

Interactive comment on “A first estimation of the contraction related to vertical axis rotation: the case of the Ibero-Armorican Arc formation” by Josep Maria Casas et al.

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The Cantabrian arc and its oroclinal origin has been discussed since many times, using different techniques and approaches. The approach presented in this manuscript is very interesting and is essentially based on the calculation of the amount of shortening necessary for an orocline process. On this base the Author suggest that the amount of rotation is essentially less than previously proposed, and the present-day curvature of the arc is mostly related to the geometry of the Variscan foreland, and, therefore, that the arc is a primary one. This approach is innovative and interesting, but it seems to me that it is conflicting with paleomagnetic evidences that prove large amount of

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paleomagnetic rotations, much more than the 25° proposed in the model. In fact, the oroclinal model proposed by many authors for this curved orogen is mainly based on paleomagnetic results, which fully supported this model.

I think that this is an essential point that should be carefully discussed before publishing the paper. In particular I think that a reliable model should explain both the amount of shortening and the amount of paleomagnetic rotation

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