




<http://www.cap.ca>

physics makes  the world go round

La physique régit  la marche du monde

The Canadian Association of Physicists



L'Association canadienne des physiciens et physiciennes

English

Français

(a secure web site)



## The Canadian Association of Physicists

- Liaison with Government and the Natural Sciences and Engineering Research Council
- Protection of the Profession
- Physics Education
- The Annual CAP Congress
- Physics in Canada





## Liaison with Government (Federal)

Context: Research Funding had declined dangerously by the early 90's (brain drain fears). The federal government is the driving force behind research. Provinces follow suit through matching funds (mostly: Alberta, Ontario, Quebec)

CAP is a lead organization in lobbying efforts through

- Tri-Society (Physics, Biology, and Chemistry)
- Canadian Consortium for Research
- Partnership Group for Science and Engineering (PAGSE)

The intense lobbying efforts bore fruit:





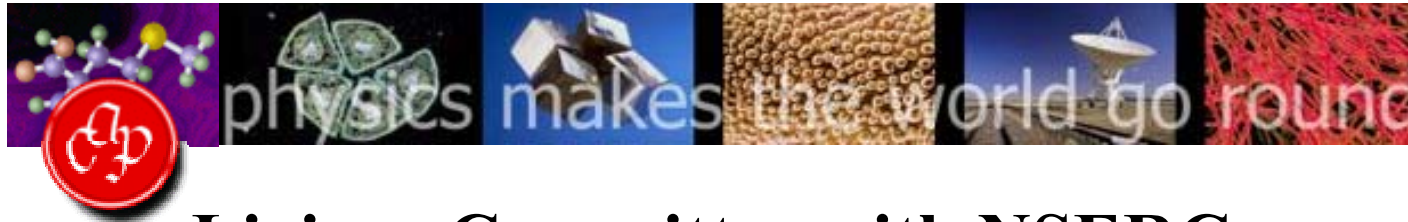
## Great Improvements in Science Funding since 1997

The Federal government's Innovation Strategy: to bring  
Canada from 10<sup>th</sup> to 5<sup>th</sup> in R&D investment by 2010

What has been done:

1. Canada Research Chairs (1200 research professors)
2. Canadian Foundation for Innovation (CFI)  
(\$1.8 B spent since 1997, \$10 B by 2010)
3. Increase in Granting Councils Budgets (14 to 17%)
4. Indirect Costs of Research (\$200 M /year)
5. Millennium and Canada Graduate scholarships
6. Canadian Light Source (\$35 K/year)





## **Liaison Committee with NSERC (Natural Sciences and Engineering Research Council)**

- Initiated by the CAP, because of the **Reallocation Exercise** (every four year, 10% of each committee's budget taken away and redistributed based on the quality of plans to spend the Money)
- For Physics: 1<sup>st</sup> exercise, disastrous; 2<sup>nd</sup>, good; 3<sup>rd</sup>, excellent
- In its current form, the exercise has run its course  
(divisive, stressful)

It is being rethought!







## Challenges

1.- NSERC provides the bulk of operating grants for Research.

It is under stress because of:

- New applicants: in physics nearly a third of all applicants (including senior Canada Research chairs)
- New equipment (CFI) : increased operating costs for a larger infrastructure

NSERC's budget needs to be doubled by 2010.

N.B. Average NSERC operating grant \$32 K/ year ,  
in physics \$43K/y (condensed matter \$49.2K/y)





## Challenges (cont'd)

- 2.- The Canadian Neutron Facility not yet funded: political issues + not easy to sell to the public plans for a new Nuclear Reactor
- 3.- Increased emphasis on research in universities (Federal spending, matched by provinces)  
**but** no new money for teaching resources  
(Canada Research Chairs teach little or not all)
- 4.- Issue of Government labs: fundamental research shifted to universities, but there is a role for labs dedicated to research (now, main mission: creating new companies)





## Practice of the Profession

- Every province has an Engineering Act regulating the profession: Engineering encompasses all human activities involving science and engineering, with exemption clauses for natural scientists.
- A constant vigilance is required:  
The New Act in British Columbia maintains the exemption clause but adds the requirement of membership in a Canadian learned society (!! e.g. CAP).
- New buzzword: "inclusion" (technologists, ...)







## Professional Physicist (P.Phys. <sup>®</sup>, phys. <sup>®</sup>)

A means to protect in the long term the practice of the  
profession in Canada

- A registered trademark
- A certification process (code of ethics)
- 169 licensees





## Physics Education

- Current main goal: Revitalization of the undergraduate physics programs to ensure healthy enrolments (through a national plan of renewal of the curriculums)
- + a set of ongoing outreach activities (Careers web site, lecture tours, prize exams, Undergraduate Physics Conf., high school teachers workshops)





## The annual CAP Congress

- Is gaining in popularity and impact  
2002, Quebec City, 1000 attendees  
(with Photonics North)
- 2003, Prince Edward Island, 500
- In June 2004, in Winnipeg,  
jointly with four societies: CAP,  
astronomers (CASCA), medical  
physicists (COMP), biophysicists (BSC)
- 100<sup>th</sup> anniversary of the University of Manitoba



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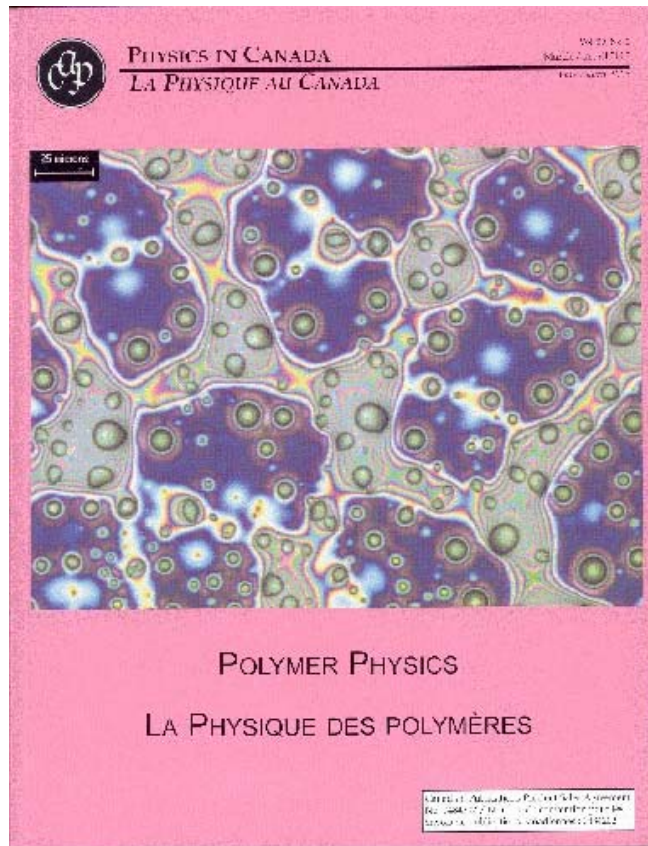


# Physics in Canada

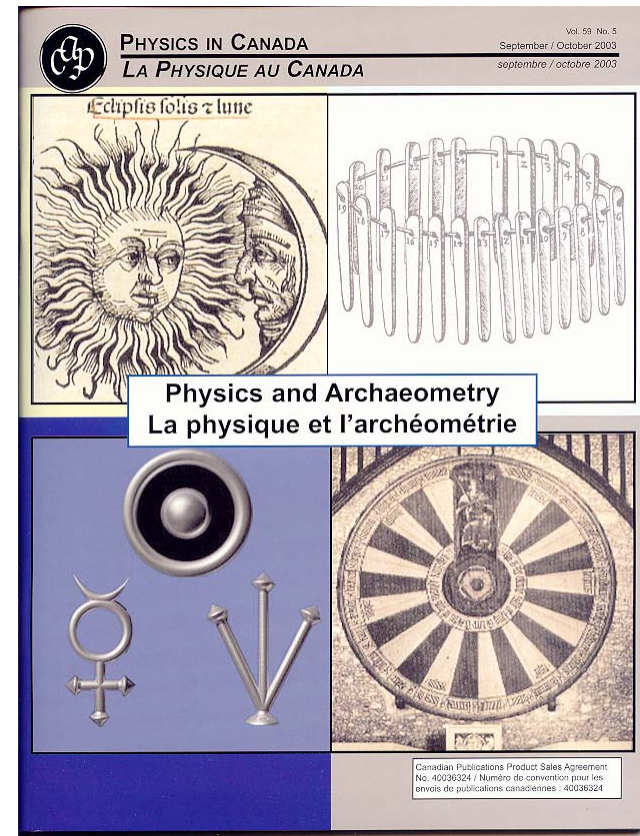
(a bi-monthly publication)

Special issues, twice a year. The last two:

March/April 2003



Sept/Oct 2003



In 2004: Biophysics and Quantum Optics





During the last decade, CAP's relevance to the Canadian Physics community has greatly increased!

## Cooperation with the APS

- We are small: 2 staff and 1600 members
- Appreciate cooperation we are receiving from APS  
(CAM03, World Year of Physics 2005)
- Pleased that the 2004 March Meeting is being held in Montreal

