**Objectives**

To process, validate and intercalibrate multi-sensor datasets dedicated to coastal mesoscale studies:
- Implementation of the technological existent advances in satellite altimetry in the coastal area.
- Comparison between altimetry and glider data physical contents
- Resolution of the glider Reference level issue
- Evaluation of coastal-oriented altimetric corrections, retracking techniques and editing strategies
- Coastal model validation at surface and along the water column
- 3D characterisation of mesoscale features in the coastal domain

**Datasets**

**ALTIMETRY (ENVISAT, J1, J2)**
- Variable: ADT and along track SLA (15th / 20th)
- Horizontal resolution: 1/8, 200 ~ 700m, 250 ~ 350m

**COASTAL GLIDERS**
- Variable: *F*, *T*, *S*, oxygen, chl., turb., GPS positioning
- Horizontal resolution: *GPS 6km, others: 300 m / 1 km*

**RUGGED**

- Sensitivity to corrections: 0.5 cm - 2.0 cm/s
- Sensitivity to retracking (SLA-current): 0.6 cm - 3.2 cm/s

**Glider Geostrophic Absolute Current computation**

The altimetric currents are processed with coastal-oriented strategies (new retracking, editing...).

**Glider vs Model and Remote-sensing**

Relative geostrophic and modelled total current are quite similar but the improvements are quite different. When the RLC is added ("Rebuilt AGC") the results are improved (after validation of the glider SAGC processing).

**REF**