



Clearing up the mystique of Vb-cyclones

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Atmospheric cyclones propagating from the Western Mediterranean Sea, around the Alps, northwards into Europe are generally referred to as Vb-cyclones according to W.J. van Bebber.

As early as 1891, Wilhelm van Bebber recognized the role of Vb cyclones in generating heavy, large-scale precipitation and winter snowstorms in Central Europe. But it was only after the devastating European flood in August 2002, when Vb cyclones again gained considerable attention in various scientific communities and among the public as well. At that time our knowledge on the nature of Vb cyclones was rather limited and statements on the role of climate change in modifying Vb cyclones remained vague. Since then a number of studies contributed to clearing up the mystique of these rare high-impact events, and more research efforts are still under way.

In this talk a broad overview of the current state of knowledge of Vb cyclones will be given. A number of topics will be discussed such as tracking issues, spatio-temporal characteristics of cyclone tracks and related precipitation, case studies of selected high impact events, the link between Vb cyclones and a 7000-year flood-proxy, and the relationship between large-scale atmospheric circulation patterns and Vb occurrence.

Despite the efforts during the last 15 years, a number of important questions still need to be addressed, not only to better understand climate extremes and related changes but also to support decision makers in trans-national flood-management. This talk also aims at fostering collaborations between research groups on Vb cyclones and developing joint strategies for advancing the science.