



# US Particle Accelerator School:

*Educating the next generation  
in the science & technology of  
accelerators, beams & plasmas*

William Barletta

*USPAS Director*

*Dept. of Physics, MIT*

*11 March 2008*



## Highlights of 2007



- ❁ Winter session sponsored by TAMU
  - ~130 students
  - Special offerings: Multiple courses with Linear Collider focus
  - “Management of Science & Technology” re-introduced
  
- ❁ Summer session sponsored by MSU
  - ~120 students
  - Hands-on course at NSCL
  - “Ion sources” + “Ion linac” design courses
  
- ❁ IU Master’s Program
  - 2 new students added; 7 presently enrolled



## Highlights of 2008



- ❁ Winter session sponsored by UC Santa Cruz
  - ~150 students
  - Special offerings: Emphasis on light sources & FELs
  - 2 new, hands-on courses introduced
    - ◆ Synchronization, timing & RF processing
    - ◆ Synchrotron light based beam diagnostics
  
- ❁ Summer session sponsored by U. Md.
  - Hands-on course “Beam dynamics experiments
  - New course introduced: Vacuum tube design
  
- ❁ **USPAS “Iron-man” recognition**
  - Mike Syphers - 408 students in 11 classes
  - New course introduced: “Optics of High Energy Accelerators”



## USPAS Initiatives



- ❁ Initiative: Provide more “hands-on” training for students
  - 2 month summer internships
    - ◆ Led to Lee Teng Internships; more to follow
    - ◆ USPAS course followed by 8 weeks at Lab
  - Improved experiments for Fundamentals course (USPAS/MIT/UCLA)
  
- ❁ Initiative: USPAS associated interdisciplinary Ph.D. at MIT
  - Establish a faculty line in accelerator science
  - Core physics & engineering courses at MIT campus
  - Summer training internships at national labs (BNL & JLab mentors)
  
- ❁ Initiative with CERN: Revitalize the Joint Accelerator School
  - Reconsolidate international accelerator schools
  - Possible next session in China