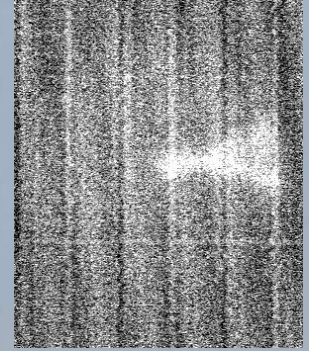


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# Herstmonceux Energy Tests

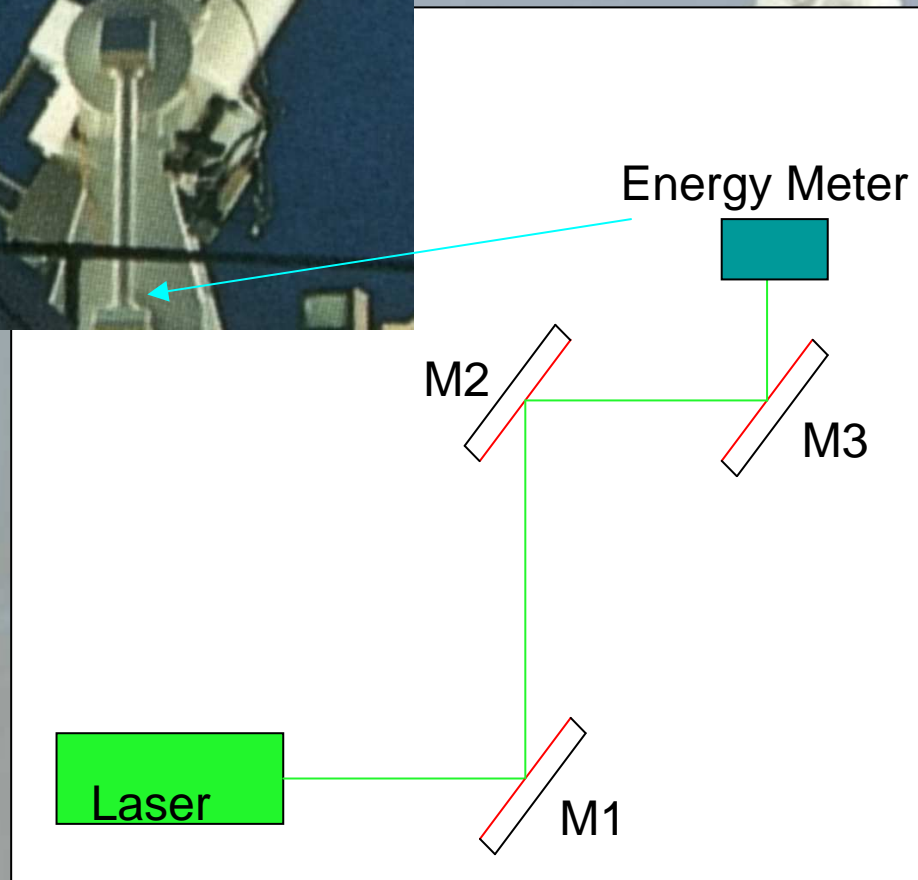


# Why ?



- Tests were the result of two thoughts;
  1. The visibility of the beam in the daytime camera alters dramatically for different quadrants of the sky
  2. Also it is thought that some areas of the sky yield higher return rates, HEO's are easier to acquire. This may come increasingly important with the move to KHz ranging

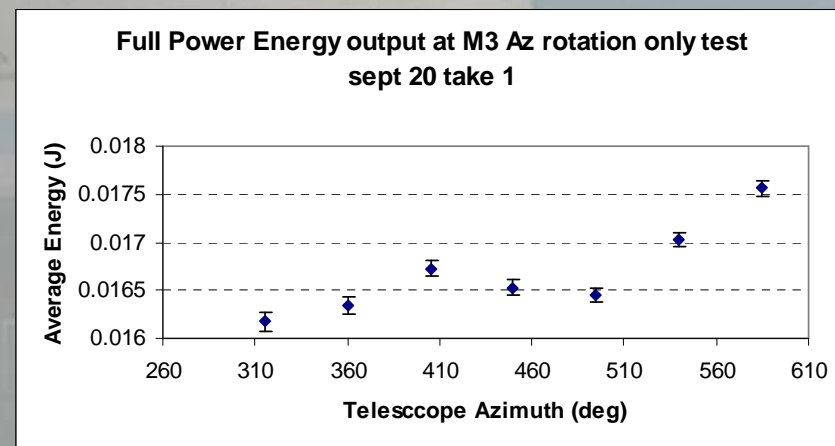
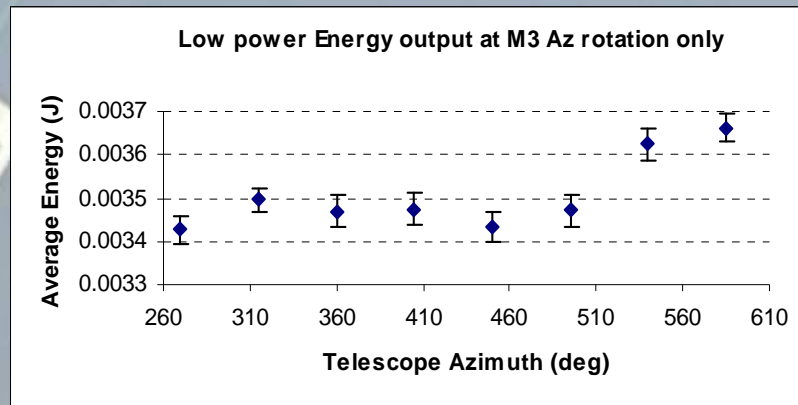
# Meter set up



- Tests were conducted placing an Energy meter above Mirror 3 on the telescope
- All tests used ~80% of the meter surface area.
- Alignment of beam on meter was checked before starting each test
- The meter was given 5 mins warm up time for each of the following tests.

# Initial results

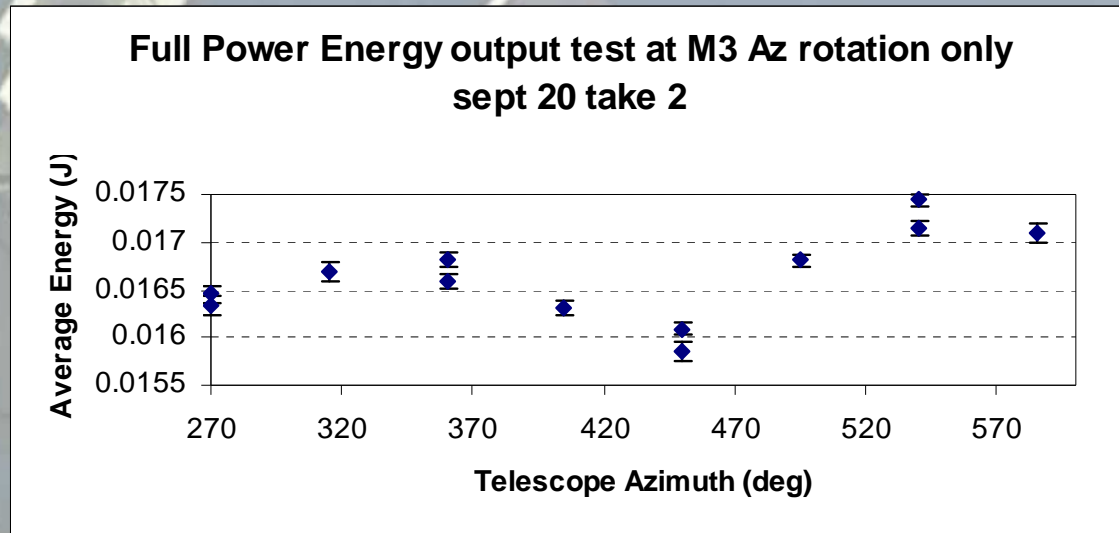
- First test was conducted at Low Power. Results show ~6% difference from min to max values.
- The first test at full power show very similar results ~8% variation
- But WHOOPS ! Missed a position !
- NB. A telescope azimuth reading of 360 = North



# And again

The test was repeated sweeping from 270 – 585 deg and back round to 180 deg azimuth taking only a few positions on the return sweep

Again ~8% variation



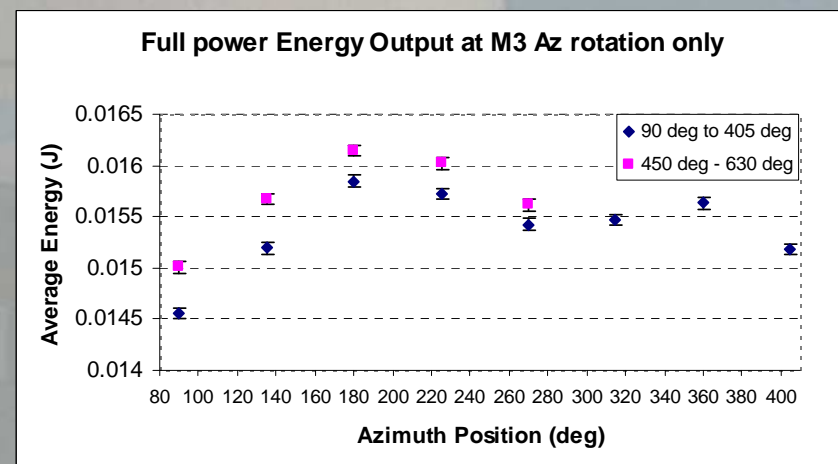
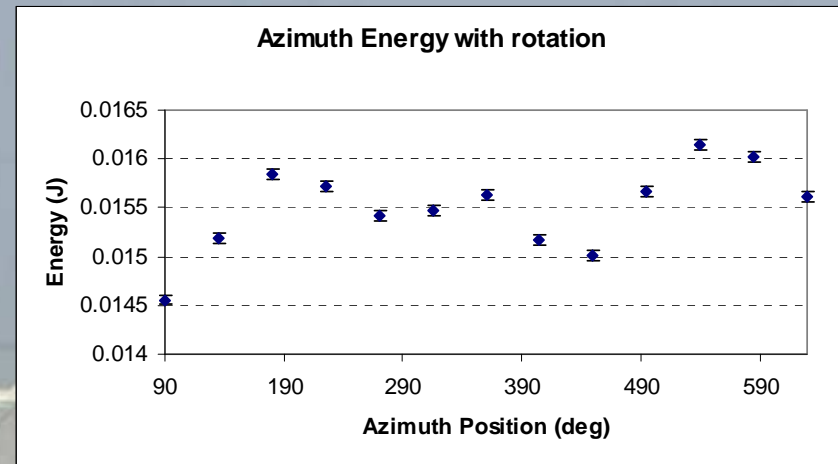
# And again

Finally we did a sweep from 90 through to 630 deg (full range of telescope)

Same graph again but this time the showing the corrected positions

(90 = 450)

The variation in Energy output may be due to insufficient warm up time of the Metre



# The 'agains' will be numerous

- MANY MANY more tests are to follow.....

Both for the 13Hz laser and the KHz laser  
for current linear polarisation and circular, at  
M3 and at the emitter !