Dear Editor,

We would like to thank you for your decision and hereby submit the minor corrections of our manuscript in response to the two comments raised by Referee #2. All new modifications to the text are indicated in green.
We hope to have satisfactorily replied to the remaining questions (see detailed responses below) and remain at your disposal should there be any further questions/comments.

Best regards,
Eline Le Breton, on behalf of all co-authors

Response to comment (1): Strike-slip connection between the North Pyrenean Fault and Eoalpine Orogeny

We rephrased and added a few more references to clarify this paragraph (lines 176-183, also below). The mentioned references indeed suggested a late Jurassic age for the initiation of the intra-continental subduction within Adria (Alcapa/Austroalpine) and its potential link with the western branch of the Neo-Tethys to the east (Schuster and Frank, 1999; Frank and Schlager, 2006; Stüwe and Schuster, 2010). The first syn-orogenic sediments recording the onset of the Eo-Alpine compressional phase are however Early Cretaceous in age (c. 130 Ma; Faupl and Wagreich, 1999; Faupl and Tollmann 1979). Regarding, the potential connection of the sinistral strike-slip faulting within the Eo-Alpine units to the North Pyrrenean Fault towards the west during the opening of the North Atlantic in Cretaceous time, we now refer to two studies describing sinistral strike-slip faulting within the Austroalpine units in Cretaceous time: Neubauer et al. (1995) and Sieberer and Otner 2020 (note the latter is not yet published but was presented at the GeoUtrecht conferenece 2020 and is available on the GeoUtrectht website:
https://www.conftool.pro/geoutrecht2020/index.php?page=browseSessions&form_session=159).

Text lines 176-183: (1) Nappe stacking of continental units and high-pressure metamorphism was first recorded in the Eastern Alps, indicating an intracontinental subduction zone within Adria (Austroalpine unit, part of "AlCaPa"; Stüwe and Schuster, 2010), which developed possibly along late Jurassic strike-slip faults connected to the western termination of the Neo-Tethys Ocean (Schuster and Frank, 1999; Frank and Schlager, 2006). This phase corresponds to the "Eo-Alpine" Orogeny and lasted between c. 130- 84 Ma (Faupl and Wagreich, 1999), as indicated by both synorogenic clastics (Rossfeld Formation; Faupl and Tollmann, 1979) and geochronological data on high-pressure metamorphic rocks within the Austroalpine units of the Eastern Alps (e.g. Thöni, 2006; Manzotti et al., 2014, their Figure 5 and references therein). Regional scale sinistral strike-slip faults offsetting Austroalpine units were also active during Cretaceous time and were potentially related to the opening of the North Atlantic and subsequent motion of Iberia relative to Europe (Neubauer et al., 1995; Sieberer & Ortner, 2020).

Response to comment (2): Test of the Jurassic opening of the Ionian Basin

We rephrased to explain – hopefully more clearly – what we tested (lines 678-688, also below). The opening of the Ionian Basin influences indeed the position of Adria and if it opens in Jurassic time, it may solve (at least in part) the overlap problem with Corsica back to 200 Ma that we discuss the text and in Figure 3. However, it may leads to convergence rather than divergence between northern Adria and Sardinia-Corsica in the Jurassic, which does not fit with the geological record of rifting in northern Adria during that time. The area between

Africa and Adria was subject to several phases of extension (also earlier in the Permian) and further work is needed to constrain the exact amount and direction of extension/transtension contemporaneous to the opening of the PL Basin in the Jurassic before we can implement it properly in the kinematic reconstructions.

Text lines 678-688: We tested nevertheless an alternative kinematic scenario in which the Ionian Basin (using the present-day total width of c. 350 km between the Malta and Apulian escarpments; Tugend et al., 2019, their Figure 13a) opens – and thus Adria (Apulia) moves relative to Africa (Tunisia) – in Early-Middle Jurassic (200-164.7 Ma; Tugend et al., 2019) and in a NW-SE opening direction following Frizon de Lamotte et al. (2011). This would reduce the overlap problem between northern Adria and Sardinia-Corsica mentioned in section 3.2 (Figure 3). However, it would significantly increase the obliquity of motion between Sardinia-Corsica and Adria (and the rates of motion up to 9 mm/yr) and therefore reduce considerably the width of the rifted PL domain. Moreover, if we include a significant sinistral strike-slip motion between Africa and Adria during the opening of the Ionian Basin (following the interpretation that the Malta and Apulian escarpments are transform margins; Frizon de Lamotte et al. 2011), Adria would converge towards Sardinia-Corsica rather than diverge, which would be in conflict with the timing of syn-rift deposits and normal faulting along northern Adria (section 2). Future work is therefore required to test in more details such alternative scenarios.