Ignition and Hot Fire Test

Our ignition system was chosen on the parameters that it needed to provide us with enough heat and burn time while being reliable and constrained on size. After multiple iterations of black powder charges, we decided on a deconstructed Estes engine as our two phase ignitor. Our two-phase ignitor consisted of an electrical ignitor in contact with the solid propellant of two fuel grains from an Estes G engine. This ignition sequence would provide a maximum temperature of \_\_\_\_ after \_\_\_\_ seconds which simultaneously combined with Nitrous Oxide would bring our engine to life. A successful hot fire test will lead to the verification of our calculations and experimental data necessary for optimization of our full system. As you can tell a hot fire test is the accumulation of all our systems performed on a stationary test. 🡪 Silas