



Analysis of 2014 winter patterns and its effects in Basque Country Coastal Area

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2014 winter time is characterized by a large cyclogenetic activity in the North Atlantic, which has resulted in a continuous generation of deep lows and wind storms, many of which have been developed as explosive cyclogenesis. These have led to violent sea storms, which have forced a lot of severe weather episodes in cantabric coastal area, especially due to wind and waves.

During the cold season, in Basque Country area, we have suffered comparable sea storms in regards to waves height, but always have been punctual events, never with the temporal continuity shown this year. Although no individual storm can be regarded as exceptional, the clustering and persistence of the storms is highly unusual.

Preliminary analysis suggest about strong and linear polar jet on the areas of greatest contrast between the polar and subtropical air mass as the underlying cause of this anomaly. Other cause can be the SST warm anomaly of subtropical Atlantic, which supply power to the cyclogenetic activity associated with the jet.

In this work are analyzed the characteristics of the atmospheric circulation of this winter and its impact on the Basque Country area, translated into numerous events with strong waves , causing serious damages in the Basque coast.