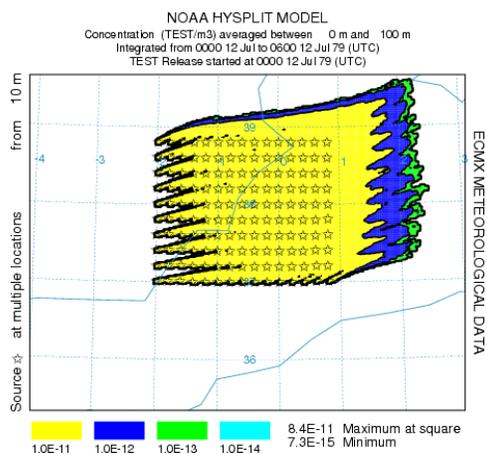


Simulations using Emissions Grids

There are two approaches to modeling more complex emission scenarios. The first is an extension of the use of the control file in creating an emission matrix using three locations, the first two representing the grid corners, and the third point representing the grid spacing. The model is then run from the “Special Simulations – Run Matrix” menu.

Location	lat	lon	height (M Agl)
Location 1	37.00	-2.00	10.0
Location 2	39.00	1.00	10.0
Location 3	37.20	-1.80	10.0
Location 4			
Location 5			
Location 6			

Prior to executing the model, the initial [3-location control file](#) is rewritten to [a new control file](#) showing 150 locations. The default graphic for the model simulation shows a 6-h average concentration with each emission point location marked. This graphic may not be desirable for some applications. Using additional [command line options](#) not available through the GUI, a considerable [simplified graphic](#) can easily be obtained. The modified control file could be edited manually to customize the emission rate.



Another approach is to define an [emissions file](#), which tabulates hourly emission rates by location. An [emission text file](#), defines the grid to which those emissions data will be accumulated. A simulation using this approach for the same case is shown here. The [control file](#) must define the lower left and upper right corners of the desired emission domain, which may be larger or smaller than the data available. The results shown here have about the same concentration levels as the control file emission run. However, there appear to be some systematic gaps. This is because the internally defined grid resolution (0.2 degrees) is the same as the resolution of the input data, resulting in occasional round-off errors. Reducing the internal resolution to

0.19 degrees can eliminate this problem. Due to the continuous emissions at many locations, all these simulations require the maximum [number of particles](#) to be increased from its default value.

