

# HAILSTORM OVER Buenos Aires CITY

PhD. Susana B. Gordillo

WEATHER METEOROLOGICAL SERVICE -- 25 de Mayo 658- Buenos Aires - Argentina  
email: subea@fibertel.com.ar

## I. INTRODUCTION

On July 26th 2007 a warm, wet and unstable air mass occupied the north and central region of Argentina.

A cold front moved to the north east into this air mass, and in the middle levels of atmosphere a short perturbation moved to the east.

In this work the synoptic situation, and the thermodynamic conditions of the atmosphere were studied because the convective cells formed over Buenos Aires city produced a hailstorm and caused serious damage to the community.

## II. PRESENTATION OF RESEARCH

The forecasters saw the rapid development of supercells over the city through radar and satellite images, particularly when



the cold front was near Buenos Aires, but it was impossible to predict the hail dimension.

## III. RESULTS AND CONCLUSIONS

The vertical structure of the convective cells was around 15.000 m. near Buenos Aires.

The heavy storm produced heavy wind gusts, and hail stone that reached in some places, during twenty minutes, the size of golf balls.

People, their houses and vehicles suffered substantial damage.

## IV. REFERENCES

**Doswell, C.A, III, 1991** : A review for Forecasters on the Application of Hodographs to Forecasting Severe Thunderstorms. *Nat. Wea.Dig*, 16, No.1, 2-16

**Doswell, C.A, III, 1982** : The Operational Meteorology of Convective Weather . Vol II: StormScale Analysis. NOAA Tech. Memo. ERL. ESG-15

**Doswell, C.A, III, 1993**: Tornadoes and tornadic storms: A review of conceptual models. *Geophys. Monogr.* 79, Amer.

**Weiss, S.J., 1992**: Some aspects of forecasting severe thunderstorms during cool-season return –flow episodes. *J. Appl. Meteor.*, 31, 964-981