

Analysis of Two Masses in a Torsion Field with Simple Harmonic Motion

1 Introduction

This document provides a detailed explanation of the Python script used to simulate two masses moving in a torsion field with simple harmonic motion. The field is visualized with vector arrows representing torsion vectors, and the dynamics of the masses are calculated based on these vectors.

2 Code Explanation

2.1 Setup

```
from vpython import *  
  
# Set up the scene  
scene = canvas(title="Two Masses in a Torsion Field with SHM",  
               width=800, height=600, center=vector  
               (0,0,0), background=color.black)
```

The script begins by importing the necessary 'vpython' module and setting up the scene for the simulation. The 'canvas' function initializes the visualization environment with a black background.

2.2 Mass Creation

```
# Create two masses  
mass1 = sphere(pos=vector(-5, 0, 0), radius=0.5, color=  
               color.red, make_trail=True)  
mass2 = sphere(pos=vector(5, 0, 0), radius=0.5, color=  
               color.blue, make_trail=True)
```

Two spheres are created to represent the masses. 'mass1' and 'mass2' are initialized with positions, radii, colors, and trails.