Comments on the manuscript “Spatio-Temporal distribution of Giant jellyfish(Nemopilema nomurai) “by Sun Young Oh et al.

This is a very interesting manuscript. The presented work applies acoustic techniques to describe spatio-temporal distribution of Giant jellyfish (Nemopilema nomurai). To do it, EK60 and EK80 Simrad echosounders were used working at 38 and 120 kHz. In both cases, split-beam transducers were used. Acoustic data obtained are compared with sighting and trawl surveys results. The comparison between acoustic survey and other techniques suggests that acoustic survey results are higher than any of the other methods. Authors conclude that the jellyfish population is distributed through water column. Moreover, they observed that jellyfish were not affected by the thermocline and a jellyfish vertical migration was influenced by atmospheric pressure and precipitation.

In general, this is a very well written and well-structured manuscript. The manuscript is suitable for publication in the journal. This reviewer has a major concern on the manuscript:

As established in (Kim et al., 2020) , It is necessary to obtain TS values at 38 and 120 kHz or SV values for both frequencies. On the basis of TS or SV results obtained, the mean volume backscattering strength (ΔMVBS) at multiple frequencies is calculated. Given that the performance measurement of the method depends on the ability of the echosounder to provide accurate measurements, a good calibration of the acoustic equipment should be made. Therefore, I would suggest adding more detail about echounder calibration, at least in the 2.2 section. In the same way parameters used to obtain individual echoes should be described in 2.3 section. I also think that the paper would benefit if SV or TS data used will be shown using either a graph or table display.

Minor comments

Lines 106-112: The acoustic signal identification method is insufficiently described in my opinion. An improvement of Figure 4 would be welcome here.

Lines 349-374: In this paragraph, the discussion has centered on a comparison of acoustic survey, sighting survey and trawl survey. The conclusion drawn is that: "...acoustic survey showed the higher distribution compared with other methods…' '. A more detailed comparison of the results of three methods is lacking in this part.

Would be very welcome that the minor issues exposed, will be better explained and clarified in detail to the better understanding of results depicted, and applied methodology.