L
l

L
l 7.ppt" ><
$INPUTTYPE =$
"$image$"$NAME =$
"$LaunchPASCOinterfaceapplication$"$SRC =$
"$../gif/telescope.gif$"$ALIGN =$
"$MIDDLE$" ><
$INPUTTYPE =$
"$submit$"$VALUE =$
"$LaunchPASCOapplication$" ><
$/FORM$ ><
$/TD$ ><
$/TR$ ><
$/TABLE >$
$_b utton.epsicon.Letthebobswingforabout17periods.Calculatethemeanandstandarddeviationbysimplyclickingonthetablestati$
$N =$
17
??
L
??
δ?
Plot the measured period as a function of angular amplitude including a few error bars.
θ
$T = T_0 \left(1 + \frac{1}{2^2}\sin^2\frac{\theta}{2} + \frac{1(3^2)}{2^2(4^2)}\sin^4\frac{\theta}{2} + \cdots\right)$
$T_0 =$
$2\pi\sqrt{(L/g)}$
θ
$\theta T/T_0$
Period vs. Length:
T
T_0
T_0
L
$L =$
0
T_0
L
T_0^2
T_0
L
Measurement of
$T =$
$2\pi\sqrt{(L/g)}$
T
L
g
Calculate the uncertainty in your determination of g.
$\Delta g =$
$g\sqrt{(\Delta L/L)^2 + (2\Delta T/T)^2}$
$M =$