Tonight

- Handouts
  - Class 4 Notes
  - Campus: Corrections (from 9/26)
- Initial the sign-in sheet
- Pictures for Moodle?
  - Only IST 1990 and Partially Online IST 2420 need these
Class 3 Notes Covered

• Lamphere:
  o Did not cover Slides 13, 16

• Campus:
  o Did not cover Slides 40 - 42
• Use Moodle to get your grades for Moodle work
  o “Grades” link under “Administration”
• IST 1990 seems to be going well
• IST 2420 Summaries (see Syllabus)
  o Only for weeks you do NOT come to class
  o These do NOT replace lab reports
    • One report per lab in addition to Summaries
  o Only cover course content, not due dates etc.
IST 2420 POL

• What you should have completed by now:
  o Lab report for Experiment 1
  o Summaries for classes 2 & 3
  o Four messages in Forums, including “Introduce yourself” and “Starting Out”

• If you have done only a minimal amount, and you do not get moving immedately, consider dropping the course
Notes on Labs

• Do Labs 2, 3 and 8 tonight
• One at a time - finish one and put equipment away so that I can get it out of here
• Reports due one by one over next three weeks, but you can turn them all in early, if you want
Measuring Distance

• For measuring large distances, lay long rulers end to end
  o Careful – keep count!
• Careful – yardstick is 36”, but meter sticks are longer
  o Probably best to use only 36” on meter sticks
Error on Errors

- Error in class notes
- Follow lab book: error for each measurement is one-half the highest minus the lowest
  - Better correspondence with full error analysis
  - Report as average ± error
- Each measurement has an error
  - Do errors overlap?
  - See next slide
Error on Errors (cont’d)

- Do errors overlap?
- Compare (sum of errors – add them) to (difference between the averages – subtract them).

![Diagram showing overlaps and no overlaps between John, Tamara #1, and Tamara #2]
Lab Reports

• Data sheet – should be clear what is what
  o Setting (names, date, which Experiment)
  o Procedure
  o Observation / measurement
  o If hypotheses present, separate them clearly
  o Gets turned in as is
  o Do not bother recopying – I will not read it

• Calculations, hypotheses, answers to questions
  o Do as homework, typed
Lab Reports (cont’d)

• Additions to Syllabus:
  o Original data sheet missing gets a C (maximum)
  o Data sheet only with no homework gets a C (maximum)
Lab 2

• Put ice in bucket *just a minute or two* in advance
• Use straws in place of pipettes
• Magdeburg spheres (see next slide also)
  o Two halves go together flange-to-flange
  o Clean flanges and O-rings of any dust, grit or larger stuff
    • Use paper towel, NOT anything that could cut O-ring
  o Liberal coating of Vaseline on O-ring to make a good seal. Also small twist (e.g. ½“).
Lab 2 (cont’d)

- Vacuum seal is O-ring, Vaseline and flat flange
- Valve is open when handle is in-line, closed when handle is “crossed” – look down the valve!
Lab 2 (cont’d)

• Do at home:
  o Activity 7
  o Additional Reflections
Lab 3

• Timing with SPER stop watch
  o Push “MODE” switch until top row of dots shows, not just one
  o Then red START/STOP starts
  o The second push stops
  o LAP/RESET zeroes time, to start over
  o Times in seconds (bigger) and hundredths (smaller), e.g. 4.26 seconds. Far left is hours.
Lab 3 (cont’d)

• In any group, four people max to use stopwatch Vs classroom clock

• Track:
  o Must rest firmly on blocks to keep angle the same
  o Use clay to prop it up side-to-side
  o Time the center of the ball
Lab 3 (cont’d)

• Do as homework
  o Part IE probably will be finished at home
  o Part II Questions 9 through 12
Lab 8

• Part I (Bock and Cart):
  o Use spring to launch cart – it is repeatable
  o For launching a *block*, instead tape wheels of the cart so they do not turn
  o Next part, with wheels untaped, do not block the path of the cart. It may curve – let it go.
  o For block on top of cart:
    • Launch by pushing so that block does not slide backwards – practice
    • Crash it into hard barrier – what happens to block on top?
    • Whatever happens, let block on top complete its motion without interference
Lab 8 (cont’d)

• Part II – A, B, C
  o Drop objects onto the mats provided
  o Be careful dropping heavy objects six feet onto your hand – injury is possible
  o Question 7 – use a grip that ensures both objects start falling together, and have the same distance to fall. Explain in your Procedure.
Lab 8 (cont’d)

• Do as homework:
  o Part I Questions 1 through 6
  o Part II Questions 1 through 3, 5, 6, 8 through 10
Assignments:

• Due next week:
  o Experiment 2 report
  o Essay 1, on diskette for face-to-face, via Moodle for POL
• In two weeks:
  o Experiment 3 report
• IST 1990 and IST 2420 POL: Postings every week
• IST 1990 Essay 1 due in three weeks
• Midterm (plus lab) coming in four weeks, review session in three weeks