



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_28446
Title of the Manuscript:	Modelling and Estimating Photosynthetically Active Radiation from Measured Global Solar Radiation at Calabar, Nigeria.
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



SDI Review Form 1.6

PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	<p>Reviewer's Report</p> <p>Article title: Modelling and Estimating Photosynthetically Active Radiation from Measured Global Solar Radiation at Calabar, Nigeria.</p> <p>The study looks good in terms of providing the necessary dataset for the region, where direct PAR measurements almost do not exist.</p> <p>Line 13: Please the sentence measured global is not complete, kindly check again.</p> <p>Line 68: The symbol of the minutes in the latitudes and longitude figures is not 1'. I guess it is an apostrophe.</p> <p>Line 72: Please provide the unit of the global solar radiation data obtained using Gunn-Bellani radiation integrators.</p> <p>Line 80: Please use where instead of Where, if you were describing the parameters in Equation 2.</p> <p>Line 83: Same comment as line 80 above</p> <p>Line 297: Please use Table 5 instead of table 5</p> <p>Line 298: Use recorded instead of record</p>	<p>Line 13 Global solar radiation Line 68 1'</p> <p>Line 72 Gunn-Bellani radiation integrator were measured $\text{MJm}^{-2}\text{hr}^{-1}$ and then converted to $\text{MJm}^{-2}\text{day}^{-1}$</p> <p>Line 80 where</p> <p>Line 83 where Line 297 Table Line 298 recorded Line 307 Figure Models were developed $7.43 \text{ MJm}^{-2}\text{day}^{-1}$, $7.43 \text{ MJm}^{-2}\text{day}^{-1}$, $7.41 \text{ MJm}^{-2}\text{day}^{-1}$, $7.42 \text{ MJm}^{-2}\text{day}^{-1}$, $7.42 \text{ MJm}^{-2}\text{day}^{-1}$, $7.43 \text{ MJm}^{-2}\text{day}^{-1}$, $7.42 \text{ MJm}^{-2}\text{day}^{-1}$</p> <p>Model performance is part of result and not methodology 299 – 309 Its clearly stated here: This confirms that extraterrestrial PAR, relative humidity and clearness are meteorological parameters are not good atmospheric parameters for estimating PAR at Calabar from the month of March-December. From table 4 and 5, it could be observed that index of agreement, d, appears to be a better measure of testing model performance than correlation statistics such as correlation coefficient, r, and</p>



SDI Review Form 1.6

	<p>Line 307: Please use Figure 1 instead of figure 1</p> <p>Methodology Please did you develop the coefficients in the model equations (Equations 10 – 24), yourself or they were based on the literature values. If they are site specific values, then it is difficult to accept the following statement in your conclusion: 'Therefore, the proposed models could be used to estimate PAR at Calabar and other locations with similar climatological conditions across the globe'</p> <p>Results and discussion Please kindly provide spaces between your figures and their units e.g $5.36 \text{ MJm}^{-2}\text{day}^{-1}$ and not $5.36\text{MJm}^{-2}\text{day}^{-1}$.</p> <p>Model Performance Please is it possible to move section 3.1 up, since this could be part of the methodology.</p> <p>Conclusions The sentences in lines 299 and 309 look contradictory, can you please explain further why the models cannot be used to estimate PAR at Calabar for March – December as you have stated in the second sentence in line 309.</p> <p>Reference Please the initials in your references do not have spaces between them. Is it the requirement of the journal? (E.g. use J. N., instead of J.N.,)</p>	<p>Nash-Sucliffe Equation, NSE. Therefore, the proposed models could be used to estimate PAR at Calabar and other locations with similar climatological conditions across the globe.</p>
<u>Minor</u> REVISION comments		
<u>Optional/General</u> comments		