On the permeability of barrier layers

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#### SUPPLEMENTARY MATERIAL

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## A Online supplementary material

Fig. A.1, A.2, and A.3 respectively correspond to Fig. 3, 4 and 5 for the 12 months of the year.Fig. A.4 shows the monthly maps of BLT computed as in de Boyer Montégut et al. (2007) updated with the data set used in this study.

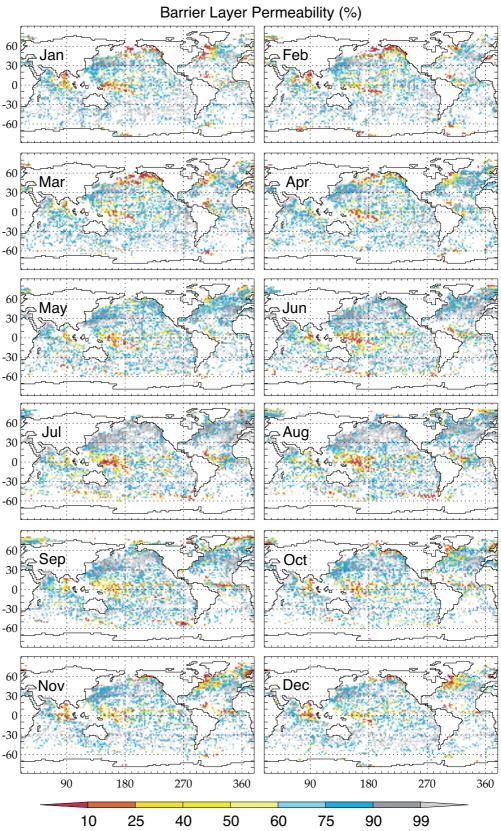


Figure A.1: as Fig. 3 for the 12 months of the year

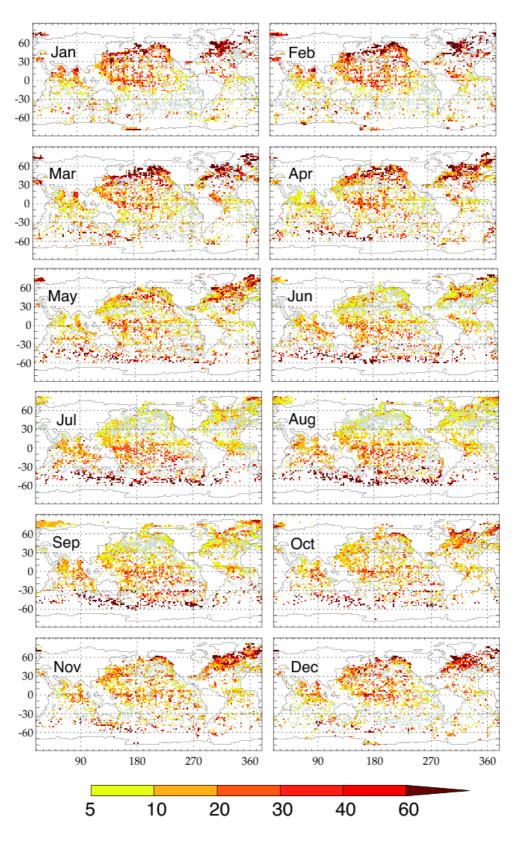
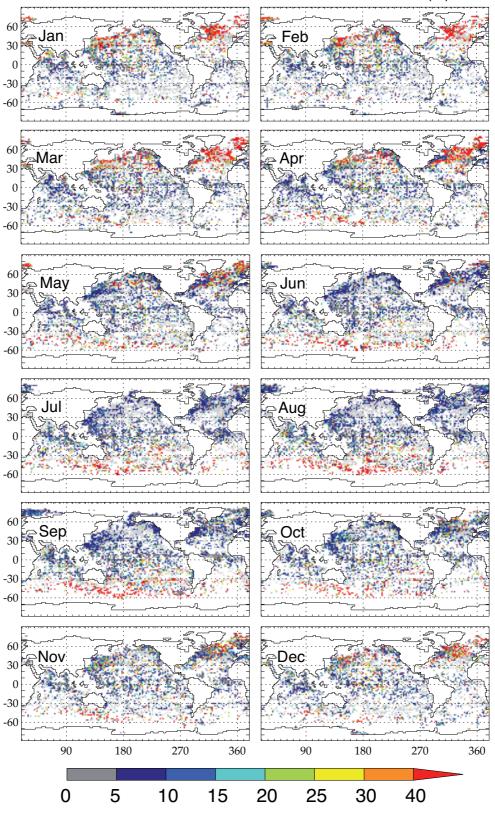


Figure A.2: as Fig. 4 for the 12 months of the year



BLT differences between the two estimation methods (m)

Figure A.3: as Fig. 5 for the 12 months of the year

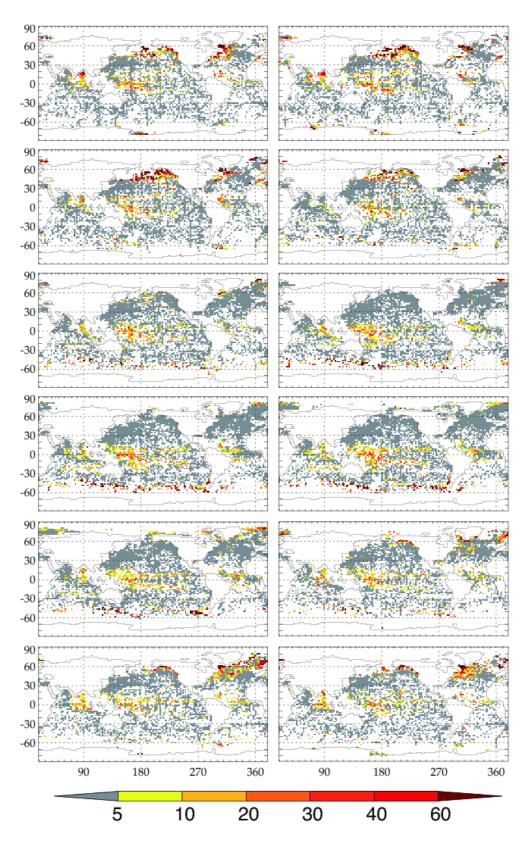


Figure A.4: Monthly maps of the difference between  $D_{T-02}$  and  $D_{\sigma}$  computed as described in de Boyer Montégut et al. (2007): for each grid mesh corresponding to a square of  $2^{\circ}x2^{\circ}$ , we plot the median of all available differences. Grey oceanic areas show grid points where the difference is smaller than 5m (included possible negative values). White areas show grid points where the no BLT could be computed (no profile or no crifteria reached) or where less than 5 profiles were available.

## References

de Boyer Montégut, C., J. Mignot, A. Lazar, and S. Cravatte, 2007a: Control of salinity on the mixed layer depth in the world ocean. part I: general description. J. Geophys. Res., 112, No. C06011 10.1029/2006JC003953.