

Name of research institute or organization:

Climate and Environmental Physics, University of Bern

Title of project:

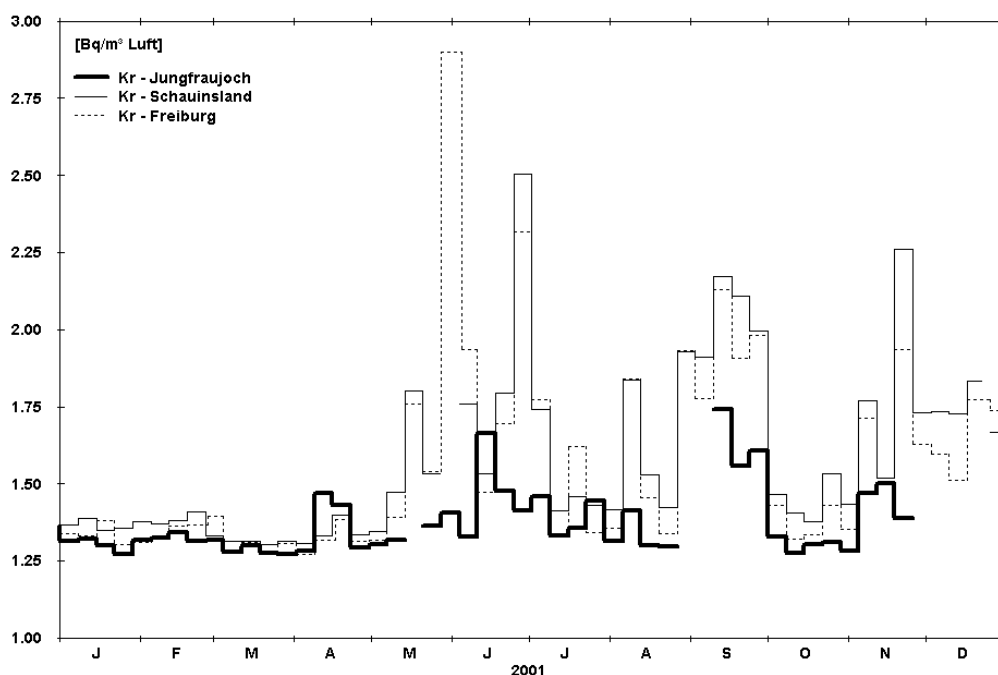
⁸⁵Kr activity determination in tropospheric air (samples measured in Freiburg i. B.)

Project leader and team:

Prof. H. Loosli, project leader

Project description:

The collection of air samples for ⁸⁵Kr measurements has been continued also in 2001. This isotope is unique because it contributes the major part of the present-day artificial activity in the air, and because up to now it showed an increasing trend. Jungfrauoch is preferred as a sampling site because there the equilibrium atmospheric activity can best be measured, since sources (reprocessing plants) are at sea level. The measured activities for three sampling sites are plotted in the figure below. The lowest level corresponding to the tropospheric activity is about 1.3 Bq/m³ of air, as it was also measured in the year 2000. The spikes up to 2.9 Bq/m³ are attributed to air masses which are coming from a source (Sellafield or LaHague) without sufficient dilution with uncontaminated air. From the measurements it is also obvious that increased levels are lower at Jungfrauoch than at Freiburg im Breisgau or at 1000 m asl (Schauinsland). Since the release rates at LaHague were lower in the last three years than before, it will be interesting to continue the survey of activity at Jungfrauoch; possibly more precise conclusions about atmospheric mixing will be possible.



Key words

⁸⁵Kr, artificial radioactivity, atmosphere

Collaborating partners/networks:

University of Heidelberg, Bundesamt für Strahlenschutz Freiburg i.Br.

Scientific publications and public outreach 2001:

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