



## **Persistent heat waves in Eastern China: Dynamical processes and trends**

Nicolas Freychet (1), Simon Tett (1), Jun Wang (2), and Gabriel Hegerl (1)

(1) School of Geosciences, University of Edinburgh, UK, (2) Institute of Atmospheric Physics, Beijing, China

Recent trends (1979-2010) in summer heat waves (HW) over Central-Eastern China and their atmospheric drivers are investigated using the ERA Interim re-analysis. We focus on regional scale (105E-125E,30N-40N) and persistent events (more than 5 days), thus threatening for a large population.

A composite analysis is used to highlight the main dynamical processes associated with such events, and lag-composites show the evolution of the circulation before and after the heat waves. A particular attention is made on the possible feedbacks that can extend the length of the events.

The trend in the occurrence of such events is analysed and we conducted a simple attribution analysis to separate the changes in the background temperature and the possible changes in the atmospheric anomalies.