Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Which String Breaks? Revisited[1] CHRISTOPHER FRYE, University of Central Florida — Many have seen the common introductory physics demonstration in which a heavy ball hangs from a string, with another identical string hanging freely from the ball. When the instructor pulls the bottom string slowly, the top string breaks. However, when the instructor pulls the bottom string very rapidly, the bottom string breaks. This simple experiment is used to demonstrate inertia and Newton's laws. In The Physics Teacher of November 1996, there is an article in which the authors create a model of this problem in an attempt to explain the outcomes quantitatively. However, their analysis gave strange results. Using an improved model, I will show that the results of this demonstration can be obtained using only simple calculations.

[1]This work was funded by a RAMP grant from the University of Central Florida.

Costas Efthimiou
University of Central Florida

Date submitted: 19 Nov 2010 Electronic form version 1.4