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Conference on European Tornadoes and Severe Storms

Tornadoes on the territory of the Czech Republic (from medieval chronicles to the Internet era)

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The oldest known record of a tornado from the region of the Czech Republic can be found in the “*Kosmas’ chronicle*” from 12th century. The event occurred in Prague on July 30th, 1119, destroyed parts of the well constructed kings palace and was described as “*the Satan himself in the appearance of a swirl*”. Throughout the next centuries, several other cases of possible tornadoes and water spouts can be found in the old records, however from the description it is not always quite clear if the event was a tornado, water spout, dust swirl, or some other non-tornadic phenomenon.

As a certain "breakpoint" in notion of tornadoes on the territory of present Czech Republic can be considered the work of Gregor Mendel (1822-1884), meteorologist and founder of genetics. In his essay "*Die Windhose vom 13. October 1870*" he describes in detail an anticyclonic tornado that occurred in Brno (town in Moravia), as well as the meteorological conditions that accompanied the event.

In his work, Jan Munzar has collected records of 32 cases of a tornado or "*tromba*" occurrence on the territory of the Czech Republic before 1990. Of these, 9 cases are from the period 1801-1900, and another 18 cases from the years 1901-1990. The most frequent occurrence was in July, the extreme data limits are April 14th and October 13th.

Preceding the political changes in the Central and Eastern Europe at the end of 80's, usage of the term "*tornado*" has been something rather exceptional in that region (at least in the former Czechoslovakia) and more general term "*tromba*", common in German and Italian languages, was strongly preferred. Therefore, climatological knowledge of severe convective storms has been scanty, even resulting in a lack of Czech terminology for some of the convective weather phenomena. The fall of the "iron curtain" has promoted a much higher information exchange, which has been further enhanced with the onset of the Internet. This

"information boom" has reflected itself also in meteorology and a sudden increase of tornado reports is probably one of its impacts.

While tornado reports before 1990 have been very scarce, leading even to conclusions that "tornadoes do not occur in Central Europe" by some local meteorologists, the last decade is a period of more frequent reports of tornadoes in the Czech Republic. Although some of the tornado reports have turned out to be false (through having done by local surveys), it seems that the average rate of tornadoes is about 1 tornado day (a day with one or more tornadoes) per year. However, the awareness of tornadoes by the general public still remains rather very low, therefore some cases are likely to escape documentation and the actual rate could be somewhat higher. Czech pages devoted to tornadoes (<http://www.chmi.cz/meteo/sat/torn/>) have been created to increase the public's interest in tornadoes and to provide some basic education in this field.

A brief overview of the known cases from 90's will be given at the conference and some of them will be presented in more detail. Current weaknesses of the damage survey capability and data analysis in the Czech Republic will be discussed. Since CHMI is recently implementing Doppler radar techniques, radar-based detection of supercell storms should be possible in the near future. Finally, a three year (2000-2002) national project aimed at severe storms will be introduced.