

**Re: CAR1071**

Dear Sir,

Thank you for reading our manuscript and the valuable remarks. Here are the added modifications along the line suggested by your report.

1) The signature splitting was discussed on the page 3, the paragraph "The quantity ...". Indeed, we have mentioned that the total splitting comes from summing two effects determined by the single particle and the core, respectively. The total splitting is consistent, indeed, with the estimate of Jensen (ref. [3])

3) First of all your remark that negative parity states do not exist since there is no octupole deformation is not correct, to my understanding. Octupole deformation implies seven degrees of freedom while here the core has only three (Euler angles fixing the position of the intrinsic frame of reference with respect to the laboratory one), involved in the three angular momentum components. Here, the parity operator acts in the space of angular momenta. The fact that the triaxial rotor has negative parity states is proved in the paragraph "Remarkable the fact..." on the page 3, second column. These arguments may be found in any text-book on the triaxial rigid rotor. The case treated microscopically by Nazarevich was also commented.

4) In the beginning of your report you say that the accepted interpretation of the TSD bands is; TSD1  $i_{13/2}, \alpha = -1/2$  quasiproton, 0 wobbling phonon,... etc. To our understanding for  $i_{13/2}, \alpha = +1/2, \dots$  etc. Am I right?

5) The report says that our model is unphysical(!). This statement is based on the fact that it differs from the picture proposed earlier by other authors. This contradicts our statement that the proposed formalism is realistic since it describes the energies of the 62 states very accurately, better than any other approach. Then is the comparison with the data a criterion for appraising whether an approach is physical or not? I don't think it is fair to say that a manuscript is not suitable for publication for only reason that is not on the line of some previously published papers.

I hope that the new version, including new arguments, removes any doubt about the validity of our approach.

Best regards,

Apolodor Raduta