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Assembly, installation, and calibration of an IGY neutron monitor at the University of Wisconsin-River Falls JACOB HANSON-FLORES, JAMES MADSEN, Univ of Wisconsin, River Falls — The sun is a complex dynamic system that is capable of diverse phenomena such as solar storms. Occasionally solar activity is sufficiently intense that there is a detectable fluctuation in the measurable cosmic ray activity on earth. Neutron monitors are used to monitor space weather, in particular solar activity. The scope of this project was to set up a neutron monitor detector at University of Wisconsin River Falls to study changes in cosmic ray flux due to solar storms. Secondary reactions occur when cosmic rays interact with the Earth's atmosphere. A neutron monitor originally designed for observations during the 1957-1958 International Geophysical Year(IGY) has been shipped from McMurdo Station in Antarctica to UWRF. Installing the detectors involved first studying the operation of the neutron monitor tubes and ensuring that they are functional. Next, the existing digital interfaces for the installed neutron monitors at University of Wisconsin River Falls had to be examined to see if they could be utilized to operate the IGY tubes. The next step was to design and construct a temperature-controlled enclosure for the detector. The status of the University of Wisconsin River Falls IGY neutron monitors will be presented.

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