

EVE 403
Atmospheric Chemistry
Homework #2
Spring 2020

Due: 29 January, 2020

1. (a) Provide atomic orbital energy diagrams for each of the following species: P, Ag, Al, Fe, V, and As.

(b) Indicate the number of chemical bonds you would expect each of the above species to form (include all possibilities).

2. Based on electronegativity considerations, discuss the likelihood of ionic bonding for molecular species formed by the following pairs of atoms: Li & N, Na & S, K & C, Cs & Cl, Mg & Sc, Ba & As, and Ti & O. For the pairs in which you determine that ionic bonding "*must be considered*," assume that the bonds are not ionic then sketch cross-sections of the electron clouds.