



Figure S1: SCAN observed soil moisture at 5 cm and SMOS soil moisture retrieved from ascending overpasses. The dry spring in 2011 at SCAN 2168 resulted in bias between the two study years. At SCAN 2024 there are a greater number of wet retrievals during the winter of 2011, which coincides with a period prior to SMOS launch in 2010 resulting in different biases. At SCAN 2053, a combination of temperature, evaporation, and humidity have resulted in a wetter year during 2010 than 2011 (T. Tolsdorf, personal communication, 25 July, 2014).