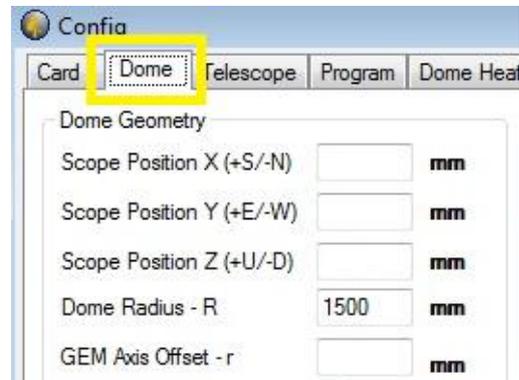# Dome Geometry
ScopeDome Dome Observatories

*Information to help you work out the inputs to make
your Dome Shutter Opening match your
Telescopes pointing position.*

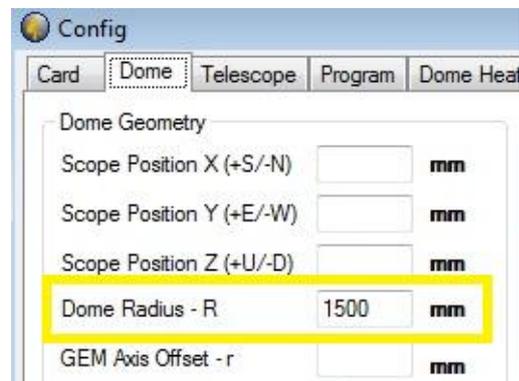## CASE STUDY: DOME GEOMETRY

In your dome's configuration section, under the tab "DOME", you will find the "Dome Geometry" section, see below:
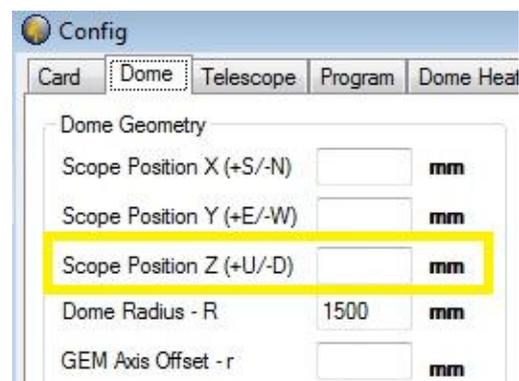
The pointing accuracy of your dome shutter opening as compared to your pointing angle of your OTA, will totally depend upon your inputs here. The dome for this case study is a 3m dome, so the input for the Dome radius is 1500mm [see below to confirm the radius input]:

To Begin…
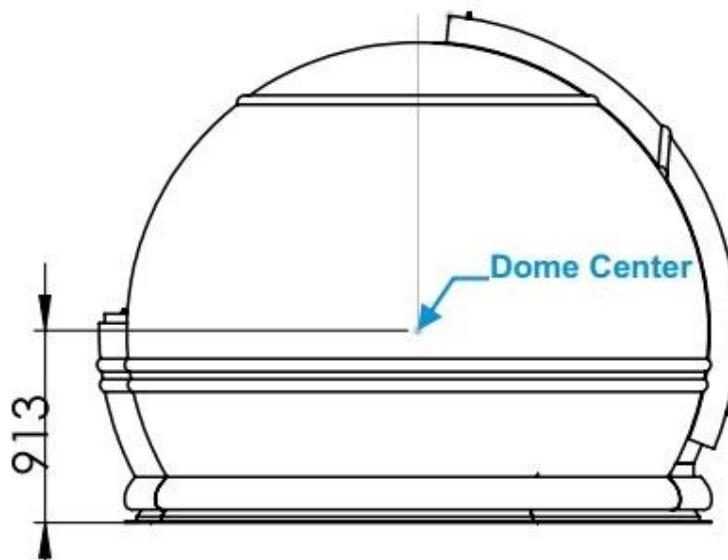To begin this explanation of the inputs, we will start with the Z Input:

Z Entry

In this case we have a 3m dome, with an AP900 installed upon a pier that is 750mm high.
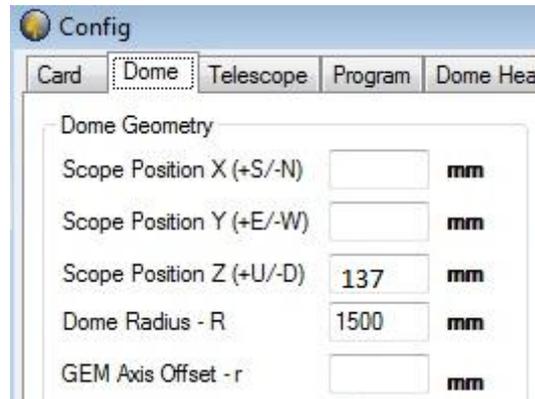
We need to examine and compare:

1. The height of the mount with pier at the mounts Dec-Ra intersecting point,
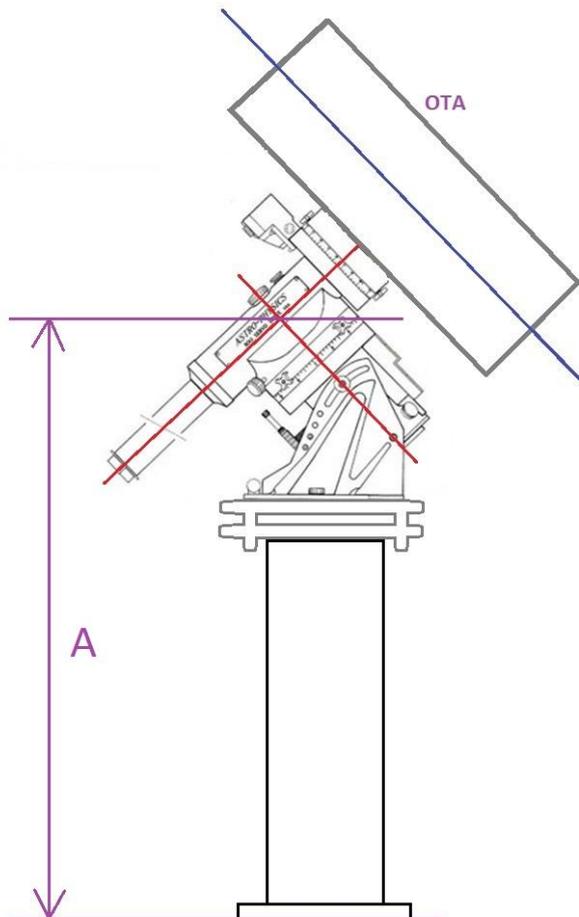
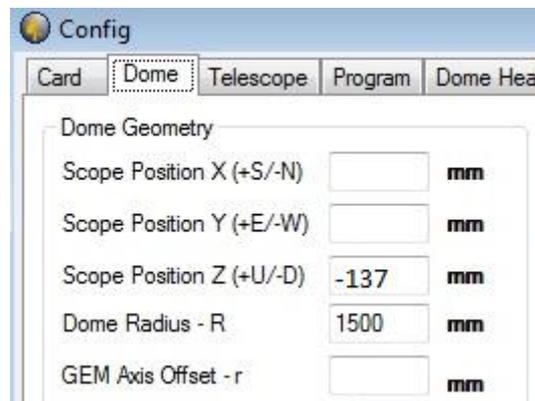2. The Domes center point height, shown below:

The Z entry is the difference between the A measurement in point one above, and the domes centre point at 913mm. If A= 1050mm, the result would be a positive input of 137mm.

If A = 800mm, the result would be a negative input of -113mm.

Continue over for the GEM offset…

GEM Axis Offset –r

This input measures the distance from the RA-DEC intersection, to the OTA centre line, see below:
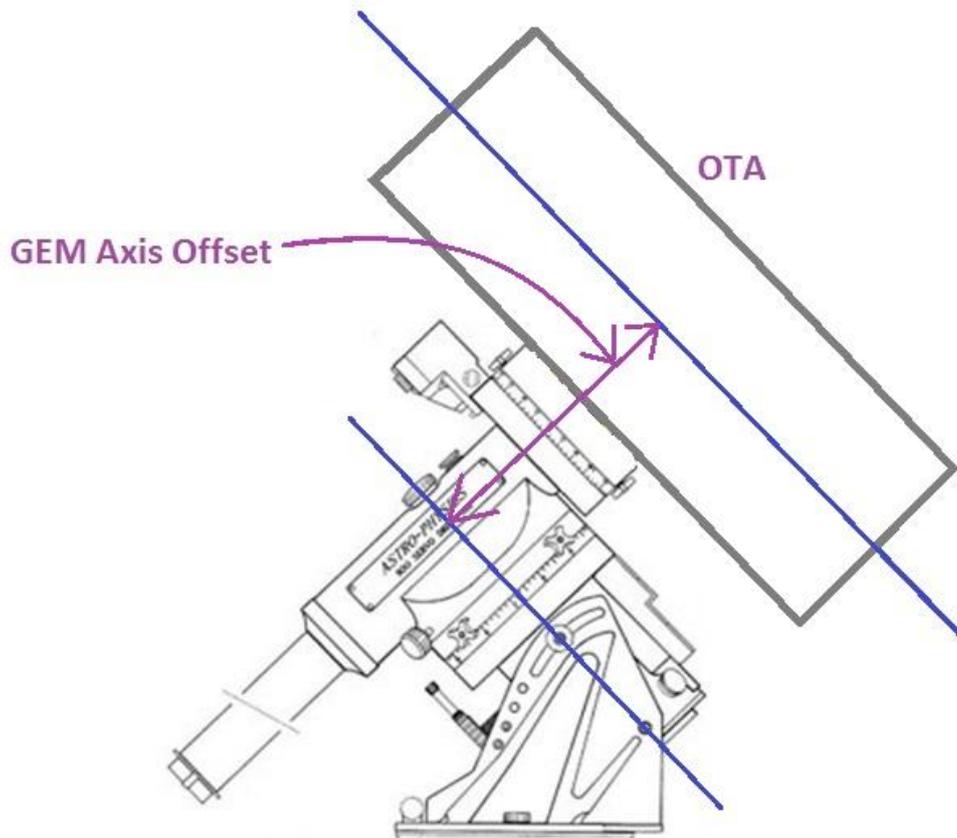
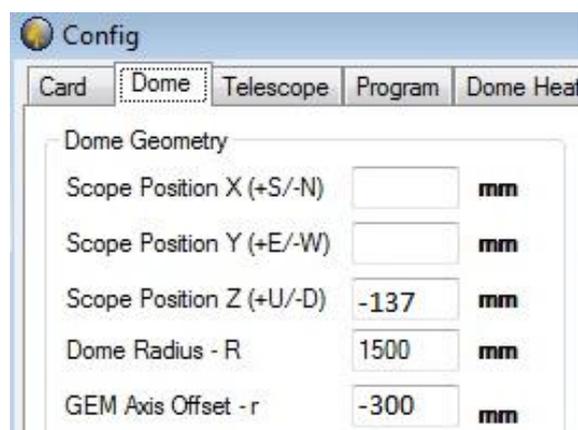IMPORTANTLY: We have found that entering this value into the driver requires a **NEGATIVE** value for the southern hemisphere, for this example, we measure the distance to be 300mm:
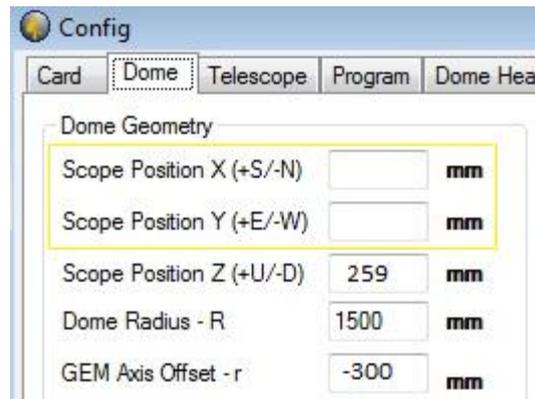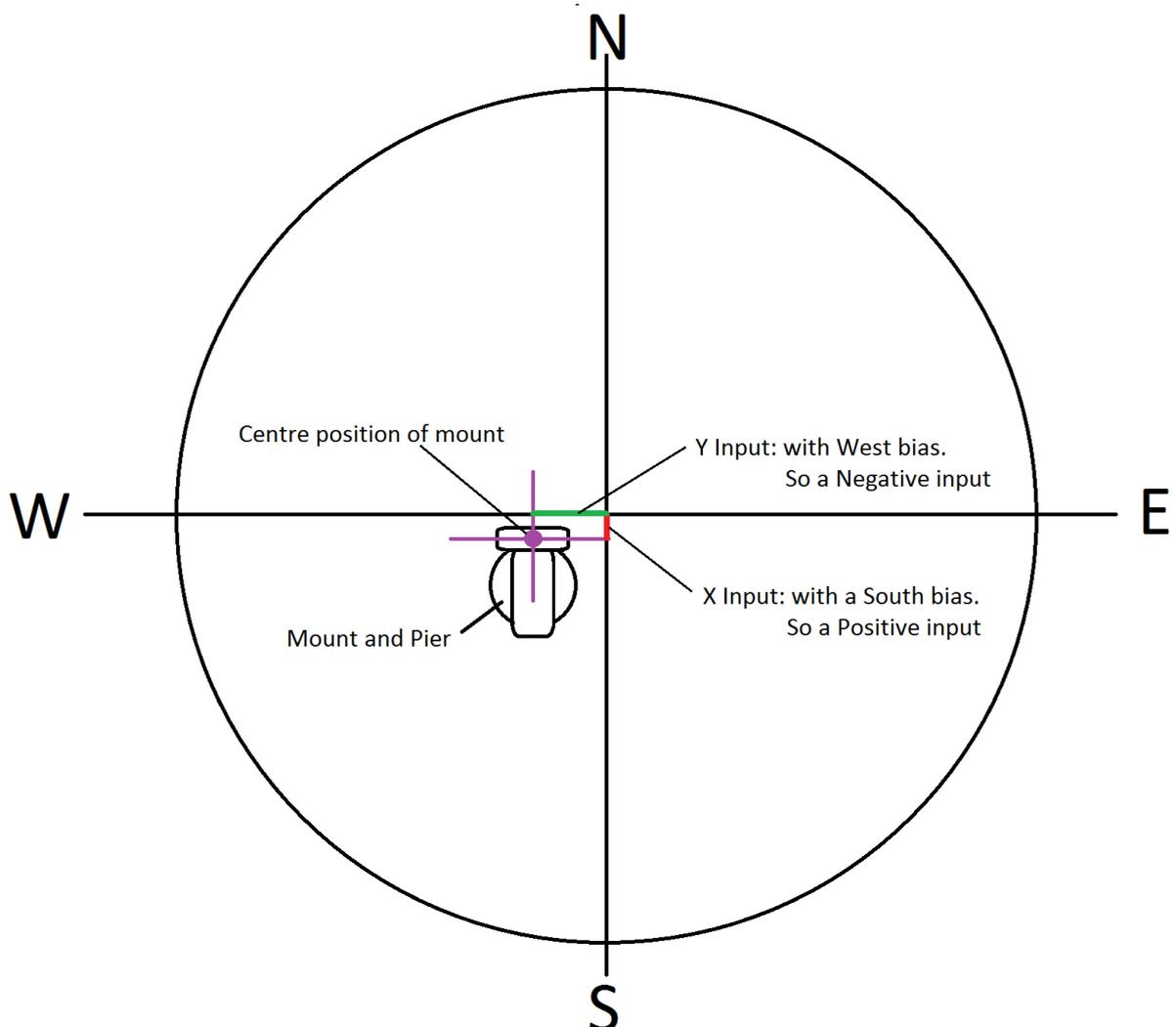
Scope Position Y & X

For these positions, you are adjusting for the mounts RA-DEC axis position relative to the centre of the dome. Here you will input the measurement again in millimetres, indicating the centre of the mount axis relative North or South, East or West perspective.
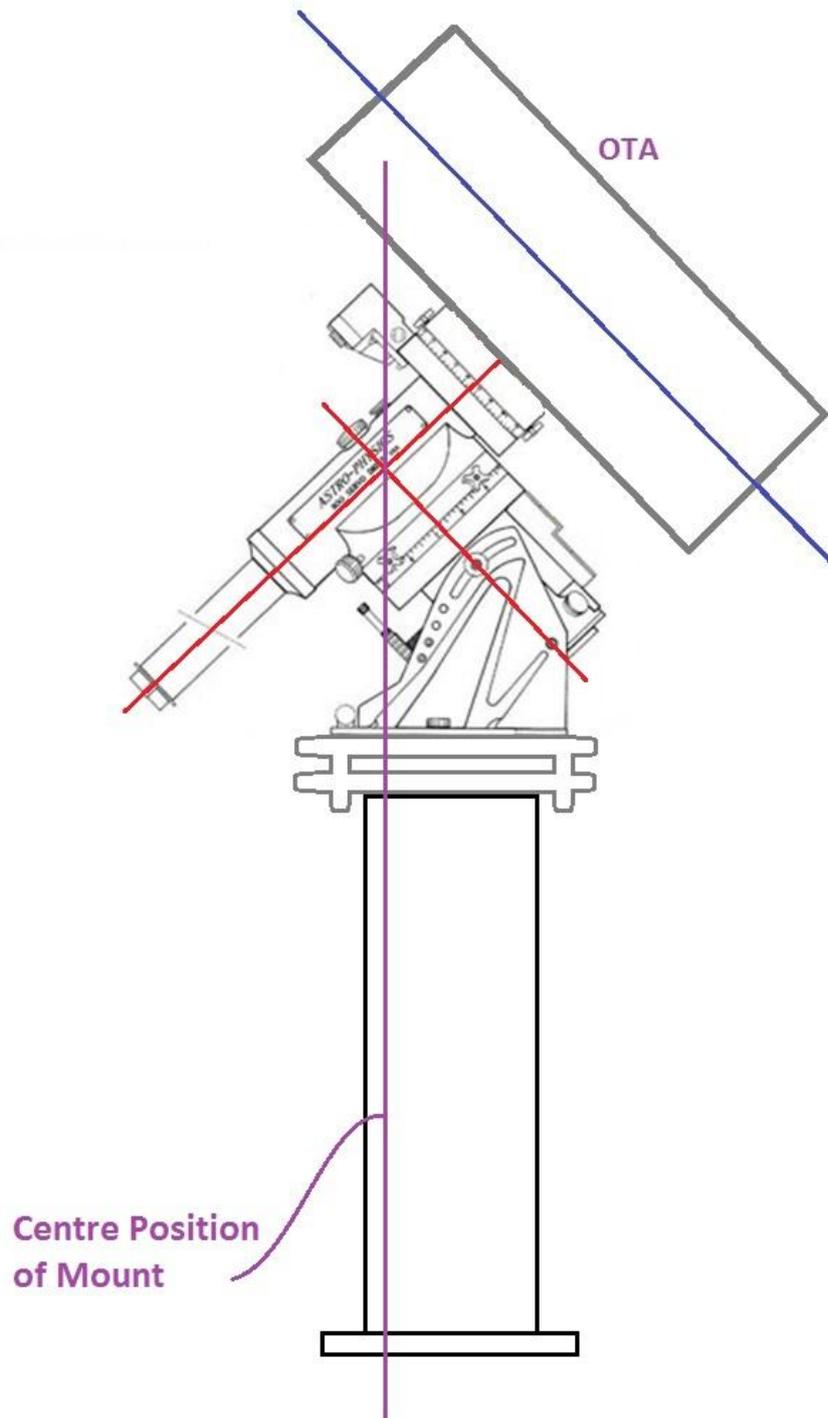
Below are the input sections:

The graphic below demonstrates looking at the dome from above, looking down on the floor, with all the compass points shown: N, S, E, W. The mount is located in the South – West quadrant. The purple dot indicates the centre of the mount, the RA-DEC centre point. The GREEN line indicates the WEST BIAS amount of distance this centre point is from the DOME CENTRE. The RED line indicates the SOUTH BIAS of the mount RA-DEC centre point as compared to the dome's centre:

If we assumed the mount was 100mm west, and 90mm south, you would input the following:
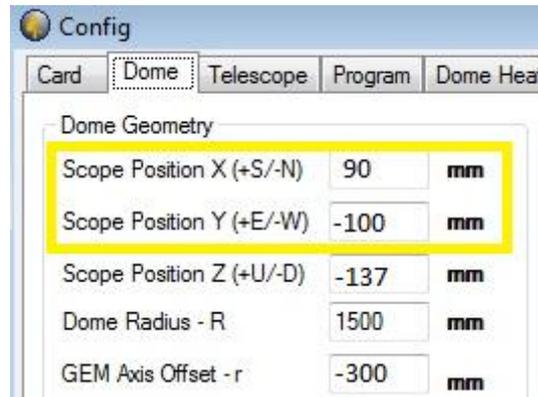
If you have any questions regarding the above, please do not hesitate to contact us, this can be a confusing set of numbers.

Kind regards,
ScopeDome Australia

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