

Hans Ertel and potential vorticity – a century of geophysical fluid dynamics



Last picture of Hans ERTEL, taken in spring 1970
(courtesy of Heinz FORTAK, Berlin).

In 2004, the geophysical fluid dynamics community celebrates the 100th birthday of Hans ERTEL (March 24, 1904–July 2, 1971), a prominent scientist of the first half of the 20th century. ERTEL served as academic teacher, holding the chair for theoretical meteorology at the University of Berlin. He became known by a series of seminal papers, perhaps the most influential one dealing with potential vorticity. The corresponding theorem¹ was first published in *Meteorologische Zeitschrift*; it generated a long list of subsequent studies that tried to explore the tremendously rich properties of the potential vorticity concept, first seen and interpreted by ERTEL. But ERTEL was also active in other fields, for example in natural philosophy, which included provocative studies on causality and teleology.

In response to our call for papers released last year, a number of fine manuscripts were submitted and went through the ordinary review process of *Meteorologische Zeitschrift*. Those eventually accepted are assembled in the present special issue. Included are, among others, a tribute to ERTEL as scientist, the English translation of 21 of ERTEL's papers originally written in German and the complete list of his publications prepared by Dr. Gertrud KOBE (a former colleague of ERTEL).

We hope that this special issue will be welcomed by all who have an esteem for the great and universally interested fluid dynamicist Hans ERTEL.

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Michael HANTEL

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¹ERTEL, H., 1942: Ein neuer hydrodynamischer Wirbelsatz. – *Meteorol. Z.* **59** (Heft 9), 277–281.