

1 An experiment with a wood burning heat stove was conducted to obtain the temperature and velocity profile of a
2 biofuel burning plume. The area around the stove was protected from crosswind interaction. Plume temperature and
3 velocity were measured with a thermocouple and a hot-wire anemometer in vertical intervals above the stove stack
4 exit in 6 different points, each 1 ft. apart. From the plume temperature, velocity, and position of the instruments, the
5 plume temperature profile was calculated and shown in Fig. S1.

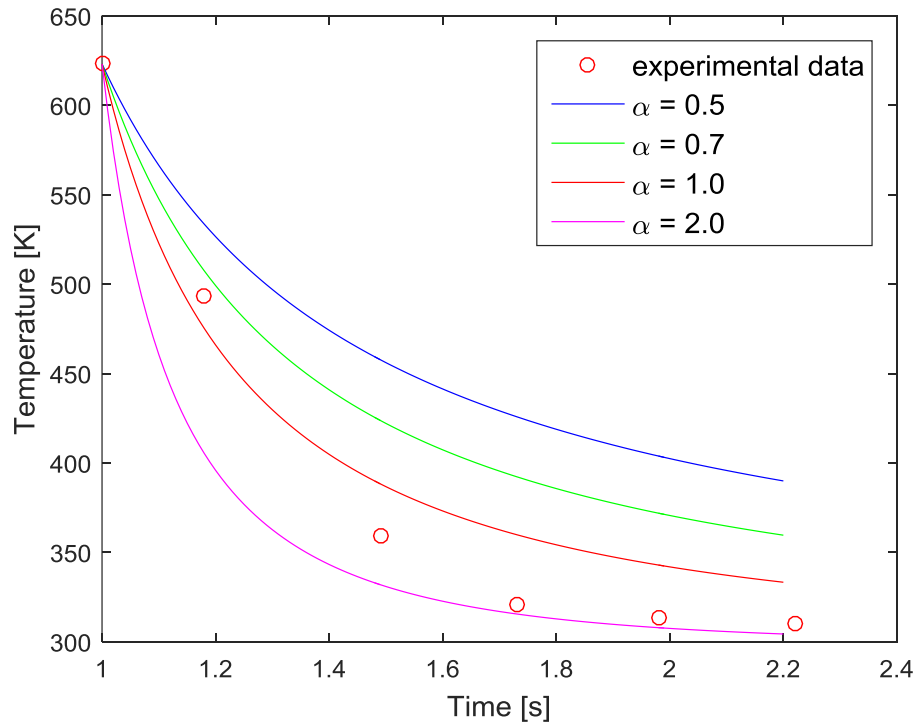


Figure S1. Measured and modeled plume temperature vs. time, for different values of α . In the plot $t = 1$ s is a reference time for the first measurement taken.