

A decorative horizontal bar consisting of a sequence of colored segments: red, black, yellow, black, yellow, black, red, black, yellow, black, yellow, black, red.

STATE OF THE DEPT

Presented to the Physics Department Staff

*It was the best of times, it was the worst of times,
it was the age of wisdom, it was the age of foolishness,
it was the epoch of belief, it was the epoch of incredulity,
it was the season of Light, it was the season of Darkness,
it was the spring of hope, it was the winter of despair...*

Charles Dickens

- It's been a very tough year....
 - We have never seen such awful budgets

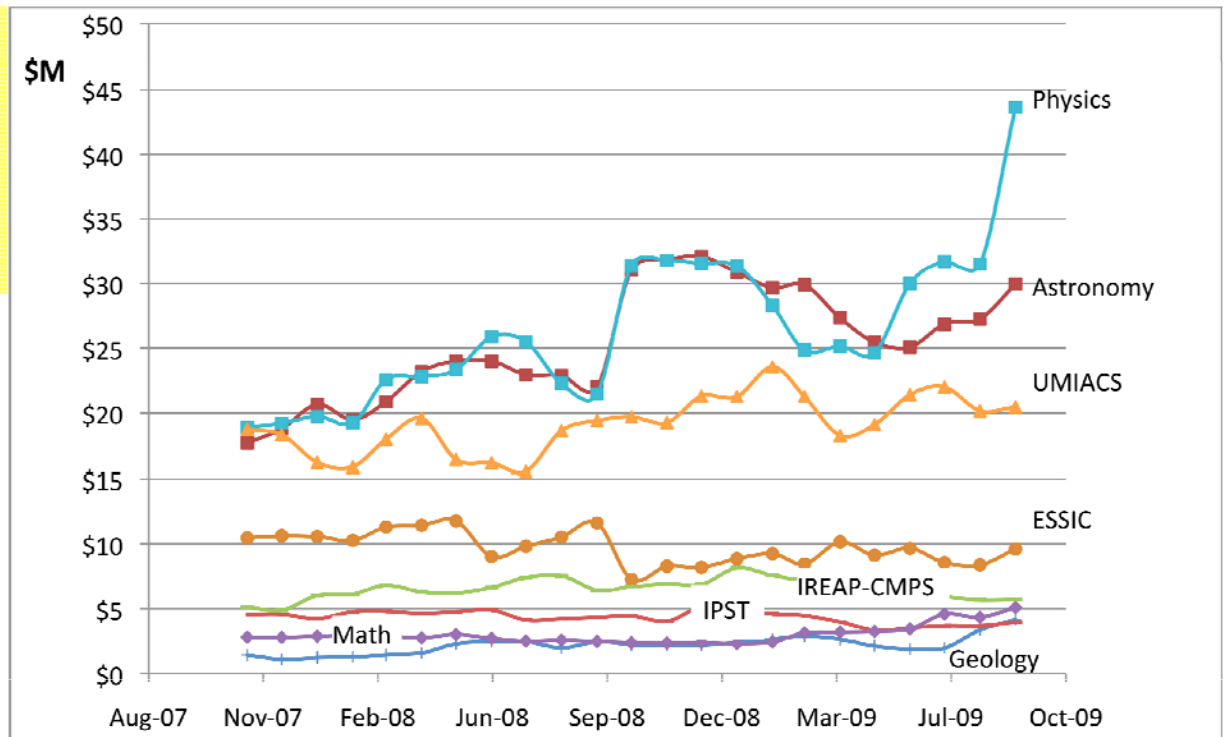
- Rolston replaces Lobb as JQI co-Director
- Fuhrer replaces Anlage as CNAM Director
- Sullivan replaces Rolston as Assoc Chair Facilities
- Cohen replaces Sullivan as Assoc Chair Graduate
 - And becomes Director of MCFP
- Hadley is in his last year as Assoc Chair Undergrad
 - Looking for a replacement
- Betsy Beise to become interim Associate Provost for Academic Planning and Programs
 - This is the most influential of all all the Associate Provosts, working closely with Provost

- Faculty recognition is significant
 - Almost all faculty have had significant achievements
 - This helps the department in a great many ways
- Staff support for faculty is crucial to their success
 - Staff suffer enormously when there are budget cuts
- Campus leadership understands the role of a strong successful physics department
 - More on that below

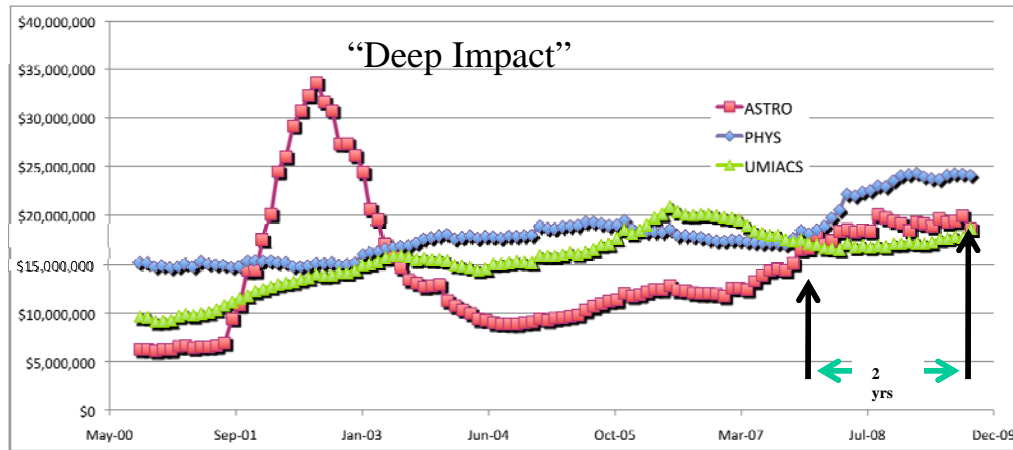
- Yi-Ya Tian died Sept 1, 2009
 - Graduate student from Taiwan, wanted to go into CM Theory
 - Passed his quals the week before. Very sad.
 - This brings up the issue of mental health
 - There is much experience and many resources on campus to help with these kinds of things
 - Please see me if you have questions, uncertainties, etc

- It's been a very good few years
 - Big jump of \$11.6M last month due to
 - MURIs (\$3.4M), PFC (\$2.1M), Lobb/Galitski IARPA (\$827k), JQI (\$2.2M), MRSEC (\$1.6M), Hoffman Career (\$500k), Buonanno NSF (980k)
- Total CMPS awards increased from \$88M to \$133M in 2 years.
 - This has gotten the attention of the Dean, VPR, Provost, President

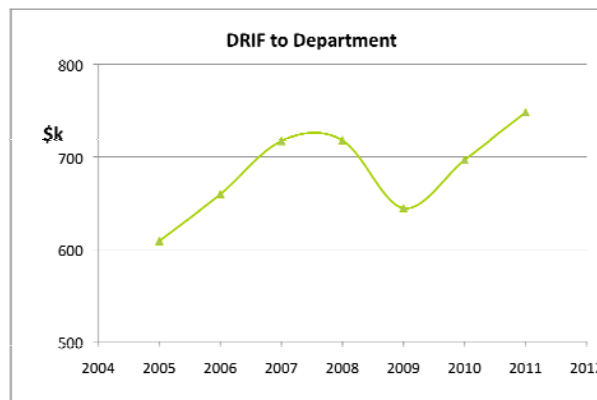
NB: These data are highly correlated! Each data point is the sum of the previous 12 months of awards



- DRIF is calculated from the expenditures, not the awards...
 - Each data point is the sum of the previous 12 months expenditures

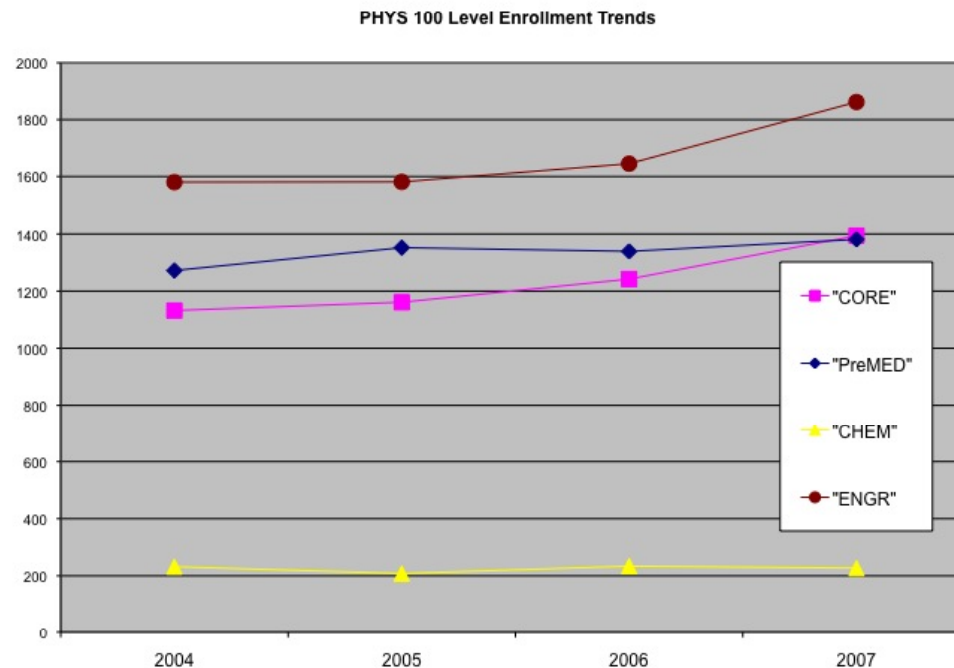


- DRIF is 1/6 of IDC (which is $\sim\frac{1}{4} - \frac{1}{2}$ of expenditures) 2 years later
- We are starting to recover....



- We have been struggling with a structural deficit
 - We have lost ~\$1.5M in recent years, due mainly to:
 - Increase in teaching costs (increased enrollment, labs, TA load, mostly ENGR and “premed” courses)
 - Decrease in DRIF due to faculty attrition, strategic reduction in fields, and having so many assistant professors ramping up
 - Decrease in state funds (5.4% before summer 09 debacle)
 - 2% Reallocation
 - Only keeping ½ of retirements but paying full salary for new faculty
 - We have been working to reduce
 - Operating costs, staff reorg and cost savings, IT, TAs, building maintenance restructuring, etc.
 - At the end of this year it was still around \$650k deficit and \$750k debt

- Engineering sequence 161/260/270 seeing real increases over time
 - Meanwhile we have decreased the TA load from 6 to 4 sections to improve quality
- Overall upward trend
 - “CORE” burden is increasing along with ENGR and 121/122



- Missive from the Dean:
 - You will not operate in the red any longer
 - Dean helps those who help themselves
 - Not hiring faculty over some years is not on the table!
- In May, an understanding with the college was reached:
 - \$300k transfer from CNAM into the department to offset base costs
 - \$100k base increase from CMPS
 - \$250k soft from CMPS with conditions:
 - We end 2010 in the black or else we are toast
 - There were no guarantees in this climate that we will get another \$250k next year
- With this deal the department “would be” ~whole
 - And we can keep on track as far as our priorities in hiring
- And then came the Summer 2009 Debacle



“ DID YOU TURN IT OFF AND
TURN IT BACK ON AGAIN? ”

- The problem
 - \$750M shortfall for FY2010 State of Maryland predicted. Insufficient revenue.
 - FY2011 projection is \$1.2-1.5B assuming \$800M in “stimulus” funds
 - Reductions to higher education:
 - UMS received a \$37.7M reduction right after July 1, not sure how much for UMCP
 - UMCP received another \$30M reduction plus \$8M increase in benefits in August
 - Today was announced another \$300M shortfall for the current year.
 - Implications are unknown *at this time*
- The UMCP numbers
 - UMD takes in ~\$400M from tuition and another ~\$400M from the state
 - “Adjusted base budget” is approximately \$540M out of \$800M
 - \$260M is “tied up” in student aid, energy, and benefits costs
 - This includes all state supported salaries, operations, etc.
 - Reduction to campus is around 7% of “adjusted base budget”
 - All VPs will contribute, including Provost
 - Provost has stated clearly he will not do across-the-board cuts
 - He has asked all Deans for a plan to reduce 8%
 - Note: many deans, including ENGR, have asked their units for a 10% reduction

- It is likely that the economy will “get better”
 - But it is also quite possible that we will see more cuts like this in the next year
 - And most economists believe that unemployment will not get much better soon, and this could be a big factor for all state economies
- However there is talk of tuition increases
 - Next semester? Not likely
 - Fall 2010? It’s an election year
 - Spring 2010? Perhaps...place your bets
- We have never seen cuts like this before. Ever.
 - Neither has the UC system: \$753M shortfall for the University, plus a 11-26 day furlough!!!
 - 20-30% cuts are not unheard of at other public universities
 - But you can believe that the privates will not stand still! We have worked hard for our ranking and we have to protect that investment.

- Wants a unit-by-unit description of source of funds and the impact of that reduction.
 - Due yesterday. He has not said how long he will take to converge
 - Note: due today are the latest state revenue predictions. Gulp.
- Guidelines:
 - Protect/promote excellence
 - Use as an opportunity to make difficult decisions
 - No bitching after the decisions have been made
 - We should not hide this from our colleagues
 - Everything is on the table, especially legacy organizations/units
 - Reallocations cannot be converted
 - There will be layoffs but need to be tied to reorganization
 - Everyone will need to work harder
 - Deans need to be open, honest, communicative
 - Look for ways to generate new revenue

- Provost will take all the 8% plans and decide how much to take from each program according to his strategic planning
 - Caution: Nariman wants an honest proposal
 - He “will not be happy” if he thinks people are purposefully overplaying it
 - He does not want to see fewer seats offered to students
- Time scale? Dunno. Soon for sure.
- My guess:
 - He is anticipating the next budget crunch. If I were him I would be very conservative. The money is just not going to be there like it has in the past.

- In CMPS:
 - Total CMPS budget is \$45.5M, around 9% of total adjusted operating budget on campus
 - In 08 and 09 CMPS hired 5 faculty members with 17 leaving (out of 220)
 - In the same period we have had a 5.4% budget reduction
 - 8% amounts to a \$3.6M reduction
 - This is approximately half of all spending in the college on staff so you can see that he cannot give back that amount in cash
- Halperin has told each unit what their target is
 - It is not “across-the-board”
 - He is protecting his academic units as a 1st priority
 - He does not have \$3.6M to give back. He will have to mortgage future retirements and use soft money to bridge
 - Retirements are going to be important. There will be “incentives”
 - These will include discretionary funds and pay increases
 - We will also guarantee office space, and Research Professor status

- 8% of our budget is around \$900k
 - We do not have any knobs to turn to deal with something that large
 - I do not know what the Provost is going to do but I suspect he will take 8% from CMPS. We shall see
- Halperin is proposing to Provost that he mortgage future retirements to lessen the impact on the operating budget
 - And bridge it with soft money and hope the retirements come in sooner than later
- And we still have a \$250k structural deficit (as of summer 2009) if the Dean cannot give us more at the end of this FY
- We will invariably lose many future retirements and this will slow down hiring a great deal. How much is TBD
 - We are like a shark. We must keep swimming or we lose all we've built in the last 10 years!

- Another “understanding” is reached with Dean Halperin
 - We reduce our expenses by \$400k
 - Target met via staff layoffs (\$130k), TA reductions (\$170k), and reduction in operations (\$100k)
 - Things are very tight. But if there are no more budget cuts then we are done reducing
 - He will push for several faculty hires during the next few years
 - **Note: funding for new faculty hires does NOT compete with budget reductions. This is extremely important to understand!!!**
- We now have closed our structural deficit!
 - Any additional budget reductions will be ONLY because of state reductions
- Overall view of Physics Department by campus leadership
 - “As goes physics, so goes CMPS”
 - This is not BS. It is absolutely true and they know it
- What will happen in the future?
 - My guess: this state will have to raise revenue (tuition will almost assuredly increase). Another round of cuts like what we have had and the state will lose its AAA bond rating and not be able to operate!!!

- The Budget Is Complicated!!!

- The Dean includes CNAM, MCFP, all state-supported research
- The budget is complicated by what is "Ongoing" and what is "Soft" (but also ongoing)
 - I am not an accountant but Dawn Myers is as good as one!
- Much of the budget is not fungible (e.g. retention commitments, cost share, etc)
- Much of the funds from CMPS, Provost, VPR come in over a period of time but the spending profile is at the discretion of the recipient and we have to ensure that funds are available

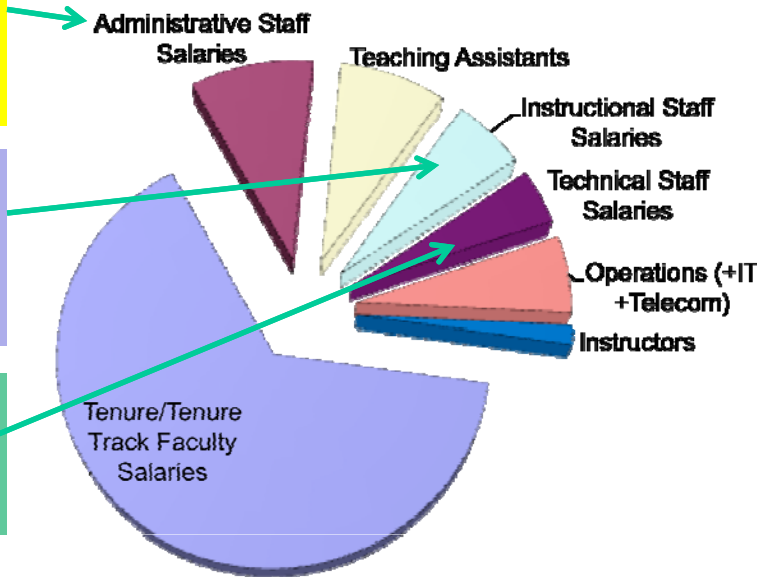
- Income this year: \$10,806k plus \$697k DRIF = \$11,503k

Admin Staff
Myers, Conners, DeSalvo, Seal, Sewllall, Lukomska, Suplee, Dudley, Ekstrom, Cuaresma, Hammer, Megonigal, Myrick, Alejandro, Noel, Rirksopa, Robinette, Woodworth, Zhao

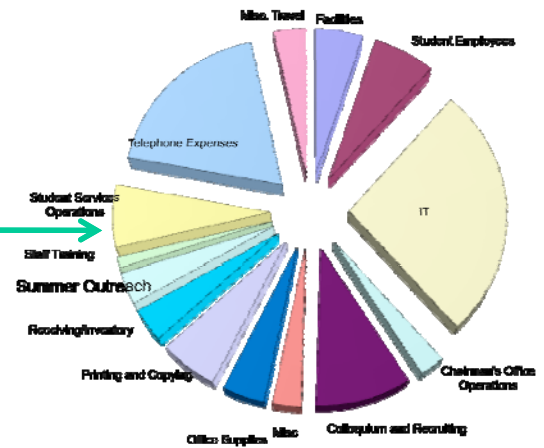
Instructional Staff
Gleason, Hessing, Kozlowski, O'Hara, Baldwin, Daetwyler, Giza, Lynch, Monroe (Allen), Norwood, Bobrowski

Technical Staff:
Dahms, Anderson, Godinez, McQueen, Owens, Terlisner, Touart, Tuminaro, Straughn, Benson

Major Expenditures By Category



Major Operating Expenditures



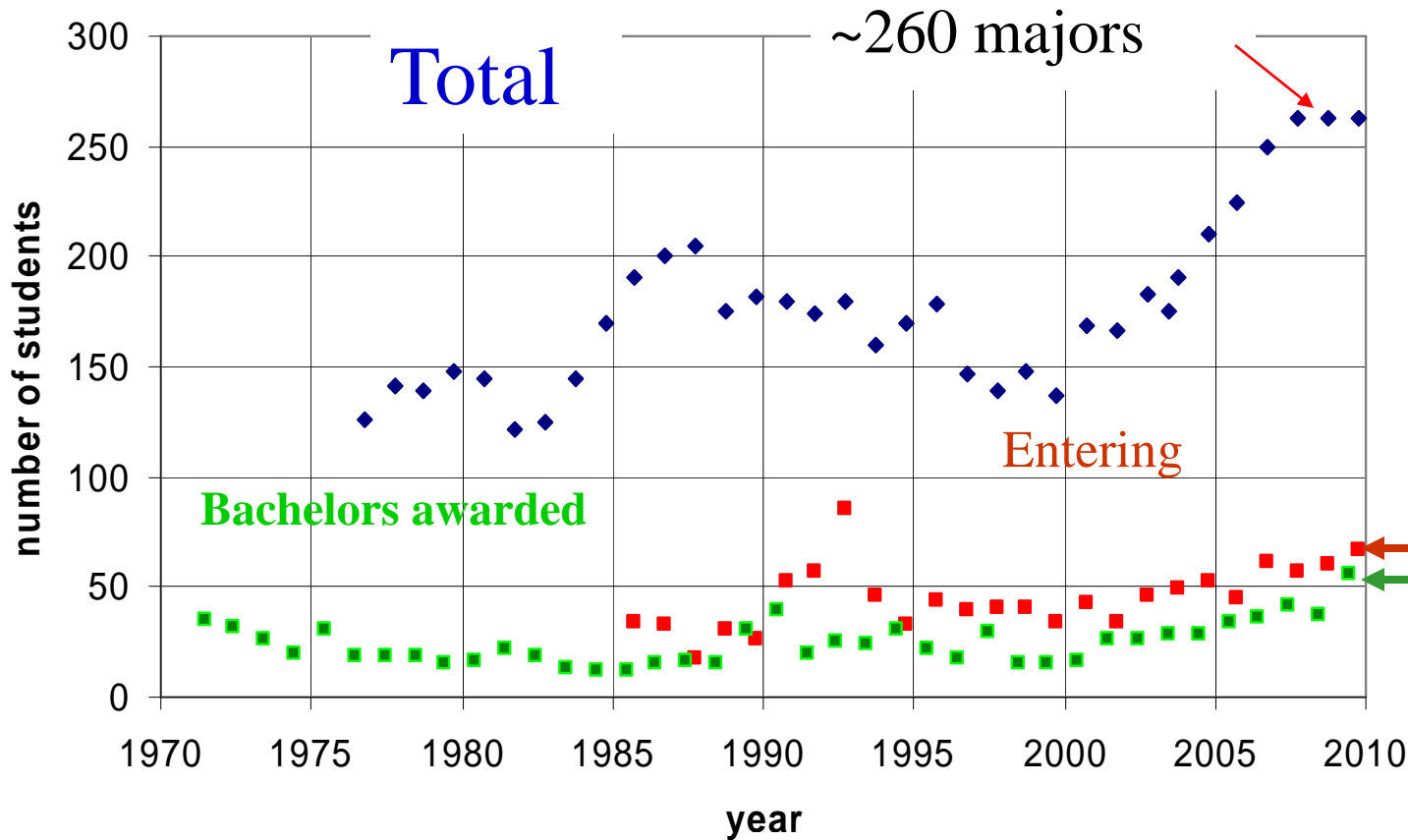
Physics Majors

Actual:

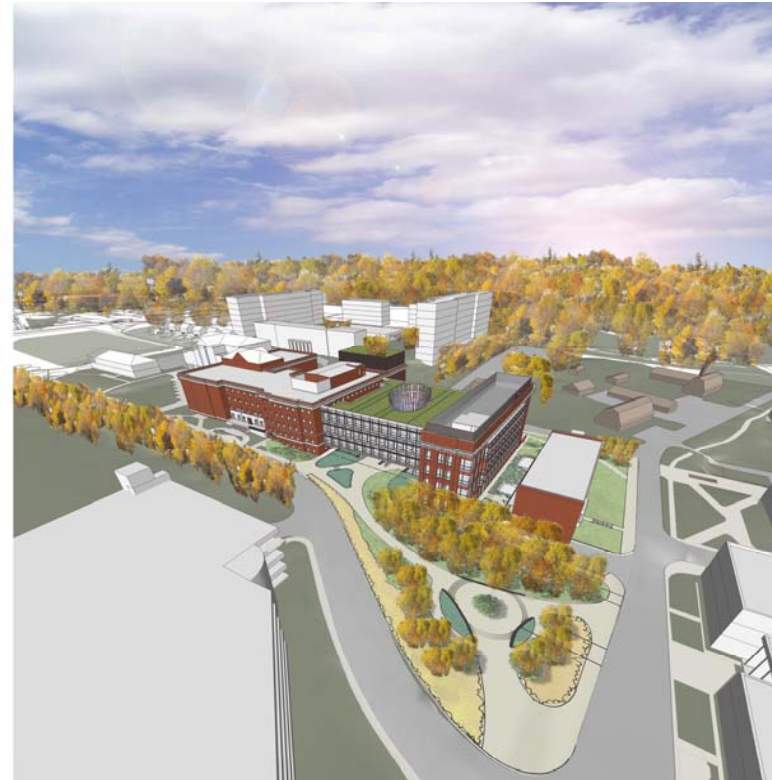
56 total B.S. for year
(1 Phys-Edu, 3 Phys-Meto tracks)

45 freshmen + 22 trans.

= 67 total F 09 entering



- Student Services coordinates a number of outreach programs:
 - Maryland Physics Olympics
 - Physics Summer Girls Program
- These programs are suffering from lack of funding
 - Especially true for the Summer Girls Program. The interest has been increasing, and we are starting to have to turn away applicants.
- We are encouraging faculty to try to include some funds for outreach programs in grant proposals
- We are also trying to raise funds from the private sector
 - Difficult but we are only just starting....



130,000 gsf - total of \$1
(design + construction)

Will house most of Physics, IPST, Astronomy

- Funding:

- \$1M FY07, \$4M FY09 and \$4.6M FY10 all for planning (engineering, architecture, document prep, etc)
- \$45.5M FY2011 begins construction (\$54.7M in FY2012 completes it)
- Schedule:
 - Appropriation – March 2010
 - Groundbreaking – May 2010
 - Construction completion – Nov 2012
 - Occupancy – Jan 2013
- Also submitted \$16.1M request to NIST for augmentation (should hear by Feb 2010)

- What will move:

- All of the research groups except Condensed Matter
 - They will now occupy entire 2nd floor
- All of the dept support staff except teaching, shops, receiving
 - Teaching will stay because the new building will have no classrooms

- Who will occupy Toll?

- CM (2nd floor)
- Teaching (classrooms and most of 3rd floor as is the case now)
- CMPS Deans office will most likely move to 1st floor old wing and vacate AV Williams
- Perhaps Geology department, or Meteorology, or something else from the college