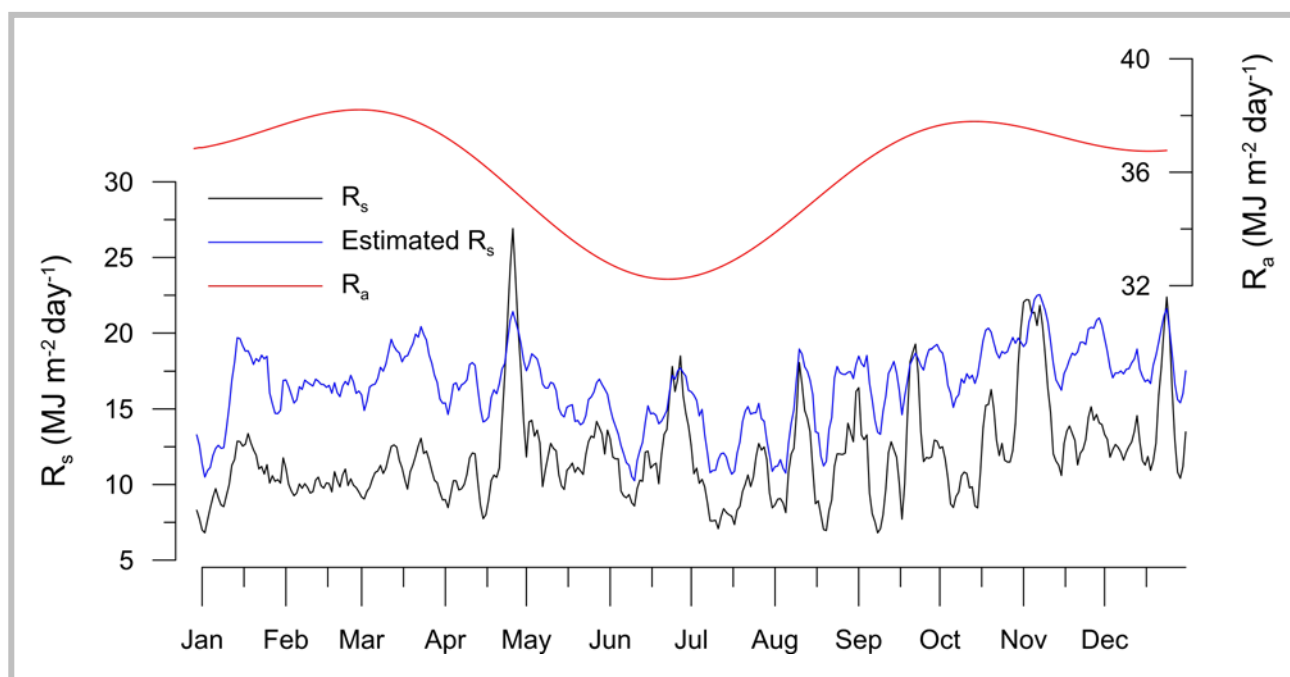


## Supplemental material for

“Evaluation of the Penman-Monteith (FAO 56 PM) method for calculating reference evapotranspiration using limited data: Application to the wet *páramo* of southern Ecuador” by Mario Córdova, Galo Carrillo-Rojas, Patricio Crespo, Bradford Wilcox, and Rolando Célleri, published in *Mountain Research and Development* 35(3), 2015. (See <http://www.bioone.org/toc/mred/35/3>)

### APPENDIX S1. The annual cycle of $R_a$ and its influence on $R_s$ estimates.

The procedure for estimating solar radiation ( $R_s$ ) is based on temperature and extraterrestrial radiation ( $R_a$ ). For these latitudes,  $R_a$  exhibits a distinct annual cycle, which imposes an annual cycle on the estimated values of  $R_s$ . However, as seen in Figure S1 below,  $R_s$  in the wet *páramo* is constant throughout the year because of the compensating effect of the lack of cloud cover during the period when  $R_a$  is low. Therefore,  $R_s$  estimates are better from May to September because lower  $R_a$  yields lower  $R_s$ .



**FIGURE S1** Solar radiation ( $R_s$ ), estimated  $R_s$ , and extraterrestrial radiation ( $R_a$ ) for the Toreadora site during 2013.