Reviewer 2

** Page 1, line 35: "new toolbox"*

Why new (maybe you want to say "a useful tool")? (Please explain)

We agree, "a useful tool" is a more suitable description.

** Page 5, line 3-5: "If the distance is high enough, very thin amphibolite layers do not boudinage but act as passive deformation marker horizons in the marble"*

What means, "the distance is high enough"? Why "layers do not boudinage but act as passive deformation marker horizons in the marble"?

We consistently made the observation that Amphibolite layers thinner than about 10mm do not boudinage. An exception from this rule is when these thin layers layers are very close to thicker layers of amphibolite (~ less than 1cm) in which case they form harmonic boudins or multilayer boudins with the thicker layer.

** Page 5, Line 17*

add a graph

We can illustrate in a graph how the minimum extensional strain was estimated if this is requested, however, illustrating it on graphically field photograph is challenging since it requires the analysis of very large planar surfaces while at the same time requires detailed oblique and profile view observations to identify the beginning and extent of the pinches. We do not think that a graph would therefore be of much help and, since it does not pose a critical aspect of the study, prefer to not include it in the revised version.

** Page 6, line 7: "Their age relationship with the pinch and swell structures is not fully resolved"*

Asymmetric folds and pinch-and-swell (in the pictures some of these structures seems like shearband boudins) could be cinematically and chronologically related. See, for example, Fig.1 of the following paper: Pamplona J, Rodrigues BC, Fernández C (2014). Folding as a precursor of asymmetric boudinage in shear zones affecting migmatitic terranes. Geogaceta, 55: 15-18

We agree, based on the orientation of some fold axis with the short wavelength pinch-and-swell boudins (which in fact often show signs of shearband boudinage) we suspect a structural relation between them. A paragraph on this possible relation was reintroduced to the discussion, including the given reference.

* Page 6, line 26: "and hairline veins" I do not understand the reasons why you included these structures in this section (3.6). In my opinion these structures are late extensional veins (nothing more). I suggest the following structure: 3.6 Brittle boudins 3.6.1 Domino boudins 3.6.2 Torn boudins 3.7 Hairline veins

The grouping of the structures and especially the terminology used for the chlorite filled hairline veins /boudins was in fact subject of some discussion. The structure can be treated and described either as boudins or veins but both approaches have their shortcomings. Their occurrence is always linked to amphibolite layers and the veins disrupt the amphibolite with a regular spacing what qualifies them as boudins. Threating them only as late extension veins would obfuscate the fact that they (just as the other sets of brittle boudins) need the amphibolite as a brittle heterogeneity to occur. However, the chlorite filled necks often

extent into the surrounding marble so it is much more convenient to threat the as veins in the description of their features since the layer that is boudinaged is so poorly defined. Based on these arguments (which we elaborate in more detail in the revised version in section 3.6.3) we would prefer to keep the structure in its current form.

** Page 7, line 1-2: "The length to width ratio (L/W) of this generation can be as low as 1 but more commonly it is in the order of 3-5 and in extreme cases >8."*
Please, cite other authors for comparing results (you could compare graphically your results with other authors – Make a new figure with a graph).
We added a paragraph in which the range of length to width ratio in comparison to other authors is discussed. Considering the number of existing figures and the fact that a statistically significant collection of ratios was not yet compiled we would refrain from plotting the ratios in a separate graph.

- Page 8, line 8-11 (introduce a new figure: a sketch that shows the relationships between all the generations of boudinage).
A schematic 3D sketch of the generations was added illustrating their expression in profile and map view as well as their angular relationship.

- Page 9, line 8-10: "General strain conditions with pure shear and a layer parallel simple shear component may have prevailed in the marbles during some deformation stages"
Insert references or explain how do you know this.
We discuss general strain conditions as a possible explanation for the occurrence of asymmetric folds, possibly coeval with boudins). It is correct that we not yet have any supporting evidence, so this is a hypothesis to be tested in the future.

- Page 9, line 10: "domino boudins occur in both polarities" I do not understand this phrase, because domino boudins only occur in non-coaxial shear! Please explain!
"Polarities" relate in this context to the shear sense indicated by the rotation of the blocks (e.g. sinistral or dextral, looking downward). The occurrence of both rotational senses in the field is interpreted to indicate locally deviating non-coaxial shear components.

Figures (The comments/corrections of the figures are, also, in the supplement pdf file)

Figure 1: Add to Figure 1, for example in left corner, a country/regional general map for location of Naxos Island. Add the pattern that you have in the geological map to the Tertiary sediments. The granite symbol is hardly visible in the geological map. Use only the color.
Figure 2: Delete figure 2a (this "Geoeye satellite image", it is unnecessary!) Add a legend to the geological map: Rocks Structures Outcrops locations (1-35)
Figure 4.1: This picture had not enough quality. The structures are not visible. Please change or improve the quality of this picture.
Figure 5b: Show in the picture the interference between the two generations of pinch- and-swell boudins (you could make a sketch to help).
All suggested changes on Figures and captions were implemented.

Technical corrections:
All technical corrections from the annotated manuscript were included accordingly.