









#### 4. CONCLUSIONS

This work is done to propose a model sufficient to predict in different contexts of global solar radiation on a horizontal plane. This is very important for a whole series of applications of solar energy conversion. Indeed, the lack of data before, we will not know what will be the previous solar potential to ensure such a feasibility or such function.

The work encountered, which is analyzed in the literature relating to the modeling of solar radiation, shows a variety of models. There are those based on experimental data specific to the sites studied and then those based on simulation. But for each case the model can be improved or questioned; its place and area of validity can be clearly seen.

After this study, the development of a suitable model for the Biskra site for a horizontal plan, of any solar project was made through an experimental study. The experimental results show that the values found give a good estimate of the solar radiation and are in good agreement with those given by the elaborate model which is in agreement with that of Capderou.

In perspective, we hope that the next promotions will use our results as a database that will serve as a reference for studies in the solar field.

Data processing is performed on selected measures covering the year 2016, collected every hour for the Biskra site. All these steps make it possible to choose adequate models from these studies which has the values found are in good agreement with those given by the model developed which is in agreement with that M.Capderou. Also note that the model are very close to the experimental.

According to the confrontations and the results obtained, we have judged that: the evolution of global solar radiation on the horizontal plane induced by the proposed model is close to that measured during the experiment, as it is close to the work done by Dr. Chabane and MYMechraoui.

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