

Interoffice

National Radio Astronomy Observatory

Very Large Array

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Subject: THE PROPOSED ANTENNA MOVE SCHEDULE

The July 30 memo by V. Herrero has proposed an antenna move schedule which implies a specific initial configuration for up to nine antennas on the southwest arm. His proposal also recommends reserving CW5 as an antenna test station. The purpose of this memo is to suggest a minor modification that will improve the u-v plane coverage of this initial system, and to provide information on the u-v plane coverage available during specific time periods.

The occupied stations, excluding the antenna on CW5, would be the following according to Herrero's proposal:

September 14 - November 15	CW6, CW7, CW8, CW9
November 15 - December 15	DW2, DW3, CW6, CW8, BW8
December 15 - January 26	DW2, DW3, CW6, CW8, BW8, AW5
January 26 - March 9	DW2, DW3, CW6, CW8, BW6, BW8, AW5
March 9 - April 29	DW2, DW3, DW6, CW6, CW8, BW6, BW8, AW5
April 29 -	DW2, DW3, DW6, CW6, CW8, BW6, BW8, AW5, AW6

Figure 1 shows the u-v plane coverage, for a declination of 40° , achieved after April 29. The minor modification that I would suggest is that station BW6 should be replaced by station BW5, so the sequence after January 26 is as follows:

January 26 - March 9	DW2, DW3, CW6, CW8, BW5, BW8, AW5
March 9 - April 27	DW2, DW3, DW6, CW6, CW8, BW5, BW8, AW5
April 29 -	DW2, DW3, DW6, CW6, CW8, BW5, BW8, AW5, AW6

The u-v plane coverage after April 29 would be somewhat more uniform as shown in Figure 2.

Figures 3-7 show the change in u-v plane coverage as antennas are added and resolution increases.

Figure Number	Number of Stations	Number of Baselines	Maximum Resolutions
3	4	6	1.2 Km
4	5	10	5.2
5	6	15	7.7
6	7	21	7.7
7	8	28	7.7
2	9	36	10.5

RMH:cb


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N
I
I
12 224221
122332 1112112321222
223211 I 1 11322
2311 11111121111111 1132
231 1111 11112111 1111 1
222 111 11111 I 11211 11
321 11 121 111112121 111
231 111 11 1112 I 11111 1
131 2 12 112 122244336633241 1111
121 1 2 2 12242111 I 122334
132 1111 2113331 2112141121 113
22 1111 11 332 1121 I 212
13 111 11 431 211 12121214121211 11
31 2 1 2 42 12 121 I 121
311111 2 52 21 22 1158848G86653
14 1 2 2 42 2 3 6785212242225684
13 2 1 224 1112 5953 2242 12
21 12 2 42 3 2 1863 2232 I 3222
32 22 1 6 2 211961 221 13326232 1
4 11 224 2 2 771 411331 I 121
5 22 224 2211A3 3 23 1766C851
221 1214 22 59 2222 2864348437
12112 16 22 68 3 4 484CCDCQDC732
5112 25132149 422 B5F94 48 422343333
31121251122C 34 75H92JRMZS654463221433
24111243221B441396I2QJCLZ7964344464222442
21111251322D1352AM2ZJZZZ2699BA832545131232
33211251234A32471GXZZZZBPHA356B92334412143
E-----24121265224D5448INZZZ+ZZZN18445D42256212142-----W
34121443329B653AHPBZZZZXGI7423A43215211233
232131545238AB9962ZZZJZ2MA2531D22315211112
2442224644434697ZLCJQ2I693144B12234211142
334122364456SZMRJ29H57 43 C22115212113
333343224 84 49F5B 224 94123152 2115
237CDQCDC484 4 3 86 22 61 21121
7348434682 2222 95 22 4121 122
158C6671 32 3 3A1122 422 22 5
121 I 133114 177 2 2 422 11 4
1 23262331 122 169112 2 6 1 22 23
2223 I 2322 3681 2 3 24 2 21 12
21 2422 3595 2111 422 1 2 31
4865222422125876 3 2 24 2 2 1 41
35668G8488511 22 12 25 2 111113
121 I 121 21 24 2 1 2 13
11 11212141212121 112 134 11 111 31
212 I 1211 233 11 1111 22
311 1211412112 1333112 1111 231
433221 I 11124221 2 2 1 121
1111 142336633442221 211 21 2 131
1 11111 I 2111 11 111 132
111 121211111 121 11 123
11 11211 I 11111 111 222
1 1111 11121111 1111 132
2311 111111121111111 1132
22311 1 I 112322
2221232112111 233221
122422 21

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```

Station 1 = dw2
Station 2 = dw3
Station 3 = dw6
Station 4 = cw6
Station 5 = cw8
Station 6 = bw5
Station 7 = bw8
Station 8 = aw5
Station 9 = aw6
Number of baselines =36

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Figure 2

Station 1 = cw6
 Station 2 = cw7
 Station 3 = cw8
 Station 4 = cw9
 Number of baselines =6

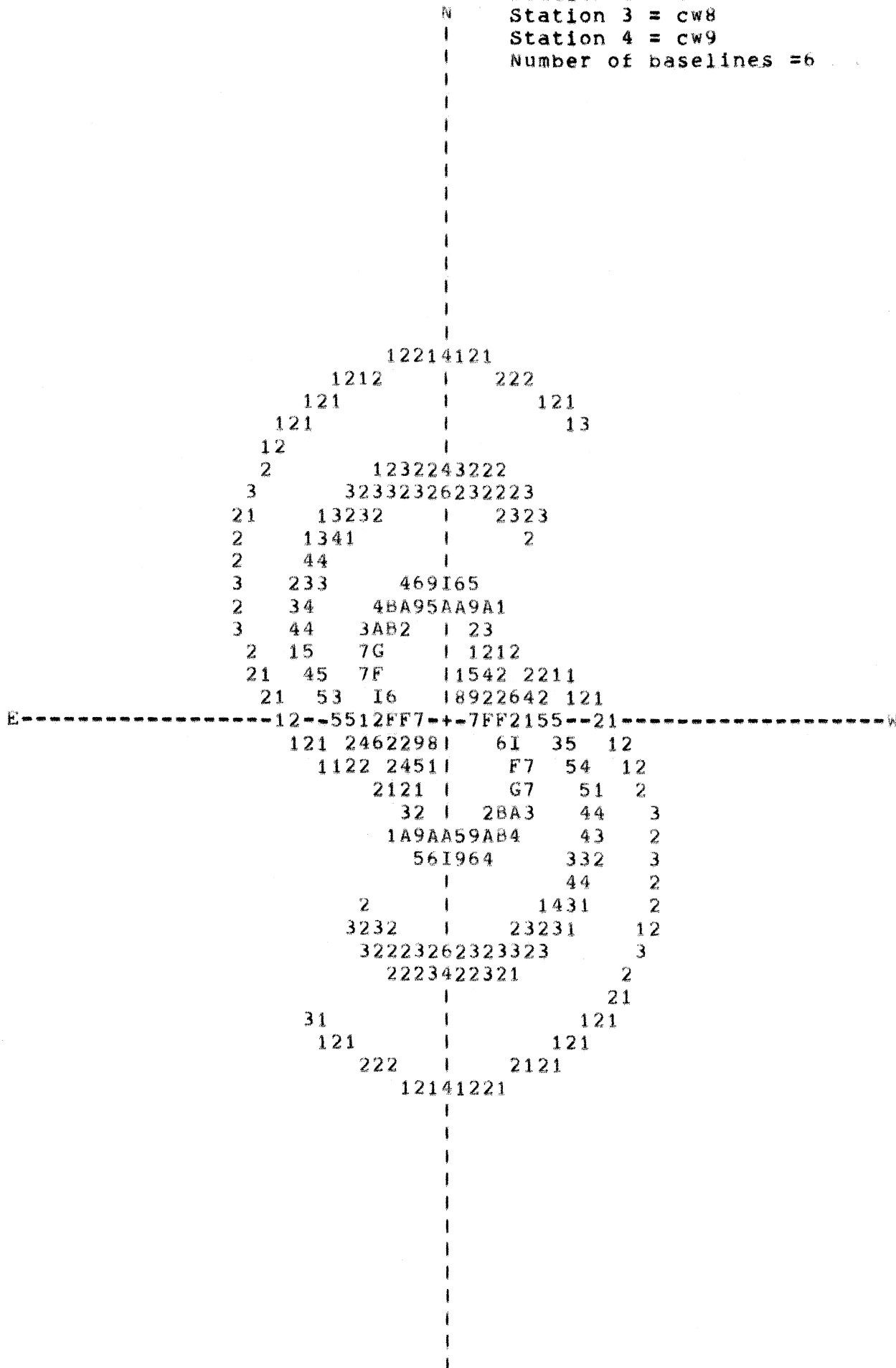


Figure 3

```

Station 1 = dw2
Station 2 = dw3
Station 3 = cw6
Station 4 = cw8
Station 5 = bw8
Number of baselines =10

      N
      |
      |
      |
1121
122221111212222 21
2221      |      12221
122      |      122
221      |
13      |      11112111
22      |      121111
12      |      111      12
21      |      111      1
4      |      121121122112111
2      |      121      1111
22      |      112
2      |      11
22      |      21
2      |      2
3      |      2
3      |      11
2      |      1
4      |      2
2      |      2
2      |      1361
2      |      4765365772
31      |      293
2      |      19      221
31      |      91      1ABAKB71112 222
2      |      9      3F247G311131111 222
22      |      A      G1B5 13      1112112 222
11      |      82      F93      12111 13
22      |      A      AB9 ZS89772      21111 22
E-----13-----1112-----1859HGP+PGH9581-----2111-----31-----W
22 11112      27798SZ 9BA A      11 2 22
31 11121      |      39F 28      2 2 11
222 2112111 31 5B1G A      3 2 22
222 111131113G742F3 9      2 1 2
222 21117BKABA1 19      2 2 13
122      |      91      11 2 2
      |      392      2 2 13
2775635674      2 1 2
1631      2 2 2
      |      2 2 4
      |      2 1 2
      |      11 2 3
      |      2 2 3
      |      2 2 2
      |      12 1 22
      |      11 2 2
      |      211 2 22
1111      |      121 12 2
      |      111211221121121 2 4
1      |      |      111 12
21      |      |      111 21
11112      |      11121 22
11121111      |      31
      |      122
221      |      221
12221      |      1222
12 222212111122221
1211

```

Figure 4

```

      N
      |
      12221124222 22
    121121      |      2222
  1221      |      2112
    221      1112111      2
    22      111111      |      11111
    12      111      |      111
    21      111      111111112111121      11
    22      11      112      |      1111
    12      11      111      |      11
    21      2      11      12422442211
    2      11      2      22421      |      13223
    4      11      11      124      |      122
    11      1      11      123      |
    3      2      11      221      12121214121212
    12      1      11      32      1211      |      21
    2      2      2      32      21      2221242122
    2      1      1      22      12      122      |      221
    4      11      2      4      12      221      |
    2      1      2      22      12      21      |
    2      2      1      4      2      21      32621
    31      1      2      4      2      21      1333      |      233
    2      2      2      4      3      3      42      |
    2      1      1      4      2      12      4      |
    22      2      2      3      2      2      41      4A88GA932 221
    2      1      2      22      3      3      4      A7      |      222112222
    13      2      1      4      2      3      4      95 1EESD22224112113112
    11      2      2      23      3      3      4      D 4L8AM43312322411121 31
    22      111      22      2      3      4      E LA9 112 22242124 112113
    11      211      221212 5 3BC05ZS4A6331 231224 121122
E-----22-2-2-24-313--425AHRZ+ZRHAS24--313-42-2-2-22-----W
    221121 422132 1336A4SZ50CB3 5 212122 112 11
    311211 42124222 211 9AL E 4 3 2 22 111 22
    13 12111422321334MA8L4 D 4 3 3 32 2 2 11
    21131121142222DSEE1 59 4 3 2 4 1 2 31
    222211222 1 7A 4 3 3 22 2 1 2
    122 239AG88A4 14 2 2 3 2 2 22
    | 4 21 2 4 1 1 2
    | 24 3 3 4 2 2 2
    332 1 3331 12 2 4 2 1 13
    12623 12 2 4 1 2 2
    | 12 21 22 2 1 2
    | 122 21 4 2 11 4
    122 1 221 21 22 1 1 2
    2212421222 12 23 2 2 2
    12 1 1121 23 11 1 21
    21212141212121 122 11 2 3
    | 321 11 1 11
    221 1 421 11 11 4
    32231 1 12422 2 11 2
    11224422421 11 2 12
    11 1 111 11 11 21
    1111 1 211 11 22
    11 121111211111111 111 12
    111 1 111 21
    11111 1 111111 22
    2 1112111 122
    2112 1 1221
    2222 1 121121

```

```

Station 1 = dw2
Station 2 = dw3
Station 3 = cw6
Station 4 = cw8
Station 5 = bw8
Station 6 = aw5
Number of baselines =15

```

Figure 5


```

      N
      |
      12221124222 22
      121122111 1121111 13222
      122111111      |      1113112
      2211111      1112111      11 2
      22 11      111111      |      11111      1
      12 11      111      |      111
      221      111      111111112111121      11
      222      11      112      |      1111
      131      11      111      1121      11
      211      2      11      1112452245332221
      22      11      2      1133432121122113322421
      41      11      11      12341211      |      112222
      111      1      11      123312      |      2
      32      2      11      13222      12121214121212
      121      1      11      24221      1211      |      21
      22      2      2      1422      21      2221242122
      21      1      1      432      12      122      |      221
      41      11      2      242      12      221      |
      22      1      2      331      12      21      12232243223
      21      2      1      152      2      21      32      32621      2
      32      1      2      242      2      21      23      136956C6863
      4      2      2      242      3      3      22      477633363454
      21      1      1      242      2      12      3      59541      |      11
      23      2      2      52      2      2      4      4942      4A9DQC9431231
      31      1      2      44      3      3      3      784      AEC85A88222113333
      14      2      1      161      2      3      4      D5      9F71EESD44445212114222
      13      2      2      45      3      3      3      A6      DG4PRTZD3313445521121141
      231111      45      2      3      45C2EFLZC      1152422422562112124
      12      211      44121213AA4NGZ6ZZDOGCC322312461121133
E-----2312-2-471313139E9LUZZ+ZZUL9E931313174-2-2132-----W
      331121164213223CCGODZZ6ZGN4AA31212144      112      21
      4212112652242242511      CZLFE2C54      3      2      54      111132
      1411211255443133DZTRP4GD      6A      3      3      3      54      2      2      31
      22241121254444DSEE17F9      5D      4      3      2      161      1      2      41
      33331122288A58CEA      487      3      3      3      44      2      1      13
      1321349CQD9A4      2494      4      2      2      25      2      2      32
      11      |      14595      3      21      2      242      1      1      12
      454363336774      22      3      3      242      2      2      4
      3686C659631      32      12      2      242      2      1      23
      2      12623      23      12      2      251      1      2      12
      32234223221      12      21      133      2      1      22
      |      122      21      242      2      11      14
      122      |      221      21      234      1      1      12
      2212421222      12      2241      2      2      22
      12      |      1121      12242      11      1      121
      21212141212121      22231      11      2      23
      2      |      213321      11      1      111
      222211      |      11214321      11      11      14
      1242233112211212343311      2      11      22
      1222335422542111      11      2      112
      11      1211      111      11      131
      1111      |      211      11      222
      11      121111211111111      111      122
      111      |      111      11      21
      1      11111      |      11111      11      22
      2      11      1112111      111122
      2113111      |      11111221
      22231      1111211      111221121

```

```

Station 1 = dw2
Station 2 = dw3
Station 3 = dw6
Station 4 = cw6
Station 5 = cw8
Station 6 = bw5
Station 7 = bw8
Station 8 = aw5
Number of baselines =28

```

Figure 7