

Dear M. Lottaroli,

Thank you for your work and patience, we have tried to respond to all your comments. Your remarks have contributed to improve the paper. Please find our answers marked in red to your comments. The description of necessary changes in the revised manuscript are attached to this reply.

Sincerely,

Paul Perron, Michel Guiraud, Emmanuelle Vennin, Eric Portier, Isabelle Moretti, Moussa Konaté

Color legend in attached manuscript:

~~Green~~ + Green = moved sentences

~~Red~~ = deleted sentences

Red = added sentences

Beside the technical and scientific value of the paper I have collected some observations on the structure of the article. How data are presented and how much is clear which is the original work performed with respect of what has been re-digested from previous published work. On this respect there is to me some room of improvement. The reader needs a bit of help in being directed towards the key messages. As it is structured now I found it a little difficult, too much relevant observations in “brackets”, too frequently reader is requested to look at more than one figures with reference to the same concept, jumping ahead and back-word. I would suggest some degree of simplification. At the end, even if is important to mark how big has been the effort of to give spatial relevance to info already published (e.g geochronology, etc: : :) the important thing is to convey the new and original message of the work. I Have never seen in my life Figures Captions as these. Captions represents basically another article. The relevance of illustrations must be stated in the article text. The Figure needs clear legends, but captions, if possible must be concise.

Abstract Row 17 – 40: It is lacking reference to your original work and the results of it. What make this paper one of original scientific content? Which is the new aspects of your approach with respect to what (a lot) have been already published on North Africa Paleozoic? Shorten the introductive remarks on Paleozoic Basins and expand the above.

-“We have reformulated the abstract axing on our work approach and results line 17-52).”

Introduction R47_ No need to cite specific Figure of Heine for a general remark like this, work citation is enough

-“We have modified (line 59).”

R48_ Non-conventional exploration has revived interest: : :: : :explain why and where

-“It is not the purpose of the paper.”

R50,51,60,61_ incorporate in text all the (i.e. in brackets), too much. : : :.. Example: Share several common features, being generally from circular to : : :., being filled by continental to shallow marine: : :: : :: : :etc: : :etc

-“We have modified (line 61-65).”

R64_Depositional environment: : : This is just the same you just stated in Row 51. Try to be more short in introductive remarks, these concepts are enough when explained once, you do it too frequently through the text. R82-86 In abstract too

-“We highlight the fact that this common feature of worldwide intracratonic basin is present in our case.”

Geol Setting: : : R99_ sandwiching ! R105_Individualizing?

-“The inherited structural framework from ancient orogeny (i.e. Pan-African) will be reactivated during the Paleozoic individualizing the Saharan platform in arches and basins configurations.”

Data & meth R122 – 129. The integrated work you describe is a standard one. You should underline more which are the new data you are presenting in this paper for the first time. Making use of GIS or looking at log and seismic doesn't represent itself something that is worth of note.

-“We have better specified the new data (especially satellite images, seismic lines and well-logs) which have been used in this study. We have integrated a figure presenting the method (cf. fig. 4 and line 146-147 in manuscript).”

R138 – 157. Describing data you analyze and methods you make reference to one table and Figs 3, 4, 5,6, 9,10. The reader would be supposed to jump ahead and backward to text to try and figure where these data are: : : : It would be possible to limitate this to wells, Outcrops, seismic, geol profiles and eventually have all of these on one or two Figures only?

-“We have limited citations. Regroup figures would be difficult because of the size.”

R147_ supplementary data? What are they and where I found it in the paper?

-“We have integrated them to the paper for a better understanding (see Fig. 4, 11 and 13). They were put in supplementary because of their redundancy.”

Structural framework 170_ Same is stated in the introduction: : no need to repeat

-“We have corrected and modified (line 217-228).”

4.1 & 4.2 Syn-sedimentary Same comment for these two and is relevant to Figures citation. e.g. R187, R204, 231,242 To figure out one simple geological concept that comes from an original observation made by you the reader is supposed to jump among 3 or more Figures, looking for, with a lens because is almost always un-readable, a fault F2: : : : a label DO1,DO2: : : a part of Fig 5 that is 5AA' (R189) or 5A-A' (182). The reader is lost with all these citations. In fig 5 you have one map and one section, which is the need to label it differently if they are univocally designed by a 5A? Try if possible to simplify these two paragraphs because they are currently impossible to follow. Minimize the reference to the figures that display a concept, you do not need to cite all, just the more significative.

-“We have simplified the numeration (i.e. avoiding A-A') and captions of figures. We have also resized lettering. We also have limited citations for a same concept.”

5.1 Facies association: : : : : R268. Explain how the present study add knowledge to what stated above in defining the facies associations. Which are the new data? Which is the news with respect to the works cited?

-“We have better specified the new data (especially satellite images, seismic lines and well-logs) which have been used in this study. We have integrated a figure presenting the method (cf. fig. 4 in manuscript). Well correlation and stratigraphy sequence interpretation need

depositional environment electrofacies analysis. However, they come from previous work not always published. So, in order to go further, they were compiled and synthesized.”

R454 6. An association: : :..refer the title to an observation not to a conclusion: : :.eg: subsidence and tectonic history

-“We have added (line 525).”

R532. Same as above

-“We have modified (line 620).”

R546: : :list of thermos orogenic events is complex, brackets inside brackets, cite name or age

-“We have modified (line 209-215). The age of different events are in the legend of fig. 1.”

Figures

Fig.1 . Too full. Very difficult to read. I would simplify the Paleozoic series legend it is impossible to identify on Map different grades of colours within Cambrian or Carboniferous.

-“The legend is based on published geological maps. So, it is difficult to simply (lose of resolution). However, we have simplified the legend of the figure.”

Too much writings in the AOI (fig3A) too small figure and too dense posting of the Geochronology data to appreciate their relationships with terrains

-“We have corrected and added (see fig. 2 previous fig. 3).”

Fig.3. W=well and O=Outcrops not in the legend.

-“We have added (line 1435-1436).”

Reference to location of sections Fig 5 & 6 difficult to read in Map.

-“We have increased the thickness of cadres and lines localizing the figures for a better visibility (cf. fig. 1 and 2).”

Capital letters of arches and basins confusing with letters that make reference to following figures.

-“Typography was homogenized (arches vs basins) between different figures.”

Fig.4. I do not understand which is the extent of this area with respect to the previous Map (Fig.3A). The small writings (eg: Otj: : : :) are completely unreadable, remove it or enlarge.

Fig.5. Same comment made above for the small writings in Figures. I do not understand the need to differentiate map and section with A, A’

-“We have simplified the numeration (i.e. avoiding A-A’) and captions of figures. Captions are much concise. We have also resized lettering (Otj...) (see Fig. 5 and 6).”

Fig.7. symbols on core description section are too small to be understand.

-“We have enlarged the lettering. However, enlarged the figure cannot be done without separating in multiple part the figure (see Fig. 8).”

Fig11. K cited in legend but not in Figure

-“modified (line 1658-1659).”

Fig.12. A,B & C are too small, it should be enlarged. D &E are necessary?

-“We have enlarged the lettering and separated the figure in two (cf. Figs. 15 and 16 in revised manuscript). The D & E show the structural pattern of shear zones (i.e. SC sigmoidal geometries) which have constrained the tectonic framework of the Saharan platform. It is a typical structural style inherited in the area.”