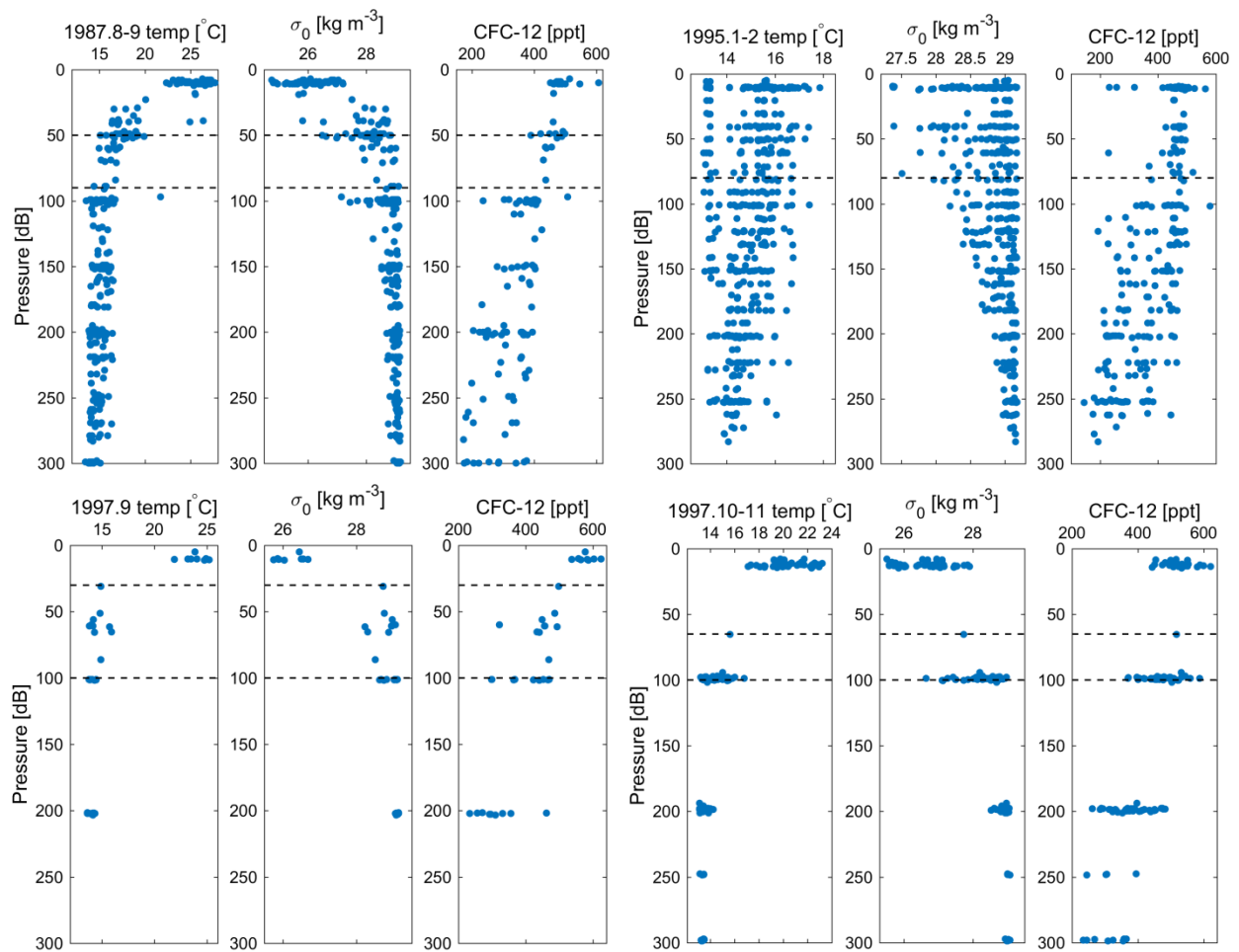


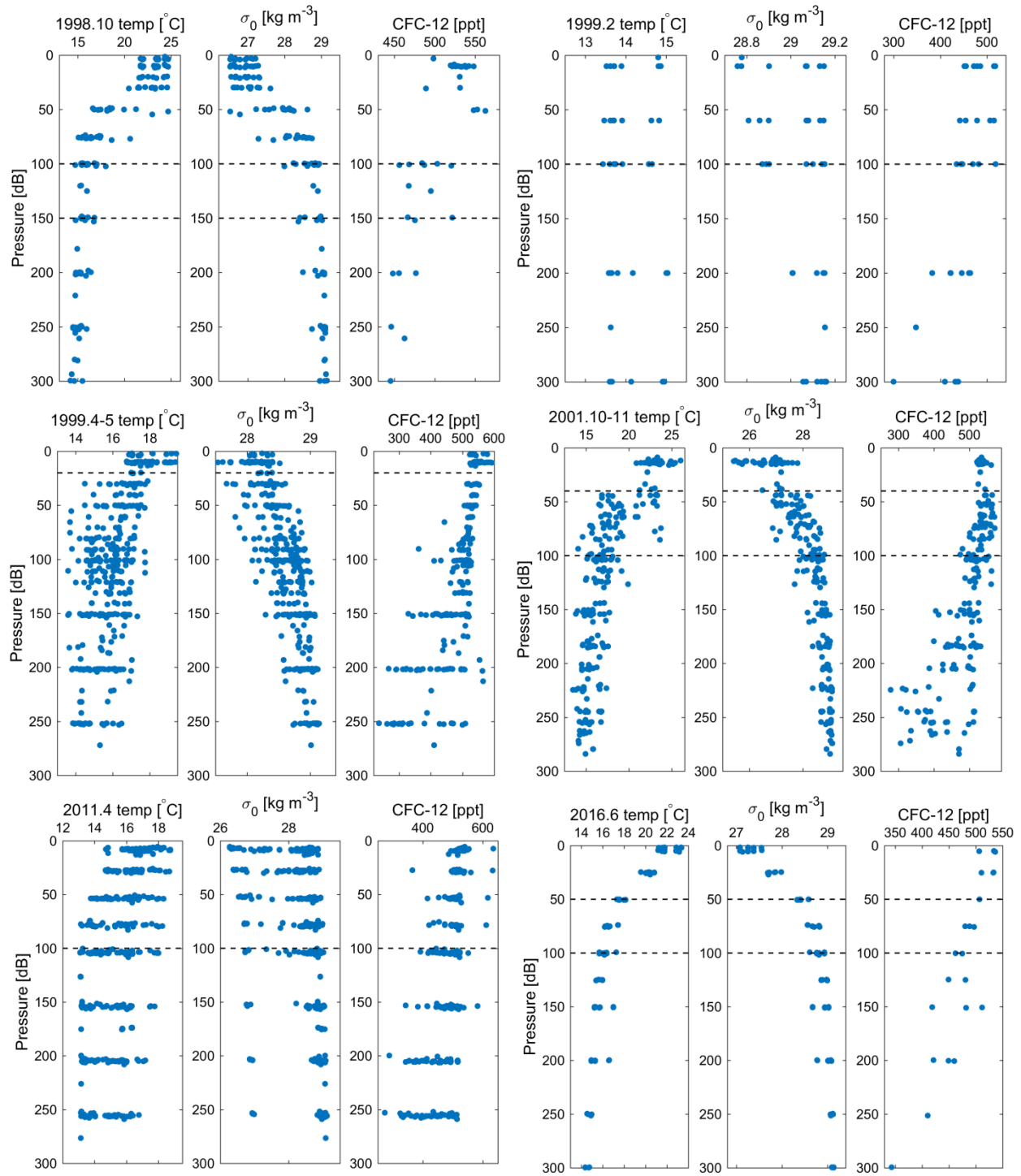
Medusa-aqua system: simultaneous measurement and evaluation of novel potential halogenated transient tracers HCFCs, HFCs and PFCs in the ocean

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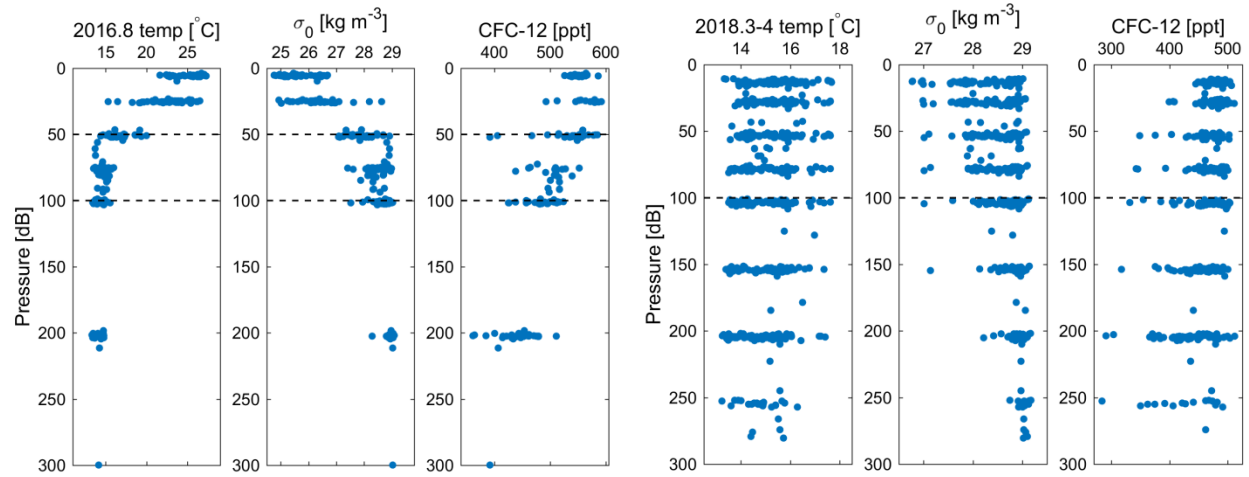


Figure S1. Profiles of temperature, potential density and concentrations of CFC-12 for each historical cruise in the Mediterranean Sea to determine the depth ranges of winter mixed layers.

Table S1. Bottle data of SF₆ and CFC-12 in profiles 51, 53, 83, 85, 105 and 107 measured by the PT-GC-ECD and CFC-12, HCFC-22, HCFC-141b, HCFC-142b, HFC-134a and HFC-125 in profiles 52, 84 and 106 measured by the Medusa-Aqua system from cruise MSM72 (see the Excel file) ^a

^a Meaning of the quality flag, this is modified from the WOCE flagging system (https://cchdo.github.io/hdo-assets/documentation/manuals/pdf/90_1/chap4.pdf, last access: 13 September 2019) only in that we added flag “5” for the purpose of this study

Quality flag number	Meaning
2	Normal data; data for sampling sites that measured CFC-12 by Medusa-Aqua system matched the one by PT-GC-ECD
3	Questionable data: may not fit profile or some other doubts
4	Problem data definitely
5	Data for sampling sites that measured CFC-12 by Medusa-Aqua system doesn't matched the one by PT-GC-ECD; data quality between 2 and 3
6	Mean of two or more measurements
9	Missing (null) data