We thank the editor and the reviewer for their comments and try to answer their remaining questions/concerns in the following. We also changed/edited the paper according to the suggestions.

a) The referee (and myself!) is struck by the large contrast between the results for lead fraction between Cryosat-2 and Envisat in Figure 4. He wonders about the algorithm and strongly recommends that you check it!... I agree. It is not my field, but I would think that the contrast is so strong that it should be possible to cross-check it (at least in specific areas) e.g. against other satellite products

The difference in lead fractions can be explained with two contributing factors. Firstly, the lead detection scheme for Envisat is slightly different than that of CS-2. However, we expect the main reason to lie in the fact that the Envisat along-track footprint width is much larger than the one of CS-2. As the lead will dominate the scattering and thus the waveform shape, a lead falling within the Envisat footprint will result in several consequent lead detections. CS-2, with its along track delay doppler processing, will have fewer lead detections over the same lead. This is due to the better along track resolution.

b) The reviewer also recommends to uniformize the color scale in Figure 5 between a, b and c...I guess he refers to the opposite color schemes(?)…

Fixed.

c) The referee is also concerned with the reference you make to a potential spatial resolution impact on the comparison of the results, but he argues that this should not be the case anymore since you converted both data sets to the same 10 km x 10 km (?)...is there a "memory effect" of the initial scale difference?

The data sets are indeed projected and averaged on the same grid, but nevertheless, the critical point are the different footprint sizes. Since the spatial resolutions (along track) of SIRAL and RA-2 are different, this difference will propagate into the grid as well, no matter how data are averaged later. In other words, the difference is already given in the individual waveforms of each system (see also a)).

d) He/She also recommends that you detail check the english again and suggests a few, non exhaustive, corrections!

We found some typos and spelling mistakes, and did the corrections accordingly.