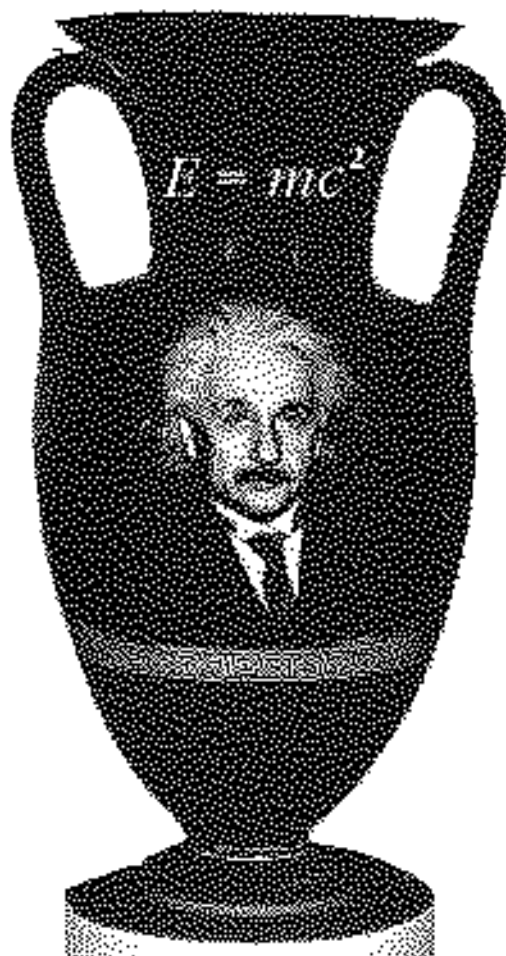




**PHYSICS: CLASSICS DEPARTMENT
OF THE FUTURE?**

*Eric Mazur
Harvard University*

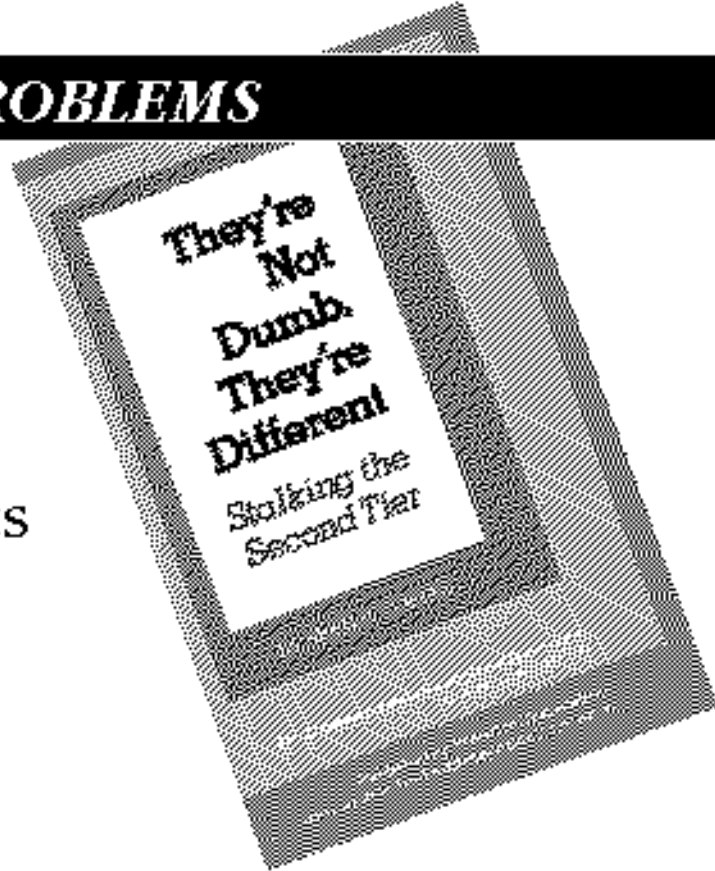
*Chairs' Conference
College Park, MD
10 May 1997*



- ➊ Some problems...
- ➋ Some more problems...
- ➌ Challenges

SOME PROBLEMS

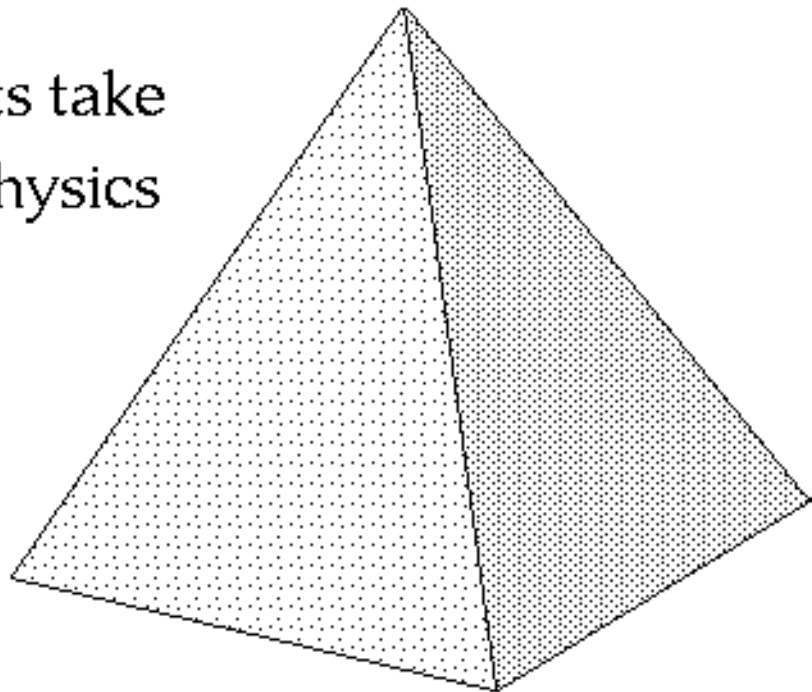
- declining support
- declining enrollments
- frustration



- ➊ Some problems...
- ➋ Some more problems...
- ➌ Challenges

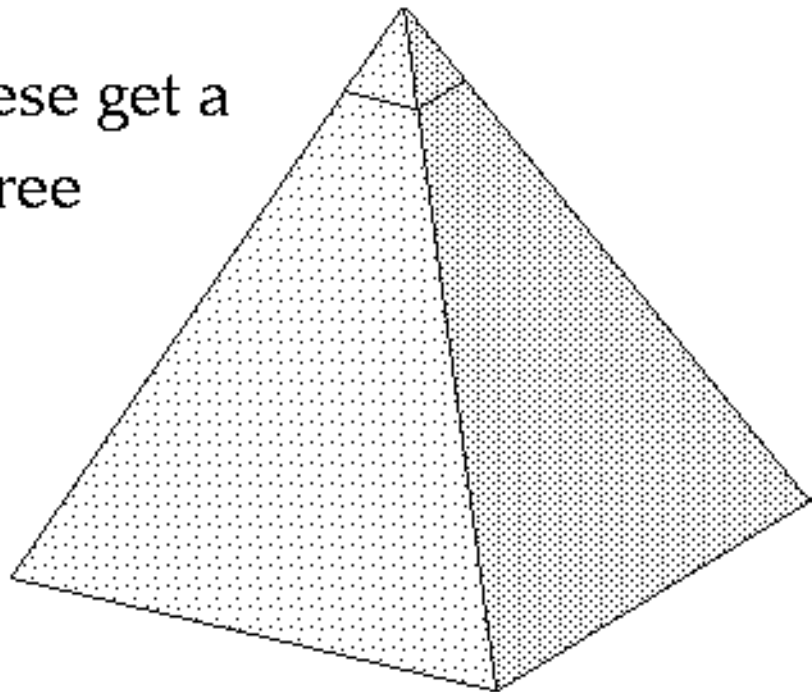
PHYSICS EDUCATION

380,000 students take
introductory physics
each year...



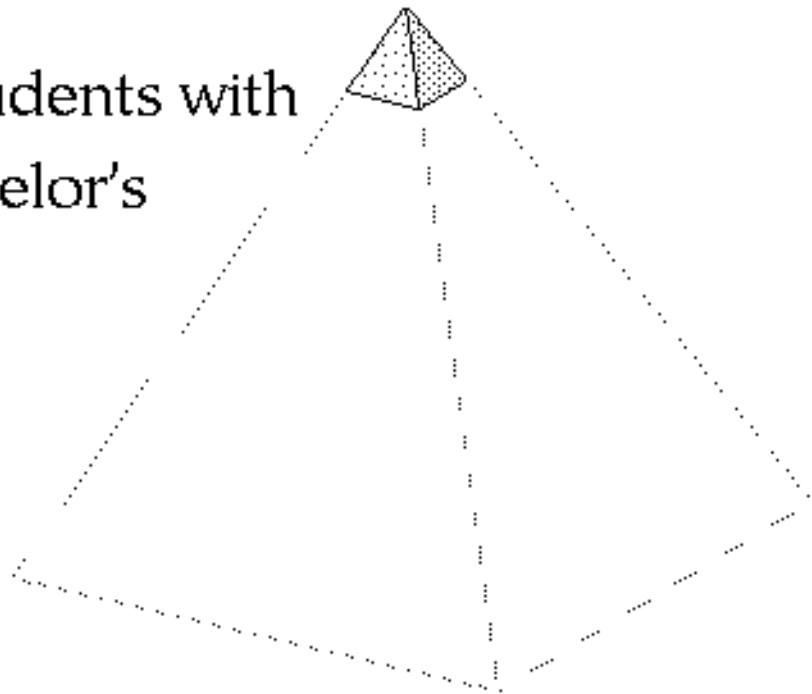
PHYSICS EDUCATION

about 1% of these get a
bachelor's degree
in physics.



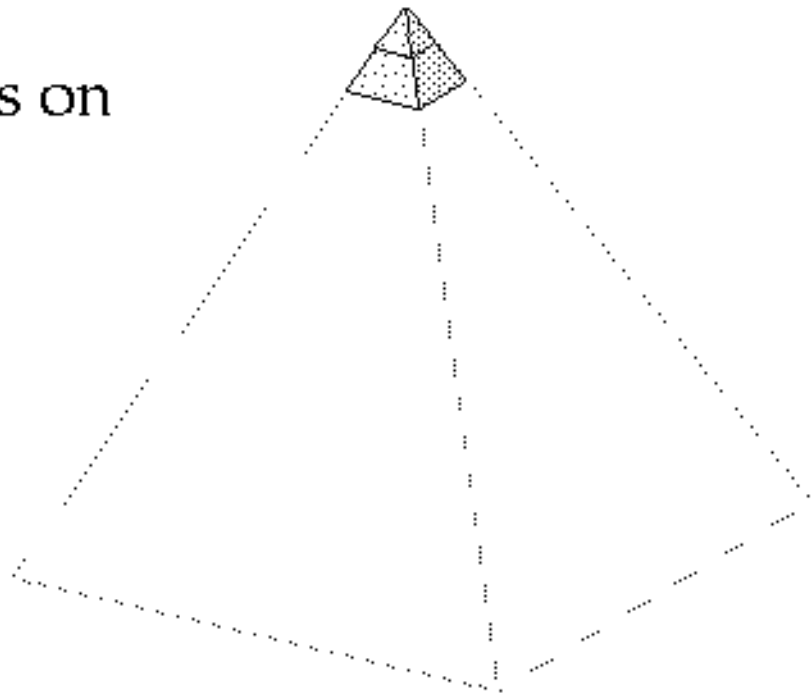
PHYSICS EDUCATION

Of the 4,300 students with
a physics bachelor's
degree...



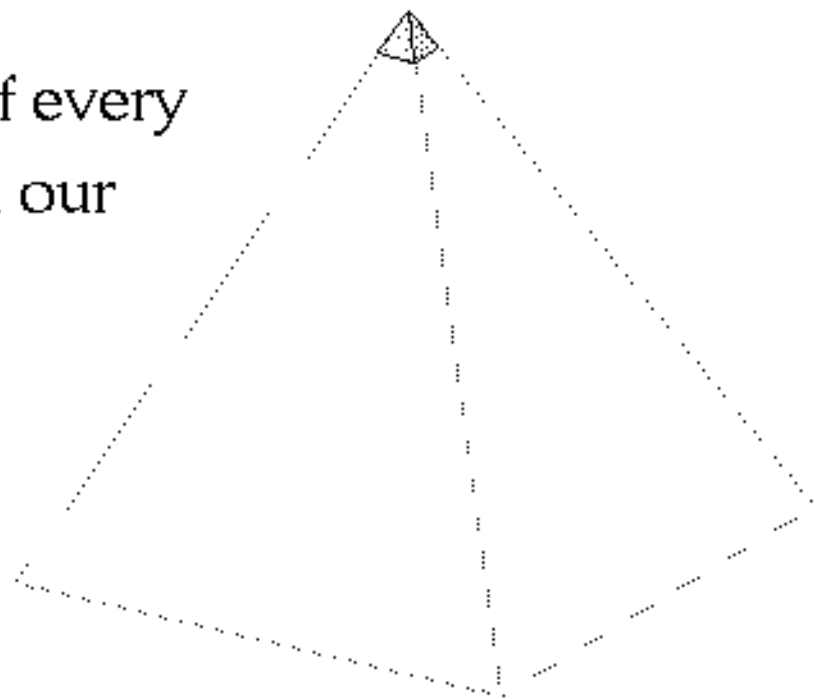
PHYSICS EDUCATION

about 35% goes on
to get a Ph.D...



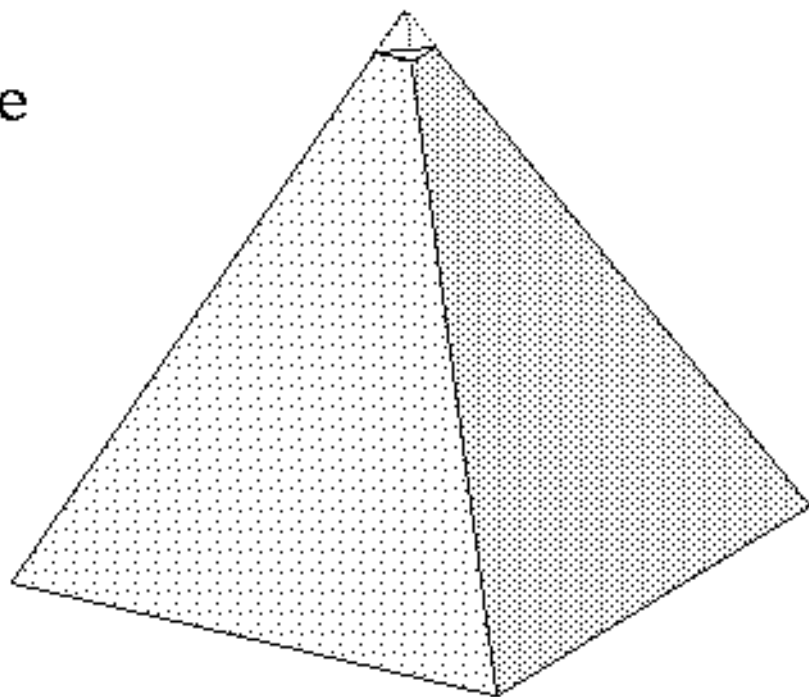
PHYSICS EDUCATION

That's 1 out of every
260 students in our
introductory
courses!



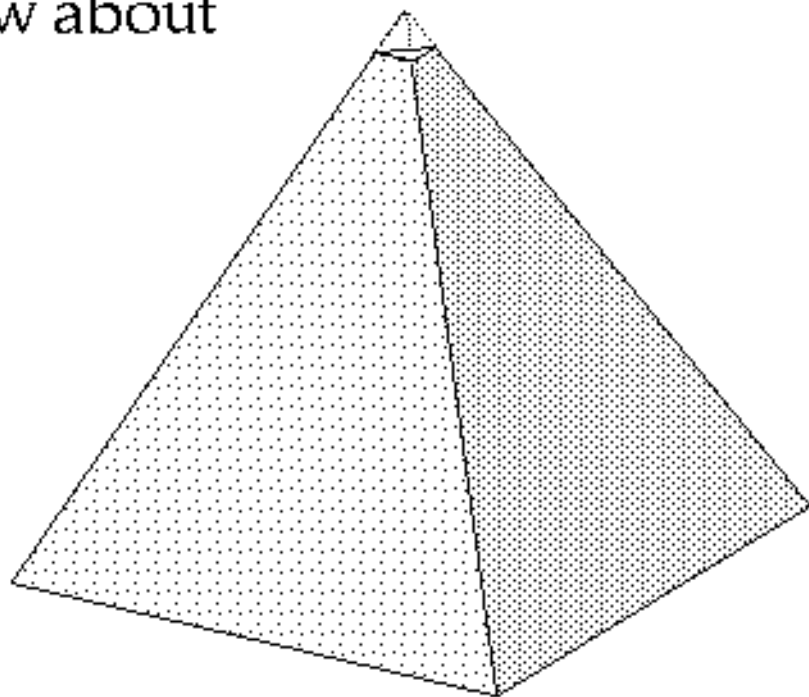
PHYSICS EDUCATION

What about the
other 259...?



PHYSICS EDUCATION

What do we know about these students?



ATTITUDE PROBLEM?



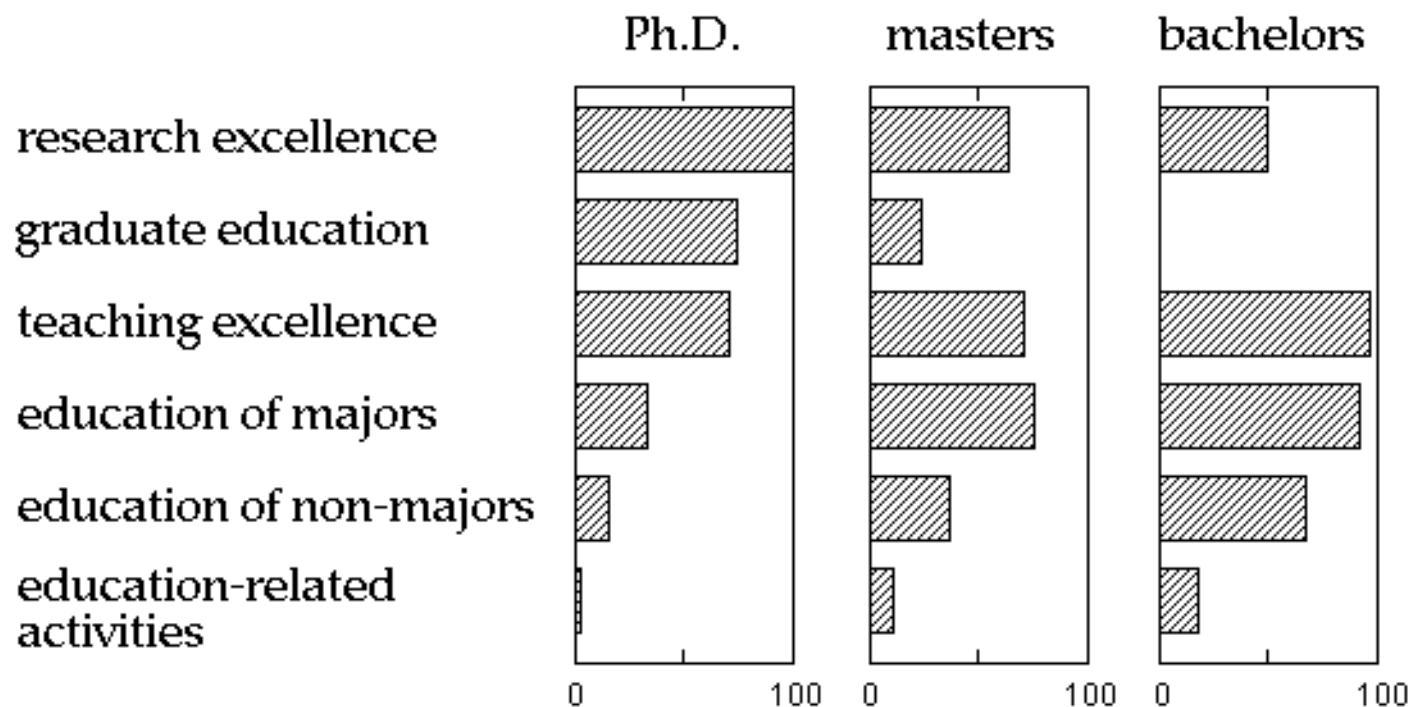
ATTITUDE PROBLEM?

“What are our most important objectives?”

- excellence in research
- excellence in teaching
- education of graduate students
- education of undergraduates
- education of non-majors
- education-related activities



ATTITUDE PROBLEM!



- ➊ Some problems...
- ➋ Some more problems...
- ➌ Challenges

BARRIERS

“reform”: bad word!

scepticism

initial effect

mismatches



POINTS TO CONSIDER

- evaluate
- reach out to public
- don't (re)invent; *implement!*
- involve research community



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Thank you!