

PC comments on version 6

Following a second review by reviewers, the authors have made an extensive series of changes to the paper (thank you!) and I believe it is now suitable for publication. There are still obviously problems with the measurements of these compounds, and I doubt the reviewers will be completely convinced by their arguments, but there seems little point in delaying the paper any longer. There is certainly a need for additional transient tracers for oceanographic use, and this paper, even with the limitations described, will help other researchers improve our measurement capability of these compounds.

I have a number of suggested changes to the wording that I believe will improve the readability of the paper. If the authors agree with these, then I do not need to see it again.

Abstract, line 20-21: "for the first time, with reproducibility studies using Baltic Sea water. Based on historical data, the surface saturation ..."

Line 22: Delete "based on historical data."

Line 23: "found currently to be" line 25: "HCFC-22 is likely unstable....which compromises its potential..."

Lines 27-29: "We were not able to fully evaluate the potential of HFC-125 and HFC-23 as tracers due to inconclusive results regarding their solubility and stability in seawater, along with potential analytical challenges."

Line 30: "alternative compounds with similar..."

P2, line 1: "is based on"

Line 7: Delete "as oceanic transient tracers"

Line 8: "ventilation, mixing and circulation."

Line 15: Delete "oceanographic transient"

Line 19: "concentration" not "concentrations"

P3, lines 4-5: "histories of these potential alternative tracers ... allow us to examine using one or several of them to replace..."

Line 11: "1200°C, while the rate of"

Line 26: "suitable" not "suited"

P6, lines 27-28: "in the sample; samples with a higher amount of tracer have better..."

P7, last sentence section 3.5: "two different instruments, at roughly the same depth and ignoring their different station positions, is 5.9 +/- 4.6%"

P8, line 11: "adding the other compound"

P12, line 2: "in this study, giving us confidence in our ability to accurately measure"

P13, line 28: "potential;" not "potentials"

Line 30: "the measurements although it has not been identified as unstable;"

Lines 34-35: "analytical methods, using either a more sensitive"