

AOSC 434/658R & CHEM 434/678A Air Pollution

Admission Ticket, Lecture 3

Due: Thursday, 3 February 2011 (at *start* of class)

10 points

Your name:

a) As we will see later in the semester, “inversion layers” are often associated with extreme air pollution events. What is a temperature inversion?

Why might high pollution be associated with an inversion layer?

b) Of the gases specifically mentioned in the Air Quality Index (AQI) section of the Environmental Protection Agency (EPA) reading assigned for Lecture 2 (i.e., gases that can have harmful effects on human health at ambient levels), which compound is most abundant in the Polluted Troposphere?

If this constituent were present at the upper limit of the range for the Polluted Troposphere given in the Jacobson reading, averaged over an 8 hour period of time, what would be the AQI for this gas on this particular day?