

Features of the Calmet Domain in This Package (For NESCAUM Class I Effort)

- 155 by 130 grid at 10 km. Resolution which allows inclusion of source regions affecting all Class I areas in the NESCAUM region. Grid projection is Lambert Conformal (Conversion programs available).

Meteorological Data - Consists of 48 surface stations, 11 radiosonde stations, and 474 precipitation sites. Currently processed for the year 1995, although 6 years, between 1990 and 1995 will be available processed in this manner. For the meteorological data, data format conversion and data filling was necessary. The data filling and correcting for the radiosonde data was necessary for all missing soundings as well as soundings which, for various reasons, were insufficient to run Calmet. For the precipitation data, preprocessing was necessary to recode the flag indicating data validity before the data could be read by Calmet.

Computing Details - The output file produced to run Calpuff for one year requires about 10 gigabytes of disk space. On my PC, a Pentium 3 with 130,596 Kb RAM, I can run Calmet for one year in about 7 hours.

Sensitivity Analysis has been performed for Calmet Windfields with respect to setting terrain effects variables (for froude cutoff, slope flows, kinematic effects), as well as varying the radial extent of linear interpolation of the measured windfields, as well as using barriers, and it has been determined on a gridwide average there is little impact in varying these parameters. However, for any particular location on the grid, such as a Class I area receptor, there is value in sensitivity analysis to determine windfield accuracy predicted by Calmet, especially considering the subsequent Calpuff handling of terrain effects.

A CD is available to run Calmet with this domain in order that Calpuff may be run for trial purposes.