



THE UNIVERSITY OF UTAH

**Atmospheric
Sciences**

SEMINAR ANNOUNCEMENT

Diurnal cycles of turbulent fluxes in an east-west oriented valley

The i-Box (Innsbruck Box) measurement installation in the Austrian Inn Valley, was designed for long-term, multi-year observations to study the turbulence structure and exchange processes in complex Alpine terrain. The i-Box sites consist of multiple measurement platforms, including six eddy-covariance stations, which are located within an approximately 6.5-km long section of the approximately 2-3-km wide Inn Valley east of Innsbruck. One of the six sites is located at the almost flat valley floor, one site at a mountain top approximately 1500 m above the valley floor, two sites on the south-facing sidewall, and two sites on the opposite north-facing sidewall.

Diurnal cycles of turbulent heat, moisture, and momentum fluxes, as well as of standard meteorological variables, such as temperature and humidity, are strongly influenced by local net radiation under synoptically undisturbed, clear-sky conditions. In the complex setting of the Alpine Inn Valley, the turbulent fluxes will thus strongly depend on the specific location of a given site within the valley and its exposure towards the sun. The diurnal cycles of the turbulent fluxes at the six different valley sites are compared together with local radiation and valley-wind observations to determine spatial variations in the timing and magnitude of the turbulent fluxes.

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Wednesday, September 6, 2017, at 3:15pm

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Refreshments and Meet the Speaker at 3:00pm