The ALMA's Compact Configuration with One Road Only. The Reconfiguration is Supposed from the Center.

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Abstract

1 Discussion

There is only one horizontal road of 30m width which gives the acces to the central ring of the six antennas.
The sizes of the array is 150m.

Table 1: The synthesized beam size as a function of zenith angle. f= 345 GHz.

ZA, deg	0	25	30	35
Beam RA, "	1.14	1.14	1.14	1.14
Beam Dec, "	1.07	1.19	1.24	1.32

The found configuration after optimization of the side lobes is given at the Figure (1). The relevant optimization of the side lobe is carried out for the double total area of the primary beam (maximum side lobes $\sim 6.4\%$)
I see the following sequence of the antenna transporting:

1. Got to antenna 1. I think(?) there is a good access to the antenna 1. take it and remove it.

2. Do the same job with antenna 6

Now we have pads 1 and 6 without antennas and the spase between the centers of the pads 1 and $6 \geq 15$m
Here is the crucial point: Is this space enough to pass transporter with antenna. If not the following does not work.

3. Pass through the gate between the pads 1-6 to the center and pick up the antenna 3. Return back with the antenna 3 passing through the gate between the pads 1-6.

4. Repeat the item3. with antenna 4, 2, 5

Now have the six inside pads without antennas. The distance between the pads is $\geq$15m. Again if this space is enough to pass transporter with antenna, we can get the access to the antennas of the second circle passing between the empty pads of the inner circle.

5. Having finished the second circle we have empty pads of the second circle and can start removing of antennas of the third circle. (again if the space 15m between the empty pads is enough to pass transporter with antenna)

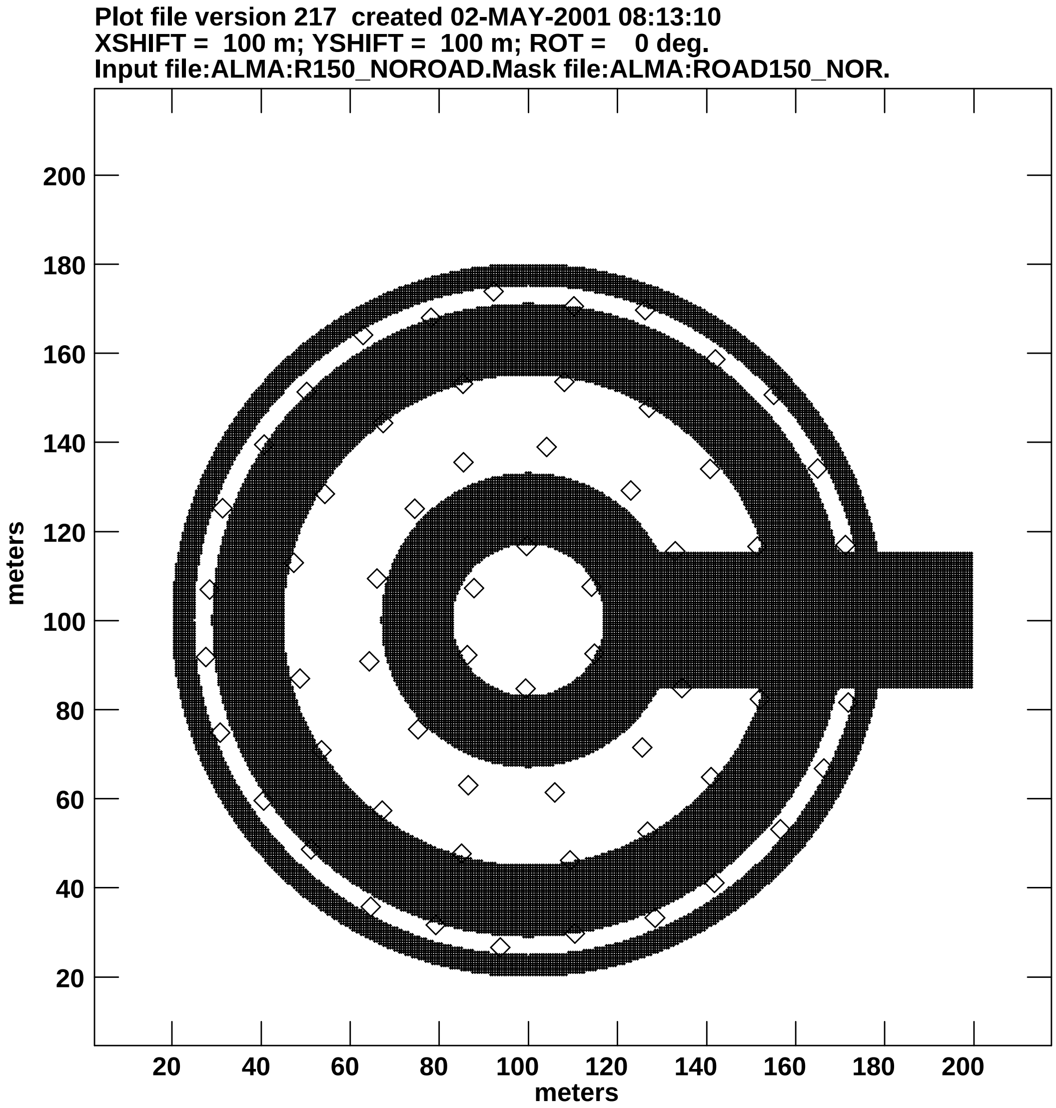

Figure 1: The configuration with one horizontal road width 30m. The maximum size of the configuration is 150m. The antenna number 1 is the inside ring's most right upper one. The numbering start at the inner ring from the antenna 1 counter clock (1,2..6). Having finished the six antennas of the inner ring, the next ring's antennas start counting (7,8..18) and so on. The shadow circle rings are not roads.