EMS Annual Meeting Abstracts
Vol. 12, EMS2015-198, 2015
15th EMS / 12th ECAM

Mechanism of Circulation over Europe in Case of Heavy Rainfalls and Floods in Central Europe

Marjan Sandev
Czech Republic (sandev@chmi.cz)

Unlike the second half of the 20th century, which was rather poor in floods in Central Europe, today it is not necessary to remind anybody of the seriousness of this topic. It seems that since 1997 we have been living in a period rich in the occurrence of floods, which is similar in this sense to the end of the 19th century. We can just mention the floods in Moravia in July 1997, in Bohemia in August 2002, spring floods in March 2006, in Moravia in the period from May to June 2010, in North
Bohemia in August 2010 and again in Bohemia in June 2013. In addition to these floods, it is also necessary to point out local flash floods in July 1998, June 2009 and at other times.
In this context, we will not address the question of whether the number and intensity of floods increases or whether this means an irregular occurrence of floods within the natural variation. It is important that the current generation has already become accustomed to the increased incidence of floods and is able to prepare for them. Every larger flood brings knowledge and experience that can be used to improve flood protection system against the next events. In this sense are done conclusions which are presented in these studies.
Comparison of synoptic situations before and during the year 2013 floods and other flood situations in our country, including the years 1997 and 2002, shows similarities of the mechanism of synoptic formation of flood situation. The aim of this study is to present those mechanisms for better understanding of heavy rainfall process and for successful forecast of potential flood situation over Central Europe with focus of the territory of Czech Republic.