

*Journal of Geophysical Research Oceans*

Supporting Information for

**A pseudo-Lagrangian Transformation to Study a Chlorophyll-a Patch in the Ría de Vigo (NW Iberian Peninsula)**

M. Villamaña1, P.J.S. Franks2, B. Fernández-Castro3,4, M. Gilcoto5, E. Marañón1, B. Mouriño-Carballido1

1Departamento de Ecoloxía e Bioloxía Animal, Universidade de Vigo, Campus As Lagoas-Marcosende, 36310, Vigo (Pontevedra), Spain.

2Scripps Institution of Oceanography, University of California, San Diego, La Jolla, California, USA.

3 Physics of Aquatic Systems Labotatory, Margaretha Kamprad Chair, Institute of Environmental Engineering, École Polytechnique Féderale de Lausanne, Lausanne, Switzerland.

4 Ocean and Earth Science, University of Southampton, National Oceanography Centre, European Way, SO14 3ZH, Southampton, UK.

5Instituto de Investigacións Mariñas, Consejo Superior de Investigaciones Científicas, Eduardo Cabello 6, 36208 Vigo (Pontevedra), Spain.

**Additional Supporting Information (Files uploaded separately)**

Caption for Movie S1

**Introduction**

Movie S1 shows the reconstruction of the chlorophyll-a patch spatial structure.

Movie S1. Reconstruction of the shape of the chlorophyll-a patch. a) Tidal heigh. (b) Eulerian distribution of chlorophyll-a in a vertical axis of potential density. (c) Temporal evolution of the shape of the chlorophyll-a patch. Dot in panel a indicates the time of sampling. Solid vertical line in panel c indicates the position of the sampling station. Horizontal scale in panels a and b corresponds to Coordinated Universal Time (UTC), local time was UTC+2; whereas in panel c represents the along-Ría axis.