

NSERC SAP GSC 2004 Competition Report

Dean Karlen

University of Victoria & TRIUMF

IPP 2004 AGM / DNP CAP meeting

Winnipeg, June 2004

GSC 19 membership

- GSC-19 (2003-2004): 11 members

Name	Institution	End of Term	Expertise
Louis Lessard	Université de Montréal	2004	Experimental Astrophysics
Nigel Lockyer	Pennsylvania University	2004	Experimental HEP
Dean Karlen - Chair	University of Victoria	2004	Experimental HEP
Brad Sherrill	Michigan State Univ.	2004	Experimental IEP
Marcela Carena	Fermilab	2005	Theoretical HEP
Noemie Koller	Rutgers University	2005	Experimental NP
Richard Van Kooten	Indiana University	2005	Experimental HEP
Malcolm Butler	Saint Mary's University	2005	Theoretical NP/IEP
Edward Brash	University of Regina	2005	Experimental IEP
David Sinclair	Carleton University	2006	Experimental NP
David Smith	Centre d'Études Nucléaires de Bordeaux-Gradignan	2006	Experimental HEP/Astroparticles

2004 Competition

- Site visits:
 - West Coast (UVic, TRIUMF, UBC, SFU)
 - Next year: Eastern Canada
- External reviews:
 - TIGRESS (removed conditions)
 - ATLAS (completion and installation request)
 - SNO
 - Astroparticle + neutrino combined
 - TWIST (progress)

2004 competition budget

- As known during competition week:

	FY2002	FY2003	FY2004
Base envelope	20,940	21,170	21,515
Carry forward	-50	799	764
Other increments*	250	768	371
RTI/SRO taxes*	0	-732	-225
Overall envelope	21,140	22,005	22,425
Funds already committed	-7,352	-12,539	-13,214
Total funds available	13,788	9,466	9,211
Number of grant requests	80	63	64
Total requested	17,475	15,108	15,589
Total awarded	12,989	8,701	
Balance	799	764	

FY2004 may appear similar to FY2003, but in fact FY2004 had much less flexibility ...

2004 Competition budget

- Ongoing operations needs can be estimated from past awards of returning applications

		2003	2004	2005
A	Overall envelope	22,005	22,425	22,066
B	Continuing grants	12,539	13,214	5,958 + b
C	Operating renewal from previous year	5,512	7,841	7,494 + c
D	Estimated discretionary funds (A-B-C)	3,954	1,370	- 592*
	New and increased operating requests	9,596	7,748	?

* worst case scenario

Significant pressure to keep operational expenses in control for the 2004 competition and to reserve some funds for the 2005 competition.

2004 Competition

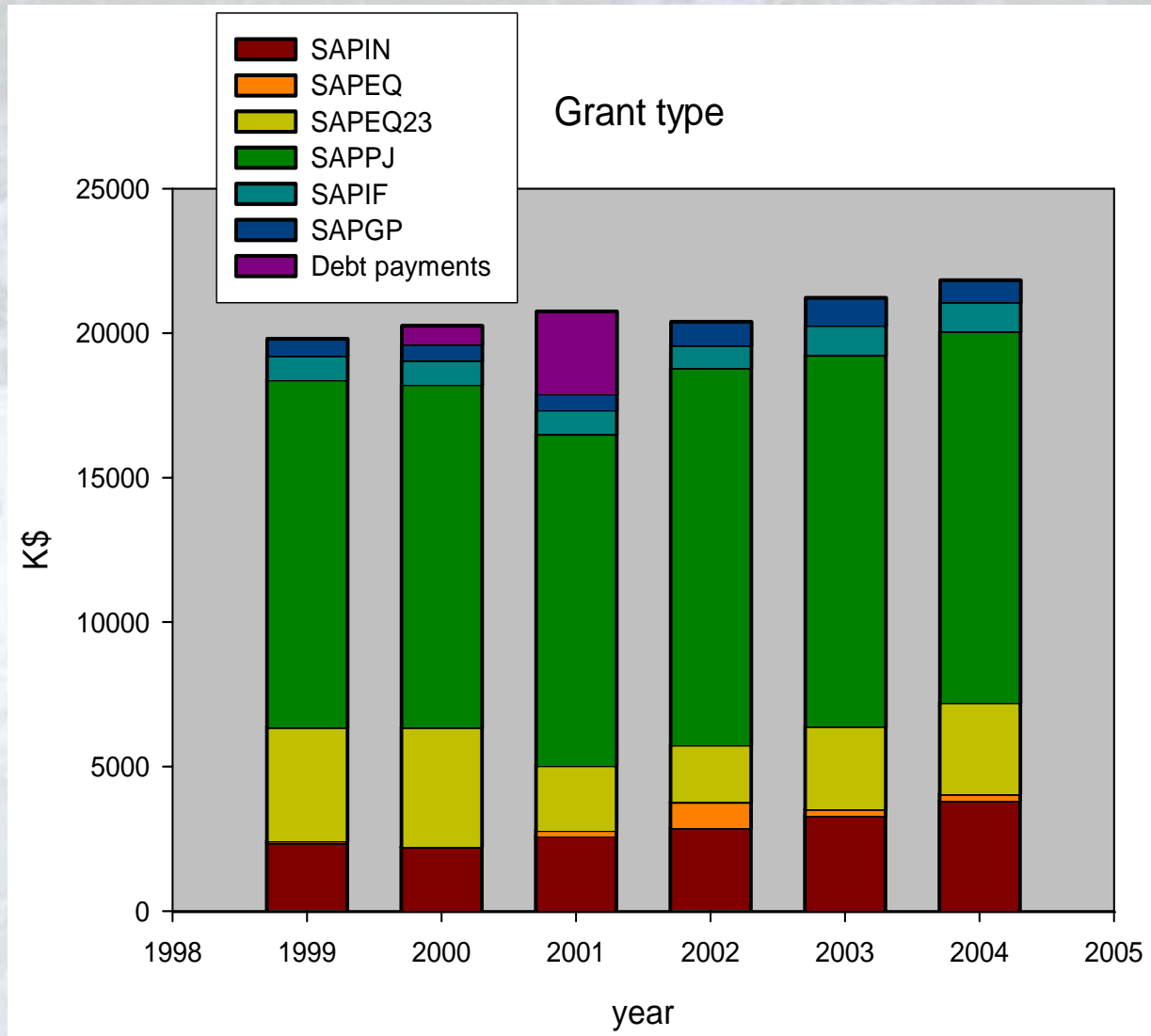
- Committee was made aware of the very difficult budget constraints before competition week...
- Round 1: committee decided to be very strict, so that we could come close to being on budget
 - after round 1, budget was overspent by only \$52K!
 - estimated FY2005 “discretionary” funds: $-\$0.5\text{M}$
 - significant reductions were needed
- Round 2: awards reduced by $\$0.7\text{M}$
 - estimated FY2005 “discretionary” funds: $+\$0.7\text{M}$
- Round 3: minor changes

Summary of awards

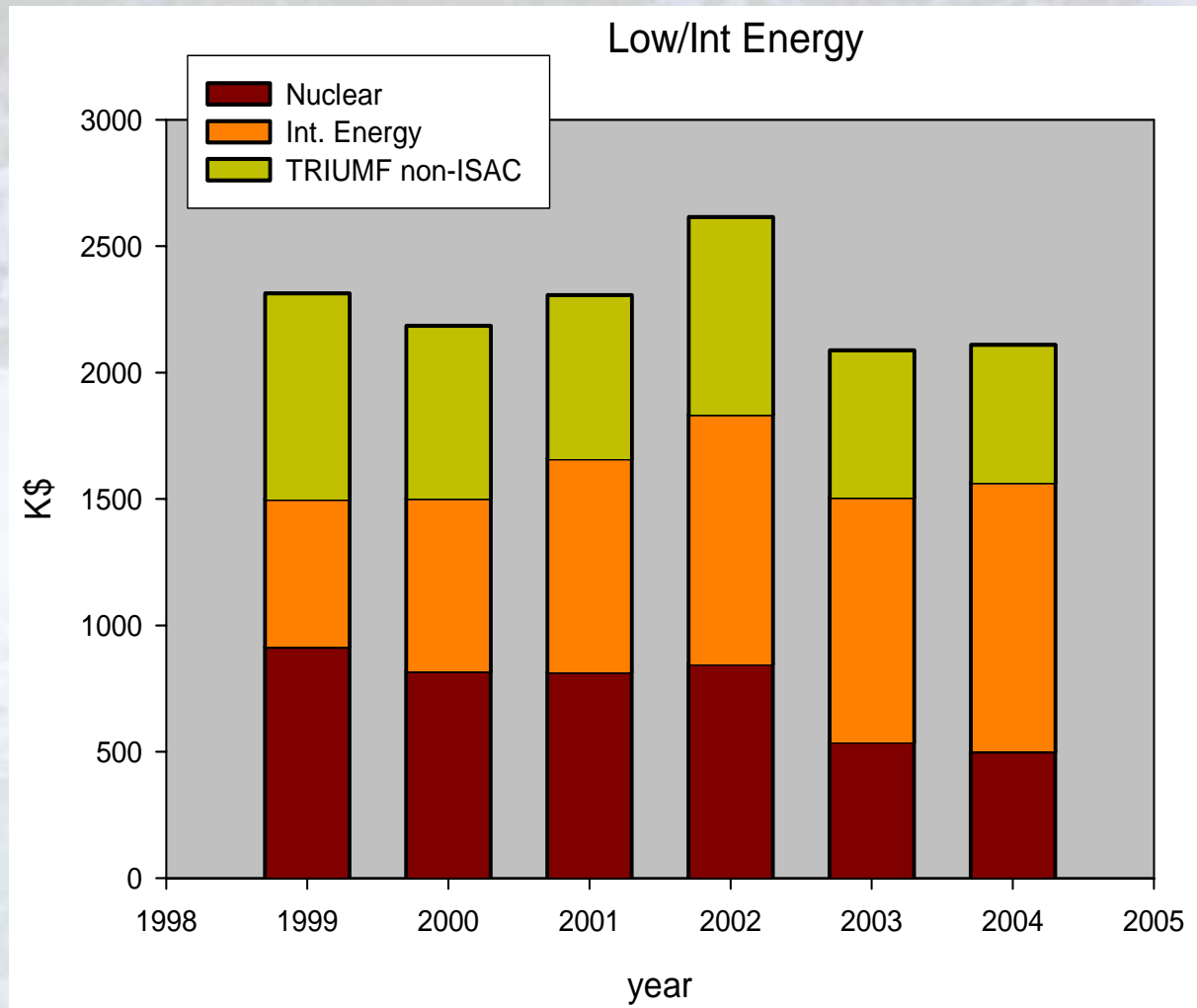
- One quarter of applications were not funded:

Type	number of requests	requested amount (k\$)	number of awards	awarded amount (k\$)
Individual	28	2,044	22	1,068
Group/Project	20	10,353	18	7,079
MFA	3	410	2	240
Equipment	13	2,782	6	236
Total	64	15,589	48	8,623

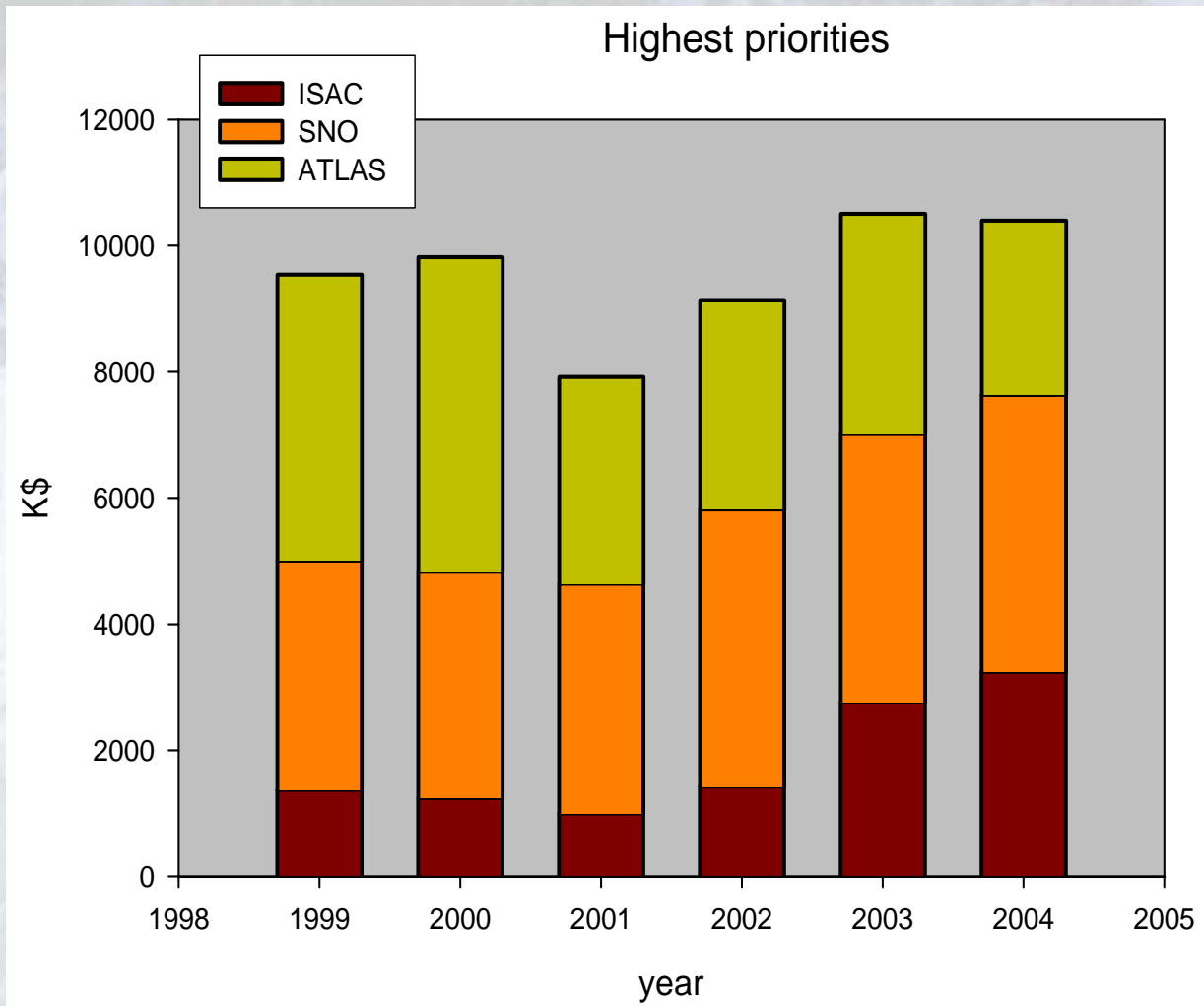
Evolution of SAP awards



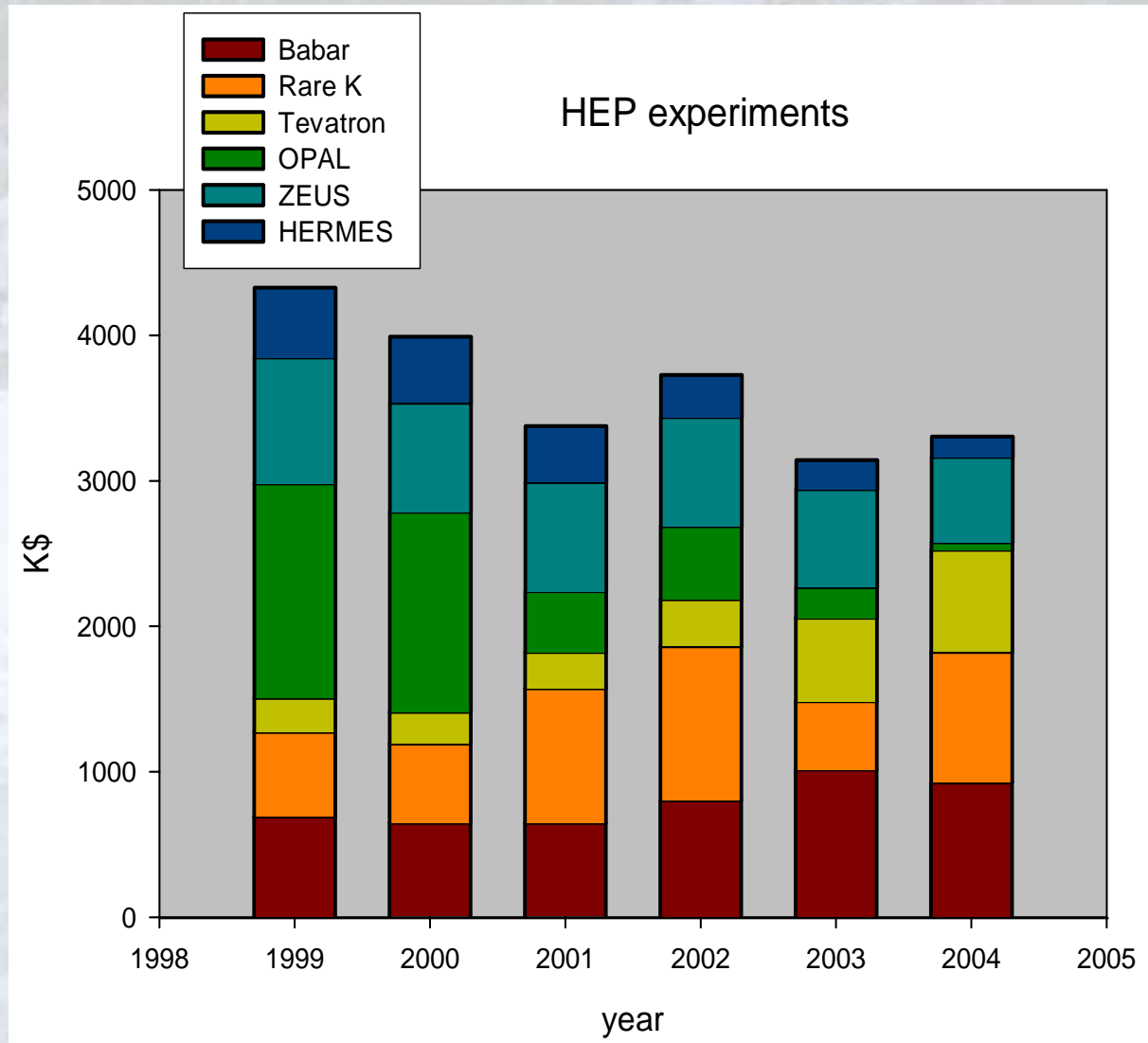
Evolution of SAP awards



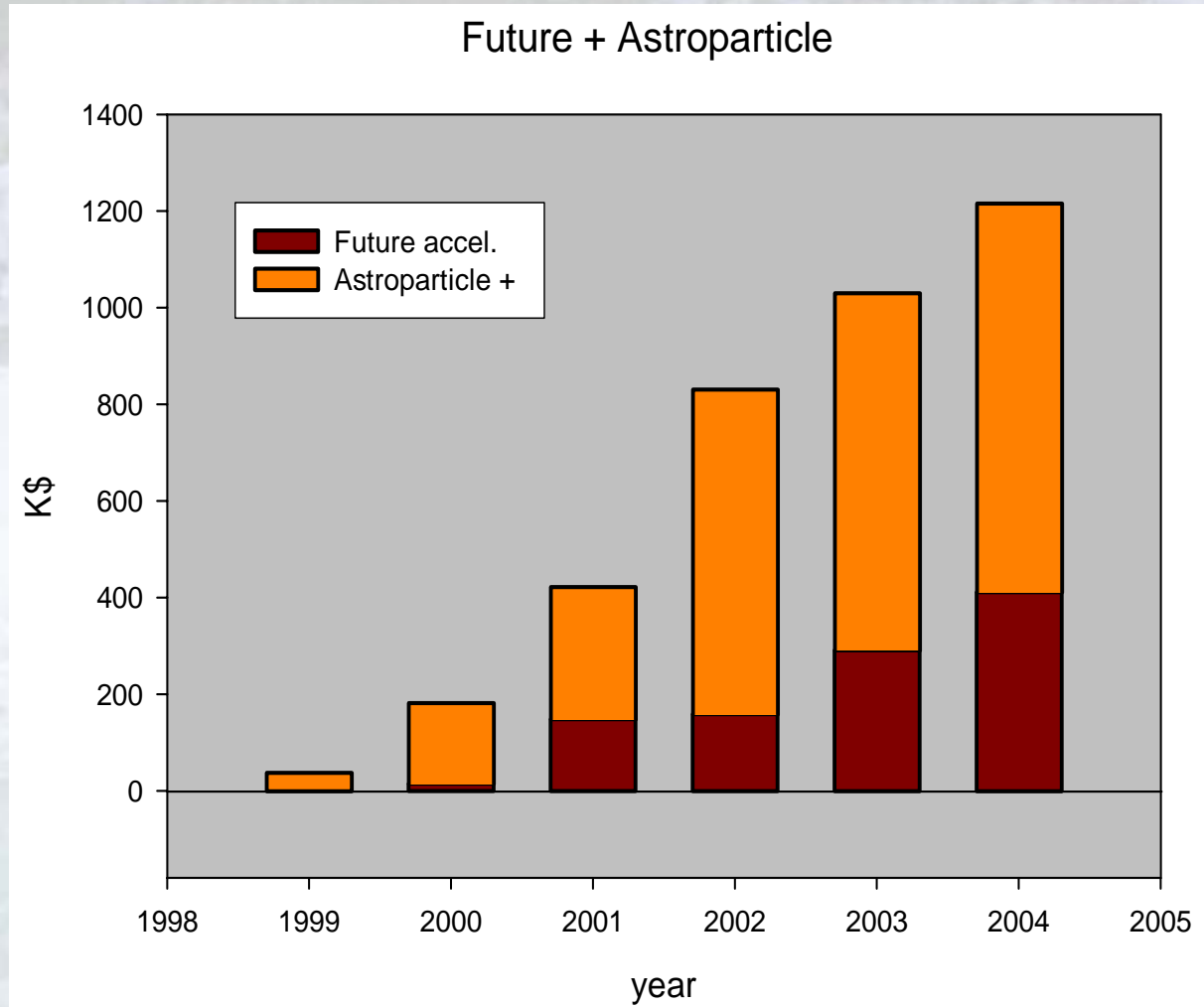
Evolution of SAP awards



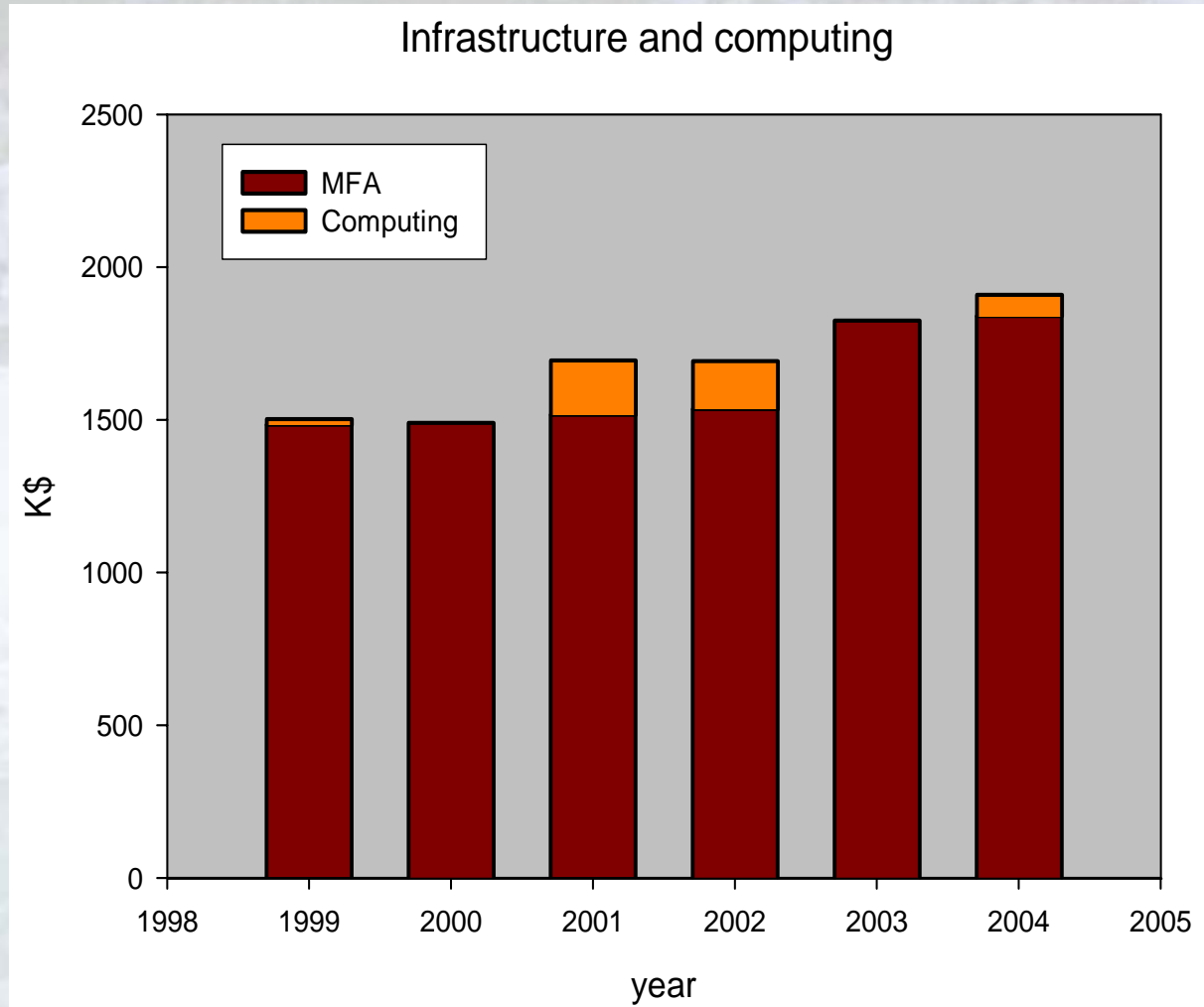
Evolution of SAP awards



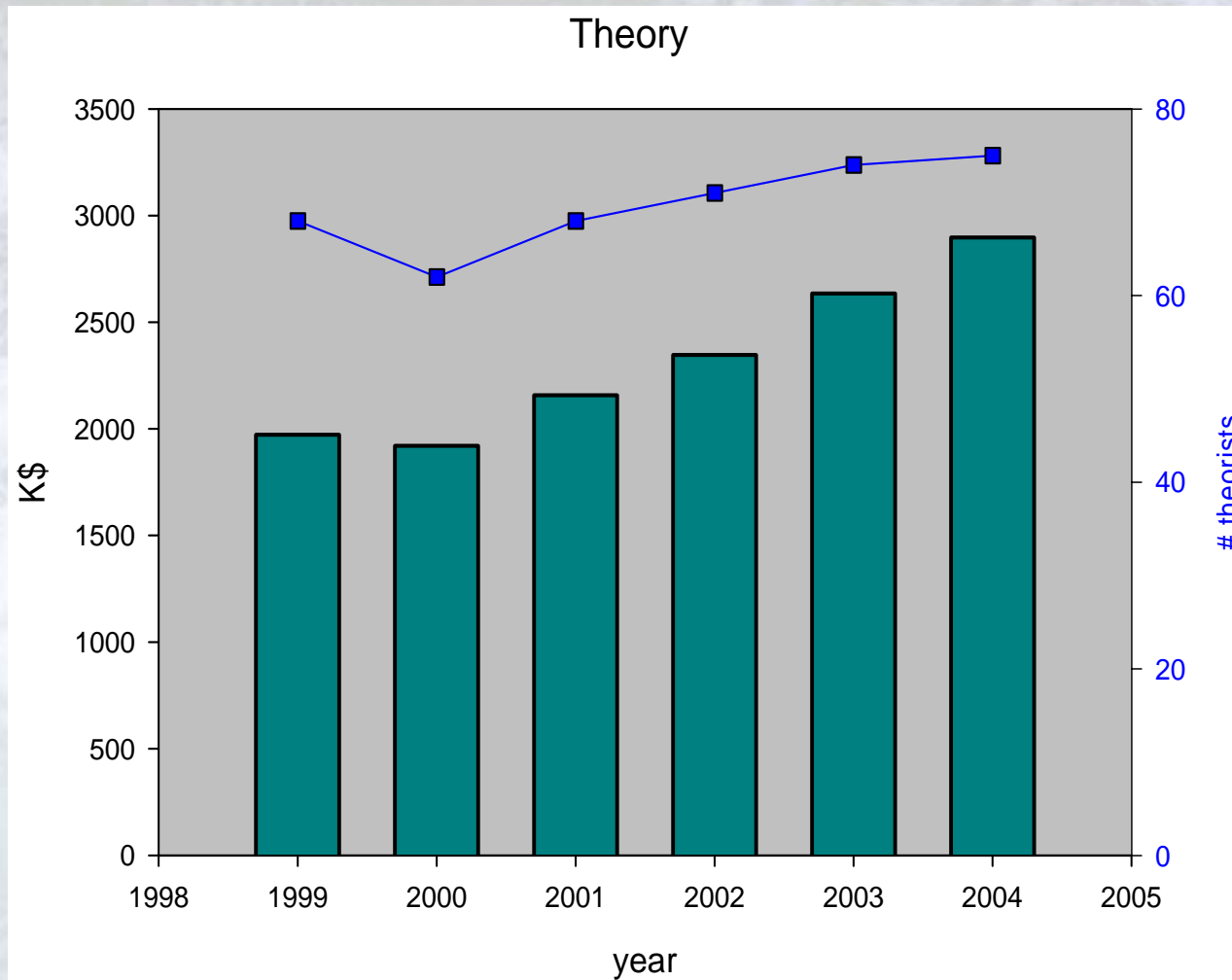
Evolution of SAP awards



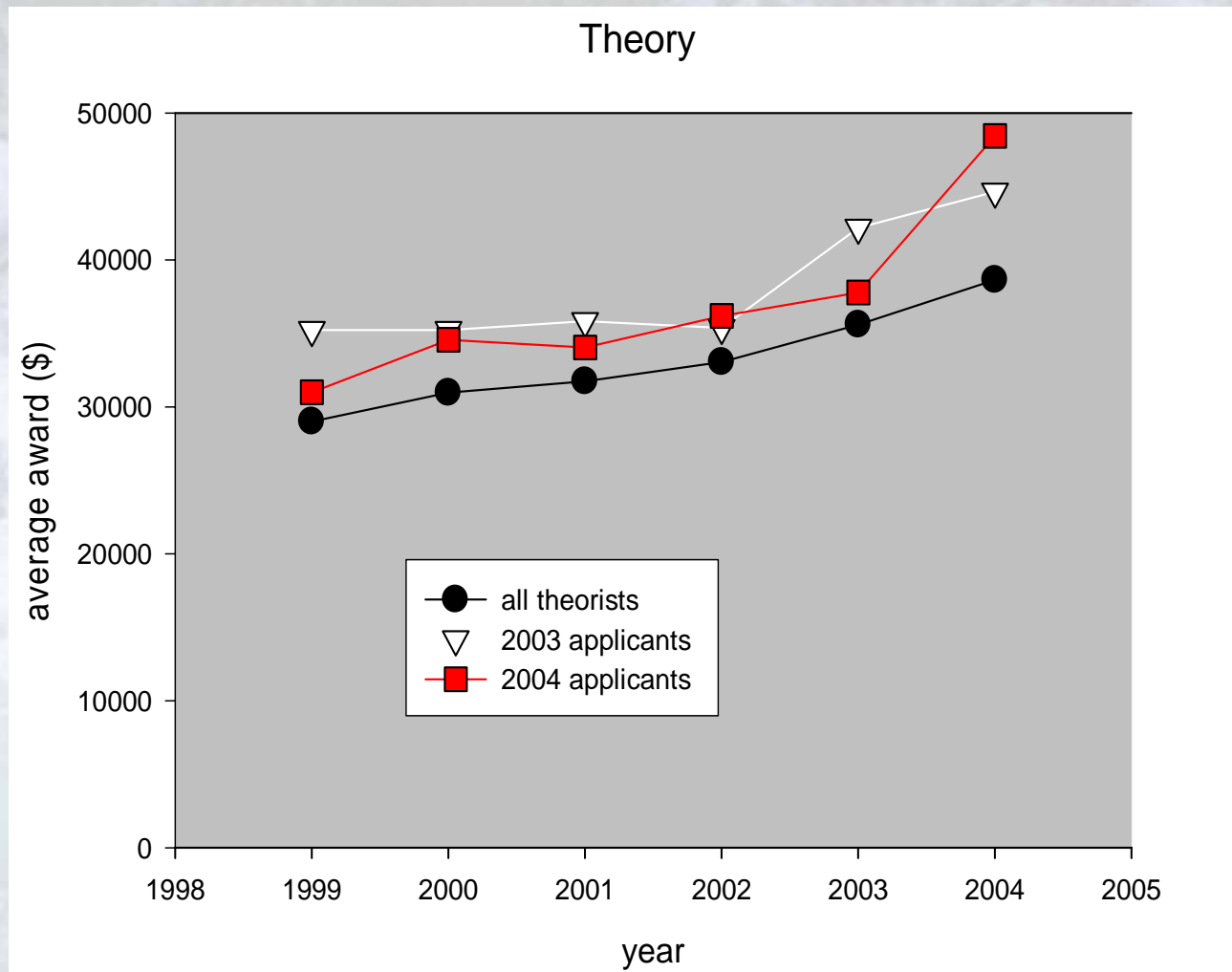
Evolution of SAP awards



Evolution of SAP awards



Evolution of SAP awards



Reallocation exercise

- Redistribution of funds between the GSC disciplines last took place in 2002.
 - Each discipline contributed 10% of its base budget to reallocation pool.
 - In our case this is less than 10% of envelope
 - Each discipline made proposals for funding from the pool.
 - The reallocations were to be ramped up over 4 yrs.
- Stated intention was to rebalance base budgets (macro-management)
- Outcome of process is directed funding of specific projects within a discipline (micro-management)
 - process is under review

Reallocation and SAP

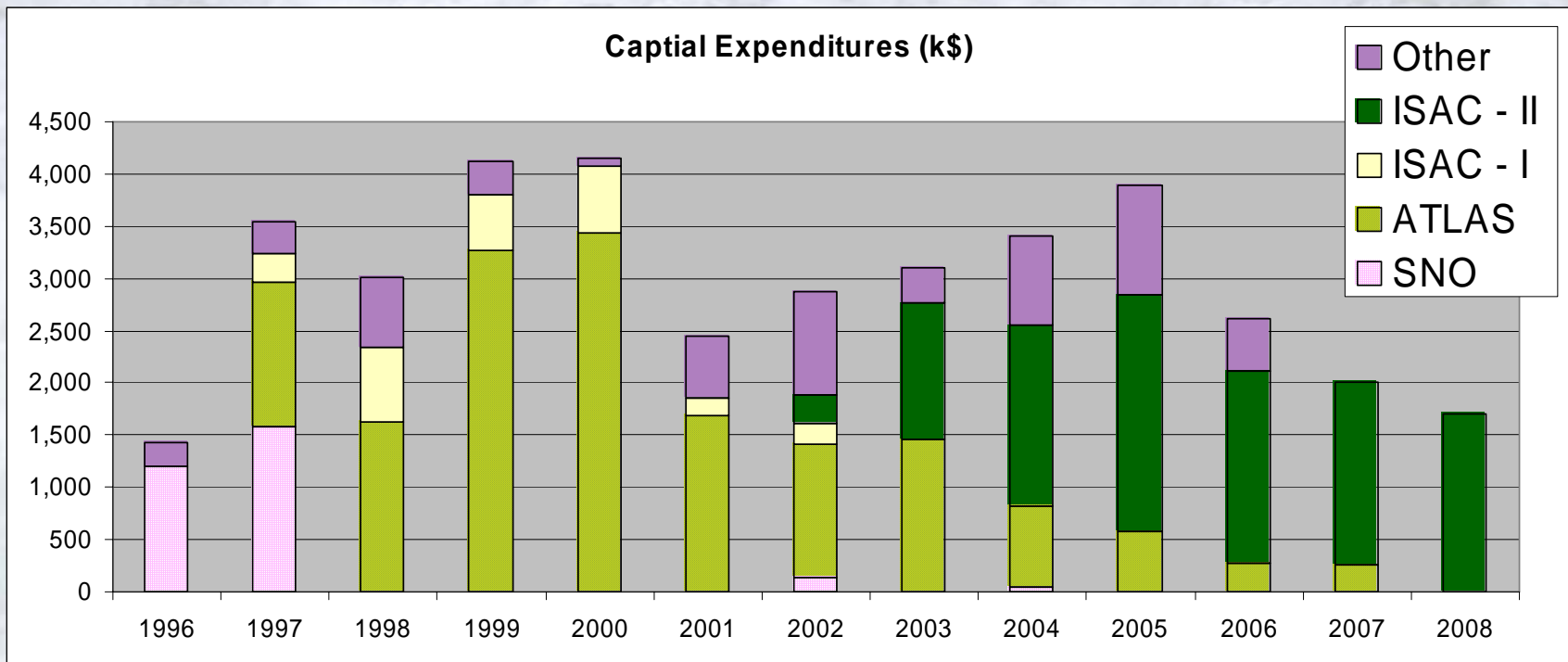
- SAP did well: \$1,384,555 contributed with \$1,845,000 returned in funded proposals:

Proposals	Request	Award	Tax	Δ2003	Δ2004
Balanced program	1,384	0	-1,384	-346	-260
Highest priority projects					
ISAC	325	175	-83	+23	+17
SNO	245	130	-266	-34	-24
ATLAS	360	190	-304	-29	-21
Particle astrophysics	330	175	-16	+40	+30
Theory and new applicants	430	920	-150	+193	+144
Advanced technology development	480	255	-6	+62	+47

Awards in FY2003,4 consistent with reallocation & SAP 5YP

Prognosis for FY2005 and beyond

- Capital commitments from previous GSCs have put pressure on FY2004 and FY2005 competitions



managed by
borrowing

managed by
saving

FY2005 Budget Estimates

- Updated after competition:
\$269K added to FY2004 budget (equipment amounts)

	FY2002	FY2003	FY2004	FY2005
Base envelope	20,940	21,170	21,515	21,886
Carry forward	-50	799	764	856
Other increments*	250	768	551	316
RTI/SRO taxes*	0	-732	-137	-137
Overall envelope	21,140	22,005	22,693	22,921
Funds already committed	-7,352	-12,539	-13,214	-13,478
Total funds available	13,788	9,466	9,479	9,443
Number of grant requests	80	63	64	
Total requested	17,475	15,108	15,589	
Total awarded	12,989	8,701	8,623	
Balance	799	764	856	

Discretionary funds

- FY2005 competition will be difficult:
 - may need to spend all carry forward amount

		2003	2004	2005	2006
A	Overall envelope	22,005	22,425	22,923	22,203
B	Continuing grants	12,539	13,214	13,478	4,939+b
C	Operating renewal from previous year	5,512	7,841	8,492	6,794+c
D	Estimated discretionary funds (A-B-C)	3,954	1,370	953	1,025*
	New and increased operating requests	9,596	7,748	?	?

* worst case scenario

- with some projects ramping down, discretionary funds will be increased by a few \$100K
- FY2006 should be easier

Upcoming demands on SAP GSC

- A number of very large requests expected in the next few years will exceed available capital:
 - SNO decommissioning
 - SNOLAB experiments
 - T2K long baseline neutrino program
 - EMMA recoil spectrometer for ISAC-II
- New capital expenditures must wait for FY2006?
- Direction from the next NSERC SAP 5YP will be important input for future GSCs
- Additional sources of funding (CFI, international partners) should be explored by applicants.

Summary

- SAP research in Canada continues to be dynamic and of a very high standard.
- The SAP envelope is under increasing pressure. Further increases, through the federal budgets and reallocation, will be essential.
- Details can be found in the GSC chair's report on the IPP web site:

<http://www.ipp.ca>