

(80-240419-C) Dr. Ingeborg Levin's Legacy in Greenhouse Gas Research: A Retrospective of Her Scientific Life

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In February 2024, we lost Ingeborg Levin, an influential figure in the greenhouse gas research community. In this tribute, we commemorate her scientific accomplishments that began in 1984 with her dissertation titled "Atmospheric CO₂: Sources and Sinks on the European Continent." Throughout her career, she delved into the study of various trace gases such as CH₄, N₂O, CO, H₂, and SF₆, integrating the additional information provided by isotopologues whenever possible. Her notable contributions included advancements in the measurement and application of ²²²Rn, a tool she humorously referred to as the "poor man's transport model".

With these tools at hand, Ingeborg's primary goal was to accurately determine both global and regional sources and sinks of the most important greenhouse gases. For many years, she held a leading role within the WMO GGMT community, where she was not only regarded as an expert but also as a valued colleague and friend. Through this engagement, Ingeborg realized the importance of a highly precise and unified data foundation for future greenhouse gas research. This realization motivated her to advocate for the establishment of the European research infrastructure ICOS (Integrated Carbon Observation System).

In this tribute, we will review Ingeborg's lasting contributions and explore the impact her work still has today.

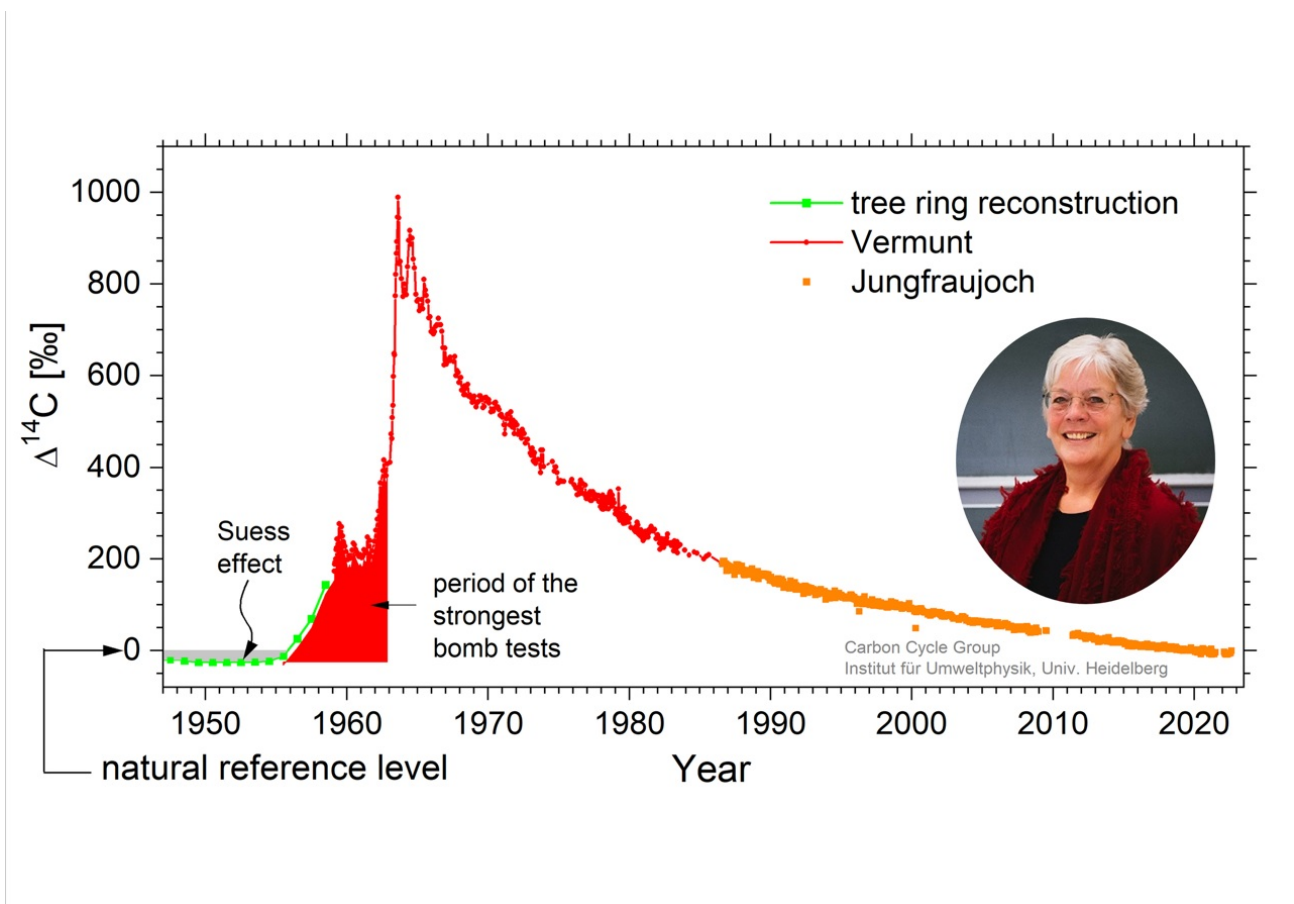


Figure 1. Observations of the $^{14}\text{CO}_2$ bomb spike in the Northern Hemisphere: a legacy of Ingeborg Levin