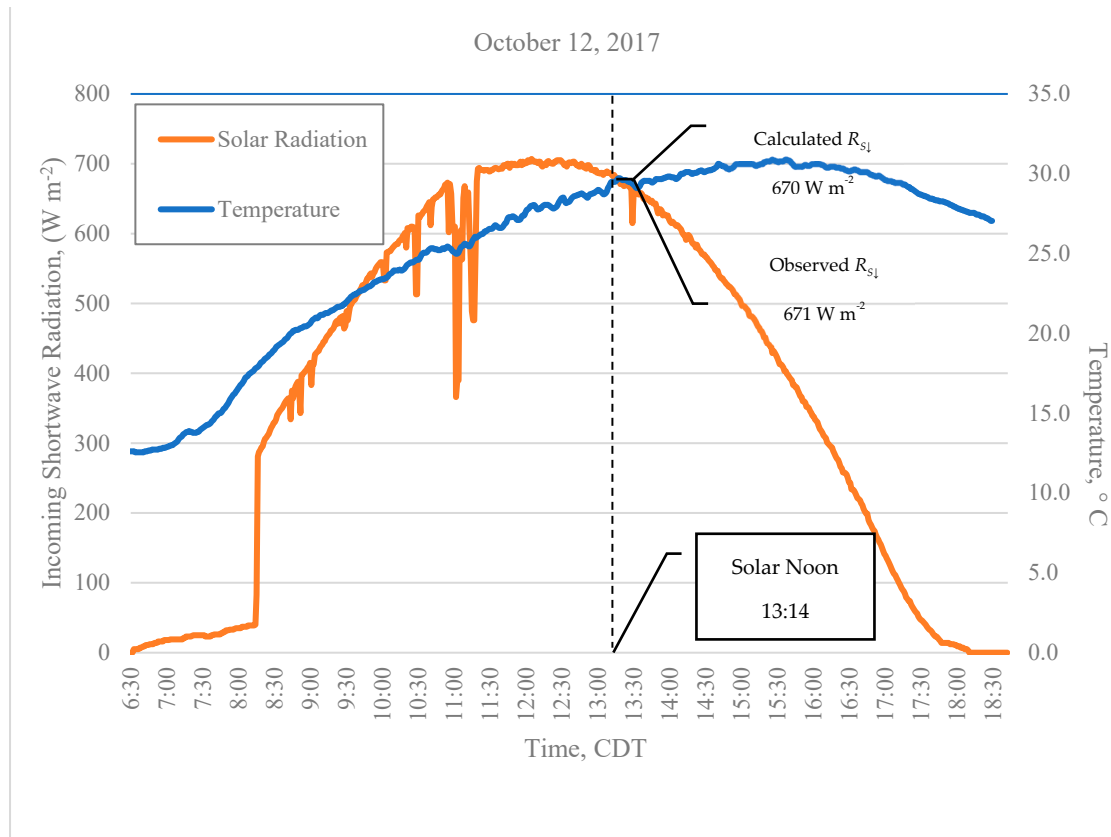
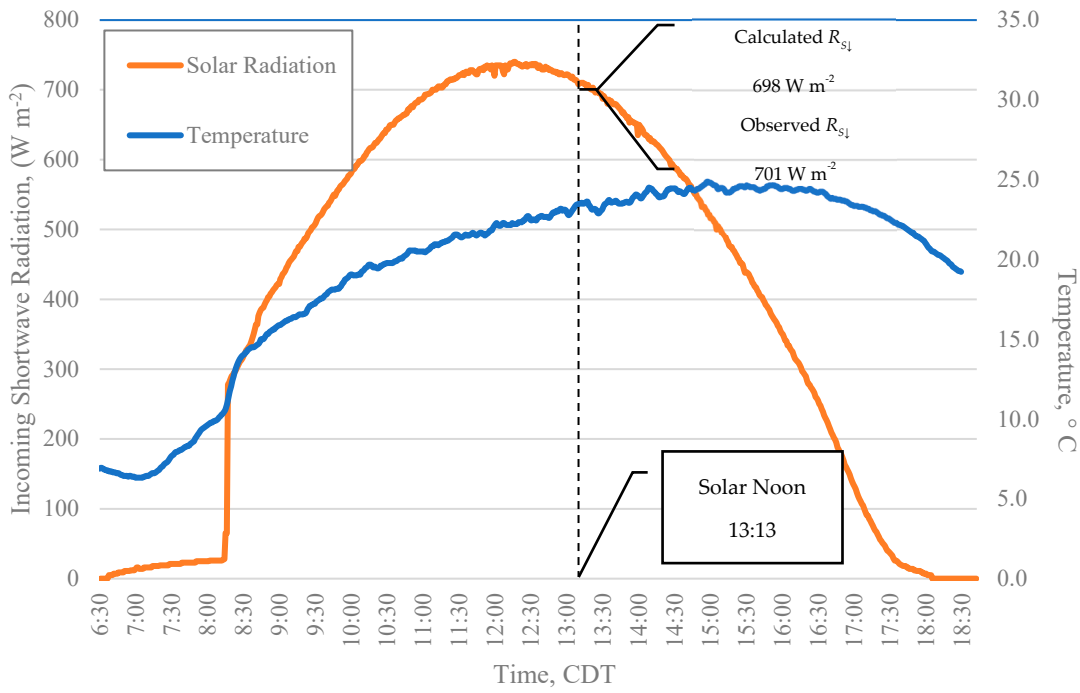


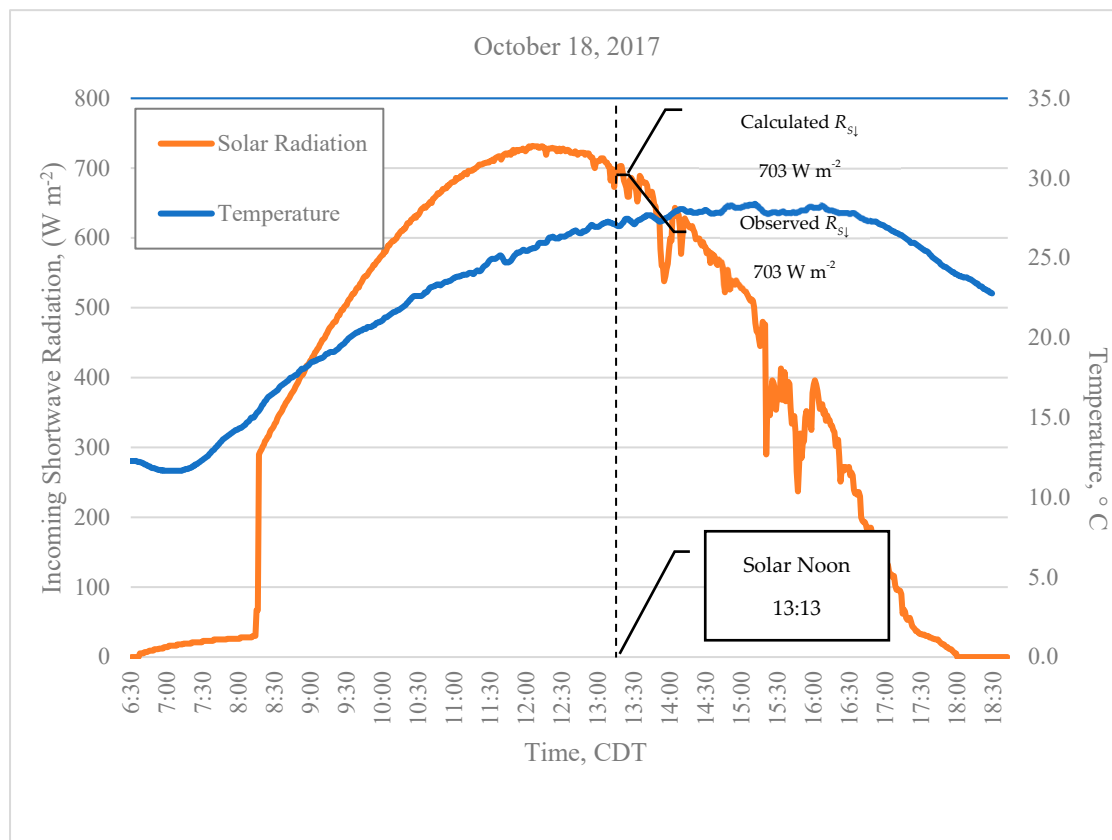
Supplementary Material

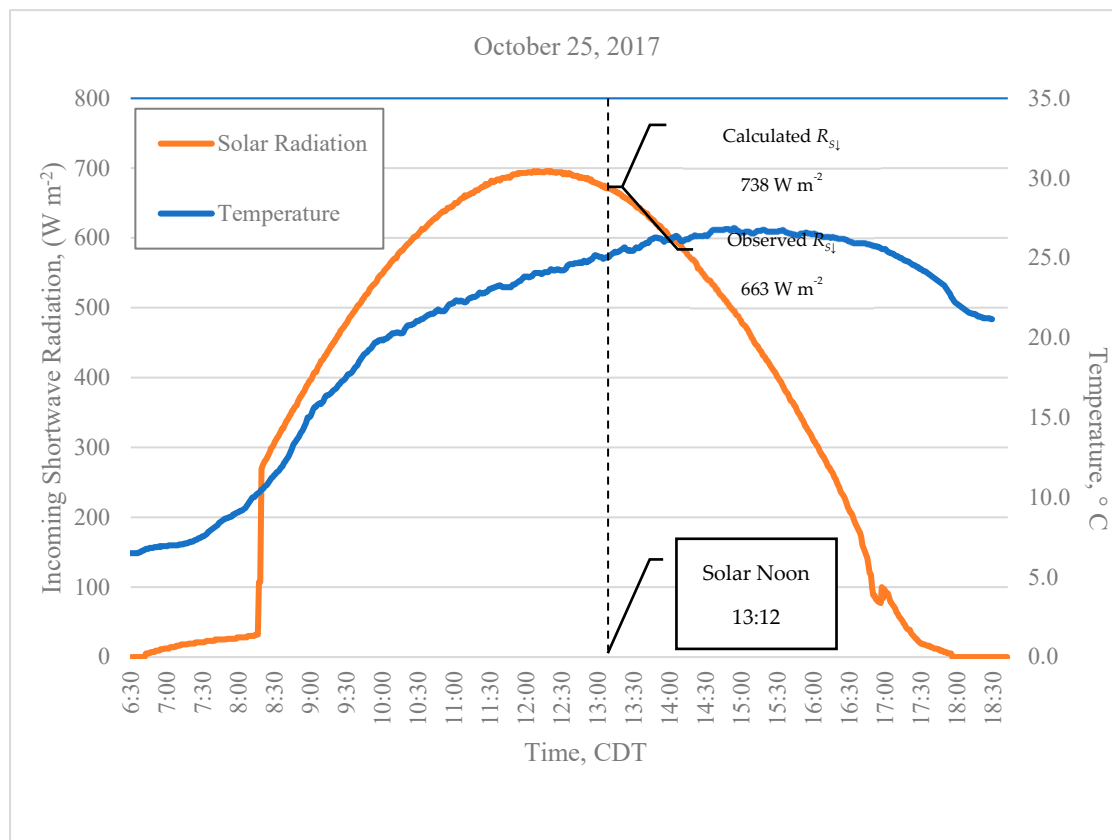
Incoming Shortwave Radiation Results for Each Flight Day

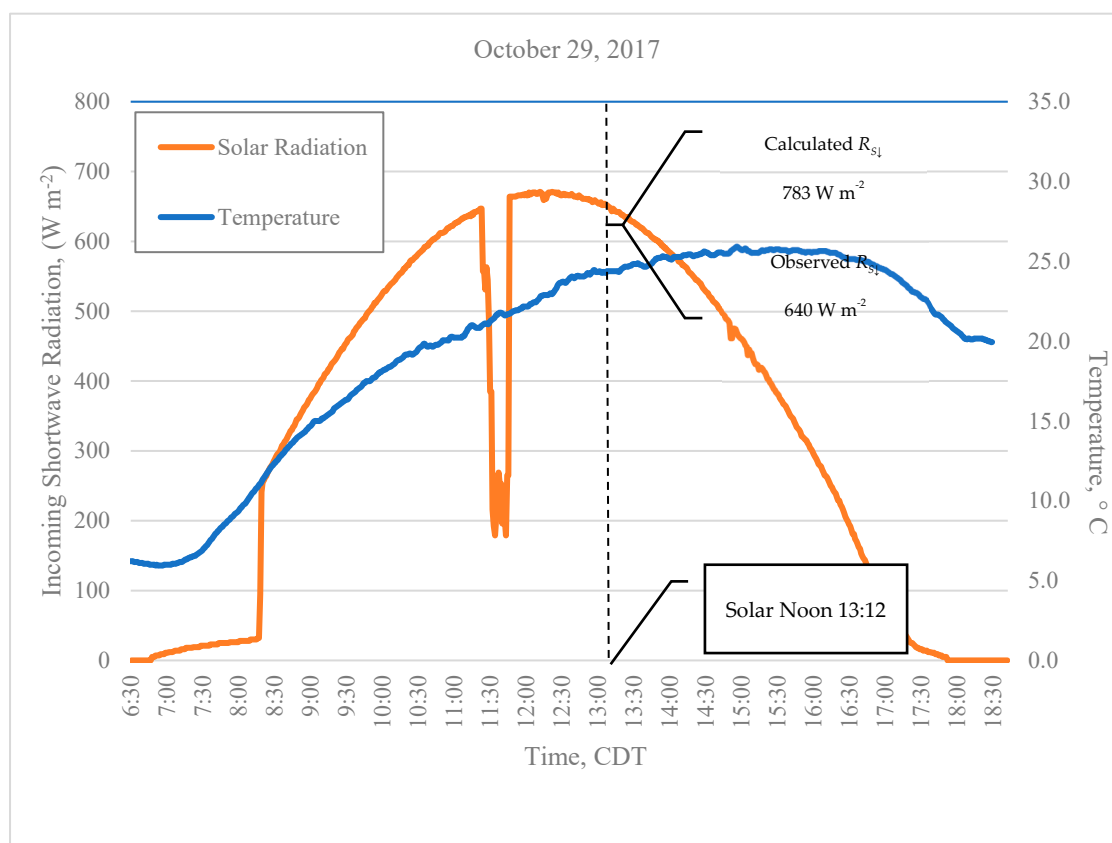


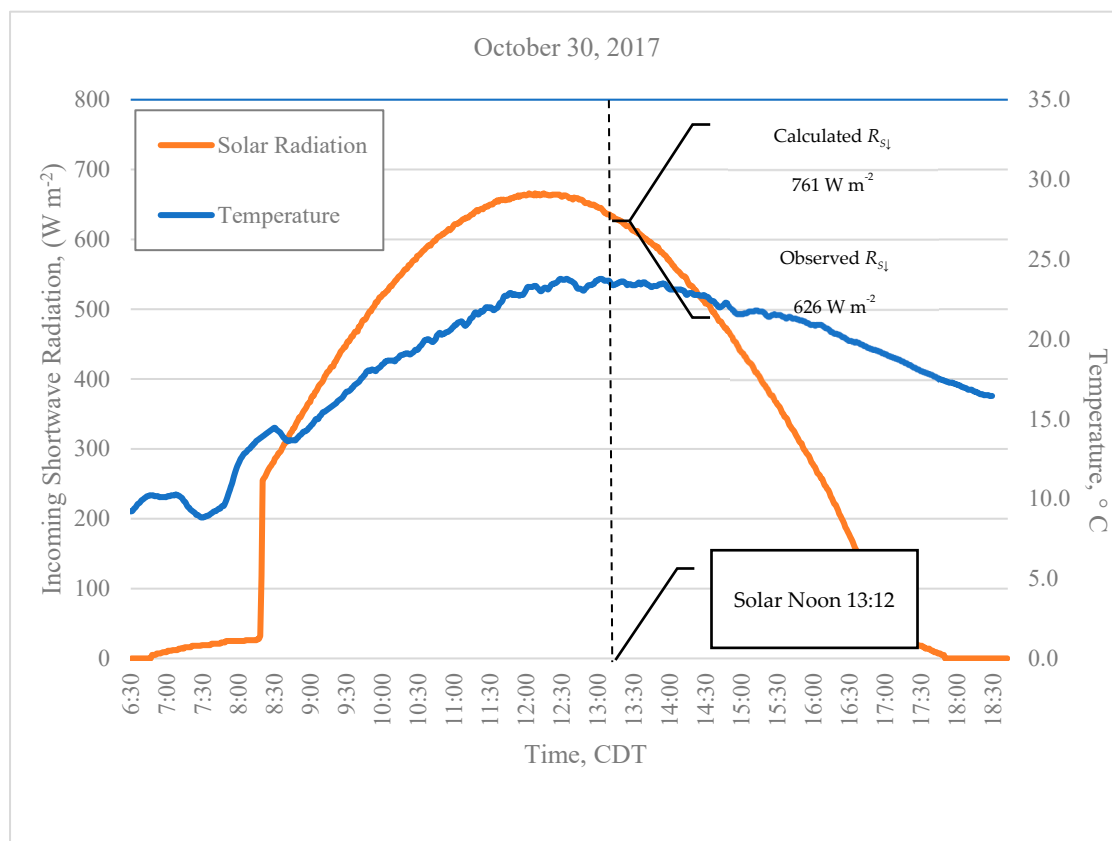
October 17, 2017



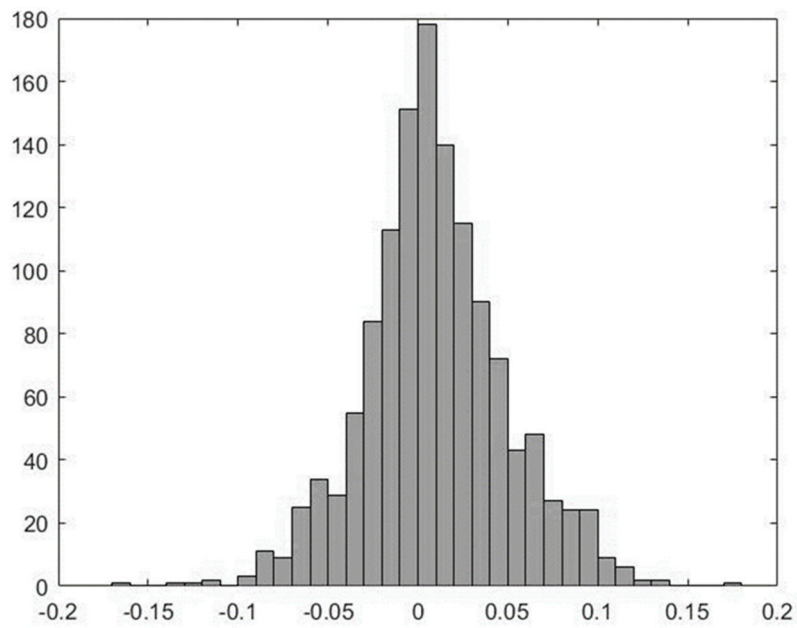




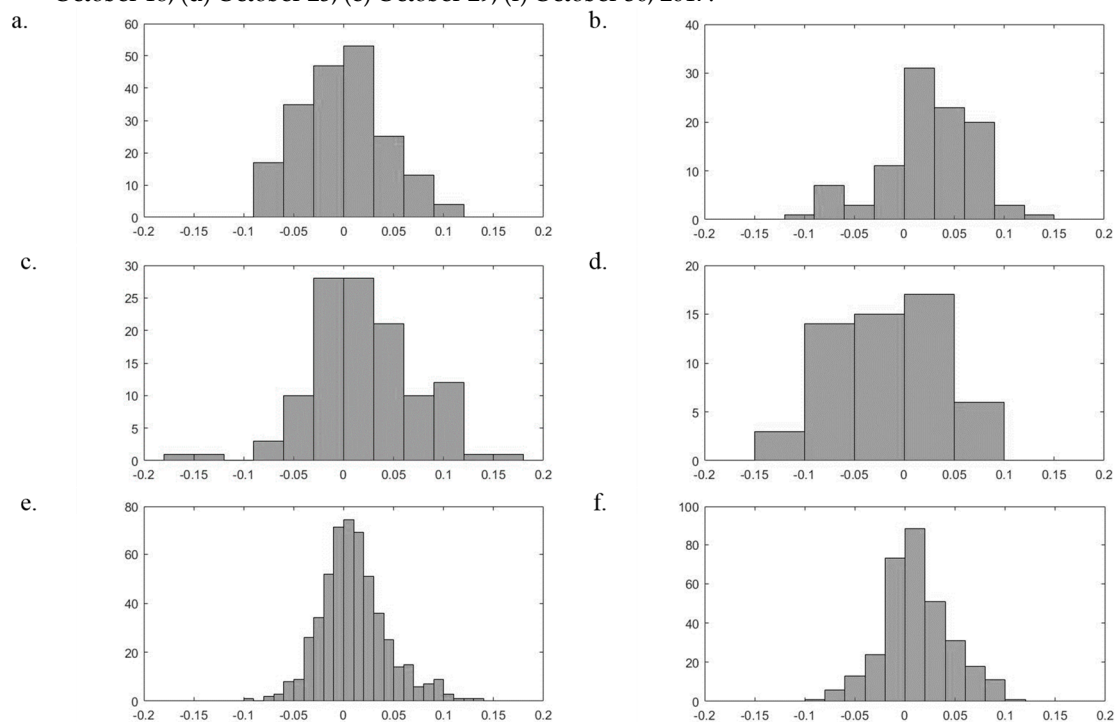




Histograms of the residual between observed and modeled Volumetric Water Content ($\text{m}^3 \text{m}^{-3}$) for October 12 through October 30, 2017.



Histograms of the residual between observed and modeled Volumetric Water Content ($\text{m}^3 \text{ m}^{-3}$): (a) October 12; (b) October 17; (c) October 18; (d) October 25; (e) October 29; (f) October 30, 2017.



Lab analysis for soil samples

	Specific Heat	Sand Fraction	Thermal Conductivity		Volumetric Saturated SWC	Dry Bulk Density of Soil
	$C_s \text{ (J}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}\text{)}$	$f_s \text{ (-)}$	$\lambda_{\text{dry}} \text{ (W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}\text{)}$	$\lambda_{\text{sat}} \text{ (W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}\text{)}$	$\theta_s \text{ (m}^3\cdot\text{m}^{-3}\text{)}$	$\rho_{db} \text{ (kg}\cdot\text{m}^{-3}\text{)}$
Sandy Loam	900	> 0.40	0.22	0.896	0.559	1259.7
Silty Clay Loam	1150	< 0.40	0.36	0.69	0.539	1215.8
Sand ^[1]	900	> 0.40	0.22	0.896	0.559	1259.7

[1] Sand core samples not extracted and analyzed; values for sandy loam used.