Remote collection and analysis of witness reports on flash floods

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Typically, flash floods are studied ex post facto in response to a major impact event. A complement to field investigations is developing a detailed database of flash flood events, including minor events and null reports (i.e., where heavy rain occurred but there was no flash flooding), based on public survey questions conducted in near-real time. The Severe Hazards Analysis and Verification Experiment (SHAVE) has been in operation at the National Severe Storms Laboratory (NSSL) in Norman, OK, USA during the summers since 2006. The experiment employs undergraduate students to analyse real-time products from weather radars, target specific regions within the conterminous US, and poll public residences and businesses regarding the occurrence and severity of hail, wind, tornadoes, and now flash floods. In addition to providing a rich learning experience for students, SHAVE has been successful in creating high-resolution datasets of severe hazards used for algorithm and model verification. This talk describes the criteria used to initiate the flash flood survey, the specific questions asked and information entered to the database, and then provides an analysis of results for flash flood data collected during the summer of 2008. It is envisioned that specific details provided by the SHAVE flash flood observation database will complement databases collected by operational agencies and thus lead to better tools to predict the likelihood of flash floods and ultimately reduce their impacts on society.