EXTRA STATIONS FOR THE COMPACT ARRAY

J.L. Caswell & L. Staveley-Smith

Abstract

It is proposed that extra antenna stations be provided for the Compact Array in order to provide array configurations which will greatly improve observing speed, sensitivity and image fidelity for extended objects. These objects include many high priority Galactic, Magellanic Cloud and extended extragalactic sources (e.g. Centaurus A) for which the AT is ideally placed, yet is presently unable to efficiently or faithfully observe. Limitations arising from the lack of these stations will become particularly acute as the Compact Array moves to higher frequencies and more compact configurations. Three new stations would permit a complementary pair of 375-m arrays for a complete 2-day synthesis (presently impossible) and an ultra-compact single-day configuration using a 180-m array (presently impossible – the existing 122-m array is a highly redundant non-imaging array).

As a first step in this direction, we have identified a position for one of the three new stations which would provide a good temporary solution for the single-day ultra-compact array.

1 Introduction

The Australia Telescope Compact Array (ATCA) was constructed with thirty five stations for locating the five antennas on the 3 km track and two stations for locating the 6 km antenna. It was originally envisaged that most radio sources would be observed using twenty four separate 12 hr observations. For these types of observation, most interferometer spacings between 30 and 3000 m and about half the remaining spacings out to 6000 m are obtained, so that a nearly-complete synthesis of the full 6 km aperture is achieved. Under these conditions, image fidelity can be high and deconvolution is trivial.

However, in the nearly 3 years since the commencement of regular scheduling, the actual number of 12 hr observations for a single source has rarely exceeded four. The reasons for this are: (a) that good fidelity is attainable for simple sources with only a few configurations; and (b) pressure on observing time is high, with oversubscription running at a factor of ~ 3.

Scientific priorities have also moved and significant observing time is now being expended in scientific areas which require the use of more compact configurations. The combination of the current observing styles and these unforeseen areas of scientific interest has led to the realization that image quality is being compromised by the existing antenna stations. For large sources, where a compact array is required for surface brightness sensitivity, the existing stations mainly allow for spacings that are even multiples of the

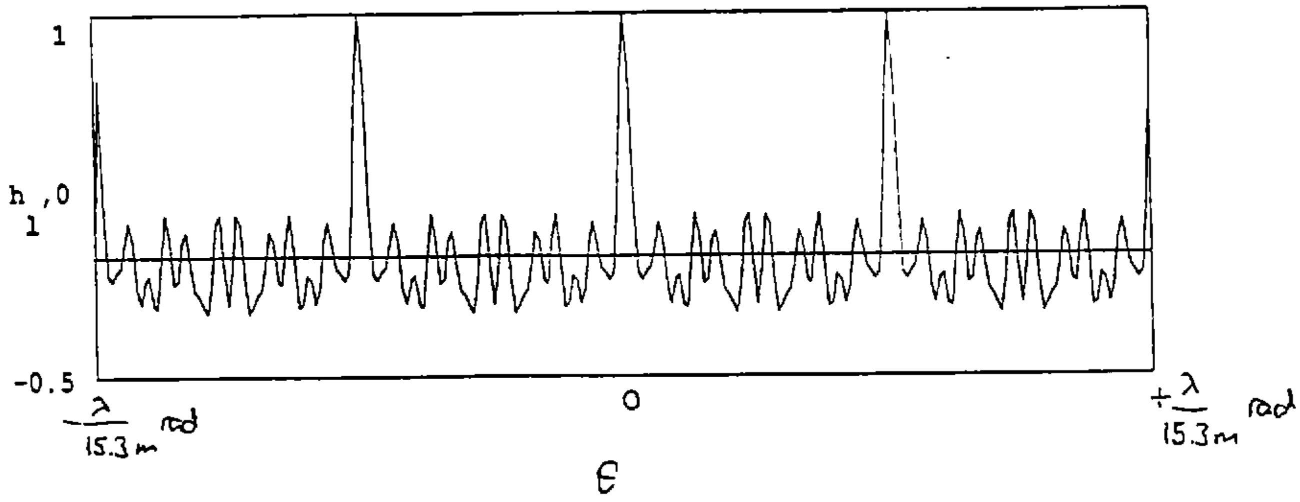

Figure 1: One-dimensional beam with the existing 375m array (uniform weighting). The first grating is well within the primary beam of the antennas.

basic 15-m increment (30, 60, 90 ..). The resultant grating response of the array lies well within the primary beam (radius $\sim$ 0.67$\times$ FWHP at SCP), so that all extended sources are self-confused. The only way around this problem at present is to observe with multiple configurations using less compact arrays. Apart from being prohibitively time-consuming to achieve the equivalent sensitivity (e.g. at least 4 days are required to form a moderately useful 180-m array, compared to the single day theoretically required), there are fundamental problems calibrating such data, where the short baselines arise from separate non-redundant arrays. At high frequencies, where very compact and ultra compact configurations will be the norm, faster configurations are essential to make full use of periods of good atmospheric stability.

2 Technical Considerations

2.1 Existing Configurations

The advertised 750m configuration provides almost complete coverage in 4 days. The unit spacing increment for the ATCA is 15.306m (more precisely 3000/196) and the 750m configuration has 12 omitted spacings from the set 2-50. There are equal numbers of odd and even spacings and the major grating response for a source at the field centre is outside the first null of the primary beam. However large-scale structure is not faithfully reproduced until the full 4-day set is obtained since the 4 shortest spacings are each obtained with different configurations.

We currently advertise a 375m array with 10 baselines in the range 2-30 units, all of them even and thus generating a strong grating response within the primary beam (Figure 1). For extended sources this can lead to insuperable problems in obtaining a reliable

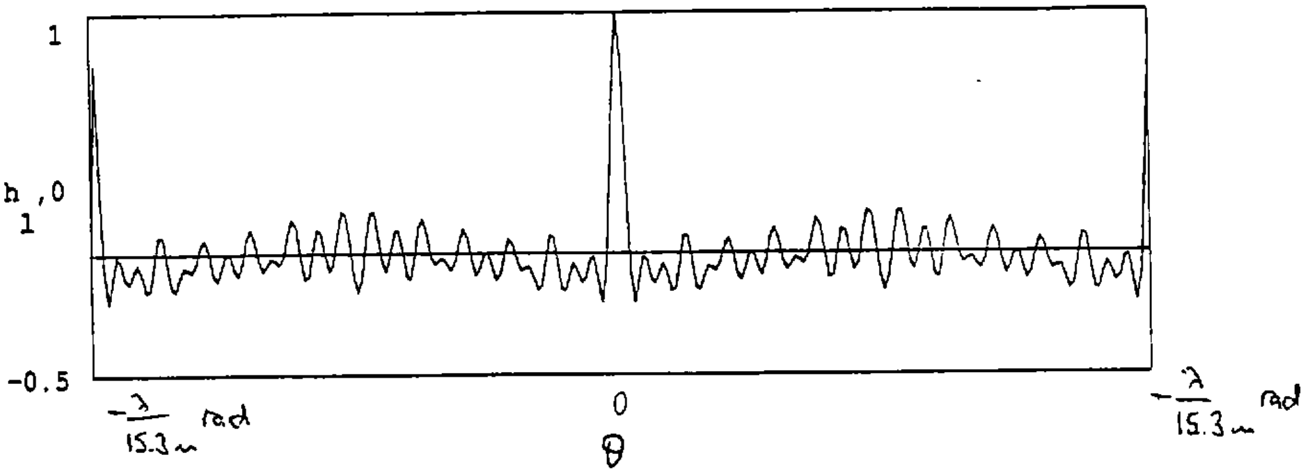

Figure 2: One-dimensional beam with the proposed 2-day 375m array (uniform weighting). The first grating is now well outside the primary beam of the antennas.

image.

2.2 New configurations needed

- Two complementary very-compact configurations with baseline range approximately 2-21, each with increments of ~ 2.
- An ultra-compact configuration with baselines 2-11 (approx) with unit increments.

Current pad positions allow no satisfactory options. At least 2 new pads are needed, and the preferred solution requires 3 new pads. We identify a configuration for 5 antennas by its set of 4 separations; from this it is then simple to derive the 10 baselines. For the ATCA it is also necessary to cite the 5 unique pad positions. For designating pads it is often easier to use the number of 15.3m units from the eastern pad which becomes 0 units. The 6km (extreme west) station becomes 392 units.

2.3 Proposed positions for 3 new pads

A typical good pair of very-compact sets is:

```
separations 4 11 2 6
baselines 2, 4, 6, 8,   11, 13, 15, 17, 19,   23
combined with
separations 5 9 7 3
baselines   3, 5, 7, 9,10,    14, 16,    19, 21, 24
```

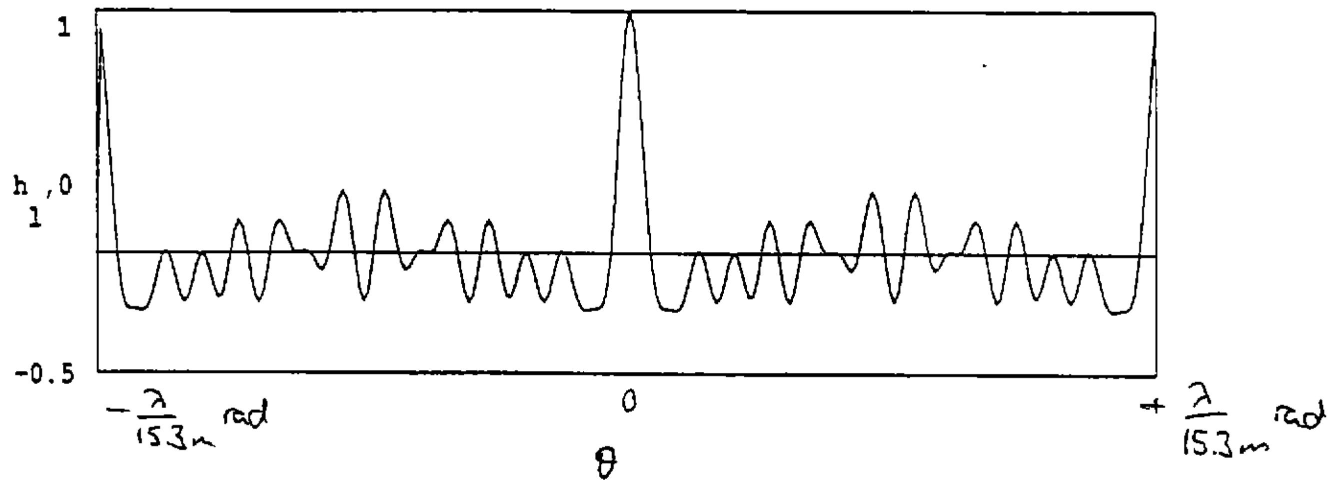

Figure 3: One-dimensional beam with the proposed 1-day ultra-compact array (uniform weighting).

Thus 19 is duplicated and 12 18 20 and 22 are missing. The 1-dimensional beam for this array is plotted in Figure 2.

Positions of the new pads would be: One pad 2 units from 33 towards 34 (designated 33a or preferably 192u). This would permit the 5,9,7,3 set, using pads 28,30,31,32,33a. Two new pads between 9 and 10: 19u (or 9a) located 3 units from 9 towards 10 and 23u (or 9b) located 7 units from 9 towards 10. These would permit the 4,11,2,6 set, using pads 1,4,5,9a,9b.

As noted below (§2.4), this option with 3 new pads allows a very good ultra-compact array. Many other 3-pad solutions are possible and are summarized in Appendix A.

2.4 Ultra-compact configuration if new pads available

A good set achievable after construction of the suggested 3 new pads is 6,2,3,4, using pads 5,8,9,9a,9b. The corresponding baselines are 2 3 4 5 6 7 8 9 11 15. Only 10 is missing from the set 2-11, with 15 obtained instead[1]. The 1-dimensional beam for this array is plotted in Figure 3. Other solutions are summarized in Appendix A and B.

2.5 Interim solution for ultra-compact array with one new station

After construction of one new station and awaiting 2 further ones, it is possible to devise a quite good temporary solution for an ultra-compact array. In particular, if the 19u

[1] Even with no pad restrictions, the best achievable baselines are not 2-11; inevitably at least one baseline between 2 and 10 is missing; preferably it should be 9 or 10.

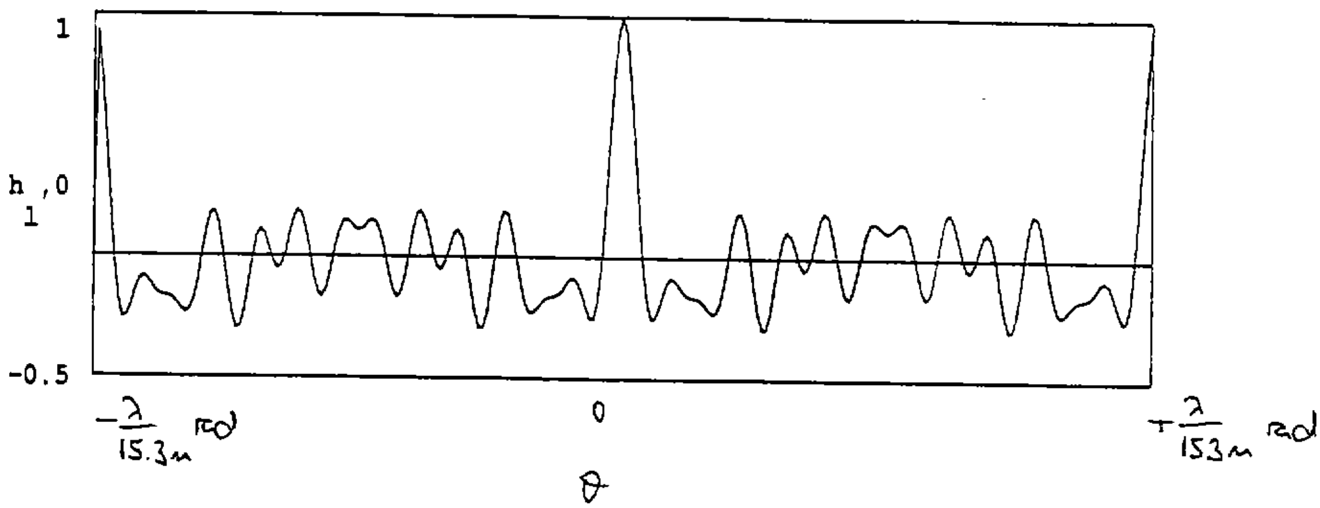

Figure 4: One-dimensional beam with the interim 1-day ultra-compact array using a single new pad (uniform weighting).

station is built, then the spacing set 4 4 2 3 can be achieved, yielding baselines

```
2 3 4 5 6   8 9 10     13  (4 repeated).
```

Spacing 7 is not obtained, but the array far surpasses anything currently achievable. The beam is plotted in Figure 4. Other interim solutions are listed in Appendix C.

3 Scientific Uses of Extra Stations

3.1 Mosaicing of the Magellanic Clouds

The Large Magellanic Cloud, the Small Magellanic Cloud and the Magellanic Stream are prime targets of opportunity for the Australia Telescope Compact Array. Apart from being the closest galaxies to us, they are extremely interesting galaxies in their own right, belonging to a class of low-mass, chemically young systems which are useful testbeds for evolutionary studies. They are connected by a gaseous and stellar trail which appears to be the result of a recent encounter (Murai & Fujimoto, 1980). Existing Parkes observations (Figure 5) of these objects have a spatial resolution of $\sim$ 250 pc, which is worse than has been achieved for other dwarf and non-dwarf galaxies, even outside the Local Group (e.g. Sagitarius dw, Sargent & Lo 1985; Sextans A, Skillman et al. 1988; GR8, Carignan et al. 1990; IC10 Shostak & Skillman 1989). Many problems could be solved with ATCA observations of the Clouds in neutral hydrogen and radio continuum. For example, the geometry and dynamics are still poorly understood; the existence and origin of 'superbubbles' is unclear; and the detailed correlation between the surface density of HI gas and young objects is poor (Lequeux 1991). Much may be learned of

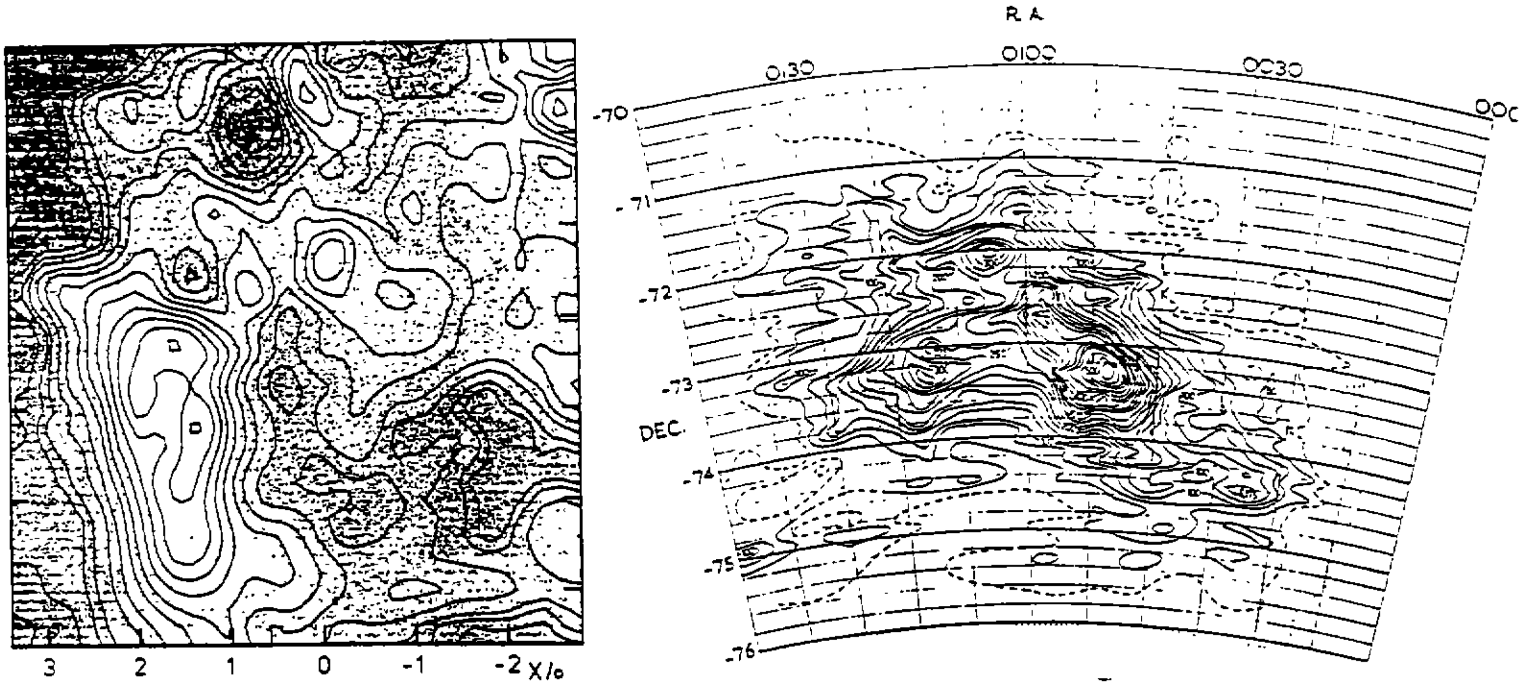

Figure 5: HI column density maps of the LMC (left) and the SMC (right) from Rohlfs *et al.* (1984) and Hindman (1967) respectively. Data are from the Parkes Telescope at a resolution of 15′ (~ 250 pc). Area covered is $\sim 6° \times 6°$.

the detailed hydrodynamical interaction of star-forming regions with surrounding gas, hence illuminating problem areas relating to the chemical evolution of young galaxies. A high angular resolution study may also enable us to pick out regions of protocluster formation. The ages of globular clusters imply that formation is occuring at the present time. We should be able to pick out such sites of cluster formation for the first time. Radio continuum observations will enable the detailed structure of the 30 Dor complex to be studied and its full extent and interaction with the surrounding molecular clouds to be understood.

However, with ~ 1000 pointing centres required even at 21cm, such a study only becomes feasible by rapid mosaicing using a set of configurations which quickly fill the UV plane. A complementary pair of 375-m arrays would give a linear resolution ~ 20 pc, probing down to the level of small-scale interstellar turbulence, and will enable completion in as little as 60 days. Three extra pads are required for this.

3.2 Centaurus A

A useful link between detailed high resolution observations and low resolution single dish observations of extended extragalactic radio galaxies such as Centaurus A would be facilitated by the existence of new stations providing more compact configurations. Cen A has interesting structure ranging from the 10 mas scale accessible to VLBI to the outer lobes covering at least $10° \times 5°$ on the sky (Figure 6; Junkes *et al.* 1992).

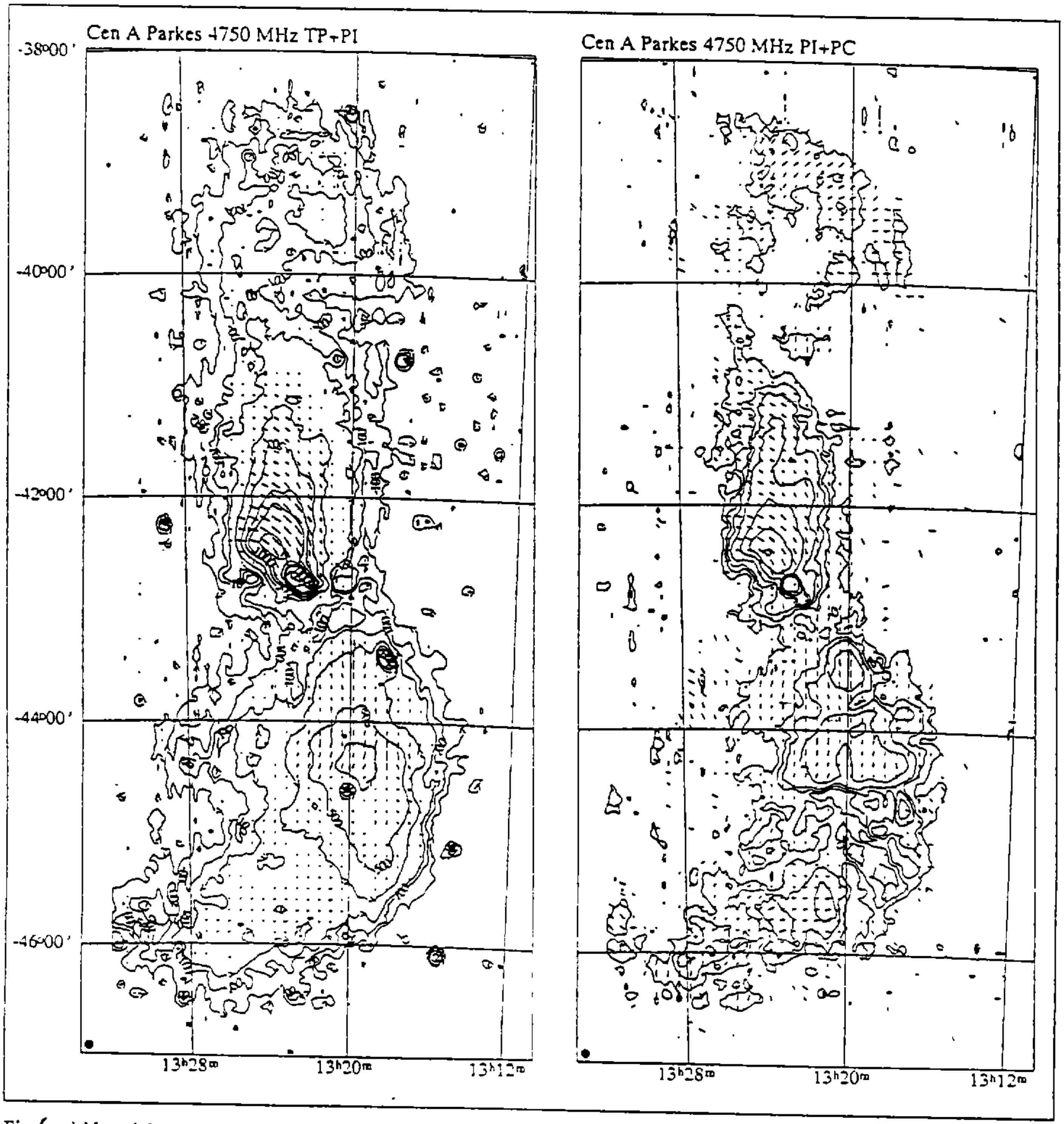

Fig. 6 a) Map of the total-power radio emission from Cen A at λ6 cm. Contours indicate the intensity of the total emission while E-vectors show the position angles of the polarized emission and their lengths its intensity (starting at 25 mJy/b.a.). The rms noise level in the map is 20 mJy/b.a.. b) Map of the polarized radio emission from Cen A at λ6 cm. Contours indicate the intensity of the polarized emission while E-vectors show the position angles of the polarized emission with their lengths giving percentage polarization (starting at 10%). The rms noise level in the map is 8 mJy/b.a..

Polarization information over this range of scale sizes can provide on information magnetic field alignments, cosmic ray confinement mechanisms and plasma turbulence.

3.3 High Frequency Studies

Except for a few powerful AGN and strong maser sources, most high frequency observations will be limited to very compact arrays because of phase stability and surface brightness requirements. Many sources will be complex and extended relative to the primary beam (45″ at 3mm) and so will require fully-sampled configurations to achieve image fidelity and suppression of the grating response. Speed of observation is essential to make use of good atmospheric conditions. The prospect of having to rely on multiple (4–24) configurations, all under good observing conditions, is impractical.

Molecular observations in the forthcoming ATCA frequency band (12-25 GHz), particularly NH_3 at 23 GHz, will also greatly benefit from compact configurations.

3.4 Magnetic Fields in Galaxies

Sensitive polarimetry of nearby galaxies is a useful tool with which to investigate magnetic field structures and the relationship with dust, stars and gas (Beck 1991). Surprisingly few galaxies have been studied so far in both hemispheres. Generally single dishes do not have enough resolution, whereas interferometers run out of sensitivity. However, with its good off-axis polarization performance, the newly commissioned polarization-calibration hardware, improved 3/6 cm performance, and better compact configurations, the ATCA would be ideally equipped for studies of a range of nearby southern galaxies including the young Magellanic and NGC 1313 systems and the starburst galaxies NGC 253 and NGC 4945. A 2-day 380 m array would have a resolution at 5 GHz of 30″ and a sensitivity of 15μJy beam^{-1} (T_B = 0.4 mK) with the forthcoming receiver upgrade. Spectral and depolarization studies could also make use of the fact that the 8 GHz angular resolution at Parkes is similar to the 1.4 GHz resolution with a 180m ATCA configuration.

3.5 Imaging of SNRs, HII regions and other extended sources

Presently, most ATCA observations of SNRs and HII regions are in the LMC and SMC because they are of small enough angular diameter to be faithfully imaged with existing configurations. Larger Galactic sources would often require mosaicing and those of low surface brightness will require very compact, or ultra compact arrays. Much may be learned from such detailed Galactic studies. For example, distance estimates from HI absorption against these objects would greatly enhance our knowledge of their intrinsic properties. Single-dish observations often cannot detect absorption against low surface brightness objects in the presence of substantial emission fluctuations. Detailed wide-field polarimetry of SNRs and mapping of swept-up or dissociated gas in a range of SNRs and HII regions would also add to our knowledge of the evolution of these objects and their interaction with the surrounding medium.

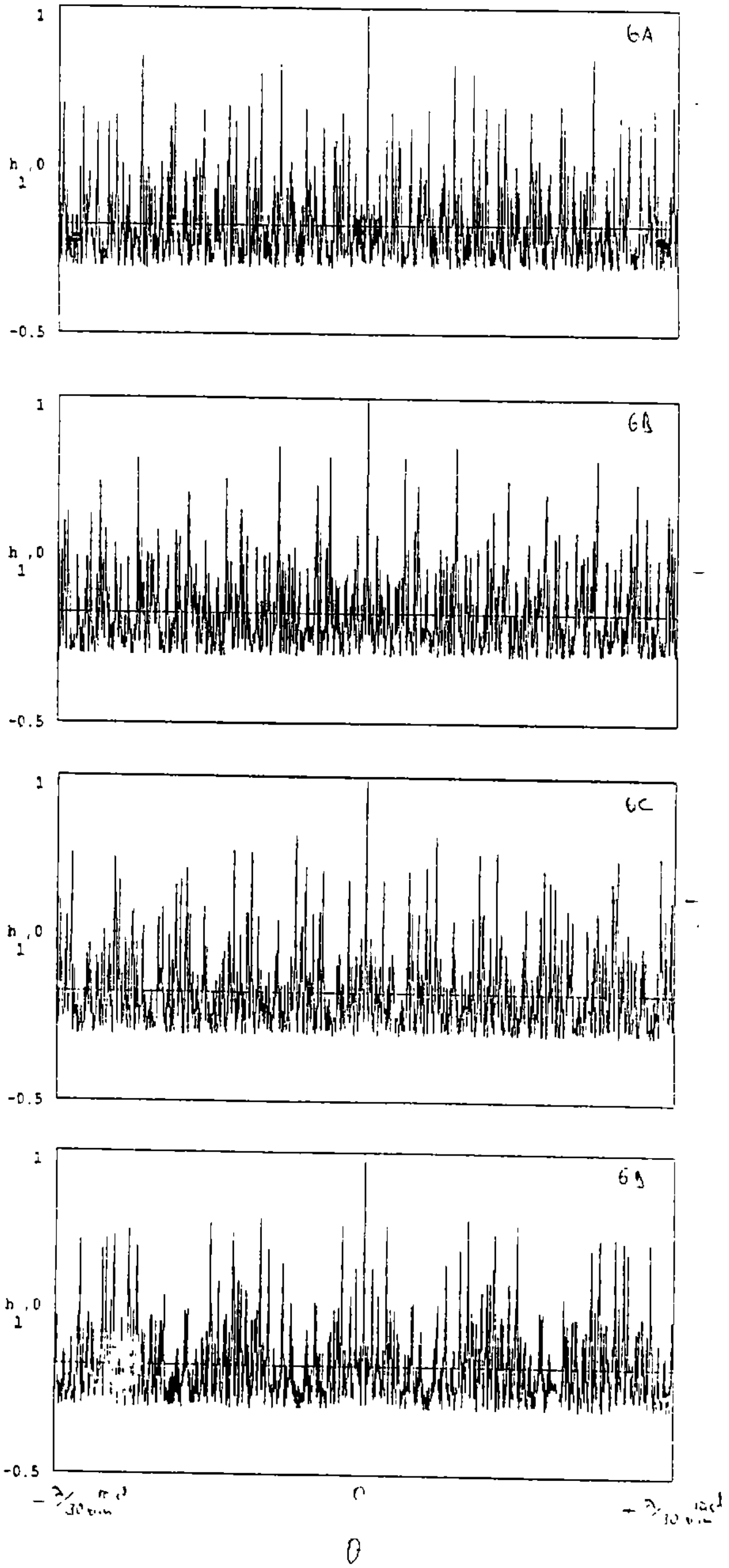

Figure 7: One-dimensional beams for currently advertised 6km configurations: (top to bottom) 6A, 6B, 6C and 6D. The horizontal scale is compressed relative to Figures 1–4.

Note that an ultra-compact array at 8.4 GHz has a resolution very similar to the MOST at 843 MHz and would yield an excellent comparison for spectral index investigations.

Recombination line mapping is an effective way of mapping velocity structure, temperature fluctuations and abundances in extended objects.

3.6 Note on Snapshot Observations

Snapshot observations are brief observations at a number of hour angles, mainly used to quickly determine an accurate radio position of a previously catalogued source or to determine if a radio source is present. These are usually made at high resolution (6km array) and are presently not encouraged because of the high sidelobe levels obtained. Figure 7 shows the 1-dimensional beams for current 6-km configurations. The positive sidelobes vary from +67 to +78% and the negative sidelobes are about −20%. The sidelobes are not associated with the main grating ring, as approximately equal numbers of odd and even increments are available on these long arrays. Therefore, extra stations will probably not substantially improve snapshot-type observations as much as other techniques such as multi-frequency synthesis.

References

Carignan, C., Beaulieu, S. & Freeman, K.C., 1990. *AJ*, **99**, 178.

Beck, R., 1991. *The Interpretation of Modern Synthesis Observations of Galaxies*, ASP Conf. Ser. vol.18, p.43.

Hindman, J.V., 1967. *Aust. J. Phys.*, **20**, 147.

Irwin, M.J., 1991. In *The Magellanic Clouds*, IAU Symposium 148, p.453, eds Haynes, R.F. & Milne, D. (Kluwer).

Lequeux, J., 1991. In *The Magellanic Clouds*, IAU Symposium 148, p.25, eds Haynes, R.F. & Milne, D. (Kluwer).

Junkes, N., Haynes, R.F., Harnett, J.I. & Jauncey, D.L., 1992. *AA*, in press.

Murai, T. & Fujimoto, M., 1980. *Publ. Astr. Soc. Japan*, **32**, 581.

Rohlfs, K., Kreitschmann, J., Siegman, B.C. & Feitzinger, J.V., 1984. *AA*, **137**, 343.

Sargent, W.L.W. & Lo, K-Y, 1985. In *Star Forming Dwarf Galaxies*, p.253, eds Knuth *et al.*.

Shostak, G.S. & Skillman, 1989. *AA*, **214**, 33.

Skillman, E.D., Terlevich, R., Teuben, P.J. & van Woerden, H. 1988. *AA*, **198**, 33.

A Solutions with 3 new pads

SQ_FINAL.DAT

A

File: squeeze.dat Printed Wed Nov 18 16:46:16 1992 Page: 1

```
  3  ! Total number of new pads
 25  ! Maximum baseline considered          ARRAY 1
  0  ! Maximum redundancy considered           "
  4  ! Maximum gap BETWEEN ..                  "
  5  ! shortest baselines                      "
  3  ! length of baseline #1                   "
 25  ! Maximum baseline considered          ARRAY 2
  0  ! Maximum redundancy considered           "
  2  ! Maximum gap BETWEEN ..                  "
  5  ! shortest baselines                      "
  2  ! length of baseline #1                   "
 15  ! Maximum baseline considered          ARRAY 3
  0  ! Maximum redundancy considered           "
  2  ! Maximum gap BETWEEN ..                  "
  1  ! shortest baselines                      "
  7  ! Maximum gap BETWEEN ..                  "        (NB 2 selection levels)
  9  ! shortest baselines                      "
  2  ! length of baseline #1                   "
  1  ! Maximum redundancy considered        COMBINED ARRAY 1+2
  1  ! Maximum gap BETWEEN ..                  "
 10  ! shortest baselines                      "
  2  ! Maximum gap BETWEEN ..                  "
 10  ! longest baselines                       "
 10  ! Maximum gap BETWEEN ..               ARRAY 1
  6  ! longest baselines                       "
 10  ! Maximum gap BETWEEN ..               ARRAY 2
  6  ! longest baselines                       "

New pad locations =    1  11  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =    3  11  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =    3  21  26
ARRAY 1 baselines:   3  4  5  7 11 15 16 18 20 23; pads:    3   6  10  21  26
ARRAY 2 baselines:   2  4  6  8  9 10 12 13 19 21; pads:    0   2   8  12  21
Combined ARRAY :   2  3  4  4  5  6  7  8  9 10 11 12 13 15 16 18 19 20 21 23
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    3  23 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    0   4  10  12  23
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    3  25 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    3  25 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    0   2   8  12  25
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    3  27 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    4   8  14  16  27
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    3  27 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    3  29 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   3   8  10  14

New pad locations =    5  11  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  20  23
ARRAY 1 baselines:   3  4  5  7 11 15 16 18 20 23; pads:    0   5  16  20  23
ARRAY 2 baselines:   2  4  6  8  9 10 12 13 19 21; pads:    2   4  10  14  23
Combined ARRAY :   2  3  4  4  5  6  7  8  9 10 11 12 13 15 16 18 19 20 21 23
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  22  25
ARRAY 1 baselines:   3  4  6  9 12 16 18 21 22 25; pads:    0   4  16  22  25
ARRAY 2 baselines:   2  3  5  7  8 10 13 15 20 23; pads:    2   5  10  12  25
Combined ARRAY :   2  3  3  4  5  6  7  8  9 10 12 13 15 16 18 20 21 22 23 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  23  28
ARRAY 1 baselines:   3  4  5  7 11 15 16 18 20 23; pads:    5   8  12  23  28
ARRAY 2 baselines:   2  4  6  8  9 10 12 13 19 21; pads:    2   4  10  14  23
Combined ARRAY :   2  3  4  4  5  6  7  8  9 10 11 12 13 15 16 18 19 20 21 23
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  23 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    0   4  10  12  23
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  25 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  25 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    0   2   8  12  25
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  9 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  27 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    4   8  14  16  27
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  27 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    5  29 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 18 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 18 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   5  10  12  16

New pad locations =    7  11  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =    9  11  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  13  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   11  15  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14
ARRAY 3 baselines:   2  3  4  5  6  7  8  9 11 15; pads:    0   6   8  11  15

New pad locations =   11  17  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  18  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  18  27
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:    8  11  18  27  32
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  19  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  20  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  21  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  22  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14
```

A

File. squeeze.dat Printed Wed Nov 18 16:46:16 199 Page: 2

```
New pad locations =   11  23  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   0   4  10  12  23
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  23  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  23 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads: 165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   0   4  10  12  23
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  24  25
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  26
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  27
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  27
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   4   8  14  16  27
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  28
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  29
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  30
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  31
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  33
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  26  34
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  35
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  35
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  11  16  25  32  35
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:   0   2   8  12  25
Combined ARRAY :  2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  36
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  37
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  38
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  39
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  40
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  41
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  42
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  43
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  44
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  46
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  47
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  48
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  49
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  50
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  51
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  52
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  53
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  54
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  55
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14
```

```
New pad locations =   11  25  56
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  57
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  58
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  59
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  60
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  61
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  62
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  63
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  65
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  66
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  67
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  68
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  69
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  70
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  71
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  72
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  73
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  74
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  75
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  76
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  77
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  78
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  79
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  80
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  81
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  82
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  83
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  85
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  86
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  87
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  88
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  89
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  90
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  91
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:   2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   0   4   6  11  14

New pad locations =   11  25  92
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:   8  11  16  25  32
```

```
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25  93
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25  94
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25  95
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25  96
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25  97
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25  99
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 101
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 103
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 104
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112

New pad locations =   11  25 105
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 106
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 107
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 108
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 114
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 115
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 116
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 117
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 118
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 119
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 120
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 121
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 122
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 123
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 124
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 125
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 126
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 127
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 130
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 131
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 132
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 133
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 134
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 135
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 136
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
```

A

File: squeeze.dat Printed Wed Nov 18 16:46:16 199 Page: 5

```
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 137
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 139
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 139
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 141
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 142
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 143
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 144
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 145
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 146
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 149
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 150
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 151
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 152
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 153
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 154
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 155
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 156
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 157
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 158
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 159
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 160
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 161
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 162
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 164
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 165
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 165
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads: 165 168 173 182 189
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 166
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 167
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 169
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 170
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 171
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 174
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 175
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14

New pad locations =  11  25 176
ARRAY 1 baselines:  3  5  7  8  9 14 16 17 21 24; pads:   8 11 16 25 32
ARRAY 2 baselines:  2  4  6  8 10 11 12 13 19 23; pads:   2  6 12 14 25
Combined ARRAY :  2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:  2  3  4  5  6  7  8 10 11 14; pads:   0  4  6 11 14
```

A

File: squeeze.dat Printed Wed Nov 18 16:46:16 199 Page: 6

```
New pad locations =   11  25 177
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 178
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 179
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 180
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 181
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 183
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 184
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 185
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 186
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 187
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 188
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 191
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 192
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    0   2   8  12  25
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 193
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  25 194
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:    8  11  16  25  32
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  27 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    4   8  14  16  27
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  27 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   11  29 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    0   4   6  11  14

New pad locations =   13  22  29
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:    8  13  22  29  32
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   13  23 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    0   4  10  12  23
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   13  25 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   13  25 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    0   2   8  12  25
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   13  27 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    4   8  14  16  27
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   13  27 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   13  29 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16

New pad locations =   15  21  24
ARRAY 1 baselines:   3  4  6  9 11 13 17 20 21 24; pads:    0   4  15  21  24
ARRAY 2 baselines:   2  3  5  7  8 10 12 14 19 22; pads:    2  14  16  21  24
Combined ARRAY :   2  3  3  4  5  6  7  8  9 10 11 12 14 13 17 19 20 21 22 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   10  14  16  21  24

New pad locations =   17  21  37
ARRAY 1 baselines:   3  4  5  7 11 15 16 18 20 23; pads:   14  17  21  32  37
ARRAY 2 baselines:   2  4  6  8  9 10 12 13 19 21; pads:    0   2   9  12  21
Combined ARRAY :   2  3  4  4  5  6  7  8  9 10 11 12 13 15 16 18 19 20 21 23
ARRAY 3 baselines:   2  3  4  5  6  7  8  9 11 15; pads:    6  12  14  17  21

New pad locations =   19  23 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    0   4  10  12  23
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8  9 11 15; pads:    8  14  16  19  23

New pad locations =   21  24  25
ARRAY 1 baselines:   3  5  6  8 10 15 16 18 21 24; pads:    0   6  16  21  24
ARRAY 2 baselines:   2  4  5  7  9 11 12 14 19 23; pads:    2  14  16  21  25
Combined ARRAY :   2  3  4  5  5  6  7  8  9 10 11 12 14 15 16 18 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   10  14  16  21  24

New pad locations =   23 104 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    0   4  10  12  23
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112

New pad locations =   23 157 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    0   4  10  12  23
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8  9 11 15; pads:  157 163 165 168 172

New pad locations =   25 104 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112

New pad locations =   25 104 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    0   2   8  12  25
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112
```

A


```
New pad locations =   25 157 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    2   6  12  14  25
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8  9 11 15; pads:  157 163 165 168 172


New pad locations =   25 185 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    0   2   8  12  25
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:  182 185 190 192 196


New pad locations =   27 104 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    4   8  14  16  27
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112


New pad locations =   27 104 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112


New pad locations =   27 157 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:    4   8  14  16  27
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8  9 11 15; pads:  157 163 165 168 172


New pad locations =   27 185 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    2   4  10  14  27
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:  182 185 190 192 196


New pad locations =   29 104 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112


New pad locations =   29 185 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:    4   6  12  16  29
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:  182 185 190 192 196


New pad locations =   87 104 192
ARRAY 1 baselines:   3  5  7  9 10 14 16 19 21 24; pads:  168 173 182 189 192
ARRAY 2 baselines:   2  4  6  8 10 12 13 17 23 25; pads:   87 100 104 110 112
Combined ARRAY :   2  3  4  5  6  7  8  9 10 10 12 13 14 16 17 19 21 23 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112


New pad locations =  104 123 165
ARRAY 1 baselines:   3  5  7  8  9 14 16 17 21 24; pads:  165 168 173 182 189
ARRAY 2 baselines:   2  4  6  8 10 11 12 13 19 23; pads:  100 104 110 112 123
Combined ARRAY :   2  3  4  5  6  7  8  8  9 10 11 12 13 14 16 17 19 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112


New pad locations =  104 124 125
ARRAY 1 baselines:   3  4  6  9 11 14 15 18 20 24; pads:  104 110 113 124 128
ARRAY 2 baselines:   2  3  5  7  8 10 13 16 21 23; pads:  102 104 109 112 125
Combined ARRAY :   2  3  3  4  5  6  7  8  9 10 11 13 14 15 16 18 20 21 23 24
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112


New pad locations =  104 125 126
ARRAY 1 baselines:   3  4  6  9 12 15 16 19 21 25; pads:  104 110 113 125 128
ARRAY 2 baselines:   2  3  5  7  8 10 14 17 22 24; pads:  102 104 109 112 126
Combined ARRAY :   2  3  3  4  5  6  7  8  9 10 12 14 15 16 17 19 21 22 24 25
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:   98 102 104 109 112
```

B Ultra-compact arrays

Note that the best achievable baselines are not 2-11; inevitably at least one baseline between 2 and 10 is missing; Preferably it should be 10 or perhaps 9. Here we summarise the spacing sets and resultant baselines for the obvious solutions so as to indicate which are the preferred sets. Generally, sets with duplicates are avoided.

2 3 4 6	2	3	4	5	6	7		9	10			13		15		
2 3 6 4	2	3	4	5	6			9	10	11		13		15		
2 6 3 4	2	3	4		6	7	8	9		11		13		15		
2 6 4 3	2	3	4		6	7	8		10		12	13		15		
2 4 3 5	2	3	4	5	6	7	8	9			12		14			fair
2 4 5 3	2	3	4	5	6		8	9		11	12		14			
3 2 4 7	2	3	4	5	6	7		9		11		13			16	
3 2 6 4	2	3	4	5	6		8		10	11	12			15		
3 5 2 4	2	3	4	5	6	7	8		10	11			14			fair
4 2 3 7	2	3	4	5	6	7		9	10		12				16	
4 3 2 6	2	3	4	5	6	7	8	9		11				15		good
4 4 2 3	2	3	4	5	6		8	9	10			13				(4 repeated)
2 3 3 4	2	3	4	5	6	7	8		10		12					(3 repeated)

C Interim solutions for ultra-compact with 1 new pad

c

File: ultra.dat Printed Fri Nov 20 12:26:41 1992 Page: 1

```
 1  | Total number of new pads
28  | Maximum baseline considered          ARRAY 1
 3  | Maximum redundancy considered           "
10  | Maximum gap BETWEEN ..                  "
 2  | shortest baselines                      "
 3  | length of baseline #1                   "
28  | Maximum baseline considered          ARRAY 2
 3  | Maximum redundancy considered           "
10  | Maximum gap BETWEEN ..                  "
 2  | shortest baselines                      "
 2  | length of baseline #1                   "
15  | Maximum baseline considered          ARRAY 3
 1  | Maximum redundancy considered           "
 1  | Maximum gap BETWEEN ..                  "
 5  | shortest baselines                      "
 2  | length of baseline #1                   "
 3  | Maximum redundancy considered        COMBINED ARRAY 1+2
 1  | Maximum gap BETWEEN ..                  "
 8  | shortest baselines                      "
 3  | Maximum gap BETWEEN ..                  "
12  | longest baselines                       "

New pad locations =   13
ARRAY 1 baselines:   3  4  7 10 11 14 14 18 25 28; pads:   84  98 102 108 112
ARRAY 2 baselines:   2  3  3  5  6  8 16 19 22 24; pads:    8  10  13  16  32
Combined ARRAY :   2  3  3  3  4  5  6  7  8 10 11 14 14 16 18 19 22 24 25 28
ARRAY 3 baselines:   2  3  4  4  5  6  8  9 10 13; pads:    0   4   8  10  13
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 10 13; pads:    0   6   8  10  13
ARRAY 3 baselines:   2  3  4  5  6  8  9 11 12 14; pads:    2   4   8  13  16
ARRAY 3 baselines:   2  3  4  5  6  7  8 10 11 14; pads:    2   6   8  13  16
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:    4   6   8  13  16

New pad locations =   15
ARRAY 1 baselines:   3  4  7 10 11 14 14 18 25 28; pads:   84  98 102 108 112
ARRAY 2 baselines:   2  3  4  5  6  9 17 20 22 26; pads:    6  10  12  15  32
Combined ARRAY :   2  3  3  4  4  5  6  7  9 10 11 14 14 17 18 20 22 25 26 28
ARRAY 3 baselines:   2  3  4  5  6  8 10 11 12 15; pads:    0   4  10  12  15
ARRAY 3 baselines:   2  3  4  5  6  6  9 10 12 15; pads:    0   6  10  12  15
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:    0   8  10  12  15
ARRAY 3 baselines:   2  3  4  4  5  6  8  9 10 13; pads:    2   6  10  12  15
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 10 13; pads:    2   8  10  12  15

New pad locations =   17
ARRAY 1 baselines:   3  4  6  8 10 13 15 18 24 28; pads:    4   8  14  17  32
ARRAY 2 baselines:   2  4  5  6  7 11 15 20 22 26; pads:    6  10  12  17  32
Combined ARRAY :   2  3  4  4  5  6  6  7  9 10 11 13 15 15 18 20 22 24 26 28
ARRAY 3 baselines:   2  3  4  5  6  8 10 11 12 15; pads:    2   6  12  14  17
ARRAY 3 baselines:   2  3  4  5  6  6  9 10 12 15; pads:    2   8  12  14  17
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:    2  10  12  14  17
ARRAY 3 baselines:   2  3  4  4  5  6  8  9 10 13; pads:    4   8  12  14  17
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 10 13; pads:    4  10  12  14  17

New pad locations =   17
ARRAY 1 baselines:   3  4  6  7 10 13 15 18 22 28; pads:    4  10  14  17  32
ARRAY 2 baselines:   2  4  5  6  9 11 15 20 24 26; pads:    6   8  12  17  32
Combined ARRAY :   2  3  4  4  5  6  6  7  9 10 11 13 15 15 18 20 22 24 26 28
ARRAY 3 baselines:   2  3  4  5  6  8 10 11 12 15; pads:    2   6  12  14  17
ARRAY 3 baselines:   2  3  4  5  6  6  9 10 12 15; pads:    2   8  12  14  17
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:    2  10  12  14  17
ARRAY 3 baselines:   2  3  4  4  5  6  8  9 10 13; pads:    4   8  12  14  17
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 10 13; pads:    4  10  12  14  17

New pad locations =   17
ARRAY 1 baselines:   3  4  7 10 11 14 14 16 25 28; pads:   84  98 102 108 112
ARRAY 2 baselines:   2  5  6  7  8 13 15 20 22 28; pads:    4  10  12  17  32
Combined ARRAY :   2  3  4  5  6  7  7  8 10 11 13 14 14 15 18 20 22 25 28 28
ARRAY 3 baselines:   2  3  4  5  6  8 10 11 12 15; pads:    2   6  12  14  17
ARRAY 3 baselines:   2  3  4  5  6  6  9 10 12 15; pads:    2   8  12  14  17
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:    2  10  12  14  17
ARRAY 3 baselines:   2  3  4  4  5  6  8  9 10 13; pads:    4   8  12  14  17
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 10 13; pads:    4  10  12  14  17

New pad locations =   19
ARRAY 1 baselines:   3  4  6  7  8 12 12 15 16 19; pads:    0   4  12  16  19
ARRAY 2 baselines:   2  4  5  6  9 11 13 18 22 24; pads:    8  10  14  19  32
Combined ARRAY :   2  3  4  4  4  5  6  7  8  9 11 12 12 13 15 16 18 19 22 24
ARRAY 3 baselines:   2  3  4  5  6  8 10 11 12 15; pads:    4   8  14  16  19
ARRAY 3 baselines:   2  3  4  5  6  6  8 10 12 15; pads:    4  10  14  16  19
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:    4  12  14  16  19
ARRAY 3 baselines:   2  3  4  4  5  6  8  9 10 13; pads:    6  10  14  16  19
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 10 13; pads:    6  12  14  16  19

New pad locations =   95
ARRAY 1 baselines:   3  5  9 11 12 14 16 17 25 28; pads:   84  95 100 109 112
ARRAY 2 baselines:   2  2  2  4  4  6 20 22 24 26; pads:    6   8  10  12  32
Combined ARRAY :   2  2  2  3  4  4  5  6  9 11 12 14 16 17 20 22 24 25 26 28
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:   95  98 100 102 110

New pad locations =   95
ARRAY 1 baselines:   3  5  9 11 12 14 16 17 25 28; pads:   84  95 100 109 112
ARRAY 2 baselines:   2  2  2  4  4  6 18 20 22 24; pads:    8  10  12  14  32
Combined ARRAY :   2  2  2  3  4  4  5  6  9 11 12 14 16 17 18 20 22 24 25 28
ARRAY 3 baselines:   2  2  3  4  5  7  8 10 12 15; pads:   95  98 100 102 110

New pad locations =  105
ARRAY 1 baselines:   3  4  4  7  7 11 14 18 21 25; pads:   84  98 102 105 108
ARRAY 2 baselines:   2  5  6  8 11 13 15 17 23 28; pads:  100 105 111 113 128
Combined ARRAY :   2  3  4  4  5  6  7  7  8 11 11 13 14 15 17 18 21 23 25 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines.   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  8 12 14 18 21 26; pads:   84  98 102 105 110
ARRAY 2 baselines:   2  3  5  6  8 11 17 23 26 28; pads:  100 102 105 111 128
Combined ARRAY :   2  3  3  4  5  5  6  7  8  8 11 12 14 17 18 21 23 26 26 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines.   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  8 12 14 19 21 26; pads:   84  98 102 105 110
ARRAY 2 baselines:   2  4  5  6  9 11 17 19 23 28; pads:  100 105 109 111 128
Combined ARRAY :   2  3  4  4  5  5  6  7  8  9 11 12 14 17 18 19 21 23 26 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  8 12 14 18 21 26; pads:   84  98 102 105 110
ARRAY 2 baselines:   2  5  6  8 11 13 15 17 23 28; pads:  100 105 111 113 128
Combined ARRAY :   2  3  4  5  5  6  7  8  8 11 12 13 14 15 17 18 21 23 26 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  8 12 14 18 21 26; pads:   84  98 102 105 110
ARRAY 2 baselines:   2  3  6  8  8 11 15 17 23 26; pads:  102 105 111 113 128
Combined ARRAY :   2  3  3  4  5  6  7  8  8  9 11 12 14 15 17 18 21 23 26 26
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  8 12 14 18 21 26; pads:   84  98 102 105 110
ARRAY 2 baselines:   2  3  6  8  8 11 16 18 24 27; pads:  102 105 111 113 129
Combined ARRAY :   2  3  3  4  5  6  7  8  8  8 11 12 14 16 18 18 21 24 26 27
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  6  7  9 13 14 18 21 27; pads:   84  98 102 105 111
ARRAY 2 baselines:   2  3  5  6  9 11 17 23 26 28; pads:  100 102 105 111 128
Combined ARRAY :   2  3  3  4  5  6  6  7  9  9 11 13 14 17 18 21 23 26 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5—7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  6  7  9 13 14 18 21 27; pads:   84  98 102 105 111
ARRAY 2 baselines:   2  3  5  7 10 12 16 23 26 28; pads:  100 102 105 112 128
Combined ARRAY :   2  3  3  4  5  6  7  7  9 10 12 13 14 16 18 21 23 26 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  6  7  8 13 14 18 21 27; pads:   84  98 102 105 111
ARRAY 2 baselines:   2  3  5  8 11 13 15 23 26 28; pads:  100 102 105 113 128
Combined ARRAY :   2  3  3  4  5  6  7  8  8 11 13 13 14 15 18 21 23 26 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  6  7  9 13 14 18 21 27; pads:   84  98 102 105 111
ARRAY 2 baselines:   2  3  5  7  8 10 16 18 23 26; pads:  102 105 110 112 128
Combined ARRAY :   2  3  3  4  5—6  7  7  8  8 10 13 14 16 18 18 21 23 26 27
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  6  7  9 13 14 18 21 27; pads:   84  98 102 105 111
ARRAY 2 baselines:   2  3  5  7  6 10 17 18 24 27; pads:  102 105 110 112 129
Combined ARRAY :   2  3  3  4  5  6  7  7  8  9 10 13 14 17 18 18 21 24 27 27
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  9 12 16 21 25 26; pads:   84 100 105 109 112
ARRAY 2 baselines:   2  2  4  4  6  8 15 17 19 23; pads:  105 109 111 113 128
Combined ARRAY :   2  2  3  4  4  4  5  6  7  8  8 12 15 16 17 19 21 23 25 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  3  4  7  7 10 18 21 25 28; pads:   84 102 105 109 112
ARRAY 2 baselines:   2  5  6  6 11 13 15 17 23 28; pads:  100 105 111 113 128
Combined ARRAY :   2  3  3  4  5  6  7  7  8 10 11 13 15 17 18 21 23 25 28 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  5  7  9 12 16 19 23 28; pads:  100 105 109 112 128
ARRAY 2 baselines:   2  4  6  7 11 13 14 21 25 27; pads:   84  98 105 108 111
Combined ARRAY :   2  3  4  4  5  6  7  7  9 11 12 13 14 16 19 21 23 25 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  5  5  8 10 13 15 18 23 28; pads:  100 105 110 113 128
ARRAY 2 baselines:   2  4  6  7 11 13 14 21 25 27; pads:   84  98 105 109 111
Combined ARRAY :   2  3  4  5  5  6  7  8 10 11 13 13 14 15 18 21 23 25 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  5  5  8 10 13 15 18 23 28; pads:  100 105 110 113 128
ARRAY 2 baselines:   2  3  4  6  7  8 18 21 25 27; pads:   84 102 105 109 111
```

```
Combined ARRAY :   2  3  3  4  5  5  6  7  8  9 10 13 15 18 18 21 23 25 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  5  5  8 10 13 15 18 23 28; pads:  100 105 110 113 128
ARRAY 2 baselines:   2  3  4  6  7  9 18 20 24 27; pads:  102 105 108 111 128
Combined ARRAY :   2  3  3  4  5  5  6  7  8  9 10 13 15 18 18 20 23 24 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  6 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  8 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  3  4  7  7 10 17 20 24 27; pads:  102 105 108 112 128
ARRAY 2 baselines:   2  5  6  8 11 13 15 17 23 28; pads:  100 105 111 113 128
Combined ARRAY :   2  3  3  4  5  6  7  7  8 10 11 13 15 17 17 20 23 24 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  4  4  7  8 11 15 19 23 26; pads:  102 105 109 113 128
ARRAY 2 baselines:   2  5  6  7 11 13 14 16 21 27; pads:   84  98 100 105 111
Combined ARRAY :   2  3  4  4  5  6  7  7  8 11 11 13 14 15 16 19 21 23 26 27
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  9  9 11 13; pads:  100 102 105 109 113

New pad locations =  105
ARRAY 1 baselines:   3  4  4  7  8 11 16 20 24 27; pads:  102 105 108 113 128
ARRAY 2 baselines:   2  5  6  8 11 13 15 17 23 28; pads:  100 105 111 113 128
Combined ARRAY :   2  3  4  4  5  6  7  8  8 11 11 13 15 16 17 20 23 24 27 28
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 108 113

New pad locations =  105
ARRAY 1 baselines:   3  3  5  8  8 11 15 18 23 26; pads:  102 105 110 113 128
ARRAY 2 baselines:   2  4  6  7 11 13 14 21 25 27; pads:   84  98 105 108 111
Combined ARRAY :   2  3  3  4  5  6  7  8  8 11 11 13 14 15 18 21 23 25 26 27
ARRAY 3 baselines:   2  2  3  4  5  6  7  8 11 13; pads:   98 100 102 105 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 100 102 105 113
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:  100 102 105 109 113

New pad locations =  106
ARRAY 1 baselines:   3  3  4  6  7 10 16 19 22 26; pads:  102 106 109 112 128
ARRAY 2 baselines:   2  3  5  8 11 13 14 22 25 27; pads:   84  98 106 108 111
Combined ARRAY :   2  3  3  3  4  5  6  7  8 10 11 13 16 16 19 22 22 25 26 27
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:   98 102 106 108 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 106 108 111 113
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:  100 106 109 111 113

New pad locations =  106
ARRAY 1 baselines:   3  3  4  6  7 10 17 20 23 27; pads:  102 106 108 112 128
ARRAY 2 baselines:   2  3  5  8 11 13 14 22 25 27; pads:   84  98 106 108 111
Combined ARRAY :   2  3  3  3  4  5  6  7  8 10 11 13 14 17 20 22 23 25 27 27
ARRAY 3 baselines:   2  3  4  4  5  7  8  9 11 13; pads:   98 102 106 109 111
ARRAY 3 baselines:   2  2  3  4  5  7  8 11 13 15; pads:   98 106 108 111 113
ARRAY 3 baselines:   2  2  3  4  5  6  7  9 11 13; pads:  100 106 109 111 113

New pad locations =  107
ARRAY 1 baselines:   3  4  5  8  9 12 14 18 23 26; pads:   84  98 102 107 110
ARRAY 2 baselines:   2  5  6  7 11 13 15 21 26 28; pads:  100 102 107 113 128
Combined ARRAY :   2  3  4  5  5  6  7  8  9 11 12 13 14 15 18 21 23 26 26 28
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  8 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  4  5  8  9 12 14 18 23 26; pads:   84  98 102 107 110
ARRAY 2 baselines:   2  4  6  7  9 13 15 19 21 28; pads:  100 107 108 113 128
Combined ARRAY :   2  3  4  4  5  6  7  8  8  9 12 13 14 15 18 19 21 23 26 28
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 108 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  4  5  8  9 12 14 18 23 26; pads:   84  98 102 107 110
ARRAY 2 baselines:   2  4  6  7 11 13 15 17 21 28; pads:  100 107 111 113 128
Combined ARRAY :   2  3  4  4  5  6  7  8  9 11 12 13 14 15 17 18 21 23 26 28
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  4  5  8  9 12 14 18 23 26; pads:   84  98 102 107 110
ARRAY 2 baselines:   2  4  5  6  7 11 15 19 21 26; pads:  102 107 108 113 128
Combined ARRAY .   2  3  4  4  5  5  6  7  8  9 11 12 14 15 18 19 21 23 26 26
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  4  5  8  9 12 14 18 23 26; pads:   84  98 102 107 110
ARRAY 2 baselines:   2  4  5  6  7 11 16 20 22 27; pads:  102 107 108 113 128
Combined ARRAY :   2  3  4  4  5  5  6  7  8  9 11 12 14 16 18 20 22 23 26 27
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  3  6  7 10 13 15 18 21 28; pads:  100 107 110 113 128
ARRAY 2 baselines:   2  4  5  7  9 11 14 18 23 25; pads:   84  98 102 107 108
Combined ARRAY :   2  3  3  4  5  6  7  7  9 10 11 13 14 15 18 18 21 23 25 28
ARRAY 3 baselines:   2  2  3  4  6  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 108 112

ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  3  5  6  8 11 15 18 21 26; pads:  102 107 110 113 128
ARRAY 2 baselines:   2  4  7  8 11 13 14 16 23 27; pads:   84  98 100 107 111
Combined ARRAY :   2  3  3  4  5  6  7  8  9 11 11 13 14 15 16 18 21 23 26 27
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  3  3  6  8 11 16 18 22 27; pads:  102 107 110 113 129
ARRAY 2 baselines:   2  4  5  7  9 11 14 18 23 25; pads:   84  98 102 107 109
Combined ARRAY :   2  3  3  4  5  5  6  7  8  9 11 11 14 16 18 19 22 23 25 27
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 100 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112

New pad locations =  107
ARRAY 1 baselines:   3  3  5  6  8 11 16 19 22 27; pads:  102 107 110 113 129
ARRAY 2 baselines:   2  4  7  9 11 13 14 18 25 27; pads:   84  98 102 109 111
Combined ARRAY :   2  3  3  4  5  6  7  8  9 11 11 13 14 16 18 19 22 25 27 27
ARRAY 3 baselines:   2  2  3  4  5  7  8  9 10 12; pads:   98 108 102 107 110
ARRAY 3 baselines:   2  3  4  5  5  7  9 10 11 14; pads:   98 102 107 109 112
ARRAY 3 baselines:   2  3  4  5  5  8  9 10 12 14; pads:   98 102 107 110 112
```

Attach to AT 31.6.7/012

EXTRA STATIONS FOR THE COMPACT ARRAY
APPENDIX D

Millimetre-wave constraints

L. Staveley-Smith & J.L. Caswell

Observations with the Compact Array in the millimetre regime will require good transfer of a stable local oscillator signal to the antennas. This will require either an upgrade to the current system, or the bypassing of this system with a new LO transfer scheme. In either of these cases, it would be beneficial to have the most compact arrays (which will be the norm for mm observing) close to the control building. The current new stations solution (19, 23 & 192) puts the compact arrays (200-m and 2x400-m) more or less at the extreme eastern and western ends of the 3km track, which would be less than ideal.

One solution in Appendix A (new stations 104, 124 & 125) is optimal in terms of location near the control building for all 3 new configurations. It produces a reasonable 200-m array (baselines 2 3 4 5 6 7 8 10 11 14) and a good 2-day 400-m array (baselines 2 3 3 4 5 6 7 8 9 10 11 13 14 15 16 18 20 21 23 24). However, the individual 400-m arrays (Fig 1) have a poorer beam than either the existing 375-m array, or the current solution (Fig 2).

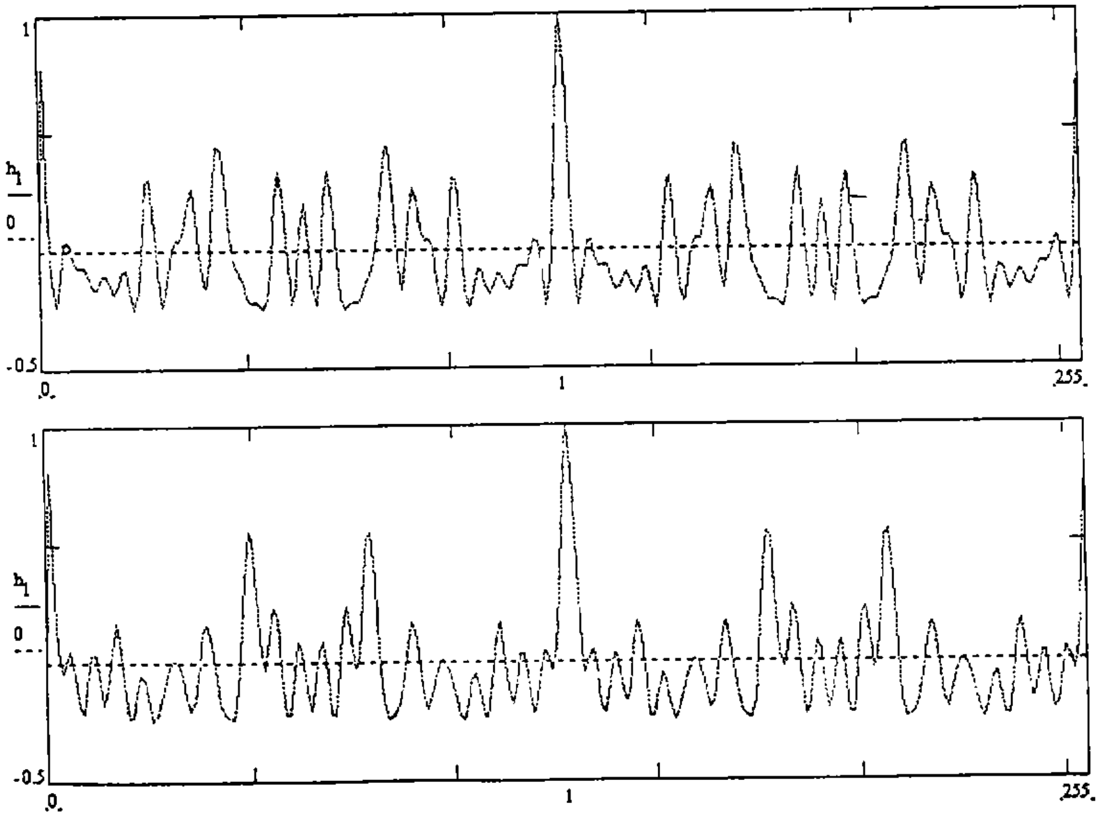

Fig.1: Days 1 & 2 for a 400-m control building configuration

Therefore, to match the performance of the proposed configurations, a further extra station near the control building would probably be required. The cost of this 4th station may be comparable to the cost of a new or upgraded LO transfer system stretching the full length of the 3km track, but is worthy of detailed cost comparison.

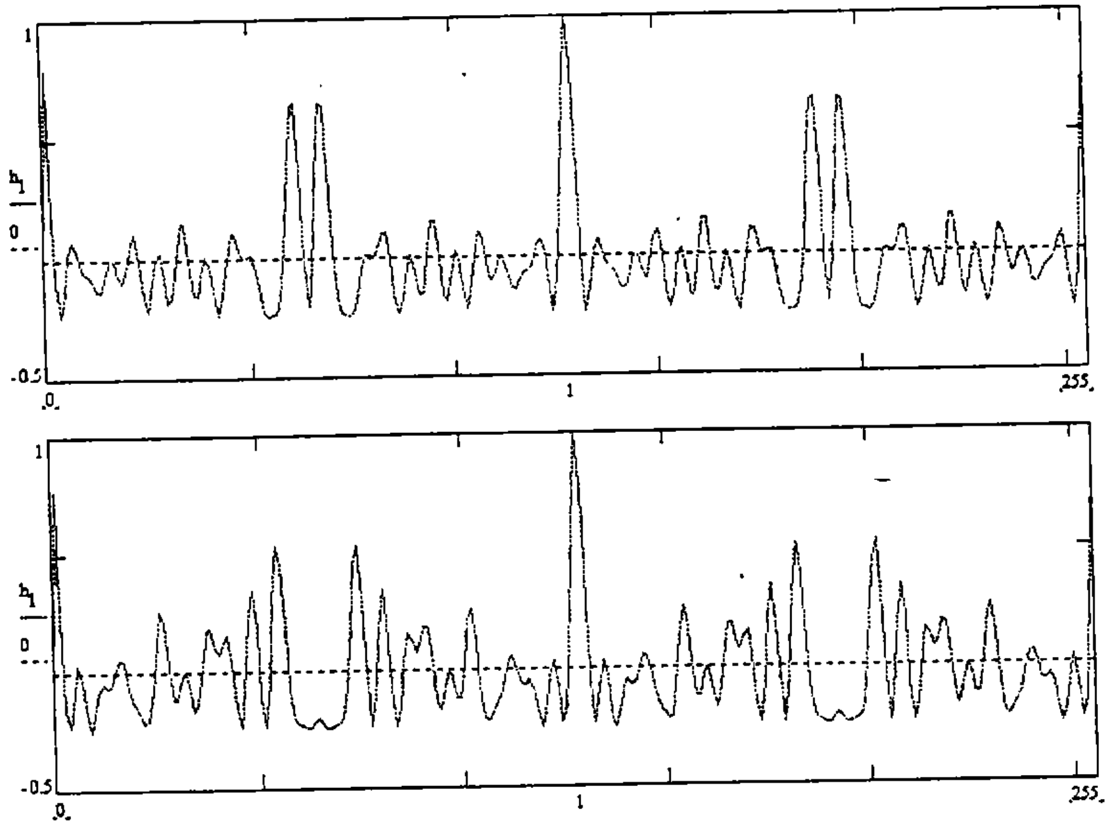

Fig.2: Days 1 & 2 for the proposed (19, 23, 192) new 400-m configuration