

JOHNS HOPKINS UNIVERSITY, PHYSICS AND ASTRONOMY AS.173.115 – CLASSICAL MECHANICS LABORATORY

Moment of Inertia – Experiment Videos

EXPERIMENT DETAILS

- Measuring Ball Diameters (4:35): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=a0cf270f-4530-4863-b623-ab9200fd20c8
- Setting the Photogate Height (2:37): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=162aa12a-c0f9-45e0-b36a-ab92010230e8
- Initial Setup of Apparatus (4:02): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=23afe21c-41dc-460d-9a29-ab92010444cc

DATA COLLECTION

The following videos show the data being collected for each of the listed balls. The assignment asks that you analyze **ONE** ball from each category.

Hollow

- Ball Pit Ball Data Collection (8:25): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=a666b609-24b5-4447-bf49-ab9201065aae
- Ping Pong Ball Data Collection (8:13): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=a0df7dfb-8e3f-40af-8028-ab92010a7fa5
- Racquet Ball Data Collection (9:38): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=a4bafe5b-a694-458c-8426-ab92010dac2a
- Hollow Iron Ball Data Collection (9:03):
 https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=582a4e75-7077-4858-92c8-ab920112385f

SOLID

- Lacrosse Ball Data Collection (9:43): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=f264490a-5ee7-411f-83b8-ab9201154a46
- Wood Ball Data Collection (8:30): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=e99992cc-7317-46f3-92d2-ab9201186e10
- Solid Iron Ball Data Collection (8:48): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=267ac252-8e00-4e1e-9ce4-ab92011b7776

Unknown

- Chime Ball Data Collection (8:44): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=062f4c1c-e40c-4591-82ac-ab92011ea25e
- Street Hockey Ball Data Collection (9:08): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=fc907bc3-6caa-4e38-8b3d-ab920121b195

INVESTIGATING A POTENTIAL SYSTEMATIC UNCERTAINTY IN PHOTOGATE

• Systematic Study (7:05): https://jh.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=dcbcb668-7eec-41f0-b384-ab9201288716