 00 06.4  SPN -0.0   0.0
          LOCAL EVENT OF COMPLEX STRUCTURE CHECK GOL

4 13 66 13   7 36.0   25.6N 109.3W  33.KM 4.3 DELTA =   14.8
          AZM FROM EPIC=  12.2 GULF OF CALIFORNIA

          EP             13 11 12.4 SPZ  -0.0   0.0    -0.0    8.4

          SEVERAL EVENTS 04-13-66 VERY LOCAL BLASTS OR SON
          IC BOOMS

4 14 66 NO EPICENTER DATA

          DERBY OF UNUSUAL APPEARANCE GOL MAG 1.5

          IP             11 17 16.3 SPZ  -0.0   0.0
          IS             11 17 20.7 SPNS -0.0   0.0

4 14 66 NO EPICENTER DATA
          IP             14 15 59.7 SPZ  -0.0   0.0
          E              14 16  9.8 SPZ  -0.0   0.0
          E              14 16 36.3 SPZ  -0.0   0.0

          NEVADA TEST SITE PROBABLY


4 15 66   6 42 59.7    5.0N  82.4W  33.KM 4.8 DELTA =   40.5
          AZM FROM EPIC= 332.6 SOUTH OF PANAMA

          EP             6 50 39.4 SPZ  -0.0   0.0     0.1    2.3

4 16 66   1 27 15.3   57.0N 153.6W  33.KM 5.7 DELTA =   35.4
          AZM FROM EPIC=  97.6 KODIAK ISLAND REGION

          IP             1 34 10.6 SPZ  -0.0   0.0    -0.3    1.1

4 16 66  10 13 28.0   35.0N 141.5E  63.KM 5.2 DELTA =   83.3
          AZM FROM EPIC=  45.3 OFF EAST COAST OF HONSHU

          EP            10 25 50.7 SPZ  -0.0   0.0     0.0    1.5

4 16 66 NO EPICENTER DATA
          I             11 39 12.1 SPZ  -0.0   0.0

4 17 66  16 46 50.9   54.2N 133.5W  33.KM 4.5 DELTA =   23.7
          AZM FROM EPIC= 115.3 QUEEN CHARLOTTE ISLANDS

          IP            16 52  1.9 SPZ  -0.0   0.0    -0.2    1.8

4 23 66   0  9 34.4    0.9S 122.4E  45.KM 6.0 DELTA =  121.8
```

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```
          AZM FROM EPIC=  41.9 NORTHERN CELEBES

          EPKP1        0 28 28.9 SPZ  -0.0   0.0     0.5    4.6
          I            0 30 11.5 SPZ  -0.0   0.0

4 23 66   1  3 23.0  73.6N   8.7E  33.KM 4.6 DELTA =  58.3
          AZM FROM EPIC= 304.4 GREENLAND SEA

          EP           1 13 20.4 SPZ  -0.0   0.0   999.0    3.4

4 23 66   8 56 46.0   0.5S 122.2E  79.KM 5.8 DELTA = 121.6
          AZM FROM EPIC=  41.7 NORTHERN CELEBES

          EPKP1        9 15 33.8 SPZ  -0.0   0.0     0.6    2.5

4 23 66 NO EPICENTER DATA
          E(P)        20 22 12.4 SPZ  -0.0   0.0
          EP          20 22 24.2 SPZ  -0.0   0.0
          E           20 22 27.4 SPZ  -0.0   0.0
          E           20 22 34.1 SPZ  -0.0   0.0
          E           20 22 39.2 SPZ  -0.0   0.0
          ES          20 23 33.7 SPNS -0.0   0.0

4 24 66 NO EPICENTER DATA

          DERBY EARTHQUAKE GOL MAG 1.6

          IS          17 20 11.4 SPNS -0.0   0.0

          DERBY EARTHQUAKE GOL MAG 1.2

          IS           3 52  9.4 SPNS -0.0   0.0

4 25 66 NO EPICENTER DATA
          E           18 40 13.8 SPZ  -0.0   0.0
          E           18 40 21.7 SPZ  -0.0   0.0
          E           18 41 33.1 SPZ  -0.0   0.0
          E           18 43 19.9 SPZ  -0.0   0.0

4 28 66 10 26 45.0  39.6N 110.3W   0.KM 3.6 DELTA =   3.9
          AZM FROM EPIC=  82.4 UTAH

          EP          10 27 59.7 SPZ  -0.0   0.0    -0.0   12.3
          EP          10 28  1.9 SPZ  -0.0   0.0    -0.0   14.5
          IS          10 28 50.0 SPNS -0.0   0.0    -0.0   15.5
          IS          10 28 59.1 SPNS -0.0   0.0    -0.0   24.6

4 28 66 10 39  7.0  15.2N  94.9W  33.KM 5.1 DELTA =  26.3
          AZM FROM EPIC= 341.8 COAST OF OAXACA,MEXICO

          IP          10 44 42.9 SPZ  -0.0   0.0     0.1    1.2

4 28 66 NO EPICENTER DATA
          EP          11  8 25.5 SPZ  -0.0   0.0
          EP          11  8 29.2 SPZ  -0.0   0.0
          ES          11  9  9.5 SPEW -0.0   0.0
          ES          11  9 11.7 SPZ  -0.0   0.0

4 28 66 22 30  5.0  44.0N 127.8W  18.KM 5.0 DELTA =  17.2
          AZM FROM EPIC=  95.6 OFF COAST OF OREGON
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```
        EP              22 34  7.4 SPZ  -0.0   0.0    -0.1    1.4

4 29 66  1 46 43.0  53.8N 157.8W  33.KM 5.2 DELTA =  37.6
        AZM FROM EPIC=  89.7 SOUTH OF ALASKA

        EP               1 53 56.3 SPZ  -0.0   0.0    -0.3    0.7
        IP               1 53 58.3 SPZ  -0.0   0.0    -0.3    2.7
        ILPBP            1 54 12.1 SPZ  -0.0   0.0            4.0

4 30 66 13  1 19.0  18.8N 106.7W  54.KM 5.2 DELTA =  21.2
        AZM FROM EPIC=   3.0 OFF COAST OF JALISCO,MEXI
        CO
        IP              13  6  3.2 SPZ  -0.0   0.0     0.1    1.4
        E               13  6 40.4 SPZ  -0.0   0.0

5  1 66 11 38 23.7  39.0N 111.6W   5.KM 3.9 DELTA =   5.0
        AZM FROM EPIC=  76.4 UTAH

        ES              11 41  3.6 SPNS -0.0   0.0    -0.0   23.3

5 01 66 16 22 56.3   8.5S  74.3W 165.KM 5.7 DELTA =  56.1
        AZM FROM EPIC= 331.6 PERU-BRASIL BORDER

        IP              16 32 20.5 SPZ  -0.0   0.0     0.1   -0.3
        ELPBP           16 32 57.6 SPZ  -0.0   0.0           -1.0
        EPCP            16 33 14.9 SPZ  -0.0   0.0           -1.5

5  2 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.9

        EP               6 34 27.5 SPZ  -0.0   0.0
        IS               6 34 32.1 SPNS -0.0   0.0

5  2 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.9

        EP               6 37  7.9 SPZ  -0.0   0.0
        IS               6 37 10.1 SPNS -0.0   0.0

5  2 66 NO EPICENTER DATA
        EP              12 19 50.3 SPZ  -0.0   0.0
        IS              12 19 54.7 SPNS -0.0   0.0

        DERBY EARTHQUAKE GOL MAG 2.0


5  4 66  5 40 38.0  36.8N 107.1W   5.KM 4.1 DELTA =   3.5
        AZM FROM EPIC=  23.6 NEW MEXICO

        EP               5 41 38.2 SPZ  -0.0   0.0    -0.0    3.8
        IS               5 42 21.1 SPNS -0.0   0.0    -0.0    4.1

5  5 66  6 39 12.0  51.6N 176.8E  75.KM 4.9 DELTA =  53.1
        AZM FROM EPIC=  70.0 RAT ISLANDS

        EP               6 48 25.5 SPZ  -0.0   0.0    -0.2    1.9
        E                6 48 30.1 SPZ  -0.0   0.0
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```
5  6 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.2

        IS            5 56  4.5 SPNS -0.0   0.0

5  6 66 NO EPICENTER DATA
        IP           15  2 15.4 SPZ  -0.0   0.0

        NEVADA TEST SITE

5  7 66  3 26 51.0  31.6N 116.1W  33.KM 5.1 DELTA =  12.1
        AZM FROM EPIC=  43.3 BAJA CALIFORNIA

        IP            3 29 47.2 SPZ  -0.0  0.0   -0.0   2.7
        E             3 30 42.7 SPZ  -0.0  0.0

5  7 66  9  4 54.0  50.9N 179.5E  70.KM 4.5 DELTA =  51.7
        AZM FROM EPIC=  71.1 RAT ISLANDS

        EP            9 13 56.5 SPZ  -0.0  0.0   -0.2   0.6
        ELPBP         9 14 11.6 SPZ  -0.0  0.0         -2.7

5  7 66 NO EPICENTER DATA

        DERBY EARTHQUAKE GOL MAG 1.1

        IS           14  0 41.8 SPNS -0.0  0.0

5  8 66 NO EPICENTER DATA
        IP           12 17  1.1 SPZ  -0.0  0.0
        EP           12 17  2.1 SPZ  -0.0  0.0
        IP           12 17  4.0 SPZ  -0.0  0.0
        ES           12 17 19.1 SPEW -0.0  0.0
        ES           12 17 21.6 SPEW -0.0  0.0

5  8 66 17 23 38.0  36.9N 106.9W   5.KM 4.5 DELTA =   3.4
        AZM FROM EPIC=  21.9 NEW MEXICO

        EP           17 24 34.5 SPZ  -0.0  0.0   -0.0   2.3
        EP           17 24 38.6 SPZ  -0.0  0.0   -0.0   6.4
        EP           17 24 42.4 SPZ  -0.0  0.0   -0.0  10.2
        IS           17 25 22.7 SPEW -0.0  0.0   -0.0   9.6
        ES           17 25 25.5 SPZ  -0.0  0.0   -0.0  12.4
        ELR          17 25 34.9 SPZ  -0.0  0.0    3.2KM/SEC

5  8 66 17 50 36.0  37.0N 106.8W   5.KM 4.2 DELTA =   3.2
        AZM FROM EPIC=  21.3 COLORADO

        EP           17 51 35.3 SPZ  -0.0  0.0   -0.0   6.8
        EP           17 51 36.6 SPZ  -0.0  0.0   -0.0   8.1
        EP           17 51 38.1 SPZ  -0.0  0.0   -0.0   9.6
        EP           17 51 40.5 SPEW -0.0  0.0   -0.0  12.0
        IS           17 52 13.2 SPEW -0.0  0.0   -0.0   5.2
        IS           17 52 21.1 SPEW -0.0  0.0   -0.0  13.1
        ES           17 52 23.4 SPZ  -0.0  0.0   -0.0  15.4

5  9 66  1 26 45.0  37.0N 106.8W   5.KM-0.0 DELTA =   3.2
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```
      AZM FROM EPIC=  21.3 NEW MEXICO

      EP            1 27 47.5 SPZ  -0.0   0.0    -0.0   10.0
      IS            1 28 29.6 SPEW -0.0   0.0    -0.0   12.6
      ES            1 28 32.4 SPZ  -0.0   0.0    -0.0   15.4

5  9 66  2  8 54.0  36.9N 106.9W    5.KM 4.2 DELTA =    3.4
      AZM FROM EPIC=  21.9 NEW MEXICO

      EP            2  9 54.4 SPZ  -0.0   0.0    -0.0    6.2
      EP            2  9 55.3 SPNS -0.0   0.0    -0.0    7.1
      EP            2  9 57.1 SPNS -0.0   0.0    -0.0    8.9
      IS            2 10 38.5 SPEW -0.0   0.0    -0.0    9.4
      ES            2 10 40.7 SPZ  -0.0   0.0    -0.0   11.6

5  9 66  2 57 24.0  37.0N 106.9W    5.KM 4.4 DELTA =    3.3
      AZM FROM EPIC=  22.6 NEW MEXICO

      EP            2 58 23.9 SPZ  -0.0   0.0    -0.0    7.0
      EP            2 58 24.9 SPNS -0.0   0.0    -0.0    8.0
      IS            2 59  8.3 SPEW -0.0   0.0    -0.0   11.5
      ES            2 59 11.7 SPEW -0.0   0.0    -0.0   14.9

      1645 25.6 MAY 10, LARGE LOCAL BLAST OR BOOM


5 11 66 14 17 34.1  48.9N 156.2E   13.KM 5.8 DELTA =   66.0
      AZM FROM EPIC=  56.2 KURILE ISLANDS

      IP           14 28 25.5 SPZ  -0.0   0.0    -0.2    2.9

5 11 66 14 26 41.6  49.0N 156.2E   33.KM 5.5 DELTA =   66.0
      AZM FROM EPIC=  56.3 KURILE ISLANDS

      EP           14 37 27.7 SPZ  -0.0   0.0    -0.2    1.1

       1705 15.7 MAY 11 LARGE LOCAL BLAST OR BOOM


5 11 66 21 39 35.3  48.8N 156.3E   28.KM 5.7 DELTA =   66.0
      AZM FROM EPIC=  56.2 KURILE ISLANDS

      IP           21 50 23.3 SPZ  -0.0   0.0    -0.2    1.8

5 13 66 NO EPICENTER DATA
      NEVADA TEST SITE

      IP           13 32 12.9 SPZ  -0.0   0.0
      E            13 32 48.8 SPZ  -0.0   0.0

5 13 66 NO EPICENTER DATA
      EP           16 17 59.5 SPZ  -0.0   0.0
      IS           16 18 36.9 SPZ  -0.0   0.0
      E            16 20 33.7 SPNS -0.0   0.0
      E            16 20 46.7 SPNS -0.0   0.0

      MACK,COLORADO QUESTION
```

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LOCAL BLAST MAY 13 AT 2053 21.7

5 14 66 NO EPICENTER DATA

DERBY EARTHQUAKE GOL MAG 1.2

IP	8 29 20.6	SPZ	-0.0	0.0	
IS	8 29 25.2	SPNS	-0.0	0.0	

5 14 66 20 27 27.4 10.5N 63.0W 16.KM 5.5 DELTA = 47.6
AZM FROM EPIC= 315.6 COAST OF VENEZUELA

EP	20 36 4.8	SPZ	-0.0	0.0	0.2	0.5

5 15 66 14 46 6.5 51.5N 178.4W 31.KM 5.8 DELTA = 50.3
AZM FROM EPIC= 72.9 ANDREANOF ISLANDS

IP	14 55 2.7	SPZ	-0.0	0.0	-0.2	1.0
ILPBP	14 55 11.6	SPZ	-0.0	0.0		-0.4
ES	15 2 14.3	SPEW	-0.0	0.0	-0.4	3.7

5 16 66 2 46 42.4 6.9S 129.4E 212.KM 5.9 DELTA = 121.2
AZM FROM EPIC= 47.1 BANDA SEA

EPKP1	3 5 13.1	SPZ	-0.0	0.0	0.5	2.6
IPKKP	3 15 16.0	SPZ	-0.0	0.0		

5 16 66 NO EPICENTER DATA

DERBY EARTHQUAKE GOL MAG 2.2. CONDITIONS AT BOL
VERY NOISY

EP	16 57 24.9	SPZ	-0.0	0.0	
IS	16 57 29.5	SPNS	-0.0	0.0	

LOCAL BLAST MAY 16 AT 1833 54.7

5 17 66 0 59 6.3 35.8N 140.5E 68.KM 5.3 DELTA = 83.3
AZM FROM EPIC= 44.8 EAST COAST OF HONSHU

EP	1 11 28.7	SPZ	-0.0	0.0	-0.0	1.8

5 17 66 7 3 29.4 0.7N 30.1E 12.KM 6.3 DELTA = 122.6
AZM FROM EPIC= 320.2 UGANDA

EPKP1	7 22 29.5	SPZ	-0.0	0.0	0.6	3.8

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5/19/66 – 12/31/66

UNIVERSITY OF COLORADO

SEISMOLOGICAL BULLETIN

Latitude: 40.008° N
Longitude: 105.271° W
Height: 1654 m
Designation: BOL

This Bulletin covers the period 19 May 1966 - 31 December 1966. Three components of motion are recorded with Benioff moving coil seismographs (To = 1.0s, Tg = 0.5s, peak magnification 30,000) and the N-S component is also recorded with a Lehner-Griffith seismograph (To = 1.5s, Tg = 0.5s, peak magnification = 100,000).

The bulletin was prepared using a computer program originally written by E. E. Berg of the University of Wisconsin and adapted for the IBM 7044 computer of the University of Colorado. Hypocentral coordinates and time of origin are taken from the Coast and Geodetic Survey's provisional cards and the theoretical times of arrival of observed phases computed from the Jeffreys-Bullen seismological tables. The information given for each phase is: phase name; phase arrival time; component; period of first oscillation if recorded; correction to clock time; ellipticity correction and residual against theoretical arrival time (observed time - theoretical). Velocities for surface wave phases are computed in place of residuals. The program does not handle the near earthquake phases P*, Pg, S* and Sg which are processed as P or S respectively. Nor can it process certain phases, notably pS, sP, pPKP, pPP and PcS; any phase with a name which is not recognized by the computer is processed as a P phase if it falls within the range of epicentral distances for which J-B tables for P exist. Most of the apparently large residuals arise from this cause. A more complete description of the computer program may be found in the University of Wisconsin's seismological bulletins. LPBP represents pP and -0.0 appears where no value of a number is specified. Time corrections are applied manually as the records are read, so the computed time corrections are always equal to 0.0

G. M. Lundquist

SEP

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```
5 19 66   0 26 44.0   37.0N 107.2W    5.KM 4.6 DELTA =    3.4
        AZM FROM EPIC=  26.2 NEW MEXICO

        EP            0 27 43.4 SPZ  -0.0   0.0    -0.0    5.1
        EP            0 27 47.2 SPZ  -0.0   0.0    -0.0    8.9
        EP            0 28 51.2 SPZ  -0.0   0.0    -0.0   72.9
        ES            0 28 27.2 SPZ  -0.0   0.0    -0.0    7.9
        ES            0 28 29.7 SPZ  -0.0   0.0    -0.0   10.4
        ES            0 28 34.0 SPZ  -0.0   0.0    -0.0   14.7

5 19 66   7  6 26.8   54.1N 164.1W   28.KM 5.8 DELTA =   41.3
        AZM FROM EPIC=  85.1 UNIMAK ISLAND REGION

        IP            7 14 12.4 SPZ  -0.0   0.0    -0.3    1.5

5 19 66 NO EPICENTER DATA
        EP           15 39 33.0 SPZ  -0.0   0.0
        E            15 40 12.4 SPZ  -0.0   0.0

5 20 66   9 14 49.2   13.9N 146.1E   66.KM 6.0 DELTA =   94.9
        AZM FROM EPIC=  46.9 SOUTH OF MARIANA ISLANDS

        IP            9 28  6.4 SPZ   1.5   0.0     0.3    0.9
        EPP           9 31 53.0 SPZ   1.8   0.0            -3.9
        ESKS          9 38 42.4 SPEW  2.1   0.0     0.6    8.5

5 20 66  11 44 29.0   55.0N 165.7E   46.KM 5.2 DELTA =   57.9
        AZM FROM EPIC=  65.0 KOMANDORSKY ISLANDS REGIO
        N
        EP           11 54 18.1 SPZ   1.4   0.0    -0.3   -0.5
        E             1 54 50.5 SPZ   1.0

5 20 66  23 58 51.7   50.2N 129.7W   37.KM 5.0 DELTA =   19.9
        AZM FROM EPIC= 111.4 VANCOUVER ISLAND REGION

        IP            0  3 24.6 SPZ   2.0   0.0    -0.1    1.5
        EPP           0  3 43.9 SPZ   2.2   0.0            1.0

5 22 66   6  6 30.0   21.0N 108.9W   28.KM 4.7 DELTA =   19.2
        AZM FROM EPIC=   8.5 REVILLA GIGEDO ISLANDS RE
        GION
        EP            6 10 56.0 SPZ   1.2   0.0     0.1    1.6

5 22 66   7 42 50.0   21.2N 108.7W   53.KM 5.5 DELTA =   19.0
        AZM FROM EPIC=   8.1 REVILLA GIGEDO ISLANDS RE
        GION
        IP            7 47 10.8 SPZ   1.4   0.0     0.1    1.1
        ELR           7 54 31.0 SPNS -0.0   0.0     3.0KM/SEC

5 22 66   9 29 23.0   21.1N 108.7W   48.KM 5.2 DELTA =   19.1
        AZM FROM EPIC=   8.1 REVILLA GIGEDO ISLANDS

        EP            9 33 44.0 SPZ   1.5   0.0     0.1   -0.2

5 24 66   3 49 52.8   39.7N 121.9W    2.KM 4.5 DELTA =   12.8
        AZM FROM EPIC=  83.3 NORTHERN CALIFORNIA

        EP            3 53  5.0 SPZ   0.8   0.0    -0.0    6.6
        ELR           3 56 39.3 SPZ   2.8   0.0     3.5KM/SEC
```

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```
5 24 66 20 19 41.0  21.3N 108.7W  57.KM 4.9 DELTA =  18.9
        AZM FROM EPIC=   8.2 REVILLA GIGEDO ISLANDS RE
        GION
        EP          20 24  0.4 SPZ  -0.0   0.0     0.1   1.2

5 25 66 13 20 56.2  52.9S 160.0E  33.KM 6.6 DELTA = 123.2
        AZM FROM EPIC=  66.2 MACQUARIE ISLAND REGION

        EPKP1       13 39 52.1 SPZ   1.9   0.0    -0.8   3.2
        EPP         13 41 28.8 SPZ   1.7   0.0           -5.9

5 26 66 NO EPICENTER DATA
        DERBY  COLORADO

        EP           2 21 44.6 SPZ  -0.0   0.0
        IS           2 21 49.0 SPNS -0.0   0.0

5 27 66 NO EPICENTER DATA
        EP          20  1 41.0 SPZ  -0.0   0.0

5 28 66 NO EPICENTER DATA
        IP          13 33 20.5 SPZ   0.4   0.0
        IS          13 33 56.6 SPZ   0.2   0.0

5 30 66  3  9 34.4   7.6N  77.0W  32.KM 5.3 DELTA =  41.0
        AZM FROM EPIC= 326.3 NORTHERN COLUMBIA

        IP          3 17 17.6 SPZ   0.8   0.0     0.1   1.4

5 31 66  7 43  0.0  52.3N 169.7W  33.KM 4.7 DELTA =  44.8
        AZM FROM EPIC=  79.2 FOX ISLANDS  ALEUTIANS

        EP          07 51 12.5 SPZ   1.0   0.0     0.2  2.08

5 31 66  8 50 18.9   8.4S  74.3W 154.KM 4.9 DELTA =  56.0
        AZM FROM EPIC= 331.5 PERU-BRAZIL BORDER REGION

        IP           8 59 46.1 SPZ   0.9   0.0     0.1   2.1

5 31 66 10 21 50.0  25.7N 109.2W  33.KM 4.3 DELTA =  14.6
        AZM FROM EPIC=  12.0 GULF OF CALIFORNIA

        EP          10 25 20.9 SPZ  -0.0   0.0    -0.0   4.4
        IPP         10 25 26.1 SPZ   1.0   0.0           -2.4
        I           10 25 32.3 SPZ   1.0   0.0

6  1 66 11 47 33.1  23.4S 174.9W  24.KM 5.9 DELTA =  90.4
        AZM FROM EPIC=  46.1 TONGA ISLANDS REGION

        EP          12  0 35.2 SPZ  -0.0   0.0     0.0   1.3

6  1 66 NO EPICENTER DATA
        EP          17 18 11.2 SPZ  -0.0   0.0
        IP          17 18 19.5 SPZ   0.3   0.0
        IS          17 18 56.6 SPZ   0.6   0.0
        IS          17 19  6.8 SPZ   0.6   0.0

6  2 66  3 27 53.3  51.1N 176.0E  41.KM 6.0 DELTA =  53.7
```

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```
        AZM FROM EPIC=  69.1 RAT ISLANDS, ALEUTIANS
        IP            3 37 14.2 SPZ  -0.0   0.0    -0.2    0.9
6  2 66 NO EPICENTER DATA
        CENTRAL UTAH
        IP           15 32 12.4 SPZ  -0.0   0.0
6  2 66 NO EPICENTER DATA
        DULCE, NEW MEXICO
        IP           21  0 11.8 SPZ  -0.0   0.0
        IP           21  0 15.8 SPZ  -0.0   0.0
        IS           21  0 55.9 SPZ  -0.0   0.0


6  3 66 NO EPICENTER DATA
        EP            7 52 17.2 SPZ  -0.0   0.0
        IS            7 53  1.4 SPZ  -0.0   0.0

6  3 66 10 42 58.1  30.8S  68.7W 101.KM 5.1 DELTA =  78.2
        AZM FROM EPIC= 332.1 SAN JUAN PROVINCE, ARGENT
        INA
        EP           10 54 49.8 SPZ  -0.0   0.0    -0.1    1.9

6  3 66 NO EPICENTER DATA
        NATIONAL TEST SITE, NEVADA

        IP           14  2 13.4 SPZ   1.2   0.0
        I            14  2 49.4 SPZ   0.9   0.0

6  3 66 NO EPICENTER DATA
        EP           15 34  7.5 SPZ  -0.0   0.0
        I            15 34 45.6 SPZ   1.5   0.0

4  4 66 10 29 39.0  37.0N 107.0W   5.KM 4.1 DELTA =   3.3
        AZM FROM EPIC=  23.8 DULCE, NEW MEXICO

        EP           10 30 35.5 SPZ  -0.0   0.0    -0.0    3.1
        IP           10 30 40.3 SPZ   0.8   0.0    -0.0    7.9
        IP           10 30 44.1 SPZ   0.6   0.0    -0.0   11.7
        IS           10 31 23.3 SPZ   0.8   0.0    -0.0   10.7
        IS           10 31 34.3 SPZ   0.8   0.0    -0.0   21.7

6  4 66 23 48 17.8  46.5N 152.5E  27.KM 5.9 DELTA =  69.5
        AZM FROM EPIC=  53.3 KURILE ISLANDS

        EP           23 59 26.6 SPZ   1.0   0.0    -0.2    1.1
        ILPBP        23 59 35.2 SPZ   0.9   0.0             0.2
        IPCP         23 59 41.3 SPZ   0.8   0.0            -7.8

6  5 66 NO EPICENTER DATA

        DERBY, COLORADO

        IS           20 46 23.7 SPZ   0.2   0.0
```

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```
6  6 66  7 46 16.2  36.3N  71.2E 225.KM 6.3 DELTA = 104.0
      AZM FROM EPIC= 357.2 AFGHANISTAN-USSR BORDER R
      EGION
      EP          7 59 56.0 SPZ  -0.0   0.0   999.0    1.4
      ELPBP       8  0 46.8 SPZ  -0.0   0.0
      EPP         8  4 14.1 SPNS  1.2   0.0          -2.9
      I           8  4 58.7 SPZ   1.0   0.0

6  6 66 NO EPICENTER DATA

      DERBY, COLORADO MAG. 2.8-3.1

      IP         19 56 53.9 SPZ   0.3   0.0
      IS         19 56 58.8 SPNS  0.2   0.0

6  7 66  0 59 46.6  15.0S  75.8W  48.KM 5.5 DELTA =  61.2
      AZM FROM EPIC= 334.5 NEAR COAST OF PERU

      EP          1  9 58.1 SPZ   0.9   0.0     0.1  -0.8

6  7 66 13 59 36.0  11.3N 139.6E  50.KM 6.5 DELTA = 101.3
      AZM FROM EPIC=  45.2 WEST CAROLINE ISLANDS

      EP         14 13 24.5 SPZ   0.0   0.0     0.2  1.77
      IPP        14 17 34.4 SPZ   1.1   0.0     0.2  1.65

6  7 66 NO EPICENTER DATA

      RAYMOND, COLORADO. ROADWORKER'S BLAST

      IP         19 57 48.4 SPZ   0.2   0.0
      IS         19 57 51.9 SPZ   0.3   0.0
      ILR        19 57 53.8 SPZ   0.6   0.0

6  8 66 NO EPICENTER DATA
      EP          8 19 53.4 SPZ  -0.0   0.0

      RAYMOND, COLORADO BLASTS AT  1730 AND 1901


6  8 66 19 56 21.3  53.1N 171.1E  20.KM 5.4 DELTA =  55.8
      AZM FROM EPIC=  67.4 NEAR ISLANDS, ALEUTIANS

      IP         20  6  0.7 SPZ   1.0   0.0   -0.3   1.6
      ILPBP      20  6  7.7 SPZ   1.2   0.0          0.9

6  9 66  1 57 38.0  45.0N 146.4E 160.KM 4.9 DELTA =  73.7
      AZM FROM EPIC=  49.4 KURILE ISLANDS

      EP          2  8 57.9 SPZ   1.0   0.0   -0.2   1.9

6  9 66 NO EPICENTER DATA
      EP          7  7 20.0 SPZ   1.0   0.0

6  9 66 15 39 27.8  44.3N 147.6E 110.KM 5.5 DELTA =  73.5
      AZM FROM EPIC=  49.9 KURILE ISLANDS

      IP         15 50 51.8 SPZ   1.1   0.0   -0.2   1.6
```

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RAYMOND BLASTS AT 1747 1930 AND 21.21

6 10 66 NO EPICENTER DATA

NATIONAL TEST SITE

EP 14 32 13.5 SPZ -0.0 0.0

6 10 66 NO EPICENTER DATA
EP 19 47 8.0 SPZ -0.0 0.0

6 10 66 NO EPICENTER DATA

ELKHEAD MTNS. COLORADO

EP 20 37 24.4 SPZ 0.3 0.0
IP 20 37 26.0 SPZ 0.2 0.0
IS 20 37 43.1 SPZ 0.7 0.0

6 11 66 2 37 39.0 19.2N 108.1W 45.KM 5.3 DELTA = 20.9
AZM FROM EPIC= 6.1 REVILLA GIGEDO ISLANDS

EP 2 42 20.1 SPZ 1.3 0.0 0.1 0.4
EPP 2 42 43.8 SPZ 1.0 0.0 0.7

6 11 66 NO EPICENTER DATA
EP 5 37 24.3 SPZ 0.4 0.0
ES 5 38 30.4 SPNS 0.3 0.0

6 11 66 10 19 27.0 43.1N 111.1W 33.KM 3.4 DELTA = 5.4
AZM FROM EPIC= 123.3 EASTERN IDAHOE

EP 10 21 0.0 SPZ -0.0 0.0 -0.0 13.4
IP 10 21 3.0 SPZ -0.0 0.0 -0.0 16.4
IS 10 22 5.3 SPEW -0.0 0.0 -0.0 17.3

6 11 66 NO EPICENTER DATA
EP 11 27 32.7 SPZ -0.0 0.0
E 11 29 56.8 SPZ -0.0 0.0
E 11 31 44.1 SPZ -0.0 0.0

6 11 66 18 13 40.6 51.6N 178.4W 60.KM 5.9 DELTA = 50.2
AZM FROM EPIC= 73.0 ANDREANOF ISLANDS, ALEUTI
ANS
IP 18 22 33.5 SPZ 1.0 0.0 -0.2 1.1
I 18 22 41.5 SPZ -0.0 0.0
ILPBP 18 22 48.3 SPZ -0.0 0.0 -0.8

SONIC BOOM AT 1750 ON 061366

6 13 66 18 8 38.4 12.2S 167.1E 259.KM 6.2 DELTA = 95.9
AZM FROM EPIC= 50.5 SANTA CRUZ ISLANDS

IP 18 21 40.1 SPZ 0.9 0.0 0.2 3.0

6 15 66 0 59 45.8 10.4S 160.8E 31.KM 6.1 DELTA = 99.6
AZM FROM EPIC= 51.0 SOLOMON ISLANDS

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```
          EP              1 13 27.0 SPZ  -0.0   0.0     0.3   -0.6
          EPP             1 17 29.0 SPZ  -0.0   0.0           -4.8
          ELR             1 48  0.0 SPEW -0.0   0.0     3.8KM/SEC

6 15 66   1 32 55.5  10.2S 161.1E  33.KM 6.2 DELTA =  99.2
          AZM FROM EPIC=  51.0 SOLOMON ISLANDS

          EP              1 46 37.6 SPZ  -0.0   0.0     0.3    2.2
          EPP             1 50 38.3 SPZ  -0.0   0.0           -2.1
          EPPP            1 52 47.0 SPZ  -0.0   0.0           -2.4

6 15 66 NO EPICENTER DATA
          IP              2 25  6.2 SPZ   1.0   0.0

6 15 66 NO EPICENTER DATA
          EP             17  2 14.3 SPZ  -0.0   0.0
          I              17  2 58.6 SPEW -0.0   0.0

6 15 66 NO EPICENTER DATA
          IP             18  4 59.4 SPZ  -0.0   0.0
          I              18  4 36.4 SPEW -0.0   0.0

6 16 66 NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          IP             19 13 41.4 SPZ  -0.0   0.0
          IP             19 13 42.6 SPZ  -0.0   0.0
          IS             19 13 59.2 SPEW -0.0   0.0

          RAYMOND COLORADO BLAST AT 2016 ON 061766.


6 19 66   7 38 22.0  42.8N 111.7W  33.KM-0.0 DELTA =   5.6
          AZM FROM EPIC= 117.8 EASTERN IDAHOE

          EP              7 39 56.3 SPZ  -0.0   0.0    -0.0   11.5
          ES             07 41 08.0 SPNS  0.0   0.0     0.2  19.29

6 19 66 19 28 43.1  51.7N 176.2W  57.KM 5.2 DELTA =  48.9
          AZM FROM EPIC=  74.4 ANDREANOF ISLANDS  ALEUTI
          ANS
          IP             19 37 25.6 SPZ  -0.0   0.0    -0.2    0.7
          ELPBP          19 37 40.2 SPZ   0.0   0.0     0.2 -0.34


6 20 66   1 24 12.9  51.5N 178.6W  34.KM 5.1 DELTA =  50.4
          AZM FROM EPIC=  72.8 ANDREANOF ISLANDS, ALEUTI
          ANS
          EP              1 33  8.9 SPZ  -0.0   0.0    -0.2    0.3

6 21 66   5 24 38.0  36.9N 107.1W   5.KM 3.8 DELTA =   3.4
          AZM FROM EPIC=  24.3 DULCE, NEW MEXICO

          EP              5 25 40.2 SPZ  -0.0   0.0    -0.0    7.1
          EP              5 25 44.9 SPZ  -0.0   0.0    -0.0   11.8
          IS             05 26 21.8 SPZ   0.0   0.0     0.2   7.09

          RAYMOND BLAST AT 1544
```

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```
6 21 66 NO EPICENTER DATA

        DERBY, COLORADO

        IS          20 28 12.1 SPNS  0.2   0.0

6 22 66  7 11  0.8  14.7N  92.1W  87.KM 5.1 DELTA =  27.7
        AZM FROM EPIC= 337.9 NEAR COAST OF CHIAPAS, ME
        XICO
        EP          7 16 42.7 SPZ  -0.0   0.0     0.1  -0.4
        ELPBP       7 17  4.1 SPZ  -0.0   0.0          1.7
        EPPP        7 17 51.6 SPZ   0.9   0.0          3.0

6 22 66 11 38 53.7  61.4N 147.6W  53.KM 5.2 DELTA =  33.4
        AZM FROM EPIC= 110.1 SOUTHERN ALASKA

        IP          11 45 29.5 SPZ   1.0   0.0  999.0   0.0

        SONIC BOOM AT 1535

6 22 66 20 29  3.6   7.2S 124.6E 507.KM 6.1 DELTA = 124.8
        AZM FROM EPIC=  45.7 BANDA SEA

        EPKP1       20 47  7.1 SPZ   1.2   0.0     0.5   1.2
        I           20 47 13.3 SPZ   1.2   0.0
        IPP         20 49 15.3 SPZ   1.2   0.0          9.9

6 23 66  5  1 42.4  43.8N 139.9E 218.KM 5.5 DELTA =  78.0
        AZM FROM EPIC=  45.5 EASTERN SEA OF JAPAN

        IP          5 13 18.5 SPZ   1.0   0.0   -0.2   0.7

6 24 66  8 17 49.1  26.7S 177.3W 146.KM 5.3 DELTA =  94.3
        AZM FROM EPIC=  47.1 SOUTH OF FIJI ISLS.

        EP          8 30 54.3 SPZ   1.0   0.0   -0.1   1.7

6 25 66  1 46 10.4  29.6N 142.1E  49.KM 5.5 DELTA =  86.7
        AZM FROM EPIC=  45.2 SOUTH OF HONSHU JAPAN

        EP          1 58 52.1 SPZ   1.0   0.0     0.1   1.7
        IPCP        1 58 56.4 SPZ   1.1   0.0           3.5
        ELPBP      01 59 09.4 SPZ   1.2   0.0     0.2  2.94

6 25 66 NO EPICENTER DATA
        EP          17 15 13.1 SPZ  -0.0   0.0
        I           17 15 51.6 SPZ   0.8   0.0

6 25 66 17 24 38.9  13.7N  91.2W 119.KM 5.3 DELTA =  29.0
        AZM FROM EPIC= 337.3 NEAR COAST OF GUATEMALA

        IP          17 30 30.8 SPZ  -0.0   0.0     0.1   1.4

6 25 66 NO EPICENTER DATA

        RAYMOND BLAST

        EP          23  8 23.1 SPNS -0.0   0.0
        ES          23  8 26.5 SPNS -0.0   0.0
```

International Seismological Centre

```
6 26 66 11 59 44.2  44.3N 103.4W  33.KM 4.1 DELTA =   4.5
        AZM FROM EPIC= 198.6 SOUTH DAKOTA

        EP          12  0 52.8 SPZ   0.5  0.0   -0.0   0.9
        IP          12  1  4.0 SPZ   0.9  0.0   -0.0  12.1
        IS          12  1 43.3 SPNS  0.7  0.0   -0.0  -0.6
        IS          12  1 59.4 SPNS  0.8  0.0   -0.0  15.5

6 27 66  8 29 33.0  19.2N 108.1W  33.KM 4.4 DELTA =  20.9
        AZM FROM EPIC=   6.1 REVILLA GIGEDO ISLANDS RE
        GION
        IP          8 34 15.1 SPZ   1.2  0.0    0.1   0.3

6 27 66  9 25 21.0  19.3N 108.1W  33.KM 3.9 DELTA =  20.8
        AZM FROM EPIC=   6.1 REVILLA GIGEDO ISLANDS RE
        GION
        EP          09 30 02.9 SPZ   1.0  0.0    0.2  1.18

6 27 66 10 41  8.6  29.7N  80.9E  37.KM 6.1 DELTA = 110.4
        AZM FROM EPIC=   5.1 NEPAL-INDIA BORDER REGION

        EPKP1      10 59 40.0 SPZ  -0.0  0.0    0.0   3.3

6 27 66 10 59 18.1  29.7N  81.0E  40.KM 6.0 DELTA = 110.4
        AZM FROM EPIC=   5.1 NEPAL-INDIA BORDER REGION

        EPKP1      11 17 48.3 SPZ  -0.0  0.0    0.0   2.4

6 27 66 NO EPICENTER DATA
        EP          17 55  0.8 SPZ  -0.0  0.0
        IS          17 55 30.1 SPNS  0.2  0.0

6 28 66  4  8 54.7  35.8N 120.6W   5.KM 5.0 DELTA =  12.8
        AZM FROM EPIC=  66.3 CENTRAL CALIFORNIA

        EP          4 12  2.0 SPZ   1.0  0.0   -0.0   1.7
        ELR         4 15 39.5 SPNS -0.0  0.0    3.5KM/SEC

6 28 66  4 26 12.4  35.9N 120.5W   4.KM 5.3 DELTA =  12.7
        AZM FROM EPIC=  66.6 CENTRAL CALIFORNIA

        EP          4 29 19.0 SPZ   1.0  0.0   -0.0   2.4
        ELR         4 32 55.8 SPNS  2.5  0.0    3.5KM/SEC

        RAYMOND, COLORADO BLAST AT 2325.

6 29 66 19 53 24.1  35.8N 120.5W   5.KM 4.9 DELTA =  12.7
        AZM FROM EPIC=  66.2 CENTRAL CALIFORNIA

        EP          19 56 29.2 SPZ  -0.0  0.0   -0.0   0.5
        ELR         20  1  5.0 SPNS -0.0  0.0    3.1KM/SEC

6 30 66 NO EPICENTER DATA

        NATIONAL TEST SITE NEVADA

        IP          22  2 14.5 SPZ   1.0  0.0
```

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```
          I            22  2 47.8 SPZ    0.8   0.0


7  1 66 NO EPICENTER DATA
          EP              1 35 55.2 SPZ    1.0   0.0
          I               1 36 29.2 SPZ    0.7   0.0

7  1 66  4 53 26.0  51.5N 179.1E  20.KM 4.5 DELTA =  51.8
          AZM FROM EPIC=  71.3 RAT ISLANDS ALEUTIANS

          EP              5  2 32.8 SPZ  -0.0   0.0    -0.2   -1.3

7  1 66 NO EPICENTER DATA
          IP              6  4 22.2 SPZ  -0.0   0.0

7  2 66 NO EPICENTER DATA

          BLASTING NEAR RAYMOND COLORADO

          IP             19  3  8.4 SPZ    0.2   0.0
          IS             19  3 11.6 SPZ    0.4   0.0
          IS             19  3 13.1 SPZ    0.9   0.0

7  3 66  3 55 15.7  52.5N 170.2W  69.KM 5.3 DELTA =  45.1
          AZM FROM EPIC=  79.1 FOX ISLANDS, ALEUTIANS

          IP              4  3 27.8 SPZ    1.0   0.0    -0.3    1.2

7  3 66 NO EPICENTER DATA
          DULCE NEW MEXICO

          EP              5 59 54.2 SPZ  -0.0   0.0
          IS              6  0 38.7 SPZ    0.5   0.0

7  3 66 NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          EP              6 35 49.4 SPZ  -0.0   0.0
          IS              6 36  9.0 SPNS   0.5   0.0

7  4 66 NO EPICENTER DATA

          DERBY COLORADO MAG.

          IP             11 43 21.3 SPEW -0.0   0.0
          IS             11 43 25.6 SPEW  0.4   0.0

7  4 66 12 15 28.1  37.5N  24.8W  33.KM 5.5 DELTA =  60.7
          AZM FROM EPIC= 299.7 AZORES ISLANDS REGION

          EP             12 25 39.7 SPZ    1.0   0.0    -0.0    1.1

7  4 66 18 33 35.7  51.7N 179.9E  13.KM 6.2 DELTA =  51.2
          AZM FROM EPIC=  72.0 RAT ISLANDS, ALEUTIANS

          EP             18 42 42.4 SPZ    1.0   0.0    -0.2    1.6
          IPCP           18 43 41.7 SPZ    1.0   0.0          -14.7
          IS             18 49 57.9 SPEW   2.3    0.0          +0.46
```

International Seismological Centre

```
        ELR          19  1 23.0 SPZ  23.0   0.0     3.4KM/SEC

7  4 66 18 50 25.0  51.7N 179.0W  33.KM 5.4 DELTA =  50.6
        AZM FROM EPIC=  72.7 AND REANOF ISLS. ALEUTIAN
        S
        EP           18 59 29.8 SPZ  -0.0   0.0    -0.2    7.6

7  5 66  3 22 45.2  15.2S 174.9W 252.KM 5.1 DELTA =  84.8
        AZM FROM EPIC=  46.3 TONGA ISLANDS

        IP            3 34 53.5 SPZ   0.9   0.0     0.2    1.1

7  5 66  5  9  3.6  37.6N  24.6W  12.KM 5.1 DELTA =  60.8
        AZM FROM EPIC= 299.7 AZORES ISLANDS REGION

        EP            5 19 18.5 SPZ  -0.0   0.0    -0.0    0.7

7  5 66 18 26 13.0  40.2N 109.0W   5.KM 3.7 DELTA =   2.9
        AZM FROM EPIC=  92.6 COLORADO

        EP           18 27  3.9 SPZ   0.2   0.0    -0.0    3.6
        IS           18 27 40.4 SPZ   0.2   0.0    -0.0    4.7

7  5 66 20  2 43.0  40.2N 109.1W   5.KM 3.5 DELTA =   2.9
        AZM FROM EPIC=  92.5 UTAH

        EP           20  3 30.5 SPZ   0.2   0.0    -0.0   -0.9
        IS           20 04 08.2 SPZ   0.3    0.0           +0.56

7  6 66  5 47  8.0  40.2N 108.9W   5.KM 4.5 DELTA =   2.8
        AZM FROM EPIC=  92.8 COLORADO

        IS           05 48 35.9 SPZ   0.4   0.0          +7.15
        IS           05 48 36.7 SPZ   0.2   0.0          +7.95

7  6 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND COLORADO

        IP           18 10 50.8 SPZ   0.3   0.0
        IS           18 10 54.0 SPNS  0.4   0.0

7  7 66 NO EPICENTER DATA
        IP           10  3 16.4 SPZ   0.6   0.0
        I            10  3 30.6 SPZ   0.7   0.0

7  7 66 NO EPICENTER DATA
        EP           20 35 46.1 SPZ   0.2   0.0
        IS           20 36  2.5 SPNS  0.3   0.0

7  8 66 NO EPICENTER DATA
        IP            8 33 16.5 SPZ   0.6   0.0
        IPP           8 33 30.6 SPZ   0.7   0.0
        I             8 33 51.1 SPZ   0.6   0.0
        I             8 37 45.8 SPZ   0.5   0.0

        LAKE SUPERIOR MICHAGAN. FIVE TON BLASTS.
        IDENTICAL TRACES VISIBLE AT 0833 AND 0933 THROUG
        H JULY 28.
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```
7  6 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        IP          13 50 54.7 SPZ    0.2   0.0
        IS          13 50 58.1 SPZ    0.3   0.0

7 10 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND COLORADO

        IP          19 47 21.7 SPZ    0.2   0.0
        IS          19 47 25.2 SPZ    0.3   0.0

7 12 66  8  1 37.0  21.3S  68.9W  99.KM 4.9 DELTA =  69.8
        AZM FROM EPIC= 331.0 CHILE-BOLIVIA BORDER REGI
        ON
        EP          8 12 39.4 SPZ    1.0   0.0   -0.0    0.9

7 12 66 18 53  8.5  44.6N  37.4E  26.KM 5.9 DELTA =  89.3
        AZM FROM EPIC= 332.2 WESTERN CAUCASUS

        EP          19 06 04.4 SPZ    0.9    0.0          +0.68

7 13 66  8 20 59.4  12.6N  87.7W  61.KM 5.3 DELTA =  31.4
        AZM FROM EPIC= 333.6 NEAR COAST OF NICARAGUA

        IP          8 27 19.2 SPNS   0.7   0.0     0.1    2.4
        ILPBP       8 27 34.4 SPNS   0.8   0.0            0.2

7 13 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        IP          23 23 47.2 SPNS -0.0   0.0
        IS          23 23 49.9 SPNS -0.0   0.0

7 14 66  6 18 47.6  35.6N 140.0E  71.KM 5.0 DELTA =  83.7
        AZM FROM EPIC=  44.6 NEAR S. COAST OF HONSHU J
        APAN
        IP          06 31 11.6 SPZ    1.0    0.0          +1.56

7 14 66 12 18 17.0  56.2N 149.8W  33.KM 5.2 DELTA =  33.2
        AZM FROM EPIC= 100.1 GULF OF ALASKA

        EP          12 24 54.9 SPZ    0.8    0.0          +2.61

7 14 66 18  7  4.1  53.1N 171.1E  29.KM 5.2 DELTA =  55.8
        AZM FROM EPIC=  67.4 NEAR ISLANDS, ALEUTIAN IS
        LANDS
        IP          18 16 42.7 SPZ    1.0   0.0    -0.3    2.2
        ILPBP       18 16 49.1 SPZ   -0.0   0.0            -2.5

7 14 66 18  8 46.0  53.1N 170.9E   2.KM 4.0 DELTA =  55.9
        AZM FROM EPIC=  67.2 9NEAR ISLANDS, ALEUTIANS

        EP          18 18 24.6 SPZ   -0.0   0.0    -0.3   -2.7

7 14 66 20  0  2.5  52.9S  27.5E  33.KM 5.4 DELTA = 145.6
        AZM FROM EPIC= 267.3 SOUTH OF AFRICA
```

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```
        EPKP2       20 19 39.1 SPZ    1.0   0.0    -0.7   -0.2

7 14 66 NO EPICENTER DATA
        IP          20 30 40.6 SPEW   0.5   0.0
        IS          20 30 57.8 SPNS   0.3   0.0

7 15 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND COLORADO

        EP          23 15 46.8 SPZ   -0.0   0.0
        IS          23 15 49.8 SPNS   0.5   0.0

7 15 66 NO EPICENTER DATA

        ELKHEAD MTNS., COLORADO

        EP          23 59 42.1 SPZ   -0.0   0.0
        IS          23 59 58.1 SPNS  -0.0   0.0

7 16 66 NO EPICENTER DATA

        DERBY, COLORADO MAG 1.5

        IP           8 25 55.4 SPZ    0.4   0.0
        IS           8 25  0.0 SPZ    0.3   0.0

7 16 66 NO EPICENTER DATA
        EP          18 18 58.3 SPZ    1.0   0.0

 7 16 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        IP          20  9 22.5 SPZ    0.2   0.0
        IS          20  9 26.0 SPNS   0.3   0.0

07 16 66 NO EPICENTER DATA
        DERBY, COLORADO

        IS           8 59 44.6 SPNS   0.4   0.0

 7 17 66  1  3  3.6  56.5N 166.9W  35.KM 4.9 DELTA =  42.7
        AZM FROM EPIC=  85.7 CENTRAL ALASKA
        IP           1 10 59.7 SPZ    1.0   0.0    -0.3    1.4

7 17 66 NO EPICENTER DATA

        DERBY, COLORADO

        IS          11 42 44.6 SPZ    0.4   0.0

7 18 66 22 15 38.0  38.3S  93.7W  33.KM 5.1 DELTA =  78.6
        AZM FROM EPIC= 351.0 WEST CHILE RISE

        EP          22 27 40.7 SPZ   -0.0   0.0    -0.3    2.7

7 19 66  1 40 53.9  56.2N 164.9E  18.KM 5.4 DELTA =  57.8
```

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```
        AZM FROM EPIC=  65.1 KOMANDORSKY ISLS. REGION

        IP          1 50 48.0 SPZ   1.0  0.0   -0.3   1.5
        ILPBP       1 50 56.1 SPZ   1.0  0.0          2.6
        I           1 51  6.3 SPZ   1.1  0.0
        IPP         1 53  1.0 SPZ   2.0  0.0          4.3
        ES          1 58 51.0 SPEW  5.8  0.0   -0.6   7.8

7 19 66  7 25 27.6  23.2S  66.8W 183.KM 5.2 DELTA =  72.4
        AZM FROM EPIC= 329.9 JUJUY PROVINCE, ARGENTINA

        EP          7 36 35.8 SPZ   0.5  0.0   -0.0   0.4

7 19 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        IP         14 48  1.2 SPZ   0.2  0.0
        IS         14 48  4.7 SPZ   0.4  0.0

7 19 66 19 20 33.4  51.7N 173.3W  47.KM 5.5 DELTA =  47.2
        AZM FROM EPIC=  76.3 ANDREANOF ISLANDS, ALEUTI
        ANS
        IP         19 29 03.9 SPZ   1.0   0.0        +1.42
        ILPBP      19 29 17.4 SPZ   1.1  0.0         -1.7

7 19 66 NO EPICENTER DATA
        ES         22 44  0.0 SPZ   0.5  0.0

7 20 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        IP          5 52 27.7 SPNS  0.4  0.0
        IS          5 52 31.8 SPNS  0.2  0.0

7 20 66  9  4 58.2  35.7N 101.2W  33.KM 4.8 DELTA =   5.4
        AZM FROM EPIC= 324.4 TEXAS PANHANDLE

        EP         09 06 18.8 SPZ   0.6   0.0        +0.70
        IP         09 06 38.5 SPNS  0.2   0.0        10.40
        IS         09 07 45.9 SPZ   0.6   0.0        16.23
        IS         09 07 49.3 SPZ   0.7   0.0        19.63

7 20 66 NO EPICENTER DATA
        EP         11  6  2.4 SPZ  -0.0  0.0

7 20 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        ES         17 53  1.1 SPNS  0.2  0.0

7 21 66  3 57 57.8  49.7N  77.9E   0.KM 5.6 DELTA =  90.6
        AZM FROM EPIC=   2.4 EASTERN KAZAKH SSR

        EP          4 11  4.2 SPZ   0.9  0.0   -0.3   1.1

7 21 66  5 32 18.2   3.9S 104.3W  33.KM 5.1 DELTA =  43.7
        AZM FROM EPIC= 358.9 NORTHERN EASTER ISLAND CO
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International Seismological Centre

```
        RDILLERA
        EP              5 40 22.3 SPZ    1.5   0.0     0.1    0.4

7 21 66  9  2 27.2   52.0N 170.0W  30.KM 5.3 DELTA =  45.1
        AZM FROM EPIC=  78.7 FOX ISLANDS, ALEUTIANS

        EP              9 10 42.7 SPZ    1.0   0.0    -0.3    0.6
        ELPBP           9 10 50.9 SPZ    0.8   0.0           -0.8

7 21 66 10  2 48.3   51.5N 173.3W  47.KM 4.7 DELTA =  47.2
        AZM FROM EPIC=  76.1 ANDREANOF ISLANDS, ALEUTI
        ANS
        EP             10 11 19.3 SPZ    0.9   0.0    -0.2    1.3

7 21 66 NO EPICENTER DATA

        BLASTING NEAR RAYMOND, COLORADO

        IP             16  0 33.5 SPZ    0.2   0.0
        IS             16  0 42.1 SPZ    0.2   0.0

7 21 66 18 30 14.9   17.8S 178.6W 591.KM 5.6 DELTA =  89.1
        AZM FROM EPIC=  47.4 FIJI ISLANDS REGION

        IP             18 42 10.4 SPZ    1.2   0.0     0.1    1.1
        IPCP           18 42 21.5 SPZ    1.7   0.0            11.1

7 21 66 NO EPICENTER DATA
        IP             21 37 57.7 SPZ    0.9   0.0

7 22 66 NO EPICENTER DATA

        DERBY, COLORADO GOL MAG 1.9

        IP              9 32  0.0 SPZ    0.4   0.0
        IS              9 32  4.5 SPNS   0.2   0.0

7 22 66 NO EPICENTER DATA

        DERBY, COLORADO GOL MAG 1.8

        IP              9 34 40.2 SPZ    0.3   0.0
        IS              9 34 44.5 SPNS -0.0    0.0

7 22 66 NO EPICENTER DATA

        DERBY, COLORADO GOL MAG 1.9

        IP             10  6 10.0 SPZ    0.4   0.0
        IS             10  6 14.2 SPNS   0.2   0.0

7 22 66 10 17 22.5   51.7N 173.5W  56.KM 5.6 DELTA =  47.3
        AZM FROM EPIC=  76.2 ANDREANOF ISLANDS, ALEUTI
        ANS
        EP             10 25 53.1 SPZ    0.7   0.0    -0.2    1.3
        ILPBP          10 26  6.0 SPZ    1.0   0.0           -1.8
        ES             10 32 48.6 SPNS   2.5   0.0    -0.4    8.8

7 22 66 NO EPICENTER DATA
```

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```
        DERBY, COLORADO MAG 1.8

        EP          10 29 45.2 SPEW -0.0   0.0
        IS          10 29 49.5 SPNS  0.2   0.0

7 22 66 NO EPICENTER DATA

        DERBY, COLORADO MAG 1.4

        IS          15 51  3.1 SPNS  0.2   0.0

7 22 66 NO EPICENTER DATA

        DERBY, COLORADO MAG 1.5

        IS          16 19  3.0 SPNS  0.2   0.0

7 22 66 NO EPICENTER DATA
        IP          19  0 33.5 SPZ   0.3   0.0
        IP          19  0 35.2 SPZ   0.2   0.0
        IS          19  0 59.2 SPZ   0.2   0.0


7 23 66 NO EPICENTER DATA
        IS           3 16 44.3 SPZ   0.7   0.0

7 23 66  3 37 55.8  51.7N 173.6W  41.KM 4.7 DELTA =  47.3
        AZM FROM EPIC=  76.1 ANDREANOF ISLANDS, ALEUTI
        ANS
        EP          3 46 27.6 SPZ   0.6   0.0   -0.2   0.5
        ILPBP       3 46 40.5 SPZ   0.9   0.0          1.3

7 23 66 15 26 16.1  51.7N 173.6W  51.KM 4.3 DELTA =  47.3
        AZM FROM EPIC=  76.1 ANDREANOF ISLANDS, ALEUTI
        ANS
        EP          15 34 50.5 SPZ   0.9   0.0   -0.2   4.1
        ELPBP       15 35  0.3 SPZ   1.0   0.0         -3.8

7 23 66 20 12  0.1  51.8N 173.5W  36.KM 4.9 DELTA =  47.2
        AZM FROM EPIC=  76.3 ANDREANOF ISLANDS, ALEUTI
        ANS
        EP          20 20 31.1 SPZ   0.9   0.0   -0.3  -0.2
        ILPBP       20 20 45.2 SPZ   1.0   0.0          3.6

7 24 66 NO EPICENTER DATA
        IP           2 49 55.6 SPZ   0.6   0.0
        IS           2 50 33.2 SPZ   0.5   0.0

7 24 66  8 52 39.0  19.4N 108.4W  33.KM 4.8 DELTA =  20.7
        AZM FROM EPIC=   6.8 REVILLA GIGEDO ISLANDS

        EP           8 57 21.0 SPZ   0.9   0.0    0.1   2.0

7 25 66 NO EPICENTER DATA
        IP           4 16 35.5 SPZ   0.5   0.0
        I            4 17 13.2 SPZ   0.9   0.0

7 25 66  8 42 18.9  31.9S  69.7W 116.KM 4.7 DELTA =  78.8
        AZM FROM EPIC= 332.9 SAN JUAN PROVINCE, ARGENT
        INA
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International Seismological Centre

```
        EP              8 54 10.8 SPZ    0.6   0.0    -0.1    0.7

7 25 66 NO EPICENTER DATA
        EP              9 26 53.3 SPZ    0.6   0.0

7 26 66  3 48 28.8   56.2N 164.6E   33.KM 4.8 DELTA =   58.0
        AZM FROM EPIC=  64.9 KOMANDORSKY ISLANDS REGIO
        N
        EP              3 58 22.7 SPZ    1.0   0.0    -0.3    2.5

        RAYMOND, COLO. BLAST AT 1747.

7 26 66 NO EPICENTER DATA

        ELKHEAD MTNS., COLORADO.

        IP             20  8 55.3 SPZ   -0.0   0.0
        IP             20  8 57.0 SPZ   -0.0   0.0
        IS             20  9 13.4 SPNS  -0.0   0.0

7 27 66  4 48 59.4   24.2S  70.3W   35.KM 6.0 DELTA =   71.7
        AZM FROM EPIC= 332.4 NEAR COAST OF NORTHERN CH
        ILE
        IP              5  0 20.5 SPZ    1.0   0.0    -0.0    0.8
        ILPBP           5  0 33.2 SPZ    0.6   0.0            1.9
        I              05 00 48.3 SPZ    0.9

7 29 66  4 36 24.8   36.6N  74.1W    1.KM 4.7 DELTA =   24.6
        AZM FROM EPIC= 287.5 OFF CAPE HATTERAS. S.S. H
        ORACE GREELY
        EP              4 41 49.3 SPZ   -0.0   0.0    -0.0    1.4

7 29 66  7  8 14.6   44.0N 145.3E   96.KM 5.2 DELTA =   75.0
        AZM FROM EPIC=  48.6 HOKKAIDO, JAPAN REGION

        IP              7 19 48.0 SPZ    0.8   0.0    -0.2    1.0

7 29 66 NO EPICENTER DATA
        EP             15 54 24.4 SPZ   -0.0   0.0
        IS             15 54 27.4 SPZ   -0.0   0.0

        RAYMOND, COLORADO. BLASTING


7 30 66  3 25 31.8   39.5N 110.4W    0.KM 4.3 DELTA =    4.0
        AZM FROM EPIC=  81.1 UTAH
        EP              3 26 43.8 SPZ    0.8   0.0    -0.0    8.3
        IS             03 27 37.2 SPNS   0.9    0.0           +13.56

        RAYMOND, COLORADO. BLAST AT 2230


7 31 66 NO EPICENTER DATA

        ATYPICAL DERBY EARTHQUAKE

        IP              1 23 49.5 SPZ   -0.0   0.0
        IS              1 23 54.3 SPNS   0.2   0.0
```

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8 1 66 6 25 57.6 51.5N 177.6E 43.KM 5.2 DELTA = 52.6
AZM FROM EPIC= 70.4 RAT ISLANDS, ALEUTIANS

EP 6 35 9.8 SPZ 1.0 0.0 -0.2 0.5

8 1 66 7 42 1.0 14.6N 92.8W 33.KM 4.4 DELTA = 27.6
AZM FROM EPIC= 339.0 NEAR COAST OF CHIAPAS,MEX
ICO
EP 7 47 47.8 SPZ 0.9 0.0 0.1 0.7

8 1 66 9 50 38.5 17.7S 70.7W 109.KM 4.8 DELTA = 65.8
AZM FROM EPIC= 331.5 NEAR COAST OF PERU

EP 10 01 14.8 SPZ 0.8 0.0 +0.41

8 1 66 9 48 2.6 1.2S 78.6W 62.KM 4.8 DELTA = 47.7
AZM FROM EPIC= 332.2 ECUADOR

EP 9 56 36.3 SPZ 1.0 0.0 0.1 1.2

8 1 66 20 32 1.3 44.6N 150.4E 24.KM 5.2 DELTA = 71.8
AZM FROM EPIC= 51.6 KURILE ISLANDS

IPCP 20 43 41.3 SPZ 1.3 0.0 -1.6

8 1 66 21 2 59.6 30.0N 68.7E 33.KM 6.2 DELTA = 110.1
AZM FROM EPIC= 355.1 WEST PAKISTAN

EPKP1 21 21 41.0 SPZ -0.0 0.0 0.0 13.3
EPP 21 22 12.3 SPZ 1.0 0.0 5.8

8 1 66 10 24 39.0 17.5N 92.3W 33.KM 3.9 DELTA = 25.1
AZM FROM EPIC= 336.0 CHIAPAS MEXICO

EP 10 30 3.5 SPZ 0.6 0.0 0.1 1.4

8 3 66 16 0 26.0 55.3N 166.7E 33.KM 4.7 DELTA = 57.3
AZM FROM EPIC= 65.8 KOMANDORSKY ISLS. REGION

EP 16 10 14.6 SPZ 1.0 0.0 -0.3 2.1

8 4 66 5 42 21.3 7.3S 120.3E 531.KM 5.5 DELTA = 127.9
AZM FROM EPIC= 44.0 FLORES SEA

EPKP1 6 0 32.0 SPZ -0.0 0.0 0.5 5.0
EPP 6 2 55.4 SPZ 1.0 0.0 14.6

LOCAL BLAST AT 2059.

8 5 66 20 9 7.8 6.1N 82.6W 33.KM 4.9 DELTA = 39.4
AZM FROM EPIC= 332.2 SOUTH OF PANAMA

EP 20 16 37.8 SPZ 0.9 0.0 0.1 1.4

8 6 66 8 21 21.5 31.5N 140.1E 120.KM 4.8 DELTA = 86.6
AZM FROM EPIC= 44.4 SOUTH OF HONSHU, JAPAN

EP 8 33 54.3 SPZ 0.9 0.0 0.1 1.9

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```
8  6 66 14 38 41.4    7.8S  75.1W 149.KM 5.4 DELTA =  55.1
       AZM FROM EPIC= 331.9 NORTHERN PERU

       EP          14 48  0.2 SPZ   0.9  0.0     0.1  -0.3
       ELPBP       14 48 36.5 SPZ   0.6  0.0          1.6

8  6 66 21  4 32.5  51.9N 175.3E  30.KM 5.3 DELTA =  53.8
       AZM FROM EPIC=  69.2 RAT ISLANDS, ALEUTIANS

       EP          21 13 55.3 SPZ   0.7   0.0         +0.61

8  7 66  2 13  5.1  50.6N 171.3W  39.KM 6.5 DELTA =  46.2
       AZM FROM EPIC=  76.6 ALEUTIAN ISLS. REGION

       IP           2 21 28.4 SPZ   0.6  0.0    -0.2   0.7
       ILPBP        2 21 38.6 SPZ   0.8  0.0          -0.9
       IS           2 28 16.8 SPNS  2.1  0.0    -0.4   6.6

8  7 66  8 20 58.2   6.9N  73.1W 142.KM 4.6 DELTA =  43.8
       AZM FROM EPIC= 323.8 NORTHERN COLUMBIA

       IP          08 28 53.3 SPZ   0.6   0.0         +1.87

8  7 66 17 36 26.7  31.8N 114.5W  33.KM 6.3 DELTA =  11.1
       AZM FROM EPIC=  39.8 GULF OF CALIFORNIA

       EP          17 39  9.2 SPZ   0.5  0.0    -0.0   3.2
       ILR         17 42 18.4 SPNS  2.5  0.0     3.5KM/SEC

8  7 66 20 18 41.5  42.3N 143.0E  66.KM 5.1 DELTA =  77.4
       AZM FROM EPIC=  47.0 HOKKAIDO,JAPAN REGION

       EP          20 30 32.3 SPZ   0.8  0.0    -0.1   1.5

8  8 66  8  2 45.8  19.3N 108.1W  33.KM 5.4 DELTA =  20.8
       AZM FROM EPIC=   6.1 REVILLA GIGEDO ISLANDS RE
       GION
       IP           8  7 27.5 SPZ   1.1  0.0     0.1   1.0
       IPP          8  7 58.4 SPZ   1.2  0.0           9.7
       ELR          8 14  0.0 SPEW  1.0  0.0     3.4KM/SEC

8  8 66  9 57 29.7  27.7S  69.0W  83.KM 5.6 DELTA =  75.3
       AZM FROM EPIC= 332.0 NORTHERN CHILE

       IP          10  9  5.2 SPZ   0.6  0.0    -0.1  -0.4

8  8 66 23 10 47.0  19.4N 103.9W  33.KM 4.5 DELTA =  20.6
       AZM FROM EPIC= 357.0 JALISCO, MEXICO

       EP          23 15 28.6 SPZ   0.0   0.0         +3.05

8  9 66  8 58 53.0  16.9N  98.0W 106.KM 4.6 DELTA =  23.9
       AZM FROM EPIC= 346.1 OAXICA, MEXICO

       IP           9  4  1.0 SPZ   1.0  0.0     0.1   3.4

       TWO RAYMOND BLASTS AND TWO SONIC BOOMS BETWEEN 1
       930 AND 2130.
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8 10 66  5  1  9.4  20.1S 175.3W  96.KM 5.8 DELTA =  88.4
       AZM FROM EPIC=  46.2 TONGA ISLANDS

       EP           5 13 52.8 SPZ   0.8  0.0     0.1   0.9
       ILPBP        5 14 18.2 SPZ   1.0  0.0          -0.3

8 11 66  5 12 42.2  19.3S 173.9W  33.KM 5.4 DELTA =  86.9
       AZM FROM EPIC=  45.8 TONGA ISLANDS

       EP           5 25 26.0 SPZ   1.0  0.0     0.1   1.0

8 11 66 NO EPICENTER DATA

       DERBY, COLORADO  MAG 1.7

       IS           6 41  4.3 SPNS  0.2  0.0

8 11 66 10 45 59.6  52.8N 169.7W  61.KM 5.3 DELTA =  44.8
       AZM FROM EPIC=  79.7 FOX ISLANDS, ALEUTIANS

       EP          10 54 09.9 SPZ   1.0   0.0        -1.43
       ELPBP       10 54 23.2 SPZ   0.9   0.0        -2.34

8 11 66 NO EPICENTER DATA

       DERBY, COLORADO

       IS          11  0 14.5 SPNS  0.2  0.0

8 12 66  9 18 54.0  36.6N 107.2W   5.KM 0.0 DELTA =   3.7
       AZM FROM EPIC=  23.4 NEW MEXICO

       EP           9 19 47.8 SPZ   1.1  0.0   -0.0  -5.7
       IP           9 19 54.5 SPZ   0.9  0.0   -0.0   1.0
       ES           9 20 22.4 SPZ  -0.0  0.0   -0.0 -16.1
       ES           9 20 33.4 SPZ  -0.0  0.0   -0.0  -5.1

       RAYMOND, COLO. BLAST AT 1804


8 12 66 20 16 59.8  52.9N 161.6W  31.KM 5.6 DELTA =  39.9
       AZM FROM EPIC=  85.6 SOUTH OF ALASKA

       IP          20 24 34.1 SPZ   1.0  0.0   -0.3   2.1
       ELPBP       20 24 42.3 SPZ   1.0  0.0          -1.0
       IPCP        20 26 38.7 SPZ   1.0  0.0           0.4

8 13 66 NO EPICENTER DATA

       GOLDEN FAULT, COLORADO

       IP          16 37 14.8 SPZ   0.2  0.0
       IS          16 37 18.2 SPNS  0.2  0.0

8 15 66 13 36 23.7  60.4N 146.0W   9.KM 5.3 DELTA =  32.3
       AZM FROM EPIC= 110.5 SOUTHERN ALASKA

       EP          13 42 56.1 SPZ   0.9  0.0  999.0   0.6

8 16 66  4 43 25.0  30.2N 113.5W  33.KM 4.5 DELTA =  11.9
```

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```
        AZM FROM EPIC=  32.3 GULF OF CALIFORNIA

        ELR          4 49 43.6 SPNS -0.0   0.0     3.5KM/SEC

8 16 66 18  2 36.1  37.4N 114.2W  33.KM 6.1 DELTA =   7.5
        AZM FROM EPIC=  66.8 SOUTHERN NEVADA

        IP          18  4 24.2 SPZ   1.2   0.0    -0.0   -1.0
        IPP         18  4 35.1 SPZ   1.2   0.0           1.4
        I           18  4 52.5 SPEW -0.0   0.0
        ES          18  6 19.0 SPNS -0.0   0.0    -0.0   29.5
        IS          18  6 32.8 SPZ   0.8   0.0    -0.0   43.3
        ILR         18  6 32.8 SPZ   0.8   0.0     3.5KM/SEC

8 16 66 19 50  9.5  37.4N 114.1W  39.KM 4.6 DELTA =   7.4
        AZM FROM EPIC=  66.6 SOUTHERN NEVADA

        EP          19 51 57.8 SPZ  -0.0   0.0    -0.0    0.3
        ES          19 54  6.6 SPNS -0.0   0.0    -0.0   45.8

8 17 66 19 54 10.2   5.0S 125.2E 538.KM 5.6 DELTA = 122.9
        AZM FROM EPIC=  44.8 MOLUCCAS

        IP          20 12  7.2 SPZ   0.9   0.0

8 17 66 20 58 35.9  52.3N 174.9E  32.KM 5.6 DELTA =  53.9
        AZM FROM EPIC=  69.3 NEAR ISLS, ALEUTIANS

        EP          21  8  0.3 SPZ  -0.0   0.0    -0.2    1.9

8 17 66 23  7 58.9  37.3N 114.1W  33.KM 5.2 DELTA =   7.4
        AZM FROM EPIC=  65.9 SOUTHERN NEVADA

        EP          23  9 49.4 SPZ  -0.0   0.0    -0.0    1.8
        I           23 10 16.0 SPEW -0.0   0.0

8 18 66  6 14 58.6  37.4N 114.1W   9.KM 4.5 DELTA =   7.4
        AZM FROM EPIC=  66.6 SOUTHERN NEVADA

        EP           6 16 52.2 SPZ  -0.0   0.0    -0.0    3.0
        E            6 16 19.4 SPEW -0.0   0.0

8 18 66  6 38  4.0  51.5N 177.8E  44.KM 5.3 DELTA =  52.5
        AZM FROM EPIC=  70.5 RAT ISLS. ALEUTIANS

        EP           6 47 16.1 SPZ   1.3   0.0    -0.2    1.4

8 18 66  9 15 34.9  37.3N 114.1W   9.KM 5.1 DELTA =   7.4
        AZM FROM EPIC=  65.9 SOUTHERN NEVADA

        EP           9 17 25.9 SPZ  -0.0   0.0    -0.0   -0.2
        E            9 17 53.5 SPEW -0.0   0.0
        IS           9 19 34.4 SPNS -0.0   0.0    -0.0   43.0

8 18 66 10 33 16.5  14.6N  91.7W  76.KM 5.9 DELTA =  28.0
        AZM FROM EPIC= 337.4 GUATEMALA

        IP          10 39  3.4 SPZ  -0.0   0.0     0.1    1.4
        ILPBP       10 39 24.7 SPZ  -0.0   0.0            3.7
        EPP         10 40  0.3 SPZ  -0.0   0.0            6.0
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```
        EPCS          10 46 11.2 SPEW -0.0   0.0     0.1 429.2
        ELR           10 47 27.5 SPEW -0.0   0.0     3.7KM/SEC
        ESCS          10 49 47.0 SPEW -0.0   0.0           7.7

8 18 66 12  0 35.2  37.3N 114.2W  33.KM 4.4 DELTA =   7.5
        AZM FROM EPIC=  66.1 SOUTHERN NEVADA

        EP            12  2 24.9 SPZ  -0.0   0.0    -0.0   0.0
        I             12  2 52.4 SPZ  -0.0   0.0
        ES            12  4 31.1 SPZ  -0.0   0.0    -0.0  41.5

8 18 66 13 33 20.8  37.4N 114.2W  33.KM 4.6 DELTA =   7.5
        AZM FROM EPIC=  66.8 SOUTHERN NEVADA

        EP            13 35  7.2 SPZ  -0.0   0.0    -0.0  -2.7
        E             13 35 35.4 SPZ  -0.0   0.0

8 18 66 14 33 59.8   0.2S 125.1E  56.KM 6.3 DELTA = 119.5
        AZM FROM EPIC=  42.8 MOLUCCA SEA

        EPKP1         14 52 47.8 SPZ   1.2   0.0     0.6   4.0

8 18 66 14 37 53.0   0.1S 125.1E  33.KM 6.3 DELTA = 119.4
        AZM FROM EPIC=  42.8 MOLUCCA SEA

        EPKP1         14 56 41.8 SPZ   1.0   0.0     0.6   2.1


8 18 66 17 35  6.4  37.4N 114.2W  33.KM 5.2 DELTA =   7.5
        AZM FROM EPIC=  66.8 SOUTHERN NEVADA

        EP            17 36 58.8 SPZ   0.6   0.0    -0.0   3.3

        RAYMOND COLO. BLAST AT 1959


8 19 66  4 15 45.0  30.3N 105.6W  33.KM 4.8 DELTA =   9.7
        AZM FROM EPIC=   1.5 TEXAS-MEXICO BORDER REGIO
        N
        EP             4 18  8.6 SPZ  -0.0   0.0    -0.0   3.5

8 19 66 NO EPICENTER DATA

        DERBY, COLORADO

        IP             5 29  4.0 SPZ   0.5   0.0
        IS             5 29  8.4 SPNS  0.2   0.0

8 19 66 10 51 38.5  37.4N 114.1W  11.KM 4.5 DELTA =   7.4
        AZM FROM EPIC=  66.6 SOUTHERN NEVADA

        EP            10 53 30.8 SPZ   0.9   0.0    -0.0   1.9
        IP            10 53 55.4 SPZ   0.8   0.0    -0.0  26.5
        ES            10 55 29.4 SPNS  1.0   0.0    -0.0  35.7

8 19 66 12 22  9.6  39.2N  41.7E  26.KM 6.1 DELTA =  95.6
        AZM FROM EPIC= 335.1 TURKEY

        EP            12 35 29.2 SPZ  -0.0   0.0    -0.0  -4.6
```

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```
8 19 66 12 46 23.7  36.4N 141.7E  28.KM 5.5 DELTA =  82.2
        AZM FROM EPIC=  45.5 NEAR EAST COAST OF HONSHU
        , JAPAN
        IP          12 58 44.7 SPZ   1.0  0.0   -0.0   1.2

8 20 66  6 36  5.0  30.3N 105.6W  33.KM 4.7 DELTA =   9.7
        AZM FROM EPIC=   1.5 TEXAS-MEXICO BORDER REGIO
        N
        EP           6 38 33.5 SPZ  -0.0  0.0   -0.0   8.4
        ES           6 41  3.1 SPNS -0.0  0.0   -0.0  49.1

8 20 66  7 43 27.6   3.2S  77.2W 116.KM 5.6 DELTA =  50.1
        AZM FROM EPIC= 331.9 PERU-ECUADOR BORDER REGIO
        N
        IP           7 52 13.2 SPZ   1.0  0.0    0.1   0.2
        ILPBP        7 52 38.6 SPZ   0.9  0.0         -1.9

8 20 66  9 32 31.7  43.1N 140.6E 161.KM 5.8 DELTA =  78.1
        AZM FROM EPIC=  45.8 HOKKAIDO JAPAN REGION

        IP           9 44 15.5 SPZ   0.9  0.0   -0.2   1.4
        IPCP         9 44 19.7 SPZ   0.8  0.0         -3.8

8 20 66 11 36 48.0  37.4N 114.2W  33.KM 4.2 DELTA =   7.5
        AZM FROM EPIC=  66.8 SOUTHERN NEVADA

        EP          11 39  2.2 SPZ  -0.0  0.0   -0.0  25.1

        RAYMOND BLAST AT 2002


8 20 66 22 55  3.0  23.4S 176.0W  57.KM 5.6 DELTA =  91.1
        AZM FROM EPIC=  46.5 FIJI ISLANDS

        EP          23  8  2.4 SPZ   1.3  0.0    0.0  -0.5

8 22 66  8 27 30.2  37.3N 114.2W  33.KM 4.8 DELTA =   7.5
        AZM FROM EPIC=  66.1 SOUTHERN NEVADA

        EP           8 29 20.5 SPZ   0.9  0.0   -0.0   0.6

8 22 66 14 21 13.7  50.3N 147.6E 628.KM 5.2 DELTA =  69.7
        AZM FROM EPIC=  51.5 SEA OF OKHOTSK

        IP          14 31 24.3 SPZ   1.0  0.0   -0.3   0.7

8 23 66  6 48 47.0  49.2N 128.2W  33.KM 4.4 DELTA =  18.7
        AZM FROM EPIC= 110.8 VANCOUVER ISLAND REGION

        EP           6 53  7.0 SPZ   0.9  0.0   -0.1   2.6

8 24 66  7 17 17.8  19.9S  69.2W 100.KM 5.5 DELTA =  68.4
        AZM FROM EPIC= 330.9 NORTHERN CHILE

        EP           7 28 11.1 SPZ   1.0  0.0    0.0   0.2
        ILPBP        7 28 36.5 SPZ  -0.0  0.0         -0.1
        EPCP         7 28 50.2 SPZ  -0.0  0.0         14.6

8 25 66 23 18 50.8  22.4S  68.6W 112.KM 5.3 DELTA =  70.9
```

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AZM FROM EPIC= 331.0 NORTHERN CHILE

EP 23 29 57.6 SPZ 0.8 0.0 -0.0 0.1

8 26 66 10 19 34.8 67.1N 161.9W 14.KM 5.2 DELTA = 41.0
AZM FROM EPIC= 102.2 ALASKA

EP 10 27 19.9 SPZ 1.2 0.0 999.0 0.8

RAYMOND COLO. BLAST AT 1358

8 28 66 7 29 34.7 35.8S 178.5E 94.KM 5.8 DELTA = 103.0
AZM FROM EPIC= 50.0 OFF EAST COAST OF NEW ZEA
LAND
E 7 42 40.8 SPZ 1.0 0.0

8 28 66 10 3 3.0 4.6S 155.2E 509.KM 5.6 DELTA = 100.2
AZM FROM EPIC= 50.3 SOLOMON ISLANDS

EP 10 15 56.5 SPZ -0.0 0.0 999.0 1.4
E 10 17 51.8 SPZ -0.0 0.0

8 28 66 15 36 18.5 36.6N 138.2E 17.KM 5.0 DELTA = 84.0
AZM FROM EPIC= 43.7 HONSHU JAPAN

EP 15 48 51.0 SPZ -0.0 0.0 -0.0 1.6

8 29 66 19 31 24.0 6.8N 82.2W 28.KM 5.1 DELTA = 39.0
AZM FROM EPIC= 331.4 SOUTH OF PANAMA

EP 19 38 50.9 SPZ 1.0 0.0 0.1 1.1

8 30 66 20 20 54.0 61.3N 147.5W 36.KM 5.9 DELTA = 33.3
AZM FROM EPIC= 110.1 SOUTHERN ALASKA

IP 20 27 31.6 SPZ 1.0 0.0 999.0 0.8

8 30 66 23 37 19.0 18.7N 107.0W 54.KM 5.3 DELTA = 21.3
AZM FROM EPIC= 3.7 C. CORRIENTES, MEXICO

EP 23 42 3.5 SPZ -0.0 0.0 0.1 0.5
I 23 42 36.3 SPZ 1.0 0.0

8 31 66 NO EPICENTER DATA

SOUTHERN NEVADA

EP 12 44 33.0 SPZ -0.0 0.0

9 2 66 0 54 40.7 51.0N 177.9E 14.KM 5.2 DELTA = 52.6
AZM FROM EPIC= 70.2 RAT. ISLANDS, ALEUTIANS

EP 1 3 57.0 SPZ 0.8 0.0 -0.2 0.7

9 2 66 7 59 5.7 4.5S 105.9W 33.KM 5.1 DELTA = 44.3
AZM FROM EPIC= 0.7 EASTER ISLAND CORDILLERA

EP 8 7 14.6 SPZ 1.5 0.0 0.1 0.5

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```
9  2 66 NO EPICENTER DATA

        DERBY,COLORADO

        IS          10 10 44.5 SPZ    0.2   0.0

9  2 66 NO EPICENTER DATA
        EP          20 49 52.5 SPZ    1.0   0.0
        ES          20 50 36.0 SPNS  -0.0   0.0

9  2 66 21 20 17.0  26.8N 110.8W  34.KM 5.2 DELTA =  14.0
        AZM FROM EPIC=  17.9 GULF OF CALIFORNIA

        EPP       21 23 44.6 SPZ  -0.0   0.0          -1.4

9  4 66  5 37 49.7  17.8S  74.0W   8.KM 5.1 DELTA =  64.5
        AZM FROM EPIC= 333.8 OFF COAST OF PERU

        EP          5 48 29.1 SPZ    0.9   0.0     0.0    0.0

9  4 66 NO EPICENTER DATA
        EP          9 53 16.1 SPZ    1.0   0.0
        ES          9 53 51.0 SPNS   0.5   0.0

9  4 66 11 23 17.5  37.3N 114.2W  33.KM 4.7 DELTA =   7.5
        AZM FROM EPIC=  66.1 SOUTHERN NEVADA

        EP         11 25  7.5 SPZ  -0.0   0.0    -0.0    0.3
        EP         11 25 35.8 SPZ   0.8   0.0    -0.0   28.6
        ES         11 27  4.8 SPNS  0.6   0.0    -0.0   32.9

9  4 66 22 14 49.0   4.6N  74.0W   5.KM 5.2 DELTA =  45.1
        AZM FROM EPIC= 325.8 COLUMBIA

        IP        22 23 10.6 SPZ    1.0   0.0     0.1    2.2

9  6 66  7 12  1.5  31.4N 114.4W  33.KM 4.0 DELTA =  11.3
        AZM FROM EPIC=  38.3 GULF OF CALIFORNIA

        EP          7 14 48.0 SPZ  -0.0   0.0    -0.0    3.8

9  7 66 NO EPICENTER DATA

        DERBY, COLORADO

        EP          8 47  6.8 SPZ    0.5   0.0
        IS          8 47 10.1 SPNS   0.2   0.0

9  7 66 11  9 37.0  37.3N 114.2W  33.KM-0.0 DELTA =   7.5
        AZM FROM EPIC=  66.1 SOUTHERN NEVADA

        EP         11 11 28.0 SPZ  -0.0   0.0    -0.0    1.3

9  8 66  8 28 52.1  23.5S  66.6W 204.KM 5.4 DELTA =  72.7
        AZM FROM EPIC= 329.8 JUJUY PROVINCE, ARGENTINA

        EP          8 40  0.2 SPZ  -0.0   0.0    -0.0    0.5

9  8 66 21 17 21.4  21.7S 176.3W  80.KM 5.7 DELTA =  90.2
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        AZM FROM EPIC=  46.6 FIJI ISLANDS REGION

        EP          21 30 14.3 SPZ   1.0  0.0     0.1    0.2

 9  8 66 21 15 52.8   2.4N 128.4E  96.KM 6.9 DELTA = 115.3
        AZM FROM EPIC=  43.2 HALMAHERA

        EPKP1       21 34 27.7 SPZ  -0.0  0.0     0.5    4.0
        IPP         21 35 24.4 SPZ  -0.0  0.0            -5.8

 9  9 66  4  4  5.7   8.2S  74.2W 156.KM 5.1 DELTA =  55.9
        AZM FROM EPIC= 331.4 PERU-BRAZIL BORDER REGION

        IP           4 13 28.4 SPZ  -0.0  0.0     0.1   -1.3

 9  9 66 NO EPICENTER DATA
        EP           9 51 56.4 SPZ  -0.0  0.0
        I            9 52 46.6 SPNS  0.2  0.0
        IS           9 53 10.5 SPNS  0.2  0.0
        IS           9 53 15.7 SPNS  0.2  0.0

 9  9 66 18 33 52.8  49.2N 129.5W  33.KM 4.9 DELTA =  19.5
        AZM FROM EPIC= 109.0 VANCOUVER ISLAND REGION

        EP          18 38 22.6 SPZ   0.9  0.0    -0.1    3.2
        IPP         18 38 39.3 SPZ   1.0  0.0            1.8

 9 10 66  2 27 47.7  46.6N 144.1E 335.KM 5.2 DELTA =  73.9
        AZM FROM EPIC=  48.4 SEA OF OKHOTSK

        IP           2 38 48.7 SPZ   0.9  0.0    -0.2    0.7

 9 11 66  1 42 11.0  27.8N 111.1W  33.KM 4.8 DELTA =  13.1
        AZM FROM EPIC=  20.1 GULF OF CALIFORNIA

        ELR          1 49 12.0 SPZ   3.0  0.0    3.5KM/SEC

 9 11 66 17 38  4.2   6.8N  72.9W 167.KM 5.9 DELTA =  44.0
        AZM FROM EPIC= 323.7 NORTHERN COLUMBIA

        IP          17 45 56.8 SPZ   1.0  0.0     0.2    0.3
        I           17 46  4.7 SPZ   1.1  0.0
        ELPBP       17 46 34.3 SPZ   1.0  0.0            0.6
        ES          17 52 15.0 SPNS  2.9  0.0     0.3   -0.2

 9 12 66 16 41  1.7  39.4N 120.1W   8.KM 5.4 DELTA =  11.4
        AZM FROM EPIC=  82.2 NORTHERN CALIFORNIA

        EP          16 43 49.1 SPZ  -0.0  0.0    -0.0    0.6
        I           16 44  3.2 SPZ   0.9  0.0
        I           16 44 28.1 SPZ   0.8  0.0

 9 14 66 NO EPICENTER DATA
        EP          23 37 26.8 SPZ   0.7  0.0

 9 16 66  2 48 21.8  54.1N 163.5W  39.KM 5.3 DELTA =  40.9
        AZM FROM EPIC=  85.6 UNIMAK ISLAND REGION

        EP           2 56  2.8 SPZ   1.0  0.0    -0.3    1.1
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9 17 66 NO EPICENTER DATA

        DERBY COLORADO

        EP            1 27 56.1 SPZ    0.3   0.0
        IS            1 28  0.5 SPNS   0.2   0.0

9 17 66 NO EPICENTER DATA

        DERBY, COLORADO

        ES           11  1  1.4 SPNS   0.2   0.0

9 18 66 NO EPICENTER DATA

        DERBY, COLORADO

        IS            4 35 45.1 SPNS   0.2   0.0

9 19 66 10  6 42.4  45.9N 111.2W   6.KM 4.4 DELTA =   7.3
        AZM FROM EPIC= 141.5 MONTANA

        EP           10  8 35.6 SPZ  -0.0   0.0   -0.0   3.1
        EP           10  9  0.6 SPZ   1.0   0.0   -0.0  28.1
        ES           10 10  2.7 SPZ   1.0   0.0   -0.0   5.8
        IS           10 10 33.5 SPZ   0.8   0.0   -0.0  36.6
        I            10 11  5.9 SPZ   1.0   0.0

9 22 66 NO EPICENTER DATA

        DERBY, COLORADO

        IS            1 35 33.3 SPNS   0.2   0.0

9 22 66 NO EPICENTER DATA

        DERBY, COLORADO

        IS            3 10 12.3 SPNS   0.2   0.0

9 22 66 18 56 40.9  37.3N 114.1W  33.KM 5.0 DELTA =   7.4
        AZM FROM EPIC=  65.9 SOUTHERN NEVADA

        EP           18 58 53.2 SPNS -0.0   0.0   -0.0  23.6
        IS           18 59 51.5 SPNS -0.0   0.0   -0.0  -1.9

9 22 66 19 59 40.2  37.3N 114.1W  33.KM 4.7 DELTA =   7.4
        AZM FROM EPIC=  65.9 SOUTHERN NEVADA

        EP           20  1 56.5 SPNS -0.0   0.0   -0.0  27.6
        ES           20  3 29.5 SPNS -0.0   0.0   -0.0  36.8

9 23 66 11 56  9.7  37.3N 114.2W  33.KM 4.5 DELTA =   7.5
        AZM FROM EPIC=  66.1 SOUTHERN NEVADA

        ES           11 59 57.4 SPNS -0.0   0.0   -0.0  33.3

9 24 66  7 33 46.0  36.5N 105.0W  20.KM 4.1 DELTA =   3.5
        AZM FROM EPIC= 356.6 DULCE, NEW MEXICO
```

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```
          IP              7 34 50.4 SPNS -0.0   0.0    -0.0    9.6
          IP              7 34 54.5 SPNS -0.0   0.0    -0.0   13.7
          IS              7 35 30.7 SPNS -0.0   0.0    -0.0    8.2
          IS              7 35 35.8 SPNS -0.0   0.0    -0.0   13.3
          IS              7 35 39.9 SPNS -0.0   0.0    -0.0   17.4

9 25 66   6  2 26.4  18.3N 100.8W  60.KM 6.1 DELTA =  22.0
          AZM FROM EPIC= 350.8 GUERRERO MEXICO

          IP              6  7 17.3 SPNS -0.0   0.0     0.1    0.6
          ES              6 11 17.3 SPNS -0.0   0.0     0.1    6.8

9 25 66 10 10 41.0  36.4N 105.1W  20.KM 3.8 DELTA =   3.6
          AZM FROM EPIC= 357.9 DULCE, NEW MEXICO

          IP             10 11 44.8 SPNS -0.0   0.0    -0.0    7.6
          IP             10 11 50.3 SPNS -0.0   0.0    -0.0   13.1
          IS             10 12 20.2 SPNS -0.0   0.0    -0.0    0.2
          IS             10 12 32.3 SPNS -0.0   0.0    -0.0   12.3

9 25 66 12 22 40.0  36.4N 105.0W  20.KM 3.6 DELTA =   3.6
          AZM FROM EPIC= 356.7 DULCE, NEW MEXICO

          IP             12 23 43.8 SPNS -0.0   0.0    -0.0    7.5
          IS             12 24 31.3 SPNS -0.0   0.0    -0.0   12.2

9 26 66 NO EPICENTER DATA

          DERBY, COLORADO

          IS              3  5 13.1 SPNS  0.2   0.0

 9 30 66  7  3 22.4  15.4N  94.0W  46.KM 4.7 DELTA =  26.4
          AZM FROM EPIC= 340.3 NEAR COAST OF OAXACA, MEX
          ICO
          EP              7  8 57.0 SPZ  -0.0   0.0     0.1    0.3

 9 30 66  9 29 11.6  18.3S  69.7W 122.KM 5.2 DELTA =  66.8
          AZM FROM EPIC= 330.9 NORTHERN CHILE

          IP              9 39 52.3 SPZ   0.8   0.0     0.0    0.0


10  1 66 NO EPICENTER DATA
          EP              0  4 39.3 SPZ   0.7   0.0
          EP              0  4 41.0 SPNS -0.0   0.0
          IP              0  4 42.5  SPZ  0.8   0.0

10  1 66 NO EPICENTER DATA
          EP              0 50 15.1 SPNS  0.5   0.0
          ES              0 50 36.1 SPNS  0.5   0.0
          ES              0 50 39.3 SPNS  0.3   0.0
          IS              0 50 43.1 SPNS  0.6   0.0
          ELR             0 50 48.3 SPNS -0.0   0.0

10  2 66  7 23 35.3  51.6N 174.5W  34.KM 5.1 DELTA =  47.9
          AZM FROM EPIC=  75.4 ANDREANOF ISLS. ALEUTIAN
          ISLS.
          EP              7 32 12.3 SPZ   0.5   0.0    -0.2    0.4
```

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```
10  2 66 12  8  0.6  51.6N 174.6W  56.KM 4.5 DELTA =  48.0
       AZM FROM EPIC=  75.4 ANDREANOF ISLS. ALEUTIAN
       ISLS.
       EP          12 16 36.1 SPZ  -0.0   0.0    -0.2    0.8

10  2 66 NO EPICENTER DATA

       NEVADA EARTHQUAKE  114W 32.2N

       IP          15 41 32.6 SPZ  -0.0   0.0
       IP          15 42  4.1 SPZ  -0.0   0.0
       IS          15 43 37.2 SPZ  -0.0   0.0

10  3 66 NO EPICENTER DATA

       12 MILES EAST OF TRINIDAD COLO.  MAG 4.4

       IP           2 26 49.1 SPZ   0.5   0.0
       IP           2 26 52.5 SPZ  -0.0   0.0
       IP           2 26 57.8 SPZ  -0.0   0.0
       IS           2 27 22.2 SPZ  -0.0   0.0
       IS           2 27 21.6 SPZ  -0.0   0.0
       IS           2 27 32.7 SPZ  -0.0   0.0

10  3 66 NO EPICENTER DATA

       SONIC BOOM FROM NNE VERY LOCAL

       IP          19 19 29.1 SPZ  -0.0   0.0

10  6 66 NO EPICENTER DATA
       EP           6 31 21.2 SPZ   0.6   0.0
       IS           6 32 25.5 SPNS  0.7   0.0

10  7 66 20 55 56.0  61.6N 150.1W  56.KM 5.7 DELTA =  34.6
       AZM FROM EPIC= 107.6 SOUTHERN ALASKA

       EP          21  2 42.9 SPZ  -0.0   0.0  999.0    1.1
       ELPBP       21  2 56.2 SPZ  -0.0   0.0          -1.0

10  8 66 12  2  8.9  35.5N 140.2E  65.KM 4.9 DELTA =  83.7
       AZM FROM EPIC=  44.7 NEAR EASTERN HONSHU JAPAN

       EP          12 14 32.7 SPZ   1.0   0.0     0.0    0.9

10  8 66 12 36 14.8  37.4N 114.2W  38.KM 3.9 DELTA =   7.5
       AZM FROM EPIC=  66.8 SOUTHERN NEVADA

       EP          12 38  4.3 SPZ  -0.0   0.0    -0.0    0.5
       IP          12 38 43.7 SPZ  -0.0   0.0    -0.0   39.9
       IS          12 40 10.7 SPNS -0.0   0.0    -0.0   42.7

10  8 66 NO EPICENTER DATA

       DERBY COLORADO     GOL MAG

       IS          15 17 23.7 SPNS -0.0   0.0

10  8 66 NO EPICENTER DATA
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```
          DERBY, COLORADO    GOL MAG

          IS          15 17 32.9 SPNS -0.0   0.0

10   8 66 17 43 56.1   51.6N 173.8W   35.KM 5.5 DELTA =   47.5
          AZM FROM EPIC=  75.9 ALEUTIANS

          EP          17 52 30.6 SPZ  -0.0   0.0    -0.2    1.4
          I           17 52 42.1 SPZ  -0.0   0.0

10   8 66 NO EPICENTER DATA
          IP          20 14 50.5 SPZ  -0.0   0.0

10   9 66  8 10 28.0   31.3N 114.3W   33.KM 5.0 DELTA =   11.4
          AZM FROM EPIC=  37.7 GULF OF CALIFORNIA

          EPP          8 13 21.7 SPNS  1.0   0.0            1.3
          I            8 14 18.1 SPNS  1.1   0.0
          ILR          8 16 37.8 SPNS  1.7   0.0     3.4KM/SEC

10   9 66 NO EPICENTER DATA
          EP          12 40 23.3 SPZ   1.0   0.0

10   9 66 NO EPICENTER DATA
          EP          19 33 40.3 SPZ   1.0   0.0

10 10 66  1 19 45.0   16.1N  98.1W   43.KM 4.7 DELTA =   24.6
          AZM FROM EPIC= 346.7 NEAR COAST OF GUERRERO ME
          XICO
          IP           1 25  5.         -0.   0.0     0.1     2.

10 11 66 NO EPICENTER DATA
          ES           0 51 41.3 SPNS -0.0   0.0

          ELKHEAD MTNS. COLORADO


10 11 66  7 31 12.0   45.0N 111.3W   33.KM-0.0 DELTA =    6.7
          AZM FROM EPIC= 136.1 HERGEN LAKE MONTANA

          EP           7 33  7.7 SPNS -0.0   0.0    -0.0   17.3

10 11 66 NO EPICENTER DATA
          EP          11 40 48.7 SPNS -0.0   0.0

10 11 66 NO EPICENTER DATA

          SONIC BOOM AT BOULDER

          IP          16  1 22.1 SPNS  0.2   0.0

10 11 66 NO EPICENTER DATA

          SONIC BOOM AT BOULDER

          IP          17 29 44.2 SPEW  0.2   0.0

10 11 66 NO EPICENTER DATA
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```
          SONIC BOOM AT BOULDER
          IP          18 55 13.5 SPNS   0.2   0.0
10 12 66 NO EPICENTER DATA
          SONIC BOOM AT BOULDER
          IP          16  8 15.7 SPNS   0.2   0.0
10 12 66 NO EPICENTER DATA
          SONIC BOOM AT BOULDER
          IP          17 34 14.5 SPNS   0.2   0.0
10 12 66 NO EPICENTER DATA
          SONIC BOOM AT BOULDER
          IP          19  2 52.4 SPNS   0.2   0.0
10 12 66 NO EPICENTER DATA
          SONIC BOOM AT BOULDER
          IP          20 28 36.8 SPNS   0.2   0.0
10 12 66 NO EPICENTER DATA
          SONIC BOOM AT BOULDER

          IP          21 57 57.7 SPEW   0.2   0.0

10 13 66 NO EPICENTER DATA
          NEAR CASTLE ROCK COLORADO  GOL MAG 3

          IP           0 33 25.8 SPNS   0.5   0.0
          IS           0 33 37.8 SPNS   0.2   0.0

10 14 66  1 49 28.0  19.2N  67.9W  43.KM 4.6 DELTA =  38.2
          AZM FROM EPIC= 311.0 MONA PASSAGE

          IP           1 56 47.2 SPZ    0.9   0.0     0.1    2.1
10 14 66 NO EPICENTER DATA
          DERBY, COLORADO   GOL MAG 2.4

          IP           9 11 23.2 SPZ    0.5   0.0
          IS           9 11 27.5 SPNS   0.2   0.0

10 14 66 NO EPICENTER DATA
           NEAR CASTLE ROCK COLORADO

          EP          15 35 44.9 SPZ    0.4   0.0
          IS          15 35 55.8 SPZ    0.2   0.0

10 16 66  9 13 31.0  29.6N 142.4E  56.KM 5.5 DELTA =  86.5
```

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```
          AZM FROM EPIC=  45.4 HONSHU JAPAN

          IP            9 26 11.5 SPZ   1.1  0.0    0.1   2.3

10 16 66 12 55 30.8  56.1S  27.1W 101.KM 5.6 DELTA = 116.2
          AZM FROM EPIC= 303.1 SOUTH SANDWICH ISLANDS RE
          GION
          EPKP1      13 14  3.5 SPZ  -0.0  0.0   -0.9   2.1

10 17 66 13  9 40.2  53.2N 163.8W  33.KM 4.9 DELTA =  41.2
          AZM FROM EPIC=  84.3 UNIMAK ISLAND REGION

          IP            13 17 24.2 SPZ   0.8  0.0   -0.3   1.4
          ILPBP      13 17 36.0 SPZ   0.9  0.0          2.0

10 17 66 21 41 56.3  10.7S  78.7W  38.KM 7.6 DELTA =  56.1
          AZM FROM EPIC= 335.6 NEAR LIMA PERU

          IP         21 51 35.7 SPZ   0.5  0.0    0.1   1.2
          I          21 51 40.0 SPZ  -0.0  0.0
          ILPBP      21 51 45.2 SPZ   1.0  0.0         -1.7
          IPCP       21 52 35.1 SPZ   0.9  0.0          3.2
          IS         21 59 18.6 SPEW  2.5  0.0    0.2  00.9
          ELR        22  7  2.8 SPEW 22.0  0.0    4.1KM/SEC

10 17 66 23 46 51.6  10.0S  79.6W  46.KM 4.9 DELTA =  55.2
          AZM FROM EPIC= 336.1 OFF COAST OF PERU

          EP         23 56 21.0 SPZ  -0.0  0.0    0.1  -0.8
          I          23 56 27.5 SPZ   1.2  0.0

10 18 66  8 26  7.7  10.6S  79.5W  30.KM 4.9 DELTA =  55.7
          AZM FROM EPIC= 336.2 OFF COAST OF PERU

          IP            8 35 43.7 SPZ   1.0  0.0    0.1  -0.3

          5 SONIC BOOMS OR VERY LOCAL EVENTS BETWEEN 1000
          AND 2000

10 19 66  3 57 57.7  49.7N  78.0E   0.KM 5.6 DELTA =  90.6
          AZM FROM EPIC=   2.5 EASTERN KAZAKH SSR

          EP            4 11  3.5 SPZ  -0.0  0.0   -0.3   0.5

10 19 66 NO EPICENTER DATA
          IP            6 58 16.6 SPZ   0.7  0.0
          ICPBP      6 58 21.3 SPZ   0.7  0.0

10 19 66  8  1 33.8   1.6S  15.5W  33.KM 0.8 DELTA =  90.8
          AZM FROM EPIC= 309.8 NORTH OF ASCENSION ISL

          EP            8 14 37.3 SPZ  -0.0  0.0    0.4   1.8
          I             8 14 57.6 SPZ   2.0  0.0
          I             8 15 12.6 SPZ   1.8  0.0

10 21 66 NO EPICENTER DATA

          SOUTHERN NEVADA EARTHQUAKE

          EP            7 15 16.1 SPZ   0.2  0.0
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```
          IP          7 15 50.2 SPZ    0.8   0.0
          IS          7 17 10.7 SPNS   0.7   0.0

10 21 66 10 33 23.7  14.2N  91.2W  31.KM 4.6 DELTA =  28.5
         AZM FROM EPIC= 337.0 GUATEMALA

          EP         10 39 19.8 SPZ    0.6   0.0     0.1    1.2
          E          10 42 11.8 SPZ    0.7

10 22 66 12 47 18.2  55.2N 162.0E  59.KM 5.4 DELTA =  59.8
         AZM FROM EPIC=  62.6 KAMCHATKA

          IP         12 57 20.4 SPZ    1.0   0.0    -0.3    1.3
          ILPBP      12 57 36.5 SPZ    1.3   0.0            0.3
          I          12 57 50.5 SPZ    0.8

10 22 66 17 16 26.8  40.6N 116.2W  38.KM 4.1 DELTA =   8.4
         AZM FROM EPIC=  90.5 NEVADA

          EP         17 18 34.0 SPZ    0.9   0.0    -0.0    5.4
          IS         17 20 44.6 SPNS   0.6   0.0    -0.0   41.7

10 23 66  7  9 20.9  51.0N 159.2E  38.KM 5.2 DELTA =  63.3
         AZM FROM EPIC=  58.9 KAMCHATKA

          EP          7 19 49.0 SPZ   -0.0   0.0    -0.2    1.1

10 25 66 16 39 33.0  37.3N 114.2W  33.KM 4.4 DELTA =   7.5
         AZM FROM EPIC=  66.1 SOUTHERN NEVADA

          EP         16 41 22.2 SPZ   -0.0   0.0    -0.0   -0.5
          IP         16 41 52.6 SPZ    1.1   0.0    -0.0   29.9
          ES         16 43 23.0 SPNS   0.8   0.0    -0.0   35.6
          IS         16 44  4.6 SPNS   1.0   0.0    -0.0   77.2

10 25 66 NO EPICENTER DATA

         DERBY COLORADO     GOL MAG 2.0

          EP         17 41  1.2 SPZ    0.2   0.0
          IS         17 41  5.5 SPZ    0.2   0.0

10 25 66 NO EPICENTER DATA

         NEAR FOXPARK WYOMING

          IP         22 31 24.0 SPZ    0.2   0.0
          I          22 31 27.9 SPZ    0.4   0.0
          IS         22 31 38.3 SPNS   0.2   0.0

10 26 66 NO EPICENTER DATA

         IN MEDICINE BOW MTNS. WYOMING

          IP         11 50 32.3 SPZ    0.2   0.0
          IS         11 50 59.0 SPZ    0.4   0.0
          IS         11 51  0.1 SPNS   0.2   0.0

10 26 66 15 17 41.0  37.4N 114.3W  33.KM 4.4 DELTA =   7.5
         AZM FROM EPIC=  67.0 SOUTHERN NEVADA
```

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```
          IP          15 19 30.2 SPZ    0.4   0.0    -0.0   -0.9
          IP          15 19 56.0 SPZ    1.0   0.0    -0.0   24.9
          IS          15 21 28.4 SPZ    0.7   0.0    -0.0   32.2

10 26 66 NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          IP          23 54 37.5 SPZ    0.2   0.0
          IS          23 54 54.6 SPNS   0.3   0.0

10 27 66   5 57 58.0   73.4N   54.8E     0.KM 6.3 DELTA =   66.1
          AZM FROM EPIC= 343.4 NOVA ZEMLYA (NUCLEAR BLAS
          T)
          IP           6  8 48.1 SPZ    1.0   0.0  999.0   -0.7
          IPCP         6  9 26.2 SPZ    1.0   0.0           6.9
          IPP          6 11 13.0 SPZ    0.7   0.0          -3.5

10 27 66 NO EPICENTER DATA
          ES           6 37 13.5 SPZ    1.0   0.0

10 27 66   9 18 15.5   20.2N  145.6E   118.KM 5.0 DELTA =   91.0
          AZM FROM EPIC=  46.5 4MARIANA ISLS.

          IP           9 31  8.7 SPZ    1.0   0.0    0.3    1.2

10 27 66 14 21  4.8   22.2N  145.9E    29.KM 6.0 DELTA =   89.4
          AZM FROM EPIC=  46.6 NORTH PACIFIC OCEAN

          IP          14 34  1.7 SPZ    0.5   0.0    0.3    1.5

10 27 66 NO EPICENTER DATA
          EP          17 16 43.6 SPZ   -0.0   0.0
          IS          17 17 47.7 SPNS  -0.0   0.0

10 28 66   6 30 44.0   37.4N  114.1W    41.KM 4.1 DELTA =    7.4
          AZM FROM EPIC=  66.6 SOUTHERN NEVADA

          EP           6 32 39.1 SPZ   -0.0   0.0   -0.0    7.2
          IP           6 33  3.8 SPZ    1.0   0.0   -0.0   31.9
          IS           6 34 33.5 SPNS   0.7   0.0   -0.0   38.2

10 29 66 NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          IP           0  4 45.8 SPZ    0.3   0.0
          IP           0  4 46.1 SPZ    0.1   0.0
          IS           0  5  2.5 SPNS   0.3   0.0

10 29 66   2 39 29.4   39.2N   21.2E    20.KM 5.7 DELTA =   87.2
          AZM FROM EPIC= 321.8 GREECE

          IP           2 52 15.1 SPZ    1.0   0.0   -0.1   -0.5

10 29 66 NO EPICENTER DATA

          LOCAL BLAST
```

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```
          IS          17 55  8.6 SPZ    1.0   0.0

10 29 66 NO EPICENTER DATA

          LOCAL BLAST

          IP          20 10 12.7 SPZ    0.5   0.0
          IS          20 10 17.0 SPZ    1.0   0.0

10 31 66 17 18 17.0  37.3N 114.2W  33.KM 4.5 DELTA =    7.5
          AZM FROM EPIC=  66.1 SOUTHERN NEVADA

          EP          17 20 33.8 SPZ    1.0   0.0    -0.0   27.1

11  1 66  7  1  0.4  43.2N 143.4E 127.KM 4.8 DELTA =   76.6
          AZM FROM EPIC=  47.4 HOKKAIDO JAPAN

          EP           7 12 39.3 SPZ    0.7   0.0    -0.2    1.2

11  1 66  7 40 28.1  40.1N 106.9W  39.KM 3.9 DELTA =    1.3
          AZM FROM EPIC=  93.7 COLORADO

          IP           7 40 50.4 SPZ    0.3   0.0    -0.0    0.8
          IP           7 40 51.2 SPZ    0.2   0.0    -0.0    1.6
          I            7 40 53.6 SPZ    0.2   0.0
          IS           7 41  8.1 SPNS   0.2   0.0     0.0    2.4
          IS          07 41 14.5 SPZ    0.5   0.0     0.0  08.77

11  1 66 14 55 31.0  16.1N  97.3W  33.KM 4.6 DELTA =   24.8
          AZM FROM EPIC= 345.3 OAXACA MEXICO

          IP          15  0 52.8 SPZ    0.7   0.0     0.1    1.3
          ILPBP       15  1  1.0 SPZ    0.8   0.0            -1.1

11  3 66 NO EPICENTER DATA
          IP           6 43 40.1 SPZ    1.1   0.0

11  3 66 11 37 22.7  19.1N  67.9W  47.KM 5.2 DELTA =   38.2
          AZM FROM EPIC= 311.1 MONA PASSAGE

          IP          11 44 40.9 SPZ    1.0    0.0          -1.70
          ELPBP       11 44 51.8 SPZ    1.1   0.0           -4.1
          I           11 45 38.6 SPZ    0.9   0.0

11  3 66 16 24 31.0  19.2N  67.9W  22.KM 5.6 DELTA =   38.2
          AZM FROM EPIC= 311.0 MONA PASSAGE

          IP          16 31 52.6 SPZ    1.0   0.0     0.1    1.9
          IPCP        16 34 06.6 SPZ    0.9    0.0           1.01

11  4 66  6  5 16.1  14.7N  93.2W  11.KM 4.8 DELTA =   27.3
          AZM FROM EPIC= 339.5 NEAR COAST OF CHIAPAS, ME
          XICO
          IP           6 11  5.4 SPZ    0.5   0.0     0.1    2.2
          I            6 11 37.3 SPZ    0.7   0.0

11  4 66  6 36 36.4  14.3N  93.3W  35.KM 4.8 DELTA =   27.7
          AZM FROM EPIC= 339.9 NEAR COAST OF CHIAPAS, ME
          XICO
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```
          IP              6 42 25.9 SPZ    1.5   0.0      0.1    2.6
          I               6 42 57.6 SPZ    0.9   0.0

11  4 66   8 21 13.9   14.4N   92.8W   33.KM 4.4 DELTA =   27.8
          AZM FROM EPIC= 339.1 NEAR COAST OF CHIAPAS MEX
          ICO
          EP              8 27  4.0 SPZ    1.0   0.0      0.1    2.3

11  4 66   8 55 53.2    4.5S   77.8W   90.KM 4.6 DELTA =   51.0
          AZM FROM EPIC= 332.9 NORTHERN PERU

          EP              9  4 49.7 SPZ    1.0   0.0      0.1    1.8

11  4 66  14 50  2.7   17.2N   99.3W   63.KM 4.8 DELTA =   23.3
          AZM FROM EPIC= 348.4 GUERRERO MEXICO

          EP             14 55  8.7 SPZ   -0.0   0.0      0.1    2.9
          ILPBP          14 55 24.5 SPZ   -0.0   0.0               1.0

11  5 66  NO EPICENTER DATA
          IP              0 47 24.2 SPNS   0.2   0.0
          IS              0 47 30.6 SPNS   0.4   0.0

11  5 66  NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          EP              3 56 56.4 SPZ    0.7   0.0
          IS              3 57 14.1 SPNS   0.2   0.0

11  5 66   5 18 18.0   31.5N  115.6W   33.KM 4.3 DELTA =   11.9
          AZM FROM EPIC=  41.8 BAJA CALIFORNIA

          EP              5 21 10.1 SPZ   -0.0   0.0     -0.0    1.5

11  5 66  12 45 13.9   15.3S  175.2W   38.KM 5.3 DELTA =   85.0
          AZM FROM EPIC=  46.4 TONGA ISLANDS

          EP             12 57 48.9 SPZ    1.0   0.0      0.2    1.9
          IPCP           12 57 52.1 SPZ    1.4   0.0               1.6

11  6 66  14 43 16.6   17.9S  178.5W  548.KM 4.8 DELTA =   89.1
          AZM FROM EPIC=  47.3 FIJI ISLANDS

          EP             14 55 16.4 SPZ    1.0   0.0      0.1    1.7

11  7 66  NO EPICENTER DATA

          LOCAL BLAST

          EP              1 22 32.4 SPZ    0.9   0.0
          IS              1 22 35.9 SPZ    0.9   0.0

11  7 66  NO EPICENTER DATA

          LOCAL BLAST

          EP              1 34 38.5 SPZ    0.7   0.0
          IS              1 34 41.9 SPZ    0.8   0.0
```

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```
11  8 66  3 50  8.0  51.2N 178.4W  41.KM 4.7 DELTA =  50.4
      AZM FROM EPIC=  72.7 ANDREANOF ISLS. ALEUTIANS

      IP          3 59  4.9 SPZ   0.9  0.0   -0.2   2.1

11  8 66 11 35 57.0  52.4N 173.0E  41.KM 4.9 DELTA =  55.0
      AZM FROM EPIC=  68.1 NEAR ISLS. ALEUTIANS

      IP         11 45 28.5 SPZ   1.0  0.0   -0.2   2.3
      ILPBP      11 45 37.0 SPZ   1.2  0.0         -3.3

11  8 66 NO EPICENTER DATA
      EP         21 44 15.6 SPNS  0.2  0.0
      IS         21 44 55.8 SPNS  0.4  0.0

11 10 66  3  2 32.5  31.9S  68.4W 113.KM 6.0 DELTA =  79.3
      AZM FROM EPIC= 332.0 SAN JUAN PROVINCE ARGENTI
      NA
      IP          3 14 29.2 SPZ   1.5  0.0   -0.1   2.4
      ELPBP       3 14 56.0 SPZ   1.1  0.0         -2.2

11 11 66  3 19 17.0  25.1N 109.2W  33.KM 4.3 DELTA =  15.2
      AZM FROM EPIC=  11.6 GULF OF CALIFORNIA

      EP          3 22 58.1 SPZ   0.9  0.0    0.0   7.0

11 11 66 NO EPICENTER DATA
      EP         12  2 13.8 SPZ  -0.0  0.0

11 11 66 15 31  4.2  52.3N 169.1W  38.KM 5.4 DELTA =  44.5
      AZM FROM EPIC=  79.7 FOX ISLS. ALEUTIANS

      IP         15 39 15.1 SPZ   0.6  0.0   -0.3   1.8

11 11 66 NO EPICENTER DATA

      DERBY, COLORADO

      IS         18  8 24.3 SPNS  0.2  0.0

11 12 66 11 50 31.6  23.8S  67.6W 126.KM 5.6 DELTA =  72.5
      AZM FROM EPIC= 330.5 CHILE ARGENTINA BORDER RE
      GION

      IP         12  1 47.9 SPZ   0.7  0.0   -0.0   1.3
      IPCP       12  2  3.1 SPZ   0.9  0.0         -0.6

11 12 66 NO EPICENTER DATA
      IP         12 14 52.5 SPZ   1.0  0.0

11 12 66 12 49 43.6  41.8N 144.1E  33.KM 5.8 DELTA =  77.1
      AZM FROM EPIC=  47.5 HOKKAIDO JAPAN

      IP         13  1 37.2 SPZ   0.9  0.0   -0.1   1.9
      ILPBP      13  1 47.4 SPZ   0.9  0.0         -0.1

11 12 66 NO EPICENTER DATA
      IP         20 30 19.1 SPZ   0.2  0.0
      IS         20 30 22.8 SPZ   0.4  0.0
      ILR        20 30 25.2 SPZ   0.7  0.0
```

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```
11 13 66 13  7 48.0  16.1N  95.0W  69.KM 4.1 DELTA =  25.4
         AZM FROM EPIC= 341.4 OAXACA, MEXICO

         EP          13 13 12.0 SPZ  -0.0  0.0    0.1   0.9

         ELKHEAD MTNS. COLORADO

         EP          21 35 57.7 SPZ   0.3  0.0
         IS          21 36 13.7 SPNS  0.3  0.0

11 13 66  2 51 50.6  17.1N  61.9W  65.KM 5.5 DELTA =  43.9
         AZM FROM EPIC= 310.4 LEEWARD ISLS.

         IP           2 59 53.8 SPZ   1.4  0.0    0.1   1.6
         EPCP         3  1 35.4 SPZ   1.0  0.0          -2.5
         IPCS         3  5 23.3 SPZ   1.0  0.0    0.1 331.1

11 13 66  3 41 48.0  24.1S 111.9E  33.KM 4.9 DELTA = 145.0
         AZM FROM EPIC=  54.0 WEST OF AUSTRALIA

         EPKP2        4  1 26.0 SPZ   0.9  0.0    0.2   2.7

11 13 66  6  4 10.4  13.6N  89.5W  83.KM 4.5 DELTA =  29.7
         AZM FROM EPIC= 335.1 EL SALVADOR

         EP           6 10 12.5 SPZ   0.7  0.0    0.1   1.5

11 13 66 11 42 25.9  17.3N  61.3W  52.KM 5.1 DELTA =  44.2
         AZM FROM EPIC= 310.1 LEEWARD ISLS.

         EP          11 50 32.7 SPZ   1.1  0.0    0.1  01.32

11 13 66 NO EPICENTER DATA
         EP          12 16 33.8 SPZ   0.8  0.0
         IS          12 16 38.3 SPZ   0.7  0.0

11 13 66 14 24 40.1   8.3S  74.2W 176.KM 4.8 DELTA =  56.0
         AZM FROM EPIC= 331.4 PERU BRAZIL BORDER REGION

         IP          14 34  2.9 SPZ   0.8  0.0    0.1   0.4

11 13 66 NO EPICENTER DATA

         DERBY EARTHQUAKE  MAG.3.1

         IP          15 16 59.5 SPZ   0.4  0.0
         IS          15 17  4.0 SPNS -0.0  0.0
11 13 66 NO EPICENTER DATA

         DERBY EARTHQUAKE  MAG.1.7

         IS          15 19 43.8 SPNS  0.3  0.0

11 13 66 NO EPICENTER DATA

         DERBY EARTHQUAKE  MAG. 1.9

         IS          15 20 17.2 SPNS -0.0  0.0
```

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```
11 13 66 NO EPICENTER DATA

         DERBY EARTHQUAKE  MAG. 1.9

         EP          15 45   1.2 SPZ  -0.0   0.0
         IS          15 45   5.5 SPNS  0.3   0.0

11 13 66 NO EPICENTER DATA
         IP          21 19 48.2 SPZ    1.0   0.0

11 14 66 12 58 36.2  18.3S  69.2W 123.KM 5.4 DELTA =  67.0
         AZM FROM EPIC= 330.6 NORTHERN CHILE

         IP          13  9 19.9 SPZ    0.8   0.0     0.0    1.7

11 14 66 NO EPICENTER DATA

          SOUTHERN NEVADA

         EP          14 32 37.7 SPZ    0.8   0.0
         IS          14 33 53.2 SPNS   0.5   0.0

11 14 66 NO EPICENTER DATA

         DERBY EARTHQUAKE MAG. 1.7

         IS          20  2 41.7 SPNS   0.4   0.0

11 14 66 20  2 35.8  39.9N 104.7W   5.KM 4.1 DELTA =   0.5
         AZM FROM EPIC= 284.0 COLORADO


         DERBY EARTHQUAKE MAG. 4.2

         IP          20  2 44.8 SPZ  -0.0   0.0   -0.0  -3.3

11 15 66  0  8  7.0  51.4N 179.9W  43.KM 5.0 DELTA =  51.2
         AZM FROM EPIC=  71.9 ANDREANOF ISLANDS ALEUTIA
         NS
         EP           0 17  9.6 SPZ    1.2   0.0   -0.2    1.7

11 15 66 NO EPICENTER DATA

         DERBY COLORADO MAG 2.9

         IP          2 51 15.4 SPZ    0.4   0.0
         IS          2 51 19.7 SPNS   0.2   0.0

11 15 66 NO EPICENTER DATA

         DERBY COLORADO  MAG 2.1

         IS          2 52 30.3 SPNS   0.2   0.0

11 15 66 NO EPICENTER DATA

         DERBY COLORADO

         IS          2 52 39.3 SPNS   0.2   0.0
```

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11 15 66 NO EPICENTER DATA

DERBY COLORADO

IS 2 54 30.1 SPNS 0.2 0.0

11 15 66 NO EPICENTER DATA

ELKHEAD MTNS. COLORADO

IP 4 17 41.9 SPZ 0.2 0.0
IS 4 17 59.0 SPNS 0.4 0.0

11 15 66 NO EPICENTER DATA

DERBY COLORADO MAG 2.0

IP 8 35 33.7 SPZ 0.4 0.0
IS 8 35 38.1 SPNS 0.2 0.0

11 15 66 16 19 7.4 51.2N 176.6W 48.KM 5.0 DELTA = 49.3
AZM FROM EPIC= 73.8 ANDREANOF ISLS. ALEUTIANS

IP 16 27 53.9 SPZ 1.0 0.0 -0.2 0.8
ILPBP 16 28 3.0 SPZ 0.8 0.0 -4.0

11 15 66 NO EPICENTER DATA
IP 23 27 25.6 SPZ 0.2 0.0
IS 23 27 47.3 SPNS 0.2 0.0

11 16 66 NO EPICENTER DATA

DERBY COLORADO

IS 10 18 51.5 SPNS 0.2 0.0

11 16 66 23 16 9.1 52.6N 169.5W 33.KM 4.9 DELTA = 44.7
AZM FROM EPIC= 79.7 FOX ISLS. ALEUTIANS

IP 23 24 21.6 SPZ 1.1 0.0 +1.38
I 23 24 37.1 SPZ 1.0 0.0

11 18 66 9 12 9.9 36.3S 100.7W 33.KM 5.1 DELTA = 76.1
AZM FROM EPIC= 356.4 SOUTHERN PACIFIC OCEAN

EP 9 23 57.4 SPZ 1.4 0.0 -0.3 2.0

11 18 66 NO EPICENTER DATA
EP 15 4 51.0 SPZ 0.6 0.0

11 19 66 NO EPICENTER DATA

ELKHEAD MTNS. COLORADO

IP 1 16 13.1 SPZ 0.2 0.0
IS 1 16 29.7 SPZ 0.4 0.0

11 19 66 5 19 56.1 37.6N 141.3E 58.KM 4.8 DELTA = 81.6
AZM FROM EPIC= 45.4 HONSHU JAPAN

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```
          IP            5 32  9.8 SPZ    1.0   0.0    -0.0    0.8
          ILPBP         5 32 24.4 SPZ   -0.0   0.0            -1.7

11 19 66 NO EPICENTER DATA
          IP           17  5 45.8 SPZ    0.4   0.0
          ES           17  5 53.4 SPNS   0.4   0.0

11 19 66 NO EPICENTER DATA
          EP           17 30 17.2 SPZ    0.7   0.0

11 20 66  5 47  5.0  51.5N 176.6W  58.KM 4.8 DELTA =  49.2
          AZM FROM EPIC=  74.0 ANDREANOF ISLS. ALEUTIANS
          IP            5 55 50.1 SPZ    1.0   0.0    -0.2    1.1

11 20 66  9 29 59.1  51.4N 176.6W  54.KM 5.1 DELTA =  49.2
          AZM FROM EPIC=  73.9 ANDREANOF ISLANDS, ALEUTI
          ANS
          IP            9 38 44.8 SPZ    1.1   0.0    -0.2    1.1

11 21 66 11 12  2.4  18.8N 102.3W  87.KM 4.7 DELTA =  21.3
          AZM FROM EPIC= 353.7 MICHORCAN MEXICO

          IP           11 16 45.2 SPZ    1.2   0.0     0.1    1.7

11 21 66 12 19 27.3  46.7N 152.5E  40.KM 5.6 DELTA =  69.4
          AZM FROM EPIC=  53.3 KURILE ISLANDS

          IP           12 30 34.3 SPZ   -0.0   0.0    -0.2    1.7

11 21 66 NO EPICENTER DATA

          GUNNISON COLORADO

          EP           22 54 55.2 SPZ   -0.0   0.0
          IP           22 54 57.6 SPZ   -0.0   0.0
          IS           22 55 19.9 SPZ    0.5   0.0

11 22 66  6 29 53.5  48.2N 146.7E 453.KM 5.6 DELTA =  71.5
          AZM FROM EPIC=  50.4 SEA OF OKHOTSK

          IP            6 40 29.6 SPZ    1.0   0.0    -0.2    1.1
          EPCP          6 40 37.5 SPZ    1.2   0.0            -8.0
          I             6 40 54.4 SPZ    1.0   0.0

11 22 66  7  1 11.1  57.9S  25.3W  38.KM 5.6 DELTA = 118.0
          AZM FROM EPIC= 301.0 SOUTH SANDWICH ISLS

          EPKP1         7 19 55.8 SPZ    0.9   0.0    -1.0    2.8

11 22 66  8 52 18.2  52.1N 172.7E  55.KM 4.9 DELTA =  55.3
          AZM FROM EPIC=  67.8 NEAR ISLS. ALEUTIAN

          EP            9  1 49.3 SPZ    0.9   0.0    -0.2    1.3

11 22 66 12 14 12.4  19.1N  67.9W  62.KM 4.4 DELTA =  38.2
          AZM FROM EPIC= 311.1 MONA PASSAGE

          EP           12 21 29.0 SPZ    0.8   0.0     0.1    0.9
```

11 23 66 NO EPICENTER DATA

IDAHO SPRINGS COLORADO

EP	16	18	55.3 SPZ	0.5	0.0
IS	16	18	58.2 SPZ	1.4	0.0

11 23 66 NO EPICENTER DATA

FOXPARK WYOMING

IP	19	27	43.1 SPZ	0.5	0.0
IS	19	28	0.7 SPNS	0.2	0.0

11 23 66 NO EPICENTER DATA

GUNNISON COLORADO

IP	22	3	16.0 SPZ	-0.0	0.0
IS	22	3	40.7 SPNS	-0.0	0.0

11 24 66 6 53 37.1 56.5N 152.9W 33.KM 4.8 DELTA = 34.9
AZM FROM EPIC= 97.6 KODIAK ISL. REGION

EP	7	0	28.5 SPZ	0.9	0.0	-0.3	1.1

11 24 66 16 45 47.0 38.3S 92.1W 33.KM 4.7 DELTA = 78.9
AZM FROM EPIC= 349.7 WEST CHILE RISE

EP	16	57	54.5 SPZ	-0.0	0.0	-0.3	6.4
IPCP	16	58	3.7 SPZ	1.4	0.0		6.3

11 24 66 NO EPICENTER DATA

DERBY COLORADO

EP	17	55	17.0 SPZ	-0.0	0.0
IS	17	55	21.4 SPNS	0.2	0.0

11 24 66 19 10 53.8 17.2N 146.0E 88.KM 5.1 DELTA = 92.7
AZM FROM EPIC= 46.7 MARIANA ISLANDS SPNS

EP	19	23	58.1 SPZ	1.0	0.0	0.3	0.5

11 25 66 4 49 5.0 1.9N 79.2W 37.KM 4.5 DELTA = 44.7
AZM FROM EPIC= 331.3 NEAR COAST OF ECUADOR

EP	4	57	17.8 SPZ	1.2	0.0	0.1	1.4

11 25 66 NO EPICENTER DATA

MEDICINE BOW MTNS. WYOMING

IP	5	53	28.7 SPZ	-0.0	0.0
EP	5	53	30.8 SPNS	-0.0	0.0
EP	5	53	32.4 SPNS	-0.0	0.0
IS	5	53	56.4 SPNS	-0.0	0.0
IS	5	53	58.2 SPNS	-0.0	0.0
IS	5	54	1.0 SPZ	-0.0	0.0

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```
11 25 66 NO EPICENTER DATA
         EP          11 13 34.4 SPNS -0.0   0.0
         IS          11 13 52.3 SPNS -0.0   0.0

11 25 66 NO EPICENTER DATA
         IP          22 40  8.0 SPNS -0.0   0.0
         IS          22 40 31.0 SPNS -0.0   0.0

11 26 66  2 18 17.0  25.6S  70.6W  54.KM 5.5 DELTA =  72.8
         AZM FROM EPIC= 332.8 NEAR COAST OF NORTHERN CH
         ILE
         IP           2 29 43.1 SPZ    1.0  0.0   -0.0    1.4
         IPCP         2 29 55.2 SPZ    1.3  0.0           -3.7

11 26 66  4 30 58.0  40.3N 125.5W  33.KM 4.6 DELTA =  15.5
         AZM FROM EPIC=  84.5 OFF COAST OF NORTHERN CAL
         IFORNIA
         EP           4 34 36.3 SPZ    1.5  0.0   -0.0    1.0

11 26 66 NO EPICENTER DATA

         LOCAL BLAST

         IP          17 20 27.4 SPZ    0.3  0.0
         IS          17 20 30.9 SPNS -0.0   0.0
         ILR         17 20 33.1 SPZ    0.8  0.0

11 27 66  4 10 43.0  60.1N 146.2W  28.KM 4.6 DELTA =  32.3
         AZM FROM EPIC= 109.8 SOUTHERN ALASKA

         EP           4 17 12.6 SPZ    0.8  0.0   -0.3    0.9

11 27 66  7  0 48.0  52.5N  34.0W  33.KM 4.4 DELTA =  48.9
         AZM FROM EPIC= 285.1 NORTH ATLANTIC OCEAN

         EP           7  9 32.1 SPZ    0.8  0.0   -0.3   -0.2

11 27 66 11  1 10.0  49.5N 155.8E  40.KM 4.9 DELTA =  65.9
         AZM FROM EPIC=  56.2 KURILE ISLANDS

         EP          11 11 55.4 SPZ    1.0  0.0   -0.2    1.5

11 27 66 20 13  1.5  78.5N   6.4E  33.KM 5.6 DELTA =  55.2
         AZM FROM EPIC= 299.7 SVALBARD REGION

         IP          20 22 32.7 SPZ    1.0  0.0  999.0   -0.8
         ILPBP       20 22 43.1 SPZ   -0.0  0.0           0.3

11 28 66  7 32 53.4   6.6N  82.7W  33.KM 5.5 DELTA =  38.9
         AZM FROM EPIC= 332.0 SOUTH OF PANAMA

         EP           7 40 17.9 SPZ    1.5  0.0    0.1   -0.1

11 28 66 NO EPICENTER DATA
         EP          20 15 46.4 SPZ   -0.0  0.0

11 28 66 NO EPICENTER DATA

         GUNNISON COLORADO
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```
          EP          22 58 13.7 SPZ    0.2   0.0
          IS          22 58 38.0 SPZ    0.2   0.0

11 29 66 NO EPICENTER DATA
          IP           9 41  3.9 SPZ    1.2   0.0

11 29 66 NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          IP          23  4 28.6 SPZ    0.2   0.0
          IS          23  4 46.1 SPNS   0.2   0.0

11 30 66 13  0 40.0  73.9N   7.0E  33.KM 4.8 DELTA =  57.7
          AZM FROM EPIC= 302.8 GREENLAND SEA

          EP          13 10 30.7 SPZ    0.9   0.0   999.0    0.7


12  1 66  4 29 23.3  60.1N 146.4W  38.KM 4.6 DELTA =  32.4
          AZM FROM EPIC= 109.6 SOUTHERN ALASKA

          EP           4 35 53.2 SPZ    0.5   0.0    -0.3    1.6

12  1 66  4 56 58.2  14.0S 167.1E 132.KM 6.1 DELTA =  97.1
          AZM FROM EPIC=  50.7 NEW HEBRIDES ISLS.

          IP           5 10 19.7 SPZ    1.2   0.0     0.2    3.2
          IPP          5 14 13.8 SPZ    1.4   0.0            -2.6
          IPKKP        5 26 51.7 SPZ    1.5   0.0     0.2  995.2

12  1 66 18 56 23.1  41.6N 139.6E 173.KM 5.4 DELTA =  79.7
          AZM FROM EPIC=  45.0 HOKKAIDO JAPAN

          IP          19  8 14.2 SPZ    0.8   0.0    -0.1    1.5
          ILPBP       19  8 56.7         1.2   0.0            -0.0

12  2 66  9 31 17.6   3.2N 128.1E  92.KM 5.8 DELTA = 115.0
          AZM FROM EPIC=  42.8 NORTH OF HALMAHERA

          EPKP1        9 49 52.0 SPZ    1.0   0.0     0.5    3.8

12  3 66 NO EPICENTER DATA

          ELKHEAD MTNS. COLORADO

          IS          21 23 24.7 SPNS   0.2   0.0

12  4 66 NO EPICENTER DATA
          IP           3 41 46.9 SPZ    0.6   0.0
          IS           3 41 55.3 SPEW   0.2   0.0

12  4 66 NO EPICENTER DATA
          IP          13 54 53.1 SPZ    0.2   0.0
          IS          13 55 24.5 SPNS   0.2   0.0

12  5 66 10 10 38.0  30.5N 105.4W  33.KM 4.2 DELTA =   9.5
          AZM FROM EPIC=   0.6 TEXAS-MEXICO BORDER REGIO
          N
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```
          IP          10 13 30.4 SPZ    0.9   0.0    -0.0   35.1
          IS          10 15 40.6 SPZ    0.6   0.0    -0.0   58.6

12  6 66   7 18 40.0   50.1N 159.8E  27.KM 5.4 DELTA =  63.4
          AZM FROM EPIC=  58.8 KURILE ISLANDS

          IP           7 29 10.9 SPZ    1.0   0.0    -0.2    1.5

12  7 66 NO EPICENTER DATA
          IP           1  9  7.0 SPZ    1.0   0.0
          I            1  9 37.9 SPZ    0.9   0.0

12  7 66 NO EPICENTER DATA
          IP          17 29  2.4 SPZ    0.7   0.0

12  7 66 22  9  2.0   51.7N 176.0W  64.KM 4.7 DELTA =  48.8
          AZM FROM EPIC=  74.6 ANDREANOF ISLS.

          EP          22 17 43.0 SPZ    1.0   0.0    -0.2    0.8

12  7 66 23 54 35.9   18.3N  68.5W 141.KM 5.0 DELTA =  38.3
          AZM FROM EPIC= 312.2 MONA PASSAGE

          IP           0  1 45.4 SPZ    1.1   0.0     0.1    0.8
          ILPBP        0  2 16.8 SPZ    0.9   0.0            0.1

12  8 66 NO EPICENTER DATA
          EP          15 12 53.4 SPZ    0.8   0.0

12  9 66 NO EPICENTER DATA
          ELKHEAD MTNS. COLORADO

          IP           3 46 28.0 SPZ    0.2   0.0
          IS           3 46 46.1 SPZ    0.4   0.0

12  9 66 10  6 55.0   14.5S  70.7W 218.KM 4.8 DELTA =  63.0
          AZM FROM EPIC= 330.7 PERU

          IP          10 17 01.0 SPZ    0.7    0.0          -0.03

12 10 66 10 38 35.6   24.2S  67.9W  91.KM 5.4 DELTA =  72.8
          AZM FROM EPIC= 330.8 CHILE-ARGENTINA BORDER RE
          GION
          IP          10 49 57.0 SPZ    0.9   0.0    -0.0    1.3

12 10 66 NO EPICENTER DATA
          IP          12 58 13.2 SPZ   -0.0   0.0
          IS          12 58 43.7 SPZ    0.2   0.0

12 10 66 13  6 32.6   14.3N  92.0W  70.KM 5.6 DELTA =  28.1
          AZM FROM EPIC= 338.0 GUATEMALA

          IP          13 12 20.5 SPZ    1.3   0.0     0.1    0.3

12 10 66 NO EPICENTER DATA
          IP          12 54 39.5 SPZ    0.2   0.0
          IS          12 54 41.7 SPZ    0.8   0.0

12 11 66  6 59 26.4   13.9N  92.1W   9.KM 4.5 DELTA =  28.5
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          AZM FROM EPIC= 338.5 CHIAPAS MEXICO

          EP          7  5 26.2 SPZ   1.0  0.0    0.1   2.3

12 11 66 19 52  9.4  13.4N 145.8E  59.KM 5.4 DELTA =  95.5
          AZM FROM EPIC=  46.9 MARIANA ISLS.

          EP         20  5 30.5 SPZ   1.0  0.0    0.3   1.4

12 11 66 20  1  3.5  52.9N 176.1W 216.KM 5.2 DELTA =  48.5
          AZM FROM EPIC=  75.5 ANDREANOF ISLS. ALEUTIANS

          IP         20  9 26.8 SPZ   1.0  0.0   -0.3   0.6

12 13 66  9 53 32.0  14.1N  92.2W  55.KM 4.4 DELTA =  28.2
          AZM FROM EPIC= 338.5 NEAR COAST OF CHIAPAS MEX
          ICO
          EP          9 59 24.6 SPZ   1.0  0.0    0.1   2.5

12 13 66 NO EPICENTER DATA
          IP         21  2 15.0 SPZ   0.8  0.0
          I          21  2 50.0 SPZ  -0.0  0.0

12 14 66  3 44  1.9  52.9N 177.6W 243.KM 5.3 DELTA =  49.4
          AZM FROM EPIC=  74.5 ANDREANOF ISLS. ALEUTIANS

          IP          3 52 29.2 SPZ   1.2  0.0   -0.3   0.6

12 14 66 NO EPICENTER DATA

          DERBY COLORADO

          IP          3 57  6.7 SPZ   0.5  0.0
          IS          3 57 11.3 SPNS  0.2  0.0

12 14 66  6 52 34.0  14.3N  92.4W  26.KM 4.4 DELTA =  28.0
          AZM FROM EPIC= 338.6 NEAR COAST OF CHIAPAS MEX
          ICO
          EP          6 58 26.7 SPZ   1.0  0.0    0.1   1.8

12 14 66 21  7 52.1   4.8S 143.9E  74.KM 6.0 DELTA = 109.0
          AZM FROM EPIC=  49.4 NEW GUINEA

          EPKP       21 26 16.1 SPZ  -0.0  0.0

12 15 66  2  8  3.0  21.7N  94.5E  81.KM 5.7 DELTA = 115.9
          AZM FROM EPIC=  16.8 BURMA

          EPKP1       2 26 39.1 SPZ   1.0  0.0    0.3   2.5

12 15 66 NO EPICENTER DATA

          DERBY COLORADO  MAG 1.6

          IS          5 32 40.3 SPNS  0.3  0.0

12 15 66 NO EPICENTER DATA

          DERBY COLORADO  MAG 1.6
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          IP          9 41 16.4 SPZ   -0.0   0.0
          IS          9 41 21.0 SPNS   0.3   0.0

12 15 66 NO EPICENTER DATA

          DERBY COLORADO  MAG 1.7

          IS         16 57 55.7 SPNS   0.3   0.0

12 15 66 NO EPICENTER DATA

          DERBY, COLORADO

          IS         17 22 42.4 SPNS   0.3   0.0

12 15 66 NO EPICENTER DATA

          DERBY, COLORADO

          IS         17 37 43.6 SPNS   0.3   0.0

12 16 66 NO EPICENTER DATA

          GUNNISON, COLORADO

          IP          0 45 13.0 SPZ    0.2   0.0
          IS          0 45 34.3 SPZ    0.3   0.0

12 16 66  2  0 44.0  37.0N 107.0W  33.KM 4.2 DELTA =   3.3
          AZM FROM EPIC=  23.8 DULCE, NEW MEXICO

          IP          2  1 36.9 SPZ    0.5   0.0    -0.0    2.4
          IP          2  1 42.9 SPZ    0.2   0.0    -0.0    8.4
          IP          2  1 46.8 SPZ    0.7   0.0    -0.0   12.3
          IS          2  2 25.7 SPZ    0.6   0.0    -0.0   12.7

          CLASSIC DULCE EARTHQUAKE


12 16 66 NO EPICENTER DATA

          ELKHEAD MTNS., COLORADO

          IP         23 11 29.2 SPZ   -0.0   0.0
          IP         23 11 29.7 SPZ   -0.0   0.0
          ES         23 11 47.1 SPNS  -0.0   0.0

12 17 66  5 59 10.2  70.7N  14.0W  27.KM 5.0 DELTA =  53.3
          AZM FROM EPIC= 286.6 JAN MAYEN ISLAND REGION

          IP          6  8 28.9 SPZ    0.6   0.0   999.0    0.2

12 17 66 15 16 31.0  40.3N 125.7W  33.KM 4.6 DELTA =  15.6
          AZM FROM EPIC=  84.5 OFF COAST OF NORTHERN CAL
          IFORNIA
          EP         15 20 10.5 SPZ    1.4   0.0    -0.0    0.2

12 17 66 17 41 20.4  22.8S  68.9W 105.KM 5.1 DELTA =  71.1
          AZM FROM EPIC= 331.2 NORTHERN CHILE
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          IP          17 52 29.2 SPZ  -0.0   0.0    -0.0    0.1
          EPCP        17 52 55.2 SPZ  -0.0   0.0            6.4

12 18 66   4 57 57.8  49.9N  77.7E    0.KM 5.9 DELTA =  90.4
          AZM FROM EPIC=   2.3 EASTERN KAZAKH SSR

          IP           5 11  3.8 SPZ   0.9   0.0    -0.3    1.6

12 18 66 NO EPICENTER DATA
          EP           5 26 32.2 SPZ   0.9   0.0

12 18 66 13 33 15.5  51.4N 178.7W  38.KM 4.5 DELTA =  50.5
          AZM FROM EPIC=  72.6 ANDREANOF ISLANDS, ALEUTI
          ANS
          IP          13 42 11.9 SPZ   0.8   0.0    -0.2    0.4

12 19 66 NO EPICENTER DATA

          ASPEN COLORADO, FELT

          IP          20 53  0.2 SPZ   0.4   0.0
          IP          20 53  1.0 SPZ   0.3   0.0
          IS          20 53 20.0 SPZ   0.2   0.0

12 19 66 NO EPICENTER DATA
          IP          23 12 57.6 SPZ   0.2   0.0
          IP          23 12 58.7 SPZ   0.2   0.0
          ES          23 13 16.7 SPZ   0.4   0.0

12 20 66   0 26 27.8  66.7N 148.7W  33.KM 4.8 DELTA =  36.0
          AZM FROM EPIC= 116.0 ALASKA

          IP           0 33 27.9 SPZ   1.0   0.0  999.0    0.6

12 20 66   0 57 53.1  66.7N 148.7W  33.KM 4.9 DELTA =  36.0
          AZM FROM EPIC= 116.0 ALASKA

          IP           1  4 53.3 SPZ   0.8   0.0  999.0    0.7

12 20 66   1 45  1.5  18.9N 106.3W  33.KM 4.2 DELTA =  21.1
          AZM FROM EPIC=   2.2 OFF COAST OF JALISCO, MEX
          ICO
          EP          1 49 47.3 SPZ  -0.0   0.0     0.1    2.3
          ILPBP       1 49 57.2 SPZ   1.0   0.0            0.9

12 20 66   2 27  3.4  18.7N 106.5W  33.KM 4.4 DELTA =  21.3
          AZM FROM EPIC=   2.6 OFF COAST OF JALISCO, MEX
          ICO
          EP          2 31 50.6 SPZ   1.1   0.0     0.1    1.6
          ELPBP       2 32  1.0 SPZ   1.0   0.0            1.3
          IPP         2 32  5.8 SPZ   1.5   0.0           -7.0

12 20 66   7 55 38.6  18.8N 106.3W  33.KM 4.6 DELTA =  21.2
          AZM FROM EPIC=   2.2 OFF COAST OF JALISCO MEXI
          CO
          EP          8  0 25.0 SPZ  -0.0   0.0     0.1    1.9
          IPP         8  0 40.6 SPZ  -0.0   0.0           -6.0

12 20 66 12 26 55.0  26.1S  63.2W 589.KM 5.7 DELTA =  76.6
          AZM FROM EPIC= 328.1 SANTIAGO DEL ESTERO PROV.
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          , ARGENTINA
          IP          12 37 47.7 SPZ    0.9   0.0    -0.0    1.0
          IPCP        12 38 10.9 SPZ    0.9   0.0            15.0
          IS          12 46 48.3 SPNS   4.0   0.0    -0.1    2.6

12 20 66  NO EPICENTER DATA

          NATIONAL TEST SITE, NEVADA

          IP           5 32 15.9 SPZ    1.0   0.0
          I            5 32 18.5 SPZ    0.7   0.0
          I            5 32 51.3 SPEW   0.9   0.0
          I            5 32 54.5 SPNS   1.3   0.0
          I            5 33 14.3 SPNS   1.2   0.0
          IS           5 33 51.0 SPNS   1.5   0.0
          IS           5 34 46.7 SPZ    1.0   0.0

          VERY NICE RECORD. MANY MULTIPLE REFLEXIONS


          PHASE AT 36SEC. AFTER P COMMON TO ALL TEST SITE
          SHOTS.

12 20 66  NO EPICENTER DATA
          EPKKP       16  3 19.2 SPZ  -0.0   0.0

12 22 66  NO EPICENTER DATA

          MT.EVANS, COLORADO

          IP          15 10 56.3 SPZ    0.4   0.0
          IS          15 10 59.8 SPZ    1.1   0.0

12 23 66   1 11 15.6  17.9S 178.6W 575.KM 5.0 DELTA =  89.2
          AZM FROM EPIC=  47.4 FIJI ISLANDS REGION

          IP           1 23 13.4 SPZ    1.0   0.0     0.1    1.7

12 23 66  15 50 20.4   7.1S 148.3E  43.KM 6.4 DELTA = 107.1
          AZM FROM EPIC=  50.4 EAST NEW GUINEA REGION

          EP          16  4 37.5 SPZ    1.3   0.0
          IPP         16  9  0.3 SPZ    1.0   0.0            -3.8
          ESKS1       16 15 21.0 SPEW   3.0   0.0     0.6    11.5
          EPKKP       16 20  4.4 SPZ    1.0   0.0

12 23 66  18 59  4.8   7.4S  74.8W 136.KM 5.2 DELTA =  54.9
          AZM FROM EPIC= 331.6 PERU-BRAZIL BORDER REGION

          IP          19  8 24.2 SPZ    1.0   0.0     0.1    0.4

12 23 66  22 10 26.0  12.7N  87.6W  34.KM 4.7 DELTA =  31.3
          AZM FROM EPIC= 333.4 NEAR COAST OF NICARAGUA

          EP          22 16 44.2 SPZ    0.7   0.0     0.1   -1.5

12 23 66  23 49 27.0  54.8N 162.5E  33.KM 4.9 DELTA =  59.7
          AZM FROM EPIC=  62.8 NEAR EAST COAST OF KAMCHA
          TKA
          EP          23 59 25.5 SPZ   -0.0   0.0    -0.3   -4.7
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12 24 66 NO EPICENTER DATA

ELKHEAD MTNS. COLORADO

IP	21 24 33.7	SPZ	0.3	0.0	
IP	21 24 35.0	SPZ	0.2	0.0	
IS	21 24 52.4	SPZ	0.3	0.0	

12 24 66 NO EPICENTER DATA

ELKHEAD MTNS., COLORADO

IP	22 31 39.5	SPZ	0.2	0.0	
IS	22 32 5.6	SPZ	0.5	0.0	

12 24 66 22 28 59.6 59.9N 153.4W 113.KM 5.1 DELTA = 35.8
AZM FROM EPIC= 101.8 SOUTHERN ALASKA

EP	22 35 52.9	SPZ	1.1	0.0	-0.4	3.9
IP	22 35 57.6	SPZ	1.0	0.0	-0.4	8.6
ILPBP	22 36 16.1	SPZ	1.0	0.0		-7.1
IPCS	22 41 49.9	SPZ	1.0	0.0	-0.4	360.9

12 25 66 12 26 8.0 0.1N 83.6W 33.KM 4.9 DELTA = 44.4
AZM FROM EPIC= 336.1 OFF COAST OF ECUADOR

EP	12 34 17.3	SPZ	0.8	0.0	0.1	0.2

12 25 66 23 3 22.8 51.8N 176.1E 47.KM 4.8 DELTA = 53.4
AZM FROM EPIC= 69.7 RAT ISLANDS, ALEUTIANS

EP	23 12 39.5	SPZ	0.7	0.0	-0.2	-0.4

12 26 66 NO EPICENTER DATA

EP	19 17 42.9	SPZ	1.0	0.0		

12 27 66 1 22 17.3 37.1N 141.0E 60.KM 5.5 DELTA = 82.1
AZM FROM EPIC= 45.2 HONSHU JAPAN

IP	1 34 34.3	SPZ	1.1	0.0	-0.0	1.6
ILPBP	1 34 46.1	SPZ	1.0	0.0		-5.0

12 27 66 14 2 25.0 78.5N 3.3E 33.KM 4.6 DELTA = 54.7
AZM FROM EPIC= 296.8 GREENLAND SEA

IP	14 11 53.7	SPZ	1.0	0.0	999.0	0.7

12 27 66 17 30 55.4 19.0N 145.0E 299.KM 4.9 DELTA = 92.2
AZM FROM EPIC= 46.3 MARIANA ISLANDS

EP	17 43 34.2	SPZ	0.9	0.0	0.3	1.5

12 27 66 21 22 14.8 13.2N 88.8W 66.KM 5.5 DELTA = 30.4
AZM FROM EPIC= 334.5 EL SALVADOR

IP	21 28 23.8	SPZ	0.7	0.0	0.1	0.9
ILPBP	21 28 40.6	SPZ	0.9	0.0		0.8
IPCP	21 31 20.2	SPZ	1.0	0.0		-1.0

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```
12 28 66 NO EPICENTER DATA
         EP            2 41 56.4 SPZ    1.0   0.0

12 28 66  8 18  7.4  25.5S  70.7W  47.KM 6.9 DELTA =  72.7
         AZM FROM EPIC= 332.8 NEAR COAST OF NORTHERN CH
         ILE
         EP            8 29 32.8 SPZ    0.6   0.0   -0.0    0.7
         IP            8 29 34.5 SPZ    0.9   0.0   -0.0    2.4
         IP            8 29 39.1 SPZ    1.0   0.0   -0.0    7.0
         IS            8 39  1.0 SPNS   4.3   0.0   -0.1    8.4
         I             9  2 56.5 SPNS  12.0   0.0

12 29 66  1 48 28.9  25.7S  70.7W  33.KM 5.4 DELTA =  72.9
         AZM FROM EPIC= 332.9 NEAR COAST OF NORTHERN CH
         ILE
         IP            1 59 57.2 SPZ    0.9   0.0   -0.1    0.9
         IPCP          2  0 12.5 SPZ    1.0   0.0          -1.1

12 29 66 11 26 49.8  28.9S  71.0W  24.KM 5.0 DELTA =  75.6
         AZM FROM EPIC= 333.5 NEAR COAST OF CENTRAL CHI
         LE
         EP           11 38 35.0 SPZ   -0.0   0.0   -0.1    0.6

12 29 66 11 56 27.0  32.6S 111.8W  33.KM 4.9 DELTA =  72.5
         AZM FROM EPIC=   5.3 EASTER ISLAND CORDILLERA

         EP           12  7 48.7 SPZ    1.0   0.0   -0.2   -3.3
         EPCP         12  8  9.1 SPZ    1.3   0.0          -1.0

12 29 66 22 16 22.7  32.8S 111.7W  33.KM 5.4 DELTA =  72.7
         AZM FROM EPIC=   5.2 EASTER ISLAND CORDILLERA

         EP           22 27 50.7 SPZ   -0.0   0.0   -0.2    1.9

12 30 66  1  0 25.4  17.8S 178.9E 658.KM 5.0 DELTA =  90.9
         AZM FROM EPIC=  48.1 FIJI ISLANDS

         IP            1 12 24.0 SPZ    1.2   0.0    0.1    1.7

12 30 66  4 24 43.1   7.2S 119.9E 601.KM 5.2 DELTA = 128.1
         AZM FROM EPIC=  43.8 FLORES SEA

         EPKP1         4 42 45.0 SPZ    0.8   0.0    0.5    2.6
         IPP           4 45  7.4 SPZ    1.4   0.0           8.3

12 30 66 NO EPICENTER DATA
         EP           10  4 58.8 SPZ    0.9   0.0

12 31 66 NO EPICENTER DATA
         IP            1 16 35.9 SPZ    0.2   0.0
         IS            1 16 56.8 SPZ    0.6   0.0

12 31 66 18 23  3.9  11.8S 166.5E  33.KM 7.7 DELTA =  96.1
         AZM FROM EPIC=  50.5 SANTA CRUZ ISLANDS

         EP           18 36 56.0 SPZ   -0.0   0.0    0.3   26.3
         EPP          18 40  6.3 SPZ   -0.0   0.0         -18.7
         ESKS         18 47 19.7 SPEW   4.0   0.0    0.4   17.2
         ELR          19  9  0.0 SPEW  30.0   0.0    3.9KM/SEC
```

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```
12 31 66 NO EPICENTER DATA
         EP          22 28 49.5 SPZ  -0.0   0.0
         EPP         22 32  7.5 SPZ  -0.0   0.0
         ELR         23  1 42.0 SPEW -0.0   0.0
```