



# Accelerator Physics Education at the University of Chicago

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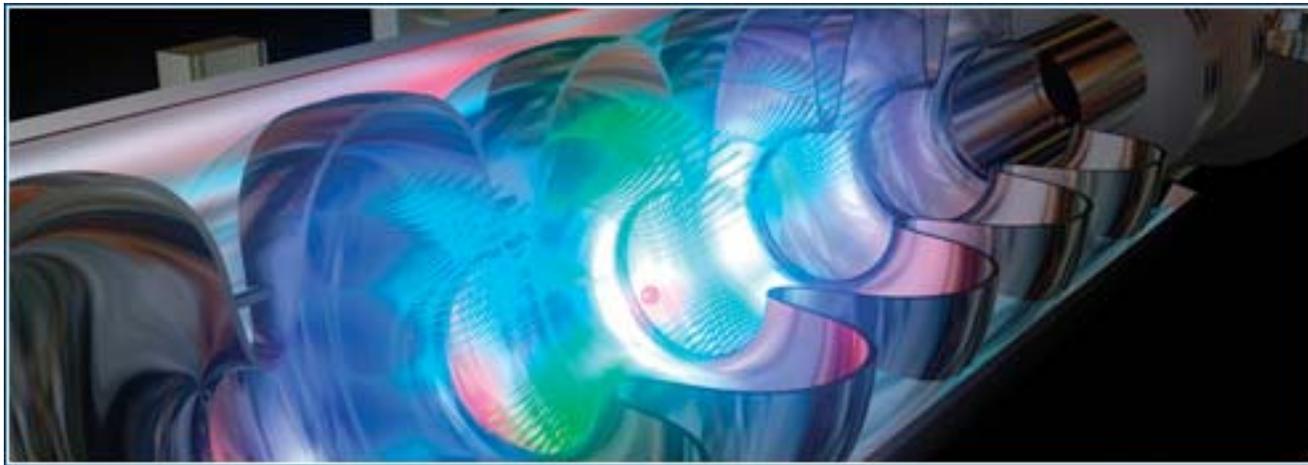
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University of Chicago (Ph.D., 1972)

## Accelerators for future science...



- \* ...Will be challenging to design & build
- \* ...Will be challenging to operate



- \* ...Will need outstanding physicists to realize

## ANL, FNAL, & UC must...



- ✱ ...Attract top undergraduate talent to graduate study of accelerator physics as well as accelerator-based science

*USPAS students won top prizes  
at PAC2009*



*At left, UC Physics graduate student Satomi Shiraishi*

## Impediments we face...



- ✧ Undergraduates must be aware of the intellectual challenge & excitement
- ✧ Top undergraduates expect to study at a great university



Photo by Michael Sinkinson

# Accelerators at the University of Chicago



- ✱ UC once had a world class accelerator on campus
- ✱ UC now has two world class accelerators at its labs



- ✱ UC should establish a Ph.D. program in accelerator physics

## How to begin...



- ✱ You have the course by Adj. Prof. Kwang-je Kim
- ✱ We have thesis research opportunities at ANL & FNAL
- ✱ We have Lee Teng accelerator internships at ANL & FNAL
- ✱ USPAS offers the opportunity to co-list core courses
  - Fundamentals of Accelerators (undergraduate)
  - Accelerator Physics
  - Synchrotron Radiation & Free Electron Lasers (by KJK)
  - Microwave Measurements
  - Special topics in accelerators (select one per year)

} *core*

*Rapid start-up with minimized required campus costs*

## Potential stumbling blocks



- ✱ Students should spend a large fraction of time on campus
  - An education at a great lab is not an education at a great university
- ✱ The labs must enrich the intellectual life on campus
  - Create opportunities for some research to be on-campus

*Don't let stones in the road impede a great journey*