



**Western Region Technical Attachment
No. 92-07
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**SIMULATION OF MESOSCALE FLOW
IN THE PACIFIC NORTHWEST**

In late 1990, COMET approved a Cooperative Project between the University of Washington (UW) and WSFO Seattle. A cooperative project is part of the COMET Outreach program, the purpose of which is to foster working relationships between the university community and NWS field offices to solve operational forecast problems. Among the objectives of the UW/WSFO Seattle Cooperative Project was a plan to model the flow over complex terrain, in particular, the Puget Sound Convergence Zone (PSCZ), a major weather producer in western Washington.

Illustrated in Fig. 1 is an 18-hour forecast of low-level streamlines from the Penn State/NCAR(MM4) mesoscale model, using a horizontal resolution of 10 km for Washington State and southern British Columbia, nested within a 30 km outer grid. The confluence of the streamlines over the central portion of the Puget Sound is clearly evident. Professor Cliff Mass, UW, plans to use this model in an attempt to simulate actual mesoscale events in western Washington. If successful, this could lay the foundation for running models such as this in real time (in concert with local forecast offices) when a threatening event is imminent.

Case: CZ86
Streamlines

Forecast time= 18.0000
at sigma = 0.995

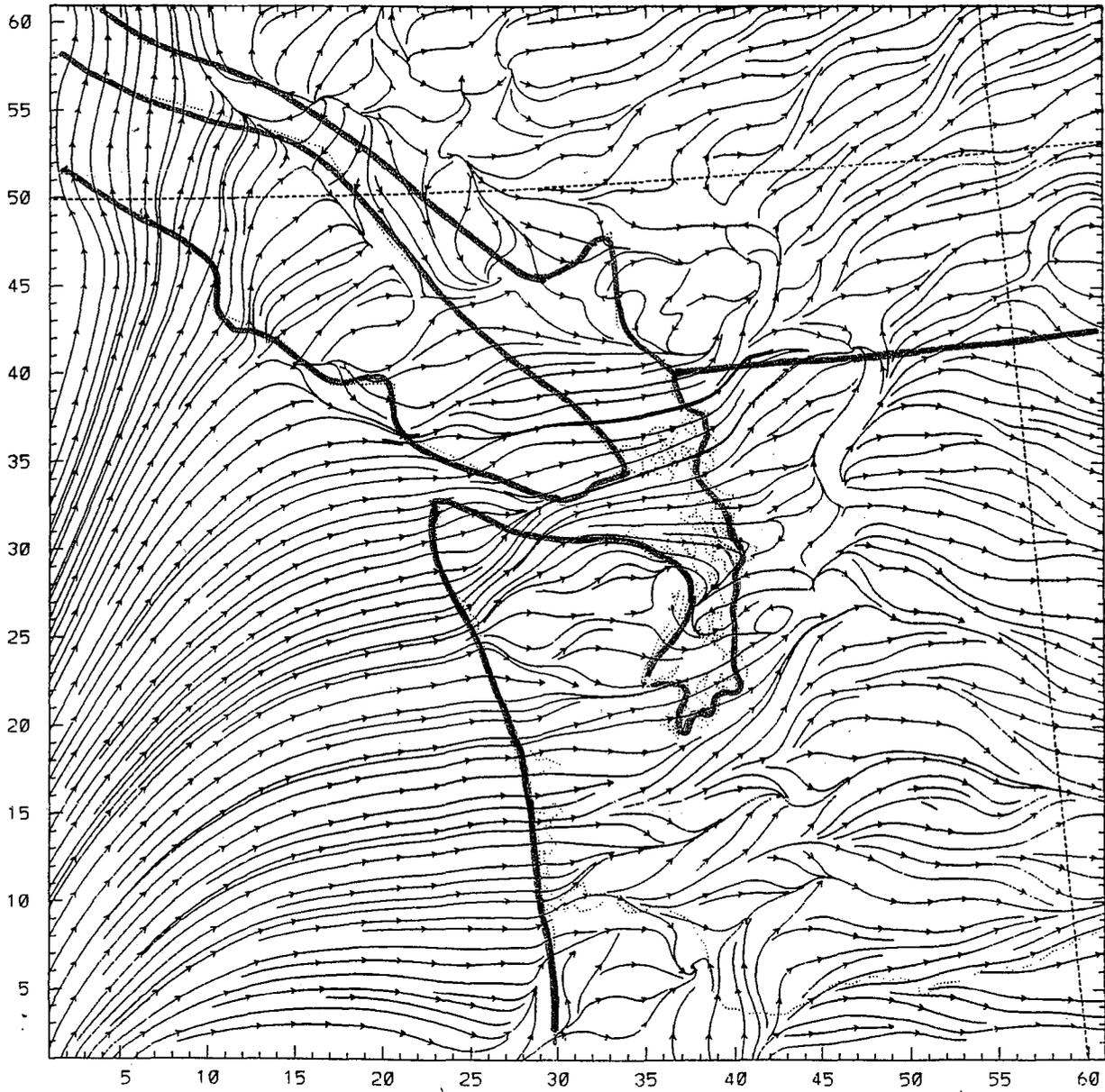


Fig. 1