

## Summary of July measurements on CRPP water with MnO<sub>2</sub> beads

A.P. Yalin, V.S. Uras, H.W. Lee, A.B. McDonald

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A report has been written (SNO-STR-93-036) on the May run. The following is a summary of the measurements of radon emanation into vacuum done on the MnO<sub>2</sub> column 007 (July).

In May, 12.45 tonnes of water were passed through clean MnO<sub>2</sub> beads loaded inside acrylic column 007. The equivalent level of uranium was inferred to be  $3.7 \pm 0.5 \times 10^{-15}$  gU/g. The whole column was sent back to CRPP on July 18 and a further 15 tonnes of water was run through.

The sample was pumped for two days and reached a base pressure of 69 microns, as measured on a gauge about 30 cm from the column.

Four Extractions were performed:

- 1: July 7, 1993 after 3 day seal:  $1.04 \pm 0.59$  Rn h<sup>-1</sup>
- 2: July 14, 1993 after 7 day seal:  $3.89 \pm 0.38$  Rn h<sup>-1</sup>
- 3: July 20, 1993 after 6 day seal:  $2.80 \pm 0.42$  Rn h<sup>-1</sup>
- 4: July 24, 1993 after 4 day seal:  $1.77 \pm 0.47$  Rn h<sup>-1</sup>

A weighted average of the above extractions yields an emanation rate of  $2.7 \pm 0.6$  Rn h<sup>-1</sup>. Using this value one finds an equivalent uranium level of  $4.0 \pm 0.9 \times 10^{-15}$  gU/g. From this, one subtracts the level of uranium found previously (see above) giving a uranium level of  $0.3 \pm 0.5 \times 10^{-15}$  gU/g due to the newly circulated water.

We are in the process of calibrating our extraction efficiency with 0.1 Bq spiked MnO<sub>2</sub>. The above results should be treated as preliminary until this calibration is completed.