Cosmic ray database begins in 1951. They have an inverse solar cycle behavior.

Earlier data exist.
Archives from Scott Forbush, early cosmic ray scientist

Cosmic ray ionization chamber data available beginning in 1936

Six worldwide stations monitoring system

Cheltenham (later replaced by Fredericksburg), Maryland; Christchurch, New Zealand; Godhavn, Greenland; Climax, Colorado; Huancayo, Peru; and Mexico City, Mexico for the time period 1936-1959

Proposal:
Migration of historical cosmic ray observations on photographic charts and published bi-hourly values to digital format
Cosmic Ray legacy data

The ionization chamber adds up the ionization on a capacitor, i.e., it gives a time integral of the cosmic ray flux.

CDMP Cosmic Ray Digitization Project

Every hour the capacitor is shorted out—that is the step you see every hour on the charts.

Digitize in 2 minute intervals

-- annual bundles of strip charts
Each day is about 24 inches long by 2 inches wide
– 1 hour/inch
Dr. Ken McCracken will help with timing issues.
Cosmic Ray legacy data

• contain important information never made public
• highly relevant to modern day scientific studies

Photographic charts:
• 9 boxes of 114 station years data, thus 70 Mbytes of data total from 2 minute digitization.
• PDF scans would also be valuable before discarding data

Bi-hourly data in books keyed in: (1140 station months, plus summary tables)
Huancayo 1936-68
Cheltenham/Fredericksburg 1936-68
Christchurch 1947-61
Godhavn 1947-Jul 59
Mexico Jul 1957-58