

Suggestions/Comments for Med-ROMS:

- 1) Use del4 instead of del2 for the horizontal mixing. This could be why the Levantine Intermediate Waters (LIW) are not crossing over the Strait of Sicily.
- 2) Use linear bottom stress at the Strait of Gibraltar and quadratic bottom stress everywhere else. This could enhance diffusion near the Strait of Gibraltar to help the circulation in ROMS.
- 3) Use Rio data to help verify model results (Nadia suggested this dataset and I have sent her an email for the reference of this data)
- 4) Make sure AVISO data is inverse pressure corrected data before making comparisons with ROMS (SSH anomalies) b/c this is very important for the Mediterranean Sea.
- 5) Consider a bigger domain such that there are 3 open boundaries to the North Atlantic. (I have emailed Paolo and Nadia to get the domain that they use for the MSF).
- 6) Get initial conditions from Paolo and Nadia (MSF).

Summary of Multi-Model Experiments:

$P_m(i(j(k)))$

Model + Data Assimilation	Med-ROMS, MFS-v1(operational), MFS-v2(research)	m	2,3
Physical processes	Open BC, horizontal mixing, vertical mixing , bottom friction, heat and freshwater fluxes	i	1 or 2
Parameter Package (describes the Physical processes)	Horizontal mixing → del 2, del 4, isopycnal, S-Surface Vertical mixing → kpp, PPh, M-Y, GLS	j	3
Replicates (generation method?)	10 member IC ensembles	k	10

- aim to get best 10 day forecast (more than 10 days?)
- Paper goals: Paper 1 → demonstrates the method with 1 week forecasts
Paper 2 → this will be the impact paper (of interest to users)