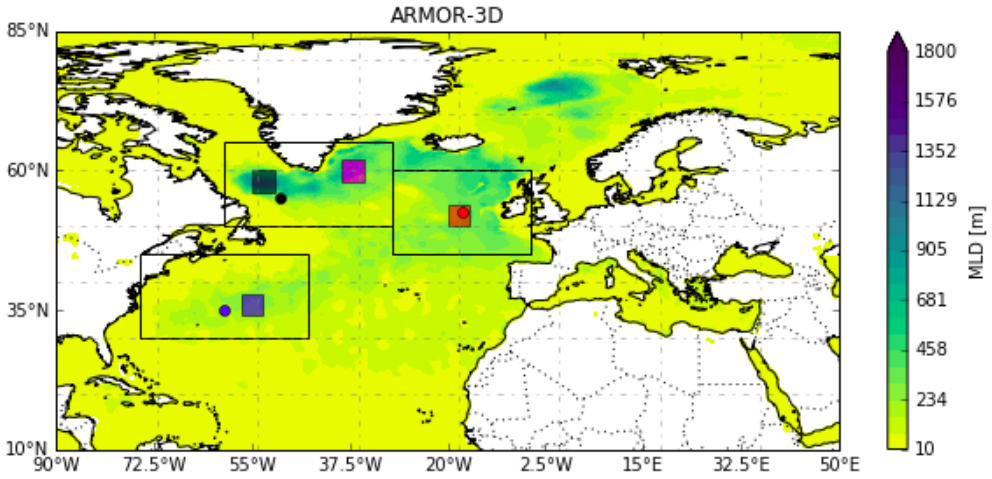
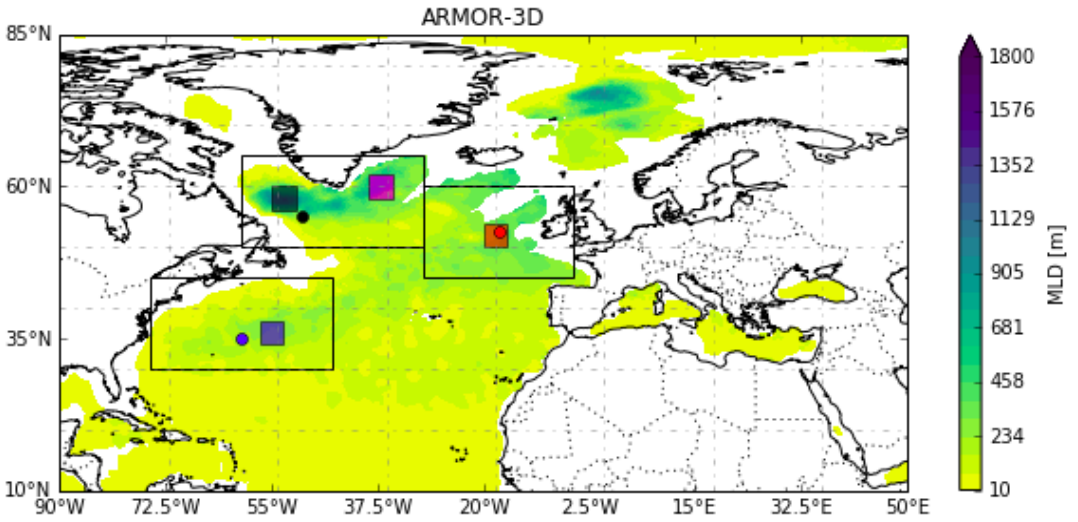
# Results 11 May

Lilian Garcia Oliva

# Delimitation of the Regions

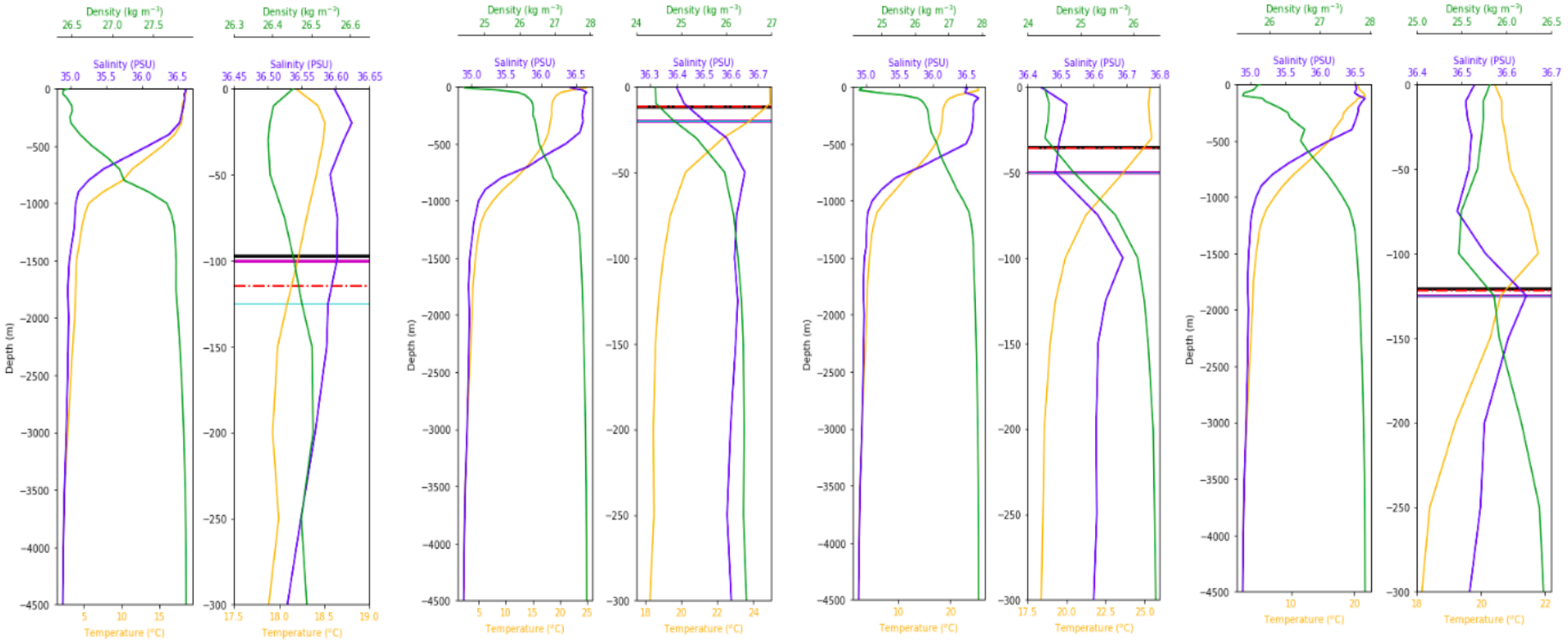



Filtered ARMOR



# Vertical profiles: Gulf Stream

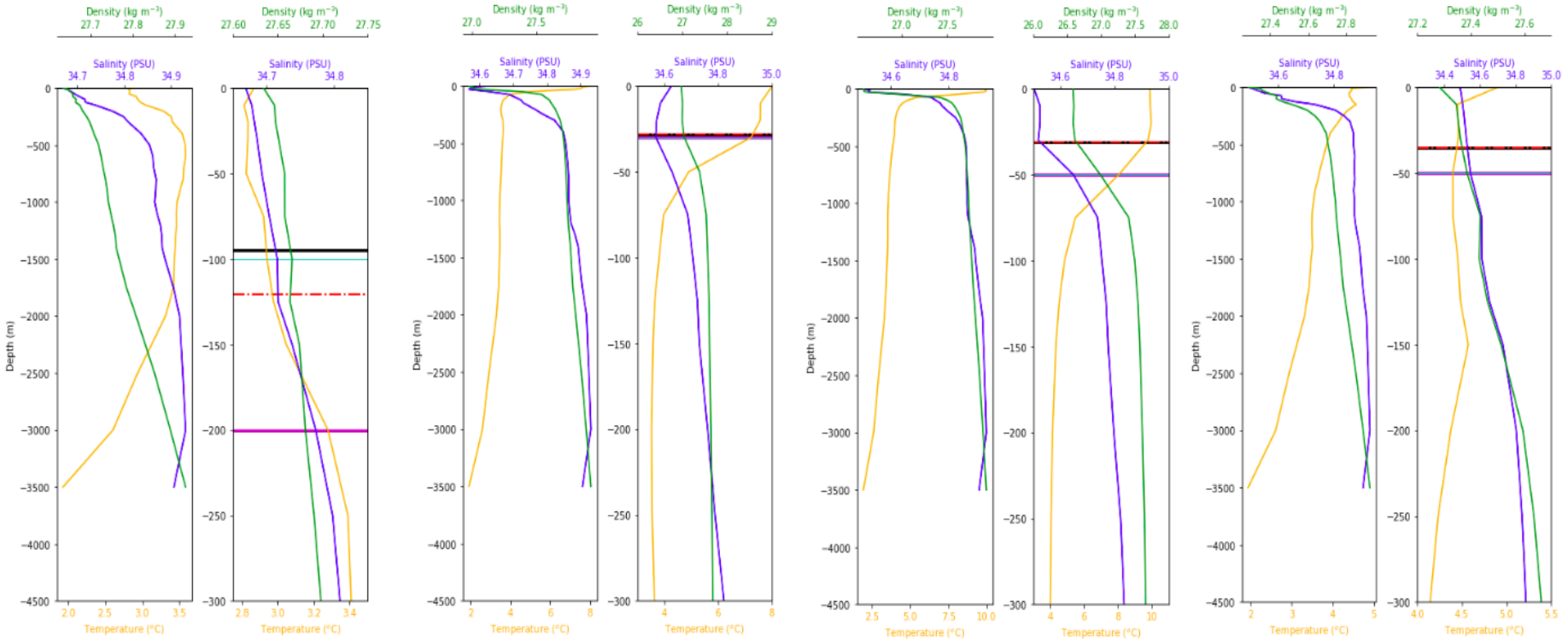
March 30 | June 29 | September 28 | December 28




| | Mixed layer depth estimation [m] | | | |
|---|---|---|---|---|
| Method | March | June | September | December |
| black ARMOR | 97.40 | 11.60 | 35.20 | 120.80 |
| cyan VARIABLE | 100.00 | 20.00 | 50.00 | 125.00 |
| magenta FIXED | 125.00 | 20.00 | 50.00 | 125.00 |
| red VAR-INT | 114.82 | 11.99 | 35.87 | 121.80 |

# Vertical profiles: Labrador-Irminger Seas

March 30 | June 29 | September 28 | December 28

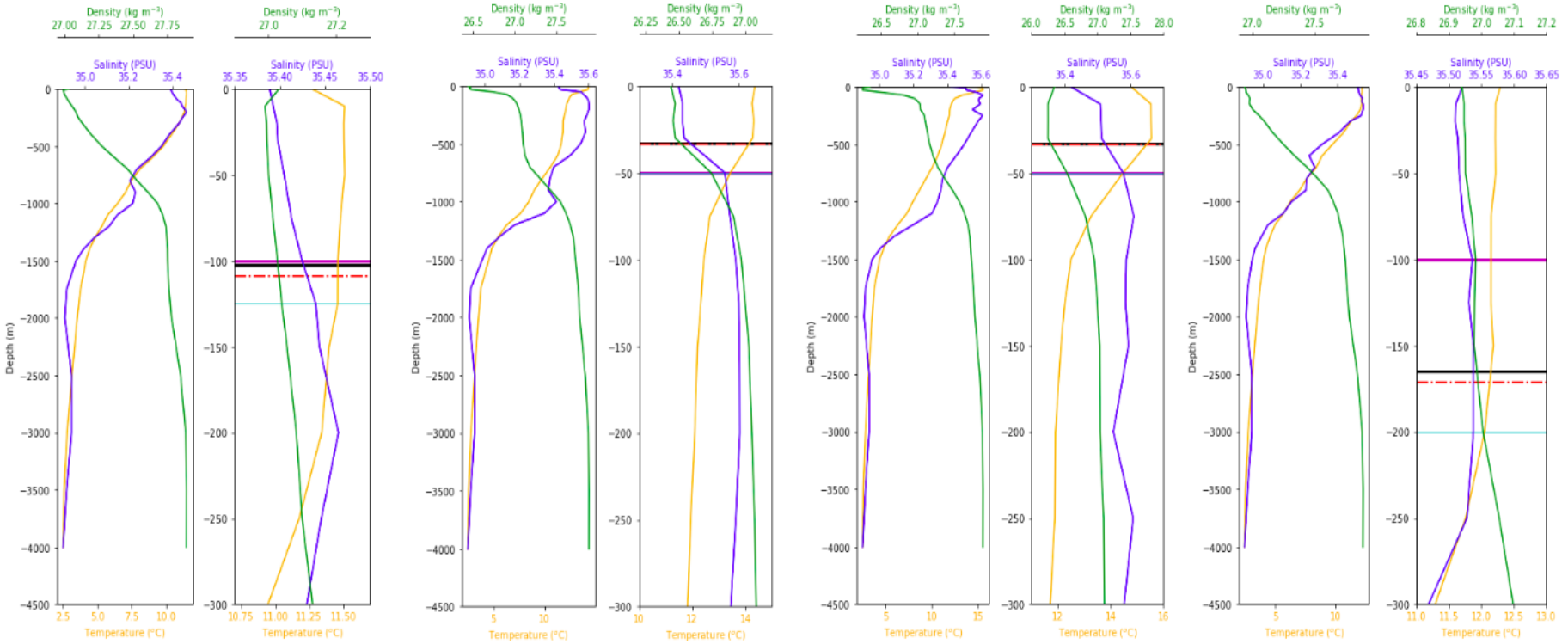



| | Mixed layer depth estimation [m] | | | |
|---|---|---|---|---|
| Method | March | June | September | December |
| ARMOR | 94.60 | 28.40 | 30.90 | 35.40 |
| VARIABLE | 100.00 | 30.00 | 50.00 | 50.00 |
| FIXED | 200.00 | 30.00 | 50.00 | 50.00 |
| VAR-INT | 120.72 | 28.47 | 30.88 | 35.40 |

black
cyan
magenta
red

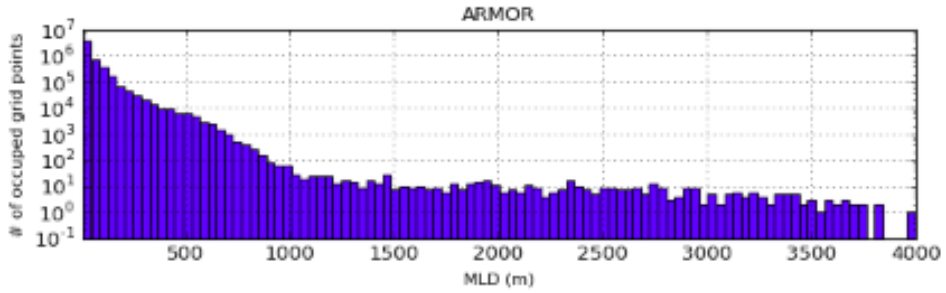
# Vertical profiles: North Easter sea

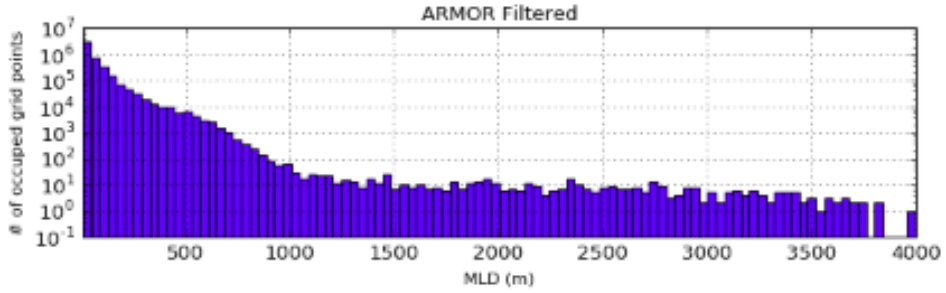
March 30 | June 29 | September 28 | December 28

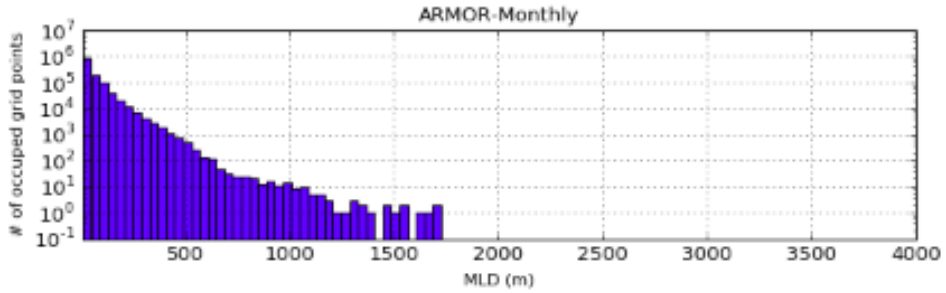


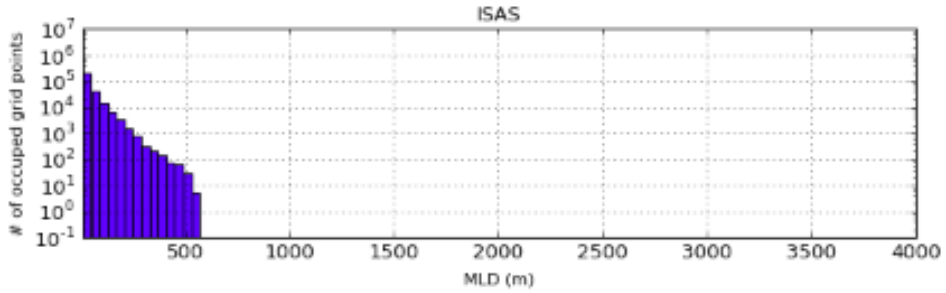

| | Mixed layer depth estimation [m] | | | |
|---|---|---|---|---|
| Method | March | June | September | December |
| black ARMOR | 102.50 | 33.10 | 33.20 | 164.60 |
| cyan VARIABLE | 125.00 | 50.00 | 50.00 | 200.00 |
| magenta FIXED | 100.00 | 50.00 | 50.00 | 100.00 |
| red VAR-INT | 108.75 | 33.47 | 33.55 | 171.43 |

# Histograms: Gulf Stream



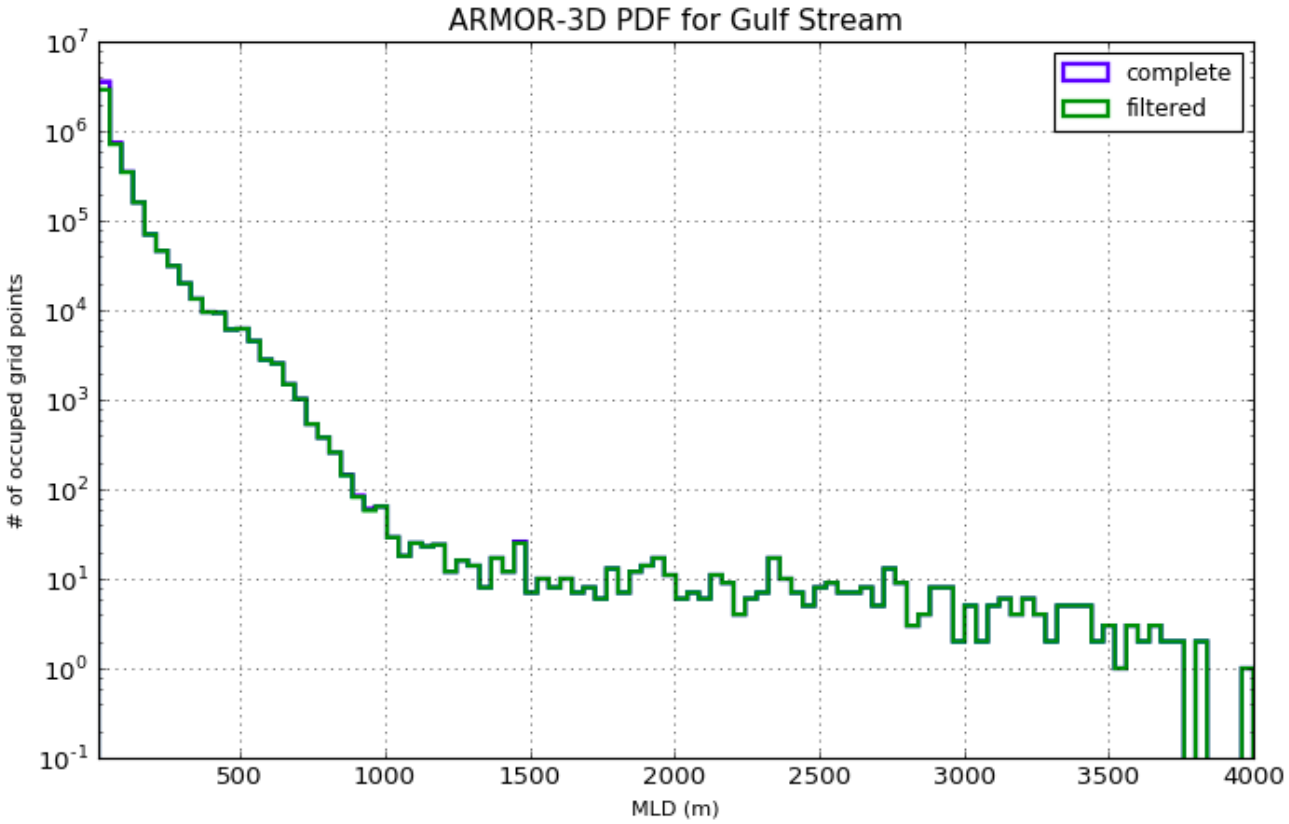




The weekly sampling of ARMOR gives a higher variability in the MLD values.

This becomes more evident when we consider the monthly mean.

# Histograms: Gulf Stream

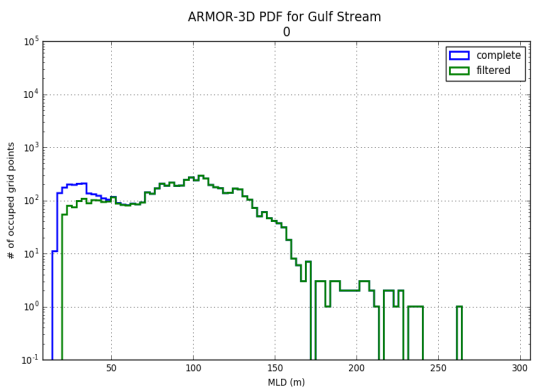



The grid points over low bathymetry are, mostly, in the first 39m of MLD.

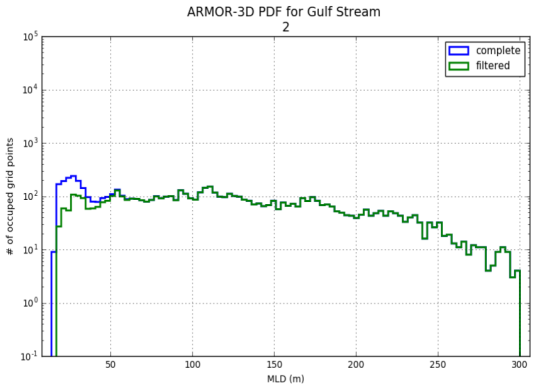
It would be nice to calculate the percentils of the distribution.

# Histograms: Gulf Stream

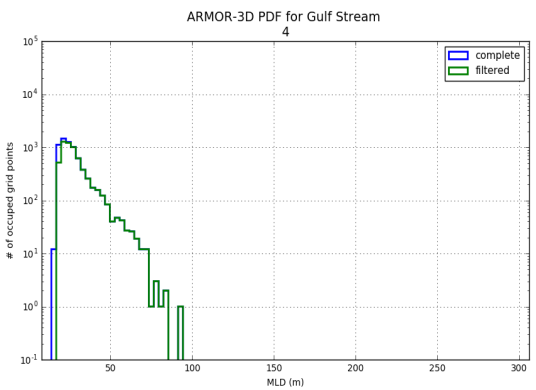
January

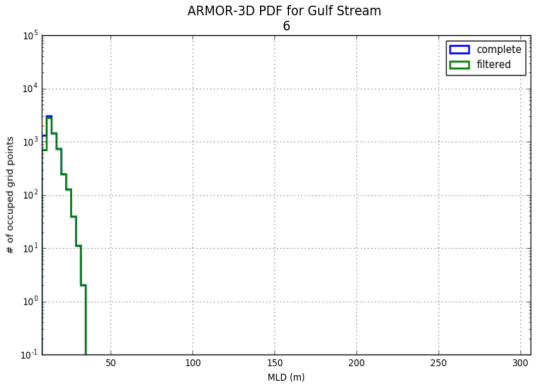


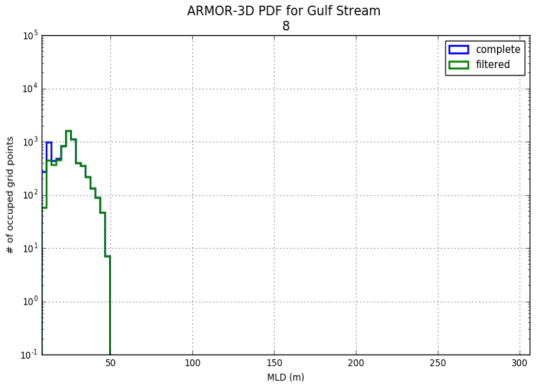

March

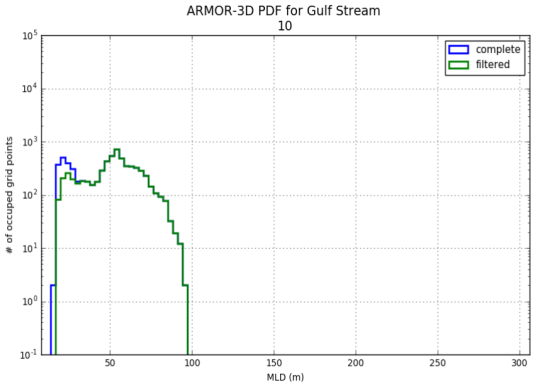



May



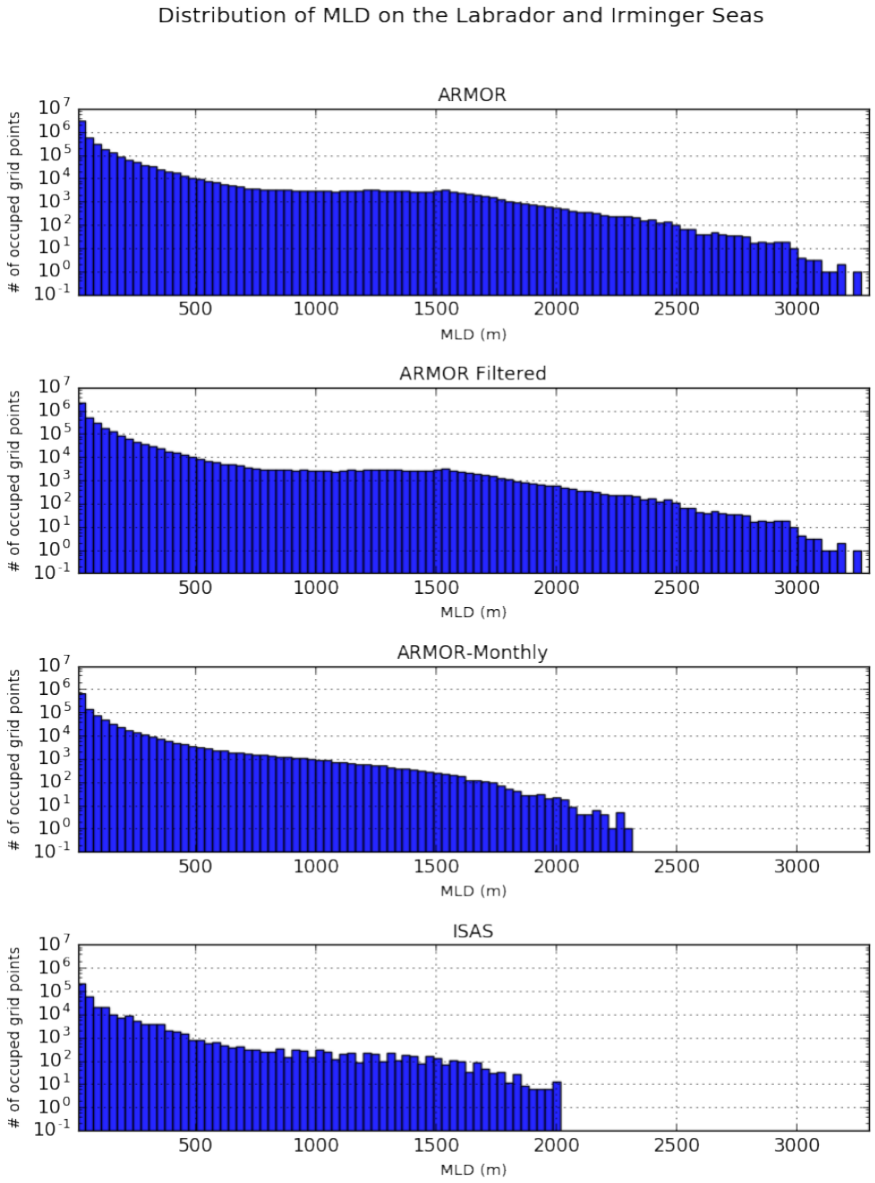

July

September

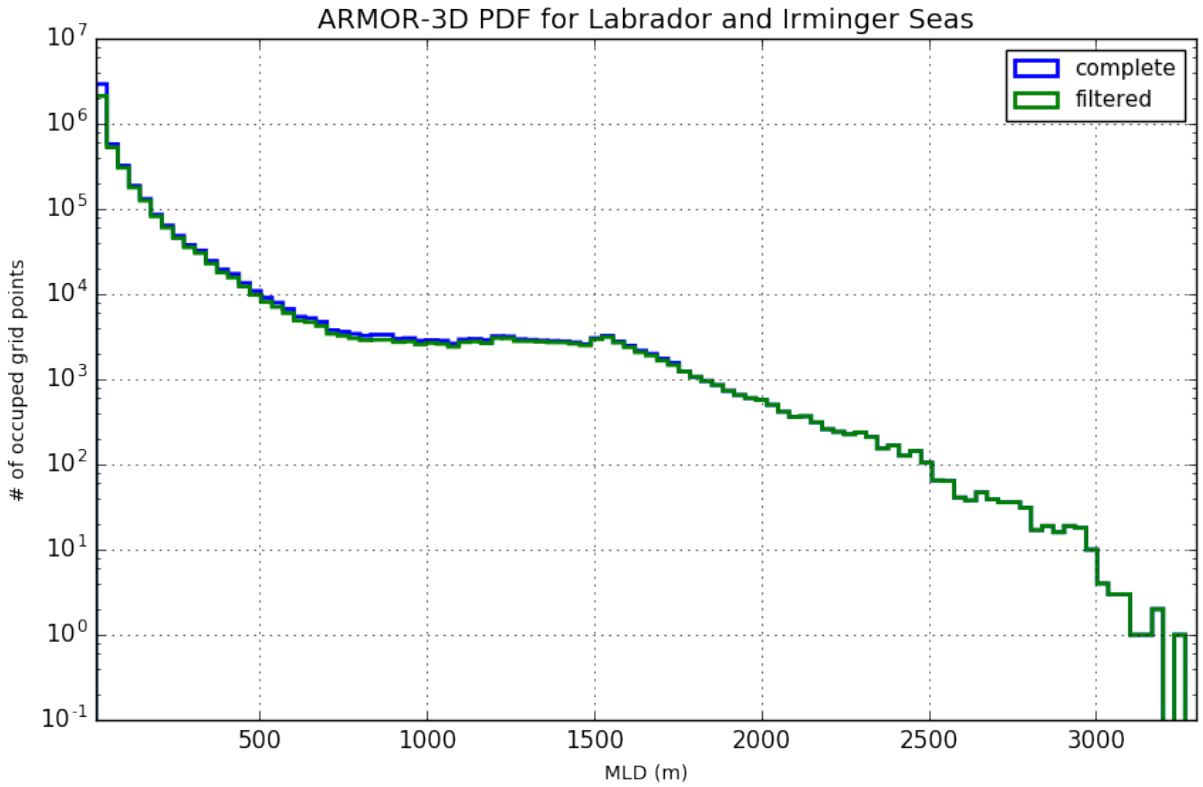
November

The filtering of the data impacts the histograms shape specially for the winter months. A better scale for the summer months will give a better look.

# Histograms: Labrador and Irminger



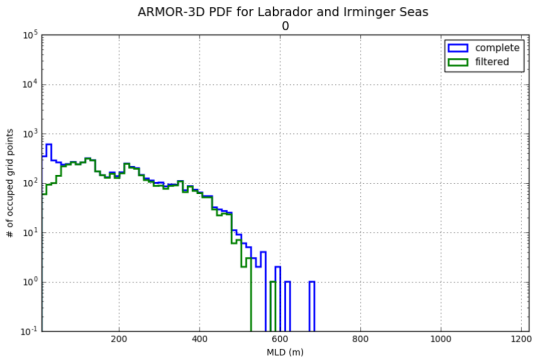
# Histograms: Labrador and Irminger



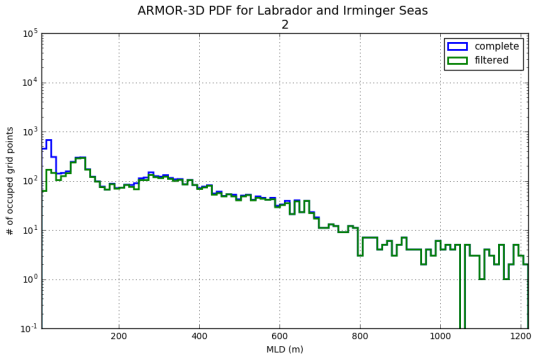

In this regions the shallow bathymetry grid points are present in the first 1500m for MLD. But they still having the greatest impact in the first meters.

# Histograms: Labrador and Irminger

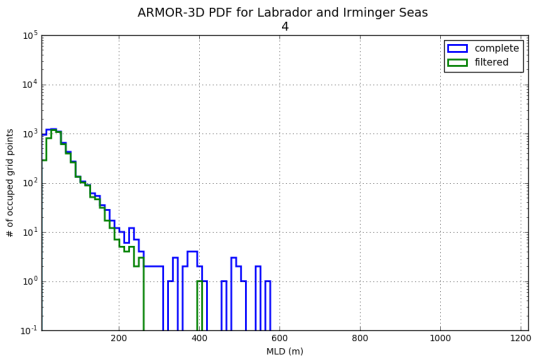
January

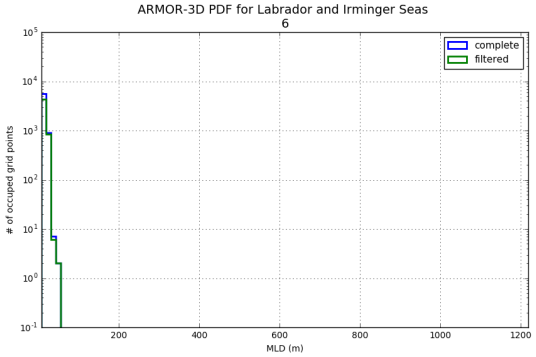


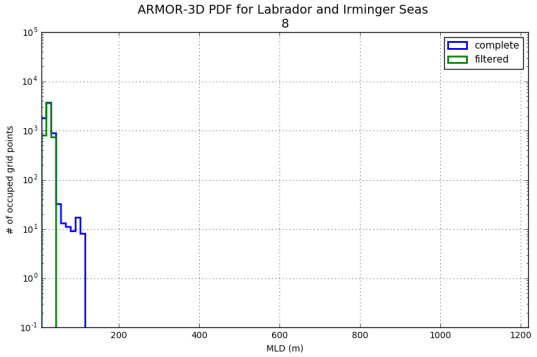

March

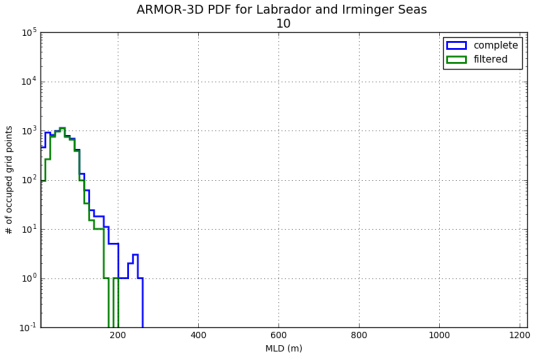



May



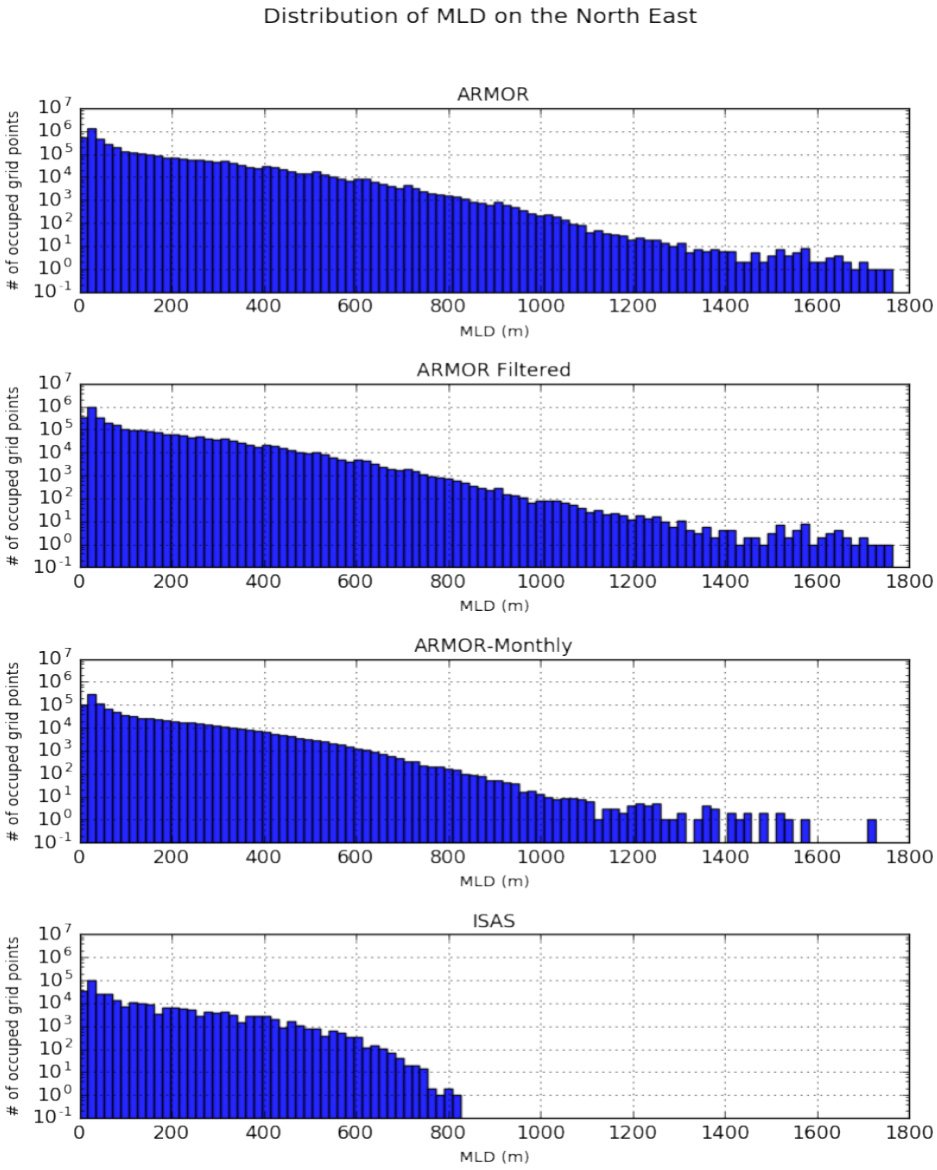

July

September

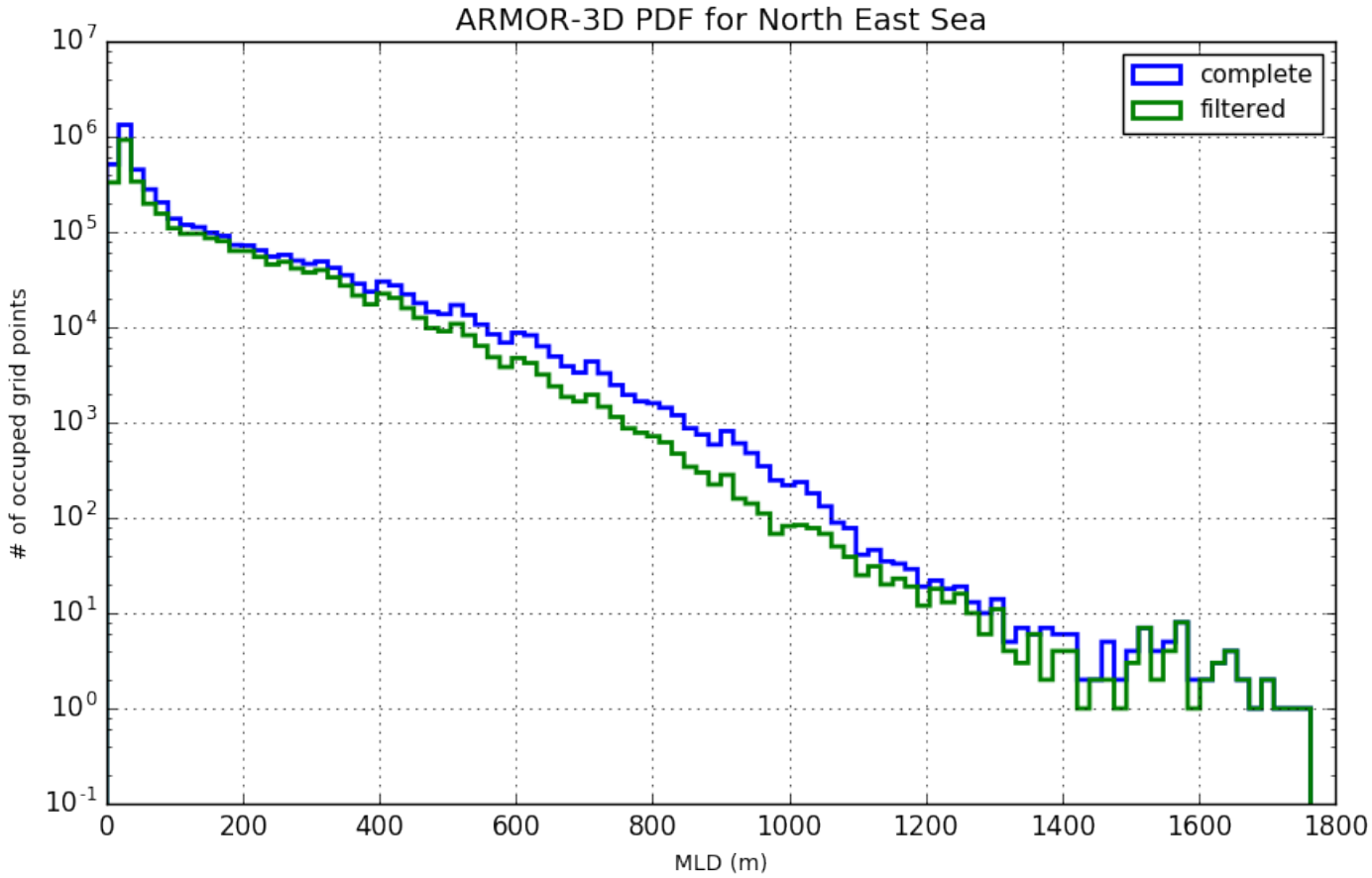
November

Here the filtering allows to spot the maxima of the histogram. It also ‘cleans’ the histogram from large MLD values, like in Jan, May, Sep and Nov.

# Histograms: North East



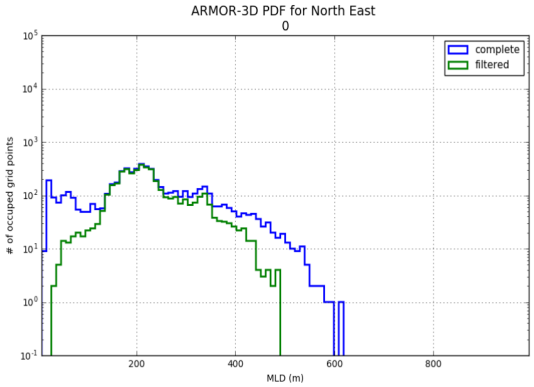
# Histograms: North East



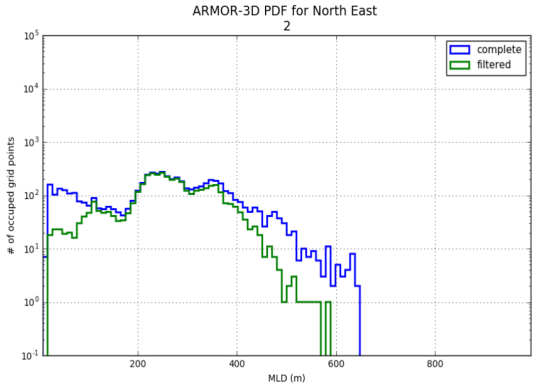

In the case of this region, the shallow bathymetry points account for grid points of MLD values in the first 1500 meters (surelly because of the vertical spacing!).

# Histograms: Labrador and Irminger

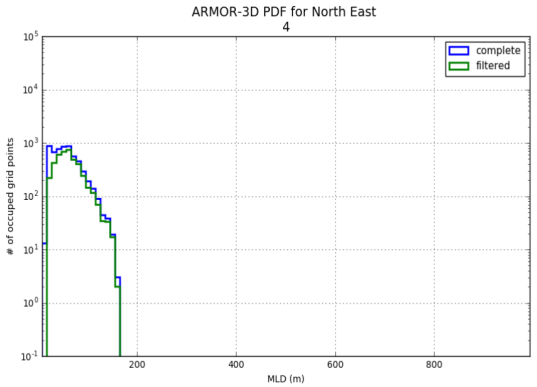
January

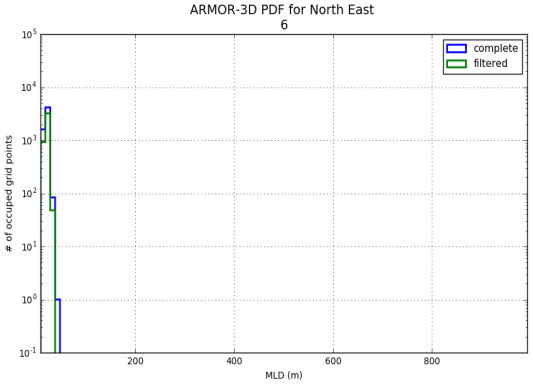


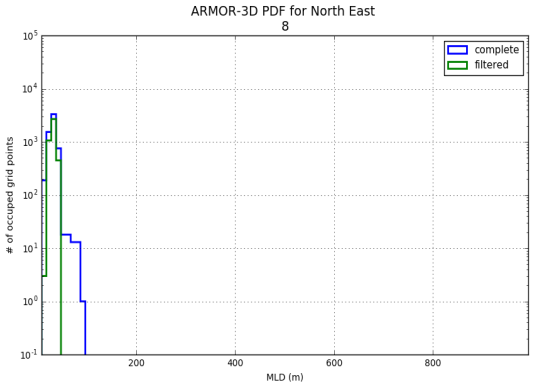

March

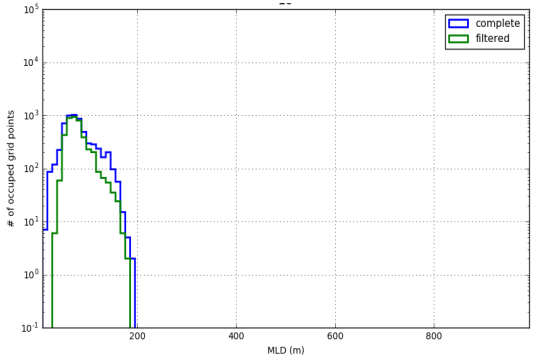



May




July

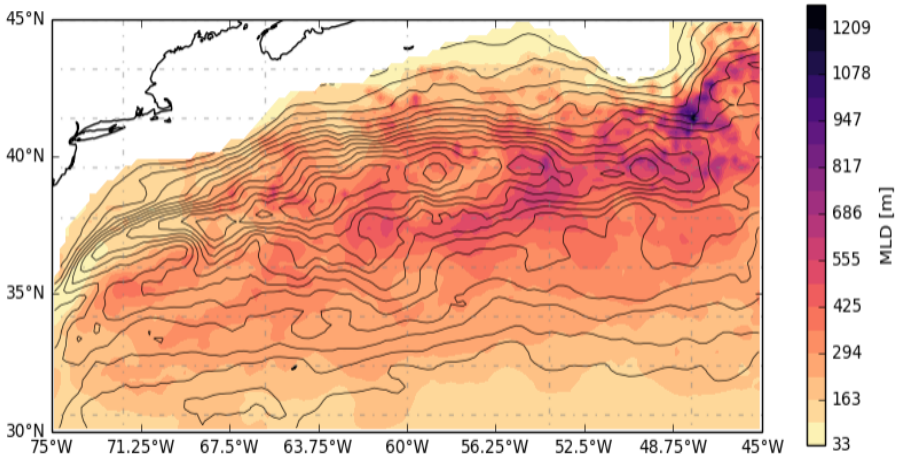
September

November

Here, again the effect of the filtering of shallow bathymety grid points is to show the maxima of the histograms and ‘clean’ it.

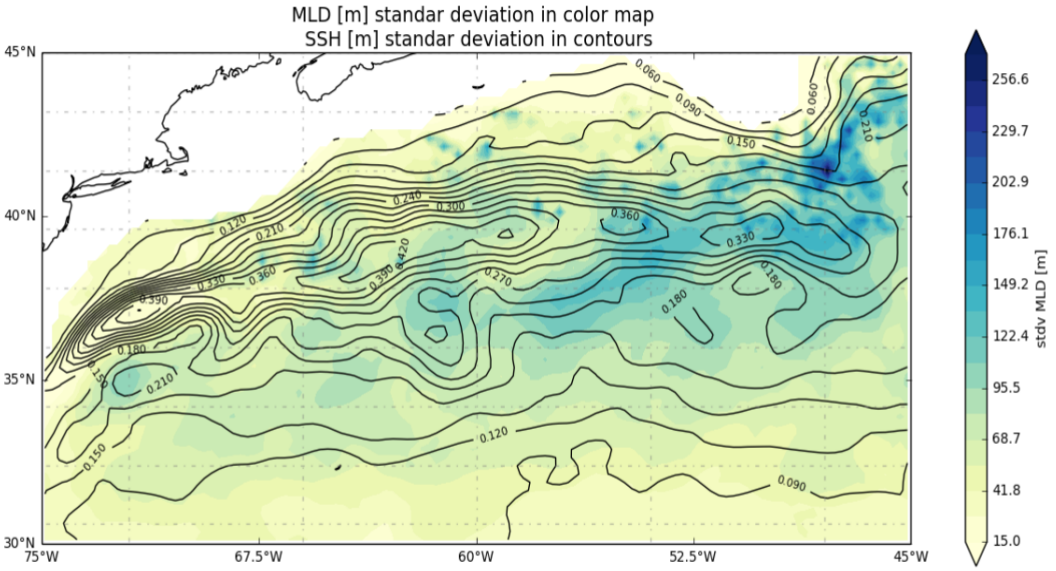
# Peak to peak: Gulf Stream

peak to peak: MLD+SSH

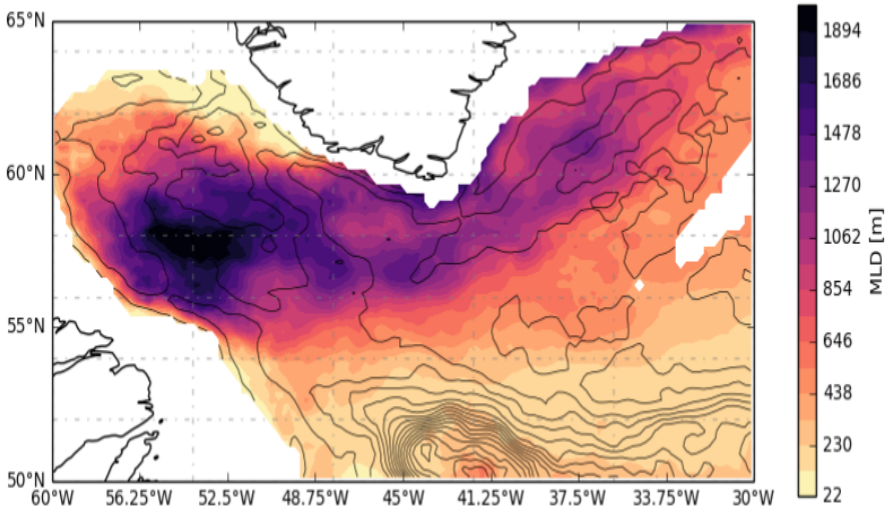



* The variability is more noticeable at the south of the Gulf Stream. (See at figure in notebook p2p)
* The higher amplitudes are also over the areas of large MLD mean values.

Is hard to find a correspondence between the variability of the MLD and the SSH.

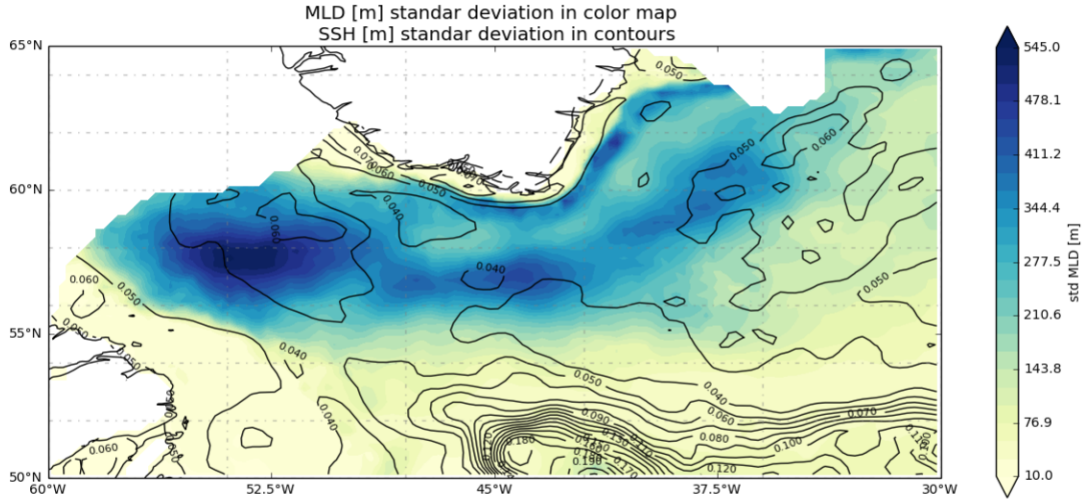


# Peak to peak: Labrador and Irminger seas



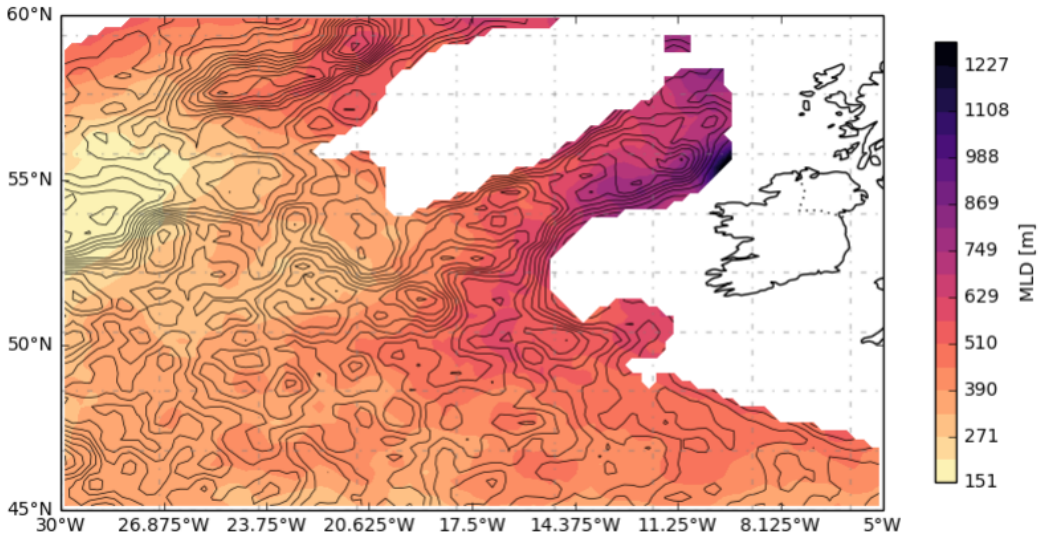

peak to peak: MLD+SSH

The largest variations are very localized. But again, the MLD variability is not clearly linked to the SSH variability.



# Peak to peak: North East

peak to peak: MLD+SSH




* Here SSH variability is in smaller clusters. Is it because of the latitude?

* Again, the same situation. No clear, for me a relation between the variability of MLD and SSH.