



## **Estimation of spatio-temporal distribution of precipitable water over Cyprus using MODIS and AVHRR**

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In this paper, the atmospheric precipitable water (PW) over the area of Cyprus island was estimated by means of Advanced Very High Resolution Radiometer (AVHRR) thermal channels brightness temperature difference ( $\Delta T$ ). The AVHRR derived  $\Delta T$  was calculated in a grid of 5 x 5 km cells; the corresponding PW value in each grid cell was extracted from Moderate Resolution Imaging Spectroradiometer (MODIS) Level 2 product (near infrared algorithm). Since the PW –  $\Delta$  relationship coefficients corresponding to the area of Cyprus were calculated, the relationship was applied to AVHRR data for one month period. Radiosonde derived PW values, as well as MODIS independent PW values were used to validate the estimations. A good agreement was observed (RMSE = 0.76 cm).