



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_42778
Title of the Manuscript:	Behavioral Analysis of Daily Rainfall Pattern in Katsina
Type of the Article	Review Paper

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:

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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	<ul style="list-style-type: none"> I'm not comfortable with the use of "Behavior" in title due to the meaning attached to the term. I would strongly recommend "Analysis of the characteristics" Line 15: I don't see how meteorological and hydrological studies are natural resources. This sentence on lines 14&15 need rephrasing line 73: "mathematically" rather than "mathematical" I contest arguments presented in lines 78&79 "While a positive" Correlation is understood as a measure of linear association I don't know why the author(s) neglected the parameteric analysis e.g. using regression. It is normally recommended that one conducts both parameteric and non-parameteric tests to confirm a trend I'm wondering whether Fig. 1. is a result or its an adapted figure. If it's an adapted figure, I don't see referencing it in caption. Besides it's not well explained in text. line 200: "mathematically" rather than "mathematical" Results: I have a comment on results presented in Table 2. I feel due to high variability of rainfall, it would have been better to present these results in less variable scales e.g. seasonal or at least monthly. E.g. it makes little sense to present the no. of Zero rainfall (please not we prefer to call it "NILL") as 86.8% makes little sense compared if you had presented i.e. ".... % of nill rainfall per year". Similarly mean annual rainfall using daily rainfall is less important again due to the large variability of rainfall. It would be better to compute daily mean rainfall and present it in terms of seasons. The labelling of vertical axes for Fig. 2 are not clear. Fig. 2(d) better call it "rainfall anomalies" rather than "differenced rainfall time-series". I also have a concern with this Fig. 2(d) the method of obtaining these anomalies is not presented. Why? Still on Fig.2. I'm not happy with the labelling of x-axis as "days" even Fig.2(c). One prefers to see the actual dates/months/years depending the scale. This is something the plotting script should help you out. It is meaningful to have the x-axis labelled using these dates/months/years whichever appropriate so that the reader may appreciate which year was dry/wet/normal etc. I'm wondering "correlation" results made with what and what? If I blindly accept that it is made with rainfall and the time, i.e. days; why? Do you think it makes sense? Time will increase indefinately but rainfall varies. This is why I'm unfortunately not in favour of correlation here. It seems the author(s) used 1 station. If it is true, in your opinion is it "representative" of rainfall of the study area to warrant using daily rainfall characteristics? Should improve Fig. Captions to communicate better. For example the "kink" around 20-25 of Fig. 6 is not explained. In conclusion section: what is the focus of this study? Is it on daily rainfall? Results presented seem to suggest that it is annual rainfall which is increasing. 	<p>Correction agreed. Topic has been changed. Monthly data has now been used as suggested. Agreed and corrected</p> <p>Corrected Corrected, new reference added</p> <p>Sen's slope estimator is a parametric regression tool. So both parametric and non-parametric tests were used.</p> <p>Reference for fig. 1 has been stated. Has been corrected.</p> <p>Correction has been made, mean monthly rainfall has been used and more interesting and consistent results have been obtained. Nill rainfall per year has been effected.</p> <p>Agreed and corrected. Methodology for seasonal differencing has been added and referenced.</p> <p>Data points are much, so trying to put the years and dates will make it clumsy and unreadable.</p> <p>Correlation with time tells if monthly rainfall increases or decreases with time (serial numbering of monthly data points). I think its ok.</p> <p>Yes the analysis was for Katsina city in Katsina state. That's where the data was collected and the results for nearby towns in the northern Katsina won't be much different.</p> <p>Agreed and corrected.</p> <p>Analysis has been redone to focus on mean monthly rainfall in Katsina as recommended.</p>
Minor REVISION comments		
Optional/General comments		