Estimation of Relative Humidity Over East Asia with Deep Neural Networks

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Abstract: Relative humidity is closely related to living organisms including plant growth, human health and so on. This study estimated relative humidity using deep neural networks over East Asia. The satellite-based products of surface temperature, water vapor, precipitation, aerosol optical depth, vegetation indices including solar radiation were applied for the estimation of relative humidity. The results based on the prediction dataset showed the 13.89 % as RMSE, and 0.5 for R^2.

Keywords: Relative humidity, Deep neural network, East Asia