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Subject: Cosmic ray shack (CRS)measurements complete T990019-00-D

## LIGO-T990019-00-D

We have made seismic and acoustic measurements in the CRS and found it to be on the whole quieter than 39 Lauritsen "on a good data day."

Seismic peak data:

CRS is lower by ~ 3x at 1.25 Hz (better for our table isolation)

CRS is higher by ~4x at 13 Hz (table isolation handles this frequency well)

General Seismic data

CRS is comparable to 39 Lauritsen 1-30 Hz

CRS is lower by 2x - 10x between 30 and 200 Hz

Acoustic data:

Both locations are dominated by the computer equipment/measurement instrument noise. 29Hz peaks are comparable. CRS has fewer neighbors and therefore less "impulsive" noise. I have plots of these data and will be happy to fax/show/copy these to anyone interested.

The CRS is a good candidate location for the IR metrology lab.

Improvements would be:

Move out archive boxes of Kip's papers

Dumbwaiter

Insulated wall w/door in place of the current cage partition

Staircase

2X 208 three phase power

Standard house chilled water 2.5 GPM

Standard house compressed air >70psi

Ceiling tiles

Floor (? current is concrete perhaps it can be simply sealed so it doesn't trap dirt?)

Gas cylinder holder

Hole in ceiling for routing cables

We would like to be moved into a new location by the beginning of May to make our schedule of characterization for the LA optics. Our current environment in Lauritsen is beginning to degrade, we are losing now about 7 of 10 data sets to vibration, compared to 2 of 10 last month. We have looked at the PMA storage room at 01 East Bridge and found it to be noisy (ducting) and too small.

Please let me know if you need any more information.

Gari