

Pendulum oscillations with Cobra3 1.3.23-11



What you can learn about ...

- Oscillation period
- Harmonic oscillation
- Mathematical pendulum
- Physical pendulum
- Variable g-pendulum
- Decomposition of force
- Gravitational force

Principle:

Earth's gravitational acceleration g is determined for different lengths of the pendulum by means of the oscillating period. If the oscillating plane of the pendulum is not parallel to the gravitational field of the earth, only one component of the gravitational force acts on the pendulum movement.

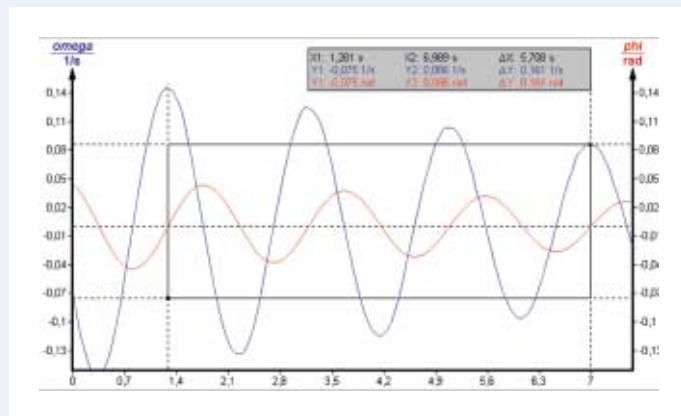
Tasks:

1. Determination of the oscillation period of a thread pendulum as a function of the pendulum length.
2. Determination of g .
3. Determination of the gravitational acceleration as a function of the inclination of the pendulum force.

What you need:

Cobra3 Basic Unit	12150.00	1
Power supply, 12 V-	12151.99	1
RS232 data cable	14602.00	1
Cobra3 Translation/Rotation Software	14512.61	1
Movement sensor with cable	12004.10	1
Adapter, BNC-socket/4mm plug pair	07542.27	1
Adapter, BNC-socket-plug, 4 mm	07542.20	1
Silk thread, $l = 200$ m	02412.00	1
Fish line, $l = 20$ m	02089.00	1
Weight holder, 1 g	02407.00	1
Pendulum ball with eyelet, $d = 32$ mm	02466.01	2
Tripod, -PASS-	02002.55	1
Support rod, -PASS-, $l = 1000$ mm	02028.55	1
Stand tube	02060.00	1
Plate holder, $l = 0 \dots 10$ mm	02062.00	1
Right-angle clamp, -PASS-	02040.55	2
Bench clamp -PASS-	02010.00	1
Semicircular scale with pointer	08218.00	1
Circular level	02122.00	1
Measuring tape, $l = 2$ m	09936.00	1
Pendulum for movement sensor	12004.11	1
PC, Windows® 95 or higher		

Complete Equipment Set, Manual on CD-ROM included
 Pendulum oscillations with Cobra3 P2132311



Typical measurement result