

The Health Physics Program  
FRANCIS MARION  
UNIVERSITY  
FLORENCE, SOUTH CAROLINA

Dr. David Peterson

Dr. Derek Jokisch

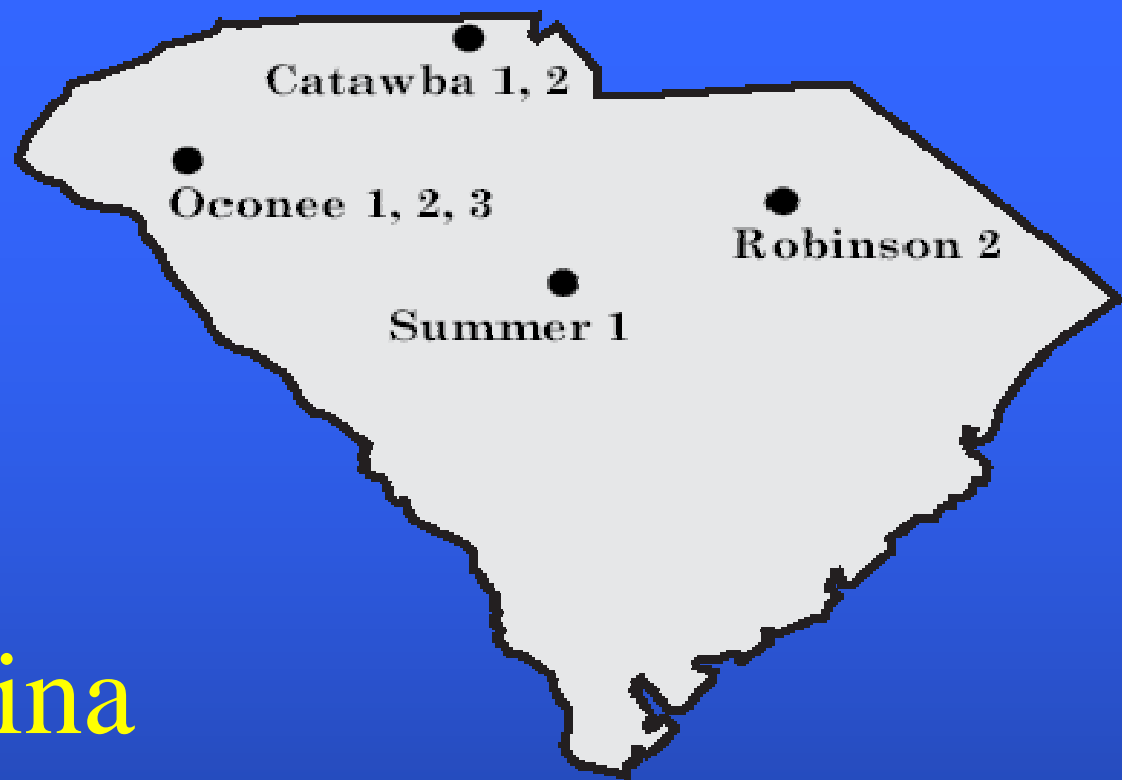
Dr. Philip Fulmer

Physics and Astronomy Department





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# South Carolina

## Nuclear Power Plants in the State

	City	Capacity (MW)	2005 Generation (MWh)	2003-2005 3-year Average Capacity Factor
Catawba 1	Clover	1,129	9,177,326	91.1%
Catawba 2	Clover	1,129	10,099,113	95.1%
Oconee 1	Seneca	846	6,720,575	86.4%
Oconee 2	Seneca	846	6,664,011	89.4%
Oconee 3	Seneca	846	7,236,990	86.7%
Robinson 2	Hartsville	710	5,770,139	96.1%
Summer 1	Jenkinsville	966	7,469,400	90.8%
<b>Total</b>		<b>6,472</b>	<b>53,137,554</b>	<b>90.8%</b>

Source: Energy Information Administration

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# HISTORY OF THE PROGRAM

- In 1981, Dr. Lynn “Skip” Hendrick and Dr. David Peterson founded Francis Marion University’s bachelor’s program in health physics in response to the large demand in South Carolina (and the nation) for health physicists in the nuclear energy industry.
- Only two states have more commercial nuclear power reactors than South Carolina’s seven.
- The state is home to the Savannah River Site and the Barnwell low-level waste repository.
- FMU is the only source of undergraduate health physicists in South Carolina.



# Health Physics at FMU

- The first FMU undergraduate health physicists received their degrees in 1982.
- Since then, 75 students have graduated from the program.
- The alumni work in: nuclear power, environmental health physics, government regulation, medical health physics, consulting, military health physics, academia.
- In 1998, the South Carolina Commission on Higher Education awarded FMU a Commendation of Excellence for the high quality of the bachelor of science program in health physics.



# PHYSICS AND ASTRONOMY DEPARTMENT

- Ten faculty
- Health Physics
- Computational Physics,
- Electronics Engineering Technology
- Civil Engineering Technology
- Dual Degree Engineering Program with Clemson University.
- Astronomy and Astrophysics program



# Health Physics Curriculum

- **Physics (36 hours)**
  - Electronics
  - Modern Physics
  - Nuclear Physics
  - Radiation Biology
  - Nuclear Radiation Physics
  - Principles of Health Physics
- **Mathematics (21 hours)**
- **Biology (12 hours)**
- **Chemistry (20 hours)**
- **Computer Science (6 hours)**



# UNDERGRADUATE RECRUITING

- South Carolina Physics Scholars Institute
- Presentations to student groups
- Advising week letters
- Professional conference visits
- Recruiting by current Health Physics majors
- Presentations by visiting speakers
- Internships



# SOUTH CAROLINA PHYSICS SCHOLARS INSTITUTE

- Forty high school physics students attend Francis Marion University for three days.
- High school students perform five experiments, each experiment lead by FMU students.
- Faculty presentations about the department's majors.
- Liquid nitrogen ice cream party and demonstrations.
- Movie night



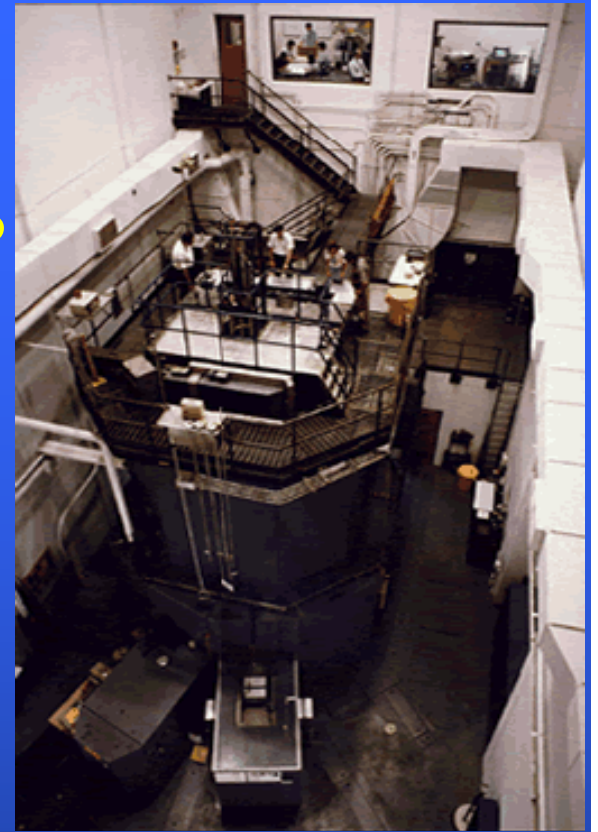
# Students at Carolina Beach (North Carolina HPS Chapter Meeting)



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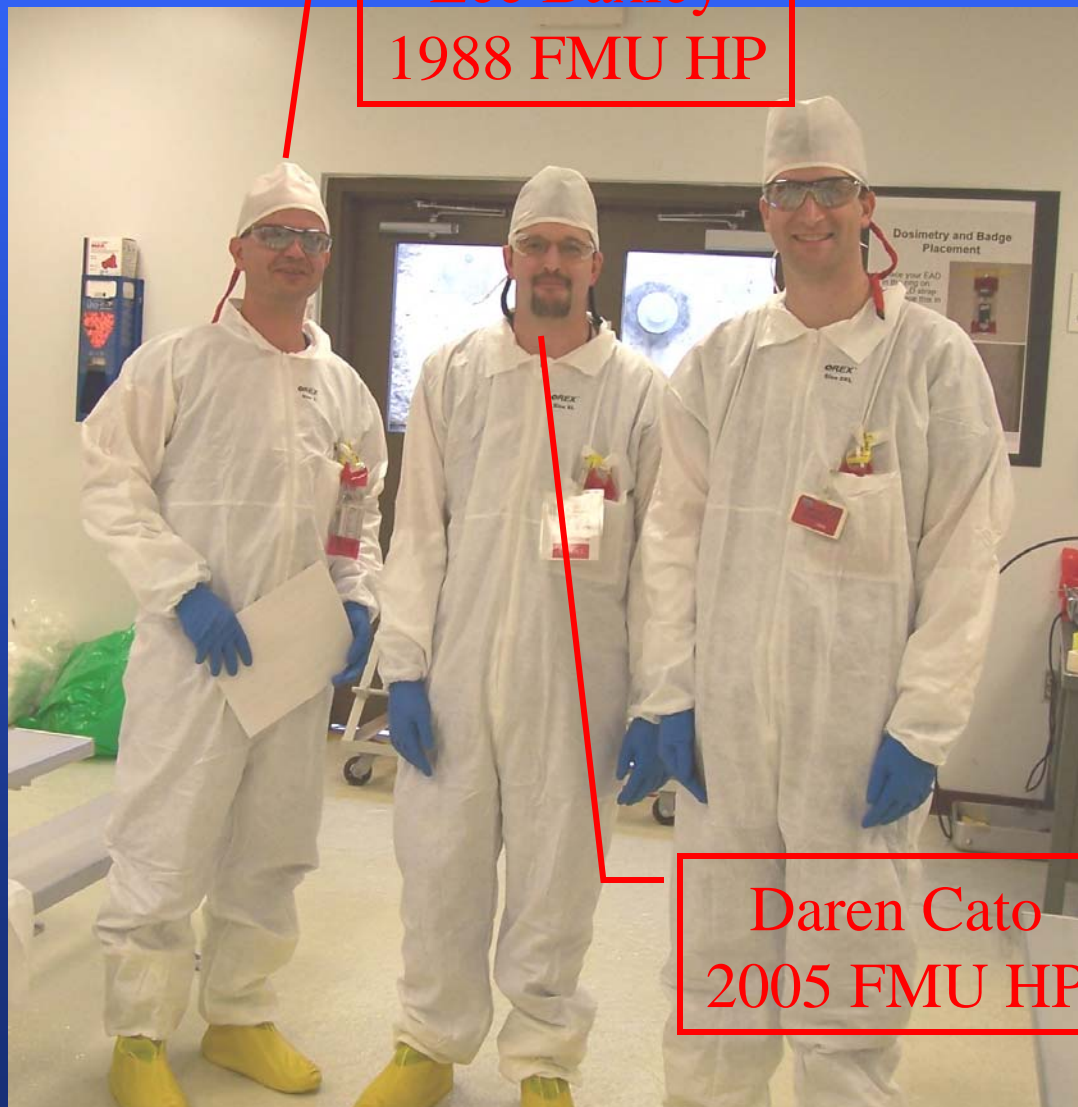
# Health Physics Internships

- Nuclear Power
- Medical Physics
- Savannah River Site (DOE)
- University Health Physics



# ALUMNI SUPPORT

Lee Baxley  
1988 FMU HP



Daren Cato  
2005 FMU HP



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# Health-physics grad works on anti-terrorism efforts

By Todd J. Hudak

Imagine standing at the 50-yard line at the Super Bowl, able to stop the game just by uttering a code word on a walkie-talkie. It's not something out of the latest action movie. It's Dale Perkins' job.

Perkins, a 1989 FMU health-physics graduate, works on anti-terrorism projects for the U.S. government. He is a member of a radiological assistance team that handles security at events such as the Super Bowl, Kentucky Derby, and the Olympics. His team is also prepared to be dispatched at a moment's notice across an eight-state region.

"We have become very involved in homeland-security anti-terrorism efforts since Sept. 11 (2001)," Perkins said.

Perkins works at the Oak Ridge



*Dale Perkins works at his computer. Perkins is a member of a radiological assistance team that works for the U.S. government and handles security at events such as the Super Bowl, Kentucky Derby, and the Olympics.*

# Institutional Support

## Associate Provost for Enrollment

### Donates Fiesta Ware



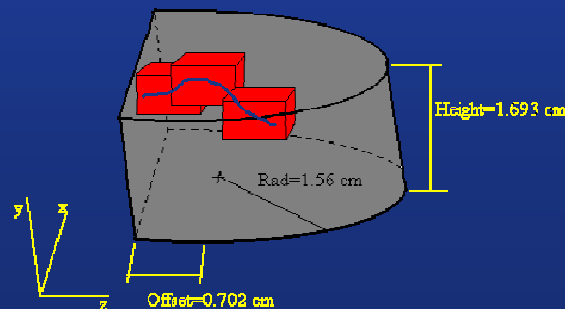
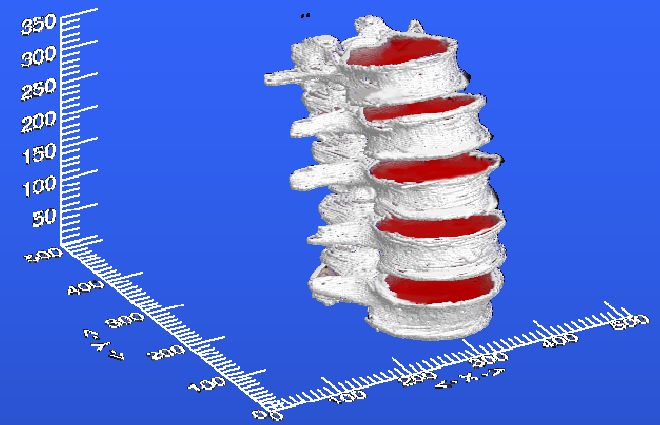
# Department Support

## Astrophysicist searches for Depression Glass



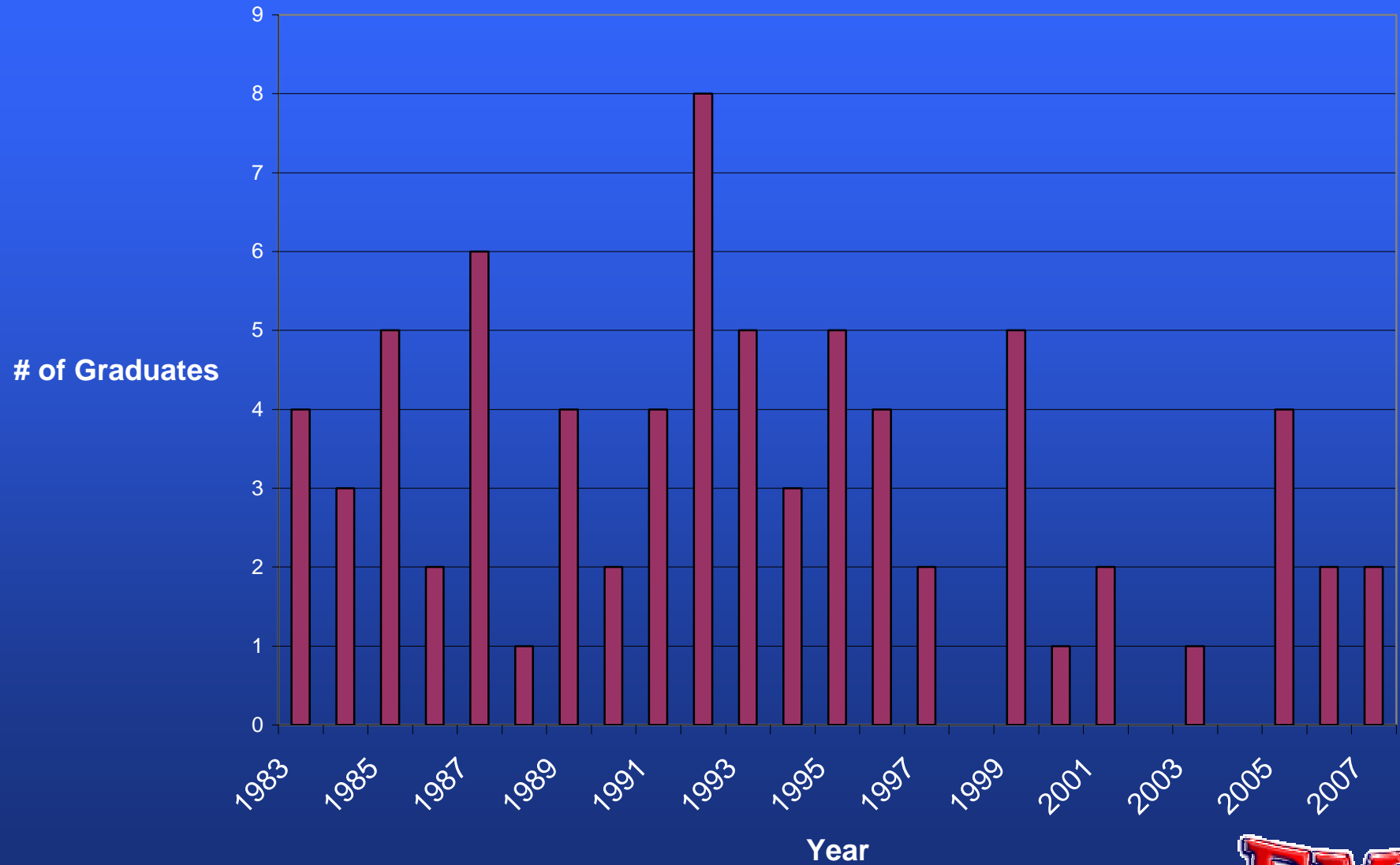
# FMU Research in Health Physics

- Bone Dosimetry
- Radiation Damage to DNA
- Computational Radiation Transport
- X-Ray Fluorescence
- Neutron Survey of Hospital Accelerators



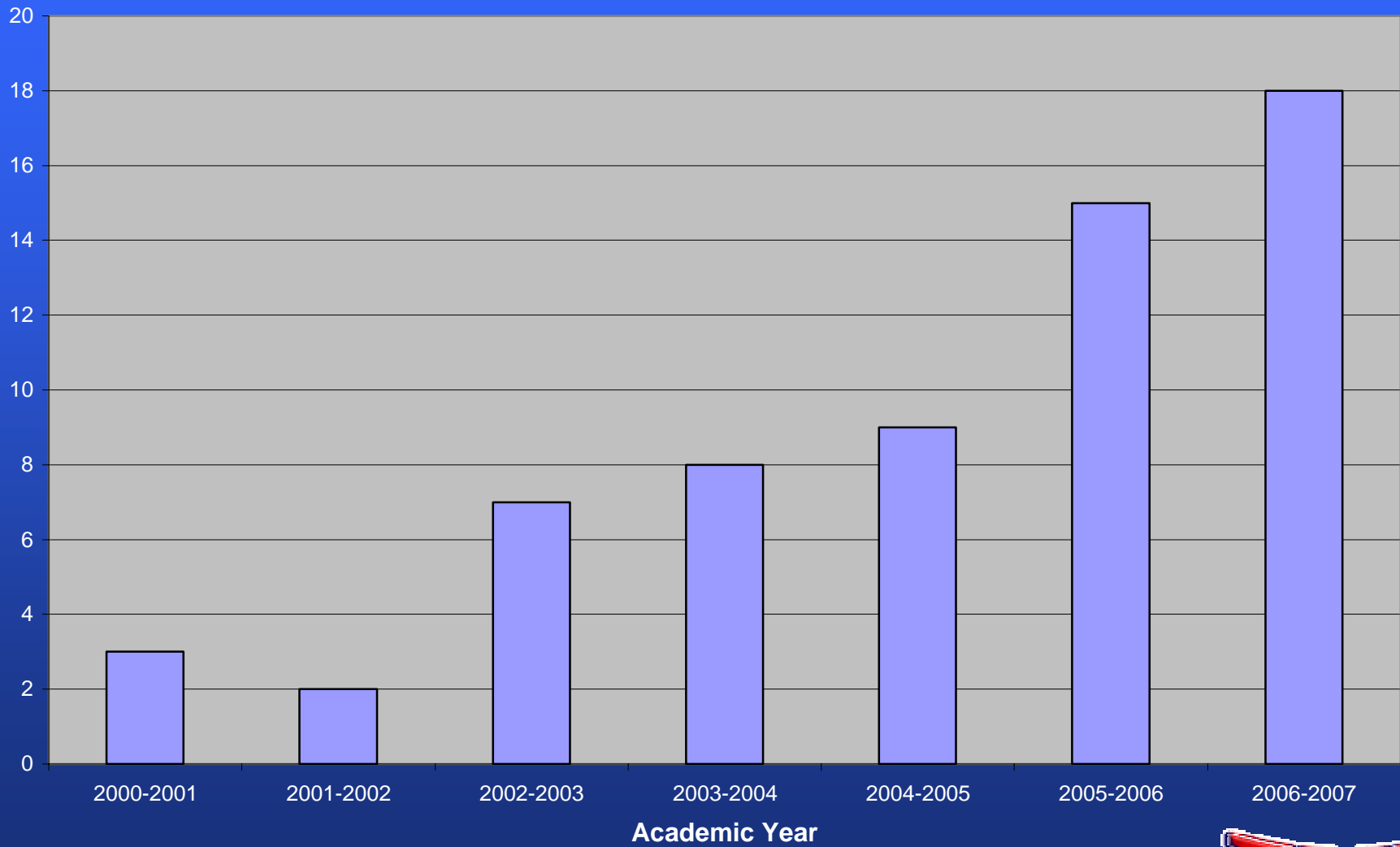
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## FMU HP Graduates by Year



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## Total Health Physics Enrollment at FMU



# FOR THE FUTURE

- Continued improvement in the curriculum
- Increased enrollment
- Improved diversity recruitment
- Increased student research opportunities
- Improved liaison with internship providers
- Wider medical health physics opportunities



# Acknowledgements

- Dr. Derek Jokisch
- Dr. Philip Fulmer
- All the members of the department
- Website: <http://swampfox.fmarion.edu>



# Radioactive Consumer Products Collection



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