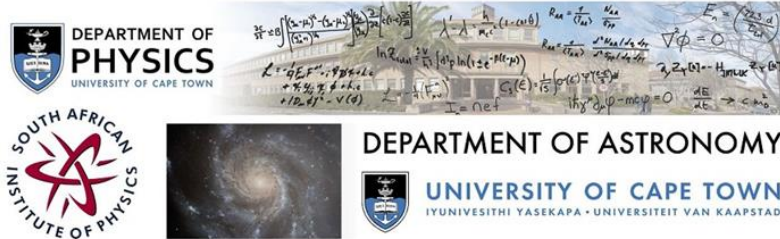


SAIP2016



Contribution ID : 58

The relationship between solar irradiance and cloud cover in Durban.

Tuesday 05 Jul 2016 at 14:00 (00h20')

Abstract :

A Total Sky Imager (TSI) and three solar radiometers were used to study the relationship between solar irradiance and cloud cover in Durban. The instruments are located at the Howard College campus of the University of KwaZulu-Natal. The TSI takes all-sky photographs at 1 minute intervals, and these images are processed to produce cloud fraction (CF) as a measure of cloud cover. The radiometers include a pyrheliometer to measure direct beam irradiance (direct normal irradiance, DNI), a shaded pyranometer to measure diffuse irradiance on the horizontal plane (diffuse horizontal irradiance, DHI) and an unshaded pyranometer to measure total (global) irradiance on the horizontal plane (global horizontal irradiance, GHI). We present results on the relationship between the radiometric and cloud fraction measurements.

Award :

Yes

Level :

MSc

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Paper :

Yes

Permission :

Yes

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