

# STUDY OF A CASE: THE 4TH JULY 2006 STORM OVER THE CITY OF BILBAO.

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## I. INTRODUCTION

On July 4th 2006 a severe storm produces an intense rainfall and hail, in the area of Bilbao (north of Iberian Peninsula). An active storm cell moves through the northwest of the Basque Country, leaving heavy rain showers and hail of large size. This severe weather event affects mainly the populated area surrounding the city of Bilbao. With the aim to understand better the creation and development of this cell of deep convection, the synoptic characteristics, mesoscale situation and others meteorological parameters are analysed.

## II. PRESENTATION OF RESEARCH

In this work the storm environment are studied considering synoptic and mesoscale features, some surface related aspects and damage reports are also analysed.

In order to characterize the synoptic environment during this event, different synoptic maps are analyzed; 500 hPa topography, sea level pressure, some instability indexes and other relevant parameters are taking into account.

The study of mesoscale aspects is based mainly on the analysis of radar data and some satellite imagery and mesoscale numerical results. Products from a METEOR 1500 Doppler Weather Radar with Dual polarization capabilities are used in order to examine the structure of this convective cell.

During this event a located area of damaging hail was reported around Bilbao city, we present damages summary and surface precipitation distribution during this event.

## III. RESULTS AND CONCLUSIONS

Available data from different sources, focusing on precipitation characteristics, are used in order to characterize this event. A local analysis was performed using Basque Meteorology Agency mesoscale numerical modelling capabilities and other data sources.

The final aim of the study is to characterize the 4th July situation as representative of a severe storm case with reported damages from hail fall and to evaluate Basque Country Agency analysis capabilities in storm scale focusing on precipitation.

## IV. ACKNOWLEDGMENTS

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