

Wells, Ryan

Physics 185L

Experiment 6

10-20-2010

### **Discussion of Results**

Upon calculation of the  $m_1 + m_2$  value from the slope of velocity vs. time, it was apparent that something was not right. The value for  $m_1 + m_2$  from the graph came out to about 2.4 kg, which is completely off, and I don't rightly know the cause of that, because the calculations involving displacement vs. time squared for the same data set produced the expected results.  $m_1 + m_2$  calculated from the graph of  $d$  vs.  $t^2$  was approximately 207.2g, and  $m_1 + m_2$  calculated from the measurements of the hanger and cart masses was about 205g. Since the latter graph seemed to be consistent with the equation derived from the work-energy theorem, I decided to feature the results from it instead of velocity vs. time.