Review:

The manuscript increased in clarity and profits from its condensed form. Significance and gain for the scientific community are better outlined, while the discussion is appropriately balanced. Some details can be still further adjusted.

L111 'have been unavailable' or rather not been used for this purpose until to date?

L114 First two reasons are in their current state somehow redundant: offline measurements (unconcentrated sample) reach their detection limit, no online-techniques (highly diluted sample) available. Maybe combine to one argument?

L328 Modelling of acidic polysaccharides mentioned here, however, only results for polysaccharide-rich regions reported (L707). Only a very small fraction of marine polysaccharides is acidic, while neutral sugars prevail and are discussed in this study. Clarify.

L424 I am not sure if dynamics are similar as you state at the Old Pier CCHOaer were highest at the beginning and end (Sept and May) while dCCHO peaked in late Sept while being much lower in May. Clarify what 44-67% refers to...

L453 incomplete sentence: ...likely due to it being...?

L454 Reformulate, might be misleading to some. Photosynthetic overflow dynamics could contribute to the variability observed in dissolved glucose, but glucose serves as storage molecule in cells no matter whether photosynthetic overflow occurs...

L457 in the whole chapter, only Old Pier and seawater samples are discussed, correct? I would suggest to state this in the concluding sentence once again.

L462 Not sure if this is the only implication... the Old Pier could be sheltered, which would lead to less wind, limited fetch, reduced wave breaking and as a consequence to lower SSA formation than at open ocean sides. Consider including this aspect into your discussion.

L511 'PASCAL', missing reference.

L519 Reference missing or is this referring to the following and not yet introduced results?

L688 You are discussing three samples with high CCHOaer concentration originating from high altitudes, potentially indicating atmospheric transformation, processing, secondary production pathways. Two of these samples belong to Case III in which you also highlight their trajectories. Only roughly within the last eight hours, these airmasses seem to have separated from mid and low altitude samples. I would consider this a rather short time frame in terms of atmospheric metabolic/ enzymatic and chemical alterations and at temperatures close to zero degree... Maybe you could include relevant examples and/or potentially previously determined rates for atmospheric aging etc?