Analysis of the Spinning Dumbbell with a spring attachment in a constant Electromagnetic Field

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1 Introduction

Talk about Purdue Experiment

2 Analytical

$\omega\phi - \omega\theta$ (1)

$\mathring{=} r\theta^2 + rsin^2(\theta)\ddot{\phi}^2 - 2k(r - r_0)/\mu$ (2)

$\ddot{\theta} = sin(\theta)cos(\theta)\phi^2 - 2\dot{\theta}\mathring{/}r + \dot{D}_\theta/r^2$ (3)

$\ddot{\phi} = -2$

Test
Include Diagram of Dumbbell.
Go over Lagrangian Mechanics process.

3 Numerical Analysis

4 Conclusion