



# Biology Seminar

By: Dr. Christopher Still

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## Studying ecosystem physiology at the Wind River Experimental Forest



**Monday, May 08, 2017 | 12:00pm**  
**HCK 132 Refreshments at 11:45am**

In this talk, I will discuss carbon, water, and energy exchanges from a tall, old-growth forest ecosystem. This well-studied forest has a complicated vertical structure, large aboveground biomass, and a great deal of epiphytic cover. My group has measured canopy temperatures and carbonyl sulfide (OCS)

concentrations at this site to better understand the dynamics of leaf and canopy energy balance, photosynthesis, and conductance. Canopy photosynthesis is inferred from OCS fluxes and compared with estimates derived from eddy flux measurements. These estimates of canopy physiology will also be compared with measurements of carbon isotopes in atmospheric carbon dioxide to infer ecosystem properties such as water-use efficiency. I will discuss the relative controls of water-use efficiency across a range of spatial and temporal scales. Finally, I will show how well the ED2 process model captures these aspects of canopy physiology and function.

