Confirmed Tornado
Carp, Ontario
August 4, 1994

Date- Local: Thursday, August 4th, 1994
UTC: Thursday, August 4th, 1994
Time- Local: 1530
UTC: 1930
Location: Carp, Ontario to Alymer, Quebec
Region: City of Ottawa
Classification: Confirmed Tornado
Category: A
Casualties: Three Hereford cattle killed; several more injured
Track Length: 20 000m
Width: None available
Motion: None available
Damage Estimate: $2 000 000
F-Scale Rating: F1
Code: AH
Damage Survey: Storm Report Summary by Mario Gaudette, Quebec Weather Centre
Spotter Reports: One
Other Documents:
Storm Report Summary by Mario Gaudette, Quebec Weather Centre
Two storm video viewing reports by Sarah J. Scriver, MSC King Radar Severe Weather Research Assistant
Newspaper Articles

sjs

August 5th, 1994
Aylmer Tornado
CBOT-TV Newsday
12 minutes
Bowdens

CBC Newsday
The day after the tornado
- incredible damage

- destroyed 10 homes, dozens damaged
- only a few hurt
- appears to be F2 damage

- 28 houses unsafe

- insurance staff & a town meeting

- many houses unroofed

- damage estimate up to 2 million $

West Carleton also hit
00's of 000s damage

house damaged.
2 cows died

Carp first then into Aylmer

3km long in Aylmer

August 5th, 1994
Aylmer tornado damage
CBOT-TV
Ottawa

-CBC evening news for Ottawa
-already viewed this footage

Workshop on operationnal meteorology 1995

The August 4, 1994 tornado outbreak in Aylmer, Québec.

* Mario Gaudette
Québec Weather Centre

Michael Leduc
Toronto Weather and
Environmental Services Office/
King Weather Radar Research Station

Abstract

In the afternoon of August 4, 1994 widespread severe convective weather was reported over Eastern Ontario and Southwestern Québec. Over five tornadoes were confirmed. The first struck the municipality of Carp, in Ontario, before moving to Aylmer, Québec; there was a second at St-Pascal, Ontario, a third at Alexandria, Ontario, a fourth at Laurel, Québec, and finally, a fifth at Rawdon, Québec.

The paper will briefly look at the dynamics and thermodynamics of the situation. The storms occurred near the centre of a deepening surface low accompanied by very strong wind fields at all levels. While it appeared only moderate levels of convective buoyant energy could be achieved, high wind shears and dynamics were sufficient to result in severe weather watches being issued well ahead of the storm development.

The two main storms occurred in Laurel, sixty (60) kilometres northwest of Montréal, and in Aylmer, just west of downtown Ottawa. This report will concentrate on the warning phase of these storms, in particular on the contrast in the radar data available for the two events. The storm in Laurel was in an ideal location to be observed by the McGill radar. It showed classic supercell characteristics in reflectivity data and exhibited a mesocyclone on Doppler. Fine resolution McGill radar Doppler and reflectivity data (including vertical cross sections) will be presented.

The Aylmer storm observed by the Carp radar, just west of Ottawa, showed only moderate reflectivities. Maximum cloud tops were 10 to 12 kilometres. No Doppler information was available for this storm at the CMQ. However, Doppler data from the King radar showed strong wind shear when the storm line crossed Eastern Ontario. McGill and Carp radars reflectivity data and King radar Doppler data will be presented to show the particular structure of this storm.

We will show differences in reflectivity data between the two storms. Then we will show how Doppler data can be used to represent the real wind field, and how this information can be used to modify helicity indexes.

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Spotter Reports, August 4, 1994

CLASSIFICATION: Severe Thunderstorm **SOURCE/WATCHER ID: EVENT TIME (UTC):** 19-30 **EVENT DAY:** 4.0 **MONTH:** 8.0 **YEAR:** 1994.0 **EVENT DURATION (HR):** 0.0 **(MIN):** 0.0 **DAY OF THE WEEK: EVENT LOCALE:** Franktown **ASOCTD PUBLIC RGN:** Frontenac-Lanark **DETAILED DESCRIPTION:** "tornado damages a home, tears apart a barn, trees and power lines downed" **INITIAL ASSESSMENT:** YES **SPL WX STATEMENT IN EFFECT ?:** UKN **STATEMENT LEAD TIME (HR): (MIN): WATCH IN EFFECT ?:** UKN **WATCH LEAD TIME (HR): (MIN): WARNING IN EFFECT ?:** UKN **WARNING LEAD TIME (HR): (MIN): TORNADO:** YES F? **WINDSPEED:** ? **RAINFALL:** ? INCH **RAIN DURATION:** ? **HAIL DIAMETER:** MM **HAIL DESCRIPTION: EVENT DESCRIPTION:** Tornado **Mesoscale ?: Synoptic ?: Big Event ?: Statement Est Hit/Miss: Watch Est Hit/Miss: Warning Est Hit/Miss: Separate Event (30km/30min):** YES **Vetted by: Vetted date:**