

Sebastian Hoch

Research Assistant Professor
Atmospheric Sciences, University of Utah

UTTR rocket motor blast / summer 2007





Boundary Layer Processes in complex terrain



Rich observational dataset of atmospheric temperature and wind structure, in a source-rich environment (Bingham Mine, UTTR, ATK, ...)

- PCAPS (2010-2011)
- Winter 2011-12 / 2013-14 / 2014-15 Bingham Canyon Mine Experiments
- MATERHORN 2012, 2013
- 2015-16 Wintertime Particulate Pollution Study
- 2016-17 UWFPS

Use for WRF validation

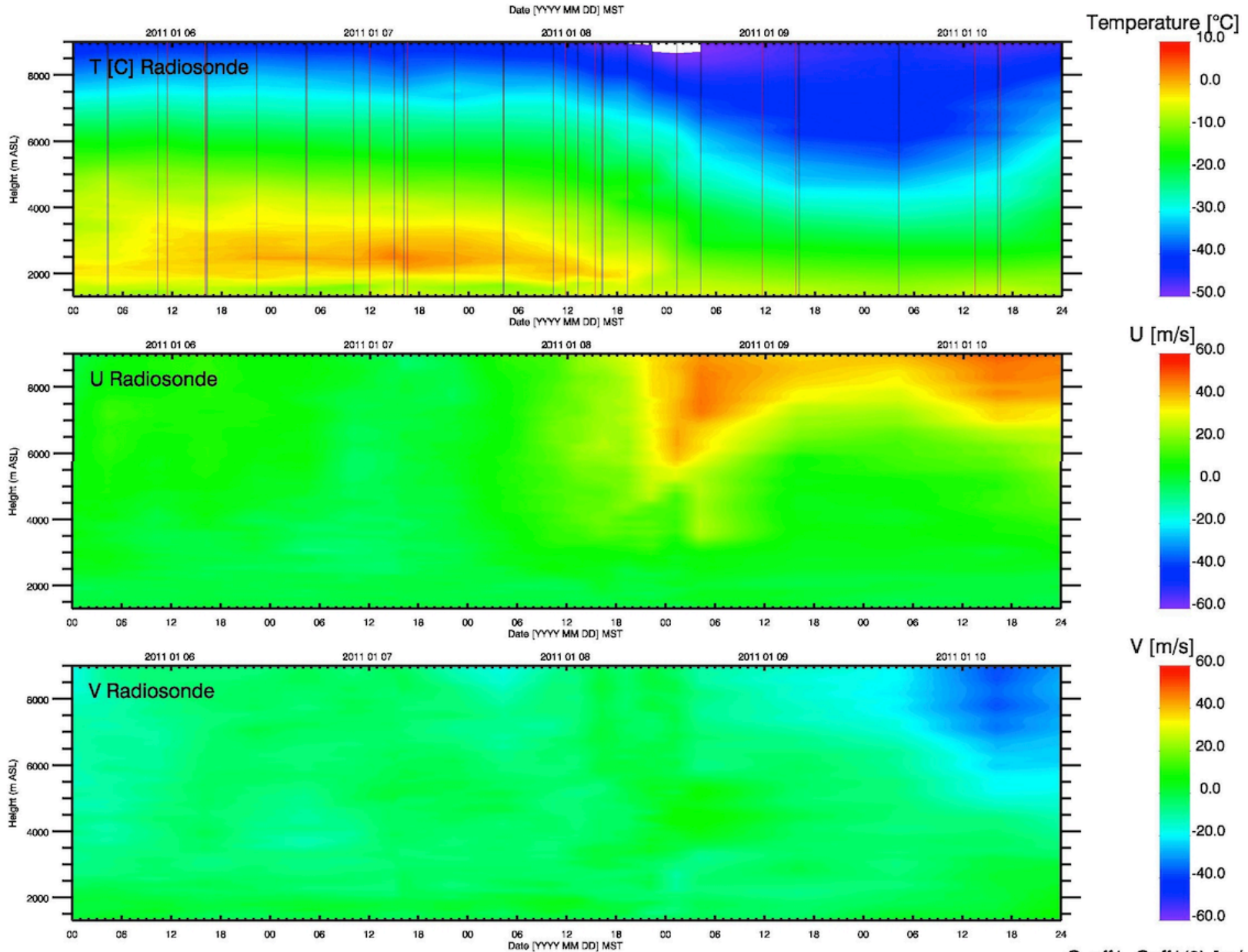
UU observational resources

- Wind Lidar
- 2 Radiosonde Systems
- SoDAR
- Pseudo-vertical temperature soundings

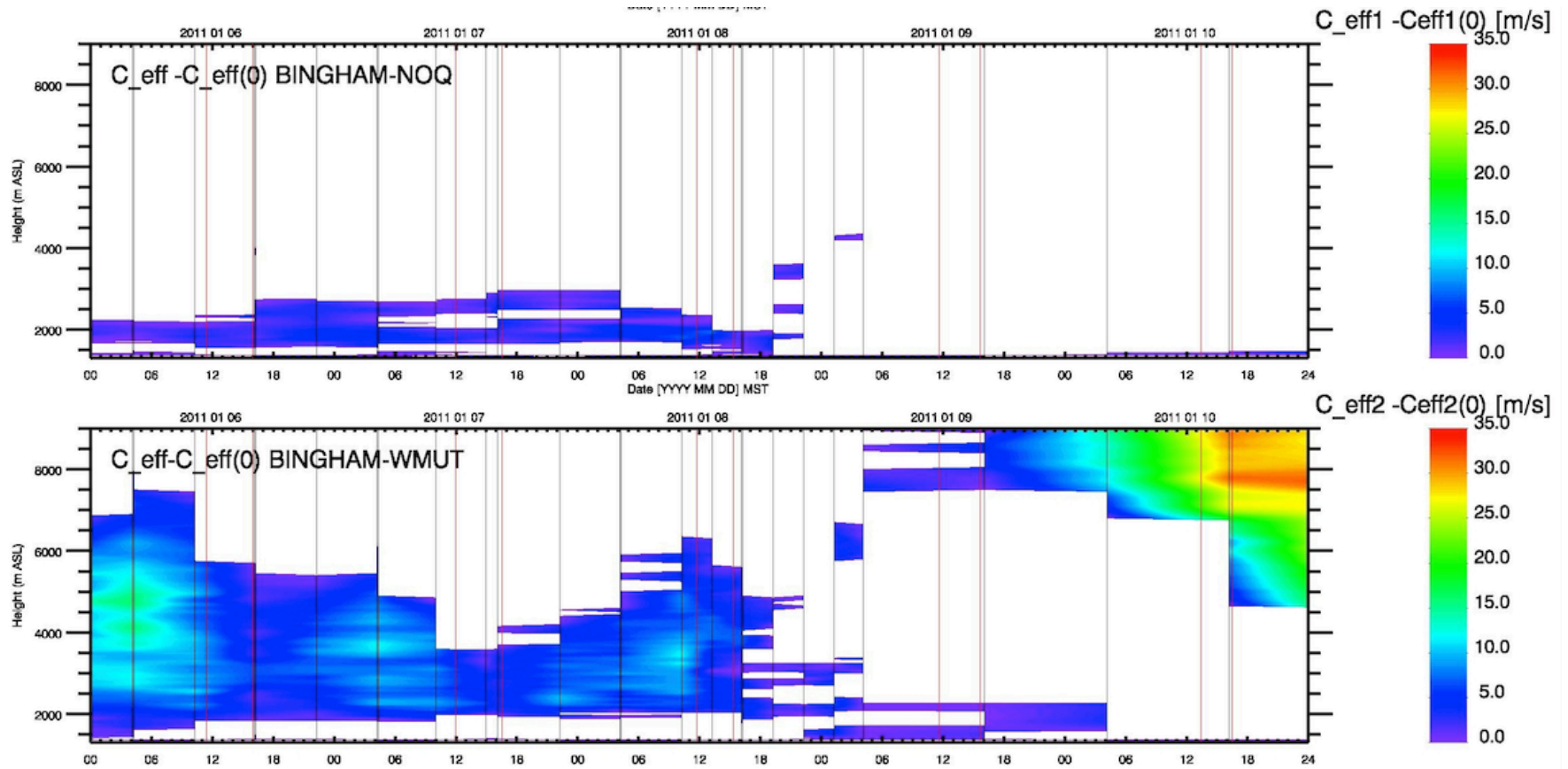
External resources

- NWS radiosonde (00 UTC, 12 UTC)
- UDAQ radiometer (temperature profiler)

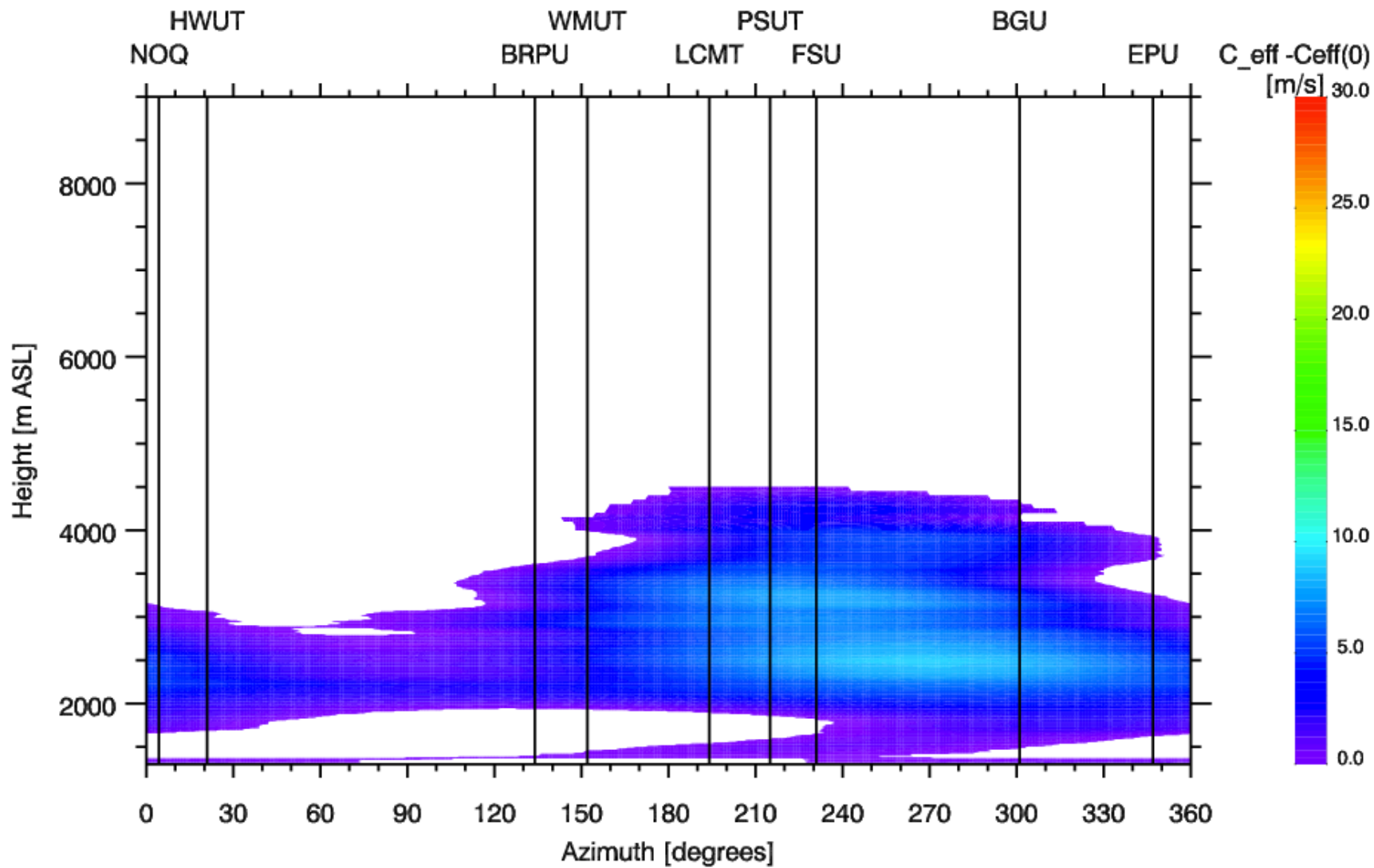
Sound propagation using atmospheric soundings from PCAPS / BCM blasts



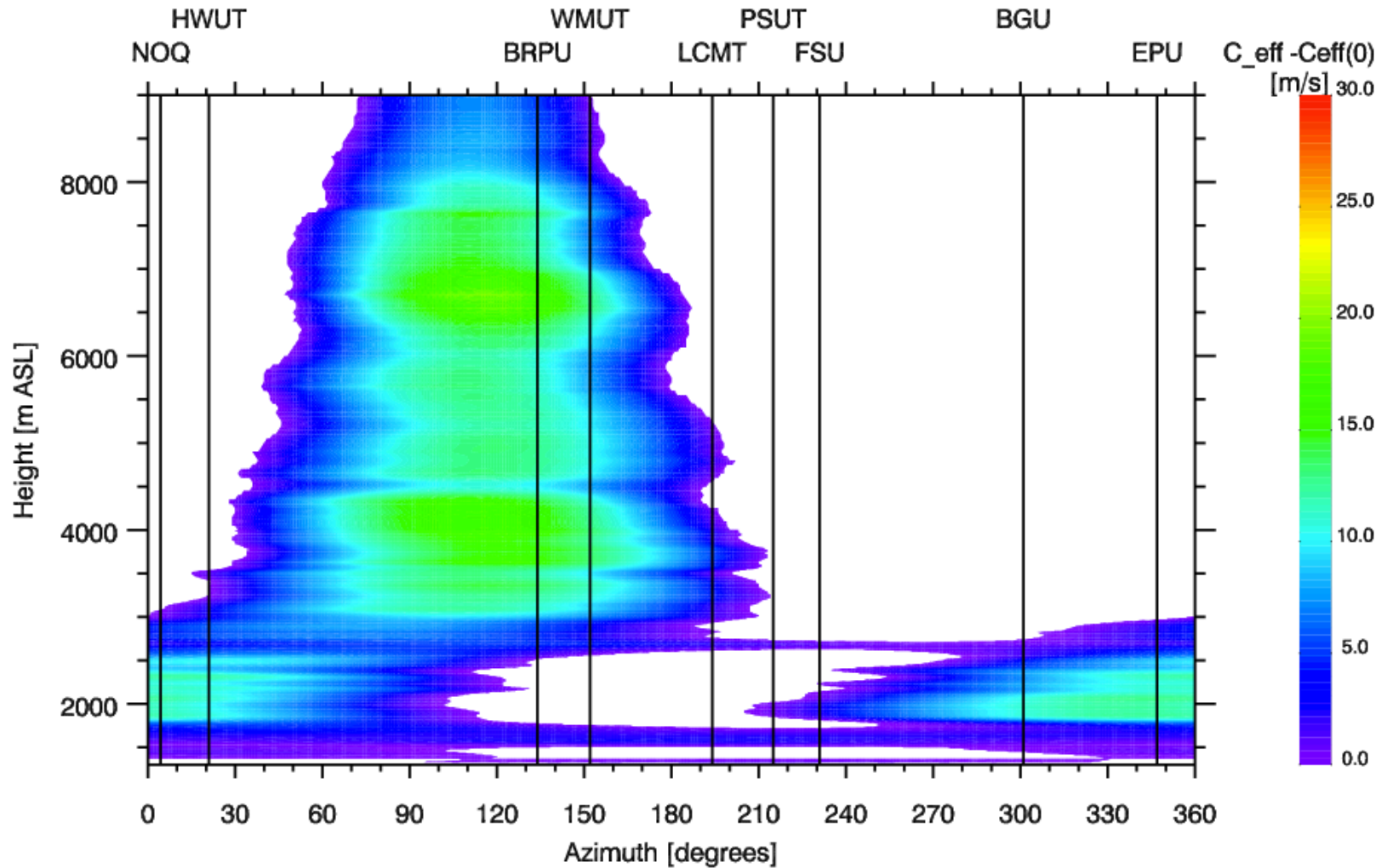
Sound propagation using atmospheric soundings from PCAPS / BCM blasts



C_eff-C_eff(0)
2011 01 07 23 03 UTC / 2011 01 07 16 03 MST/ SONDE
2011 01 07 23 33 UTC / 2011 01 07 16 32 MST/ BLAST



C_eff-C_eff(0)
2011 01 13 17 15 UTC / 2011 01 13 10 15 MST/ SONDE
2011 01 13 18 33 UTC / 2011 01 13 11 33 MST/ BLAST



G2S vs Atmospheric Sounding

