

## SAIP 2016 Annual Conference Proceedings

### Reply to referees: SAIP ID367

**“ESKOM, Irradiance and Sunny Skies - the physics of solar irradiance in South African conditions”,**  
**Author: H Winkler**

#### Responses to Referee 1

Referee comment	Response to comment
This paper is good for noting that the AM1.5 Global Spectrum is more suitable for the North American Landscape. An alternative for the western parts of South Africa is given. It is good to know but the effect of this is that PV modules operate at a slightly higher power than the rated power because of this lower air mass. This higher power is not quantified and may be a trivial gain and at this point of the paper has not been proven.	Actually the higher power achieved is significantly larger (34% for De Aar – now included in section 4.5). This can also be seen when comparing the middle (De Aar AM 1.209) and bottom (standard US AM 1.5) curves in Fig 1. A paragraph highlighting this result is now included in Section 4.5. Some sentences have been shortened elsewhere to keep the article length at 6 pages.
The word "Eskom" should be removed from the title as it has no bearing on the paper.	Title changed to: “How local conditions affect solar irradiance and photovoltaic module performance in South Africa”

#### Responses to Referee 2

Referee 2 accepted the paper as is.

#### Responses to Referee 3

Referee comment	Response to comment
The title should also be changed and not include Eskom.	Title changed to: “How local conditions affect solar irradiance and photovoltaic module performance in South Africa”
A comprehensive conclusion would add value to the manuscript and should be added.	A conclusion has been included. The scope for this was however limited by the 6-page maximum allowed for these proceedings. The last paragraph in Section 4 had previously been written so as to conclude the paper, and this has therefore been transferred to Section 5. To this was added a summary of findings with regards to the applicability of the AM1.5 spectrum
Abstract, line 3: ... used to estimate ...	Corrected
page 3, line 6 and elsewhere: photovoltaic (PV) modules, not photovoltaic solar panels (this applies throughout the manuscript). The word panel or solar panel must be replaced with module or PV module throughout the paper.	Changed “solar panel” or “panel” to “PV module” or “module” throughout