

# (Morlaix macrofauna, Amoco-Cadiz oil spill)

Some data sets have a natural sequence to their samples, usually a time series (though this can be a single spatial gradient), and it is usually a good idea to join the points on an ordination plot in that order - then referred to as *trajectory plots*. This is illustrated by a 'classic' data set of soft-sediment macrofaunal assemblages in the Bay of Morlaix at a single station (*Pierre Noire*), sampled at about 3-monthly intervals over the period April 1977 to February 1982, covering the event of the Amoco-Cadiz oil tanker wreck in March 1978. The spill occurred some 40 km from the Bay itself but oil slicks reached this area and there is a clear signal of community change in the sampling times after the spill, with a partial recovery over the next 3 years - see the MDS below. There are 21 sampling times (A-U) over the 5 years, with the oil impact occurring between samples E and F. These data are from Dauvin J-C 1984, *Ph.D. thesis, Univ Pierre et Marie Curie, Paris*, though a dynamic view of the continuation of this time series (Dauvin J-C 1998, *Mar Pollut Bull* 36; Thiébaud *et al* 2012, *Conference: Time series analysis in marine science*, Logonna Daoulas, France) is also seen later.

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