

Fig.2

dimmer image of the pendulum ball. The rods and cones in the retina of this eye take longer to register and send their image to the brain. This is called a latency period. 1 is the brightly illuminated image seen by the right eye. 2 is the delayed image seen by the left eye. The brain combines these images and the ball appears to be in position three farther away than expected.

In the fig (b) the pendulum is swinging right to left. In this case applying the same reasoning shows that the image seems closer than expected. Looking at fig (2) one can see how the path of pendulum appears to be elliptical.



LINEAR OR CIRCULAR

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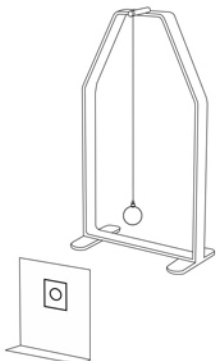
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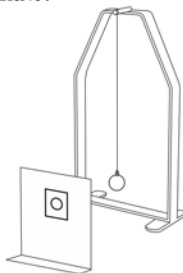
LINEAR OR CIRCULAR

The pendulum swinging in one plane appears to have an elliptical path when viewed with neutral density filter in front of one eye.

Assembly: Consists of a metal frame made from ¼ inch and 3 mm M.S. patti. A stainless steel ball is suspended to this frame using thread. A 'L' shaped plastic assembly with red coloured filter attached is part of the kit.

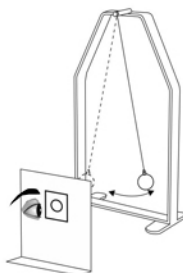


To do and Observe :



Step 1 : Place the assembly on a table.

Step 2 : Sit in front of the assembly at a comfortable distance.



Step 3 : Give swing to the S.S. ball, so that it starts oscillating periodically. You will observe that the pendulum swings to your left and right.

Step 4 : Now hold the given red coloured filter assembly in front of your left eye and observe the motion of the pendulum.

What is your observation now ? How the motion of pendulum appears to you ?

You will observe that the pendulum seems to take on an elliptical orbit, appearing closer as it swings towards left and farther as it swings towards the right.

What is going on ?

This startling illusion is due to the perceptual mechanism in the eye and circuits in the brain.

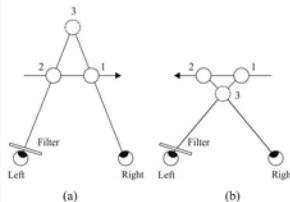


Fig. 1

See fig. (a) The pendulum ball is swinging left to right. The left eye looking through the neutral density filter sees the