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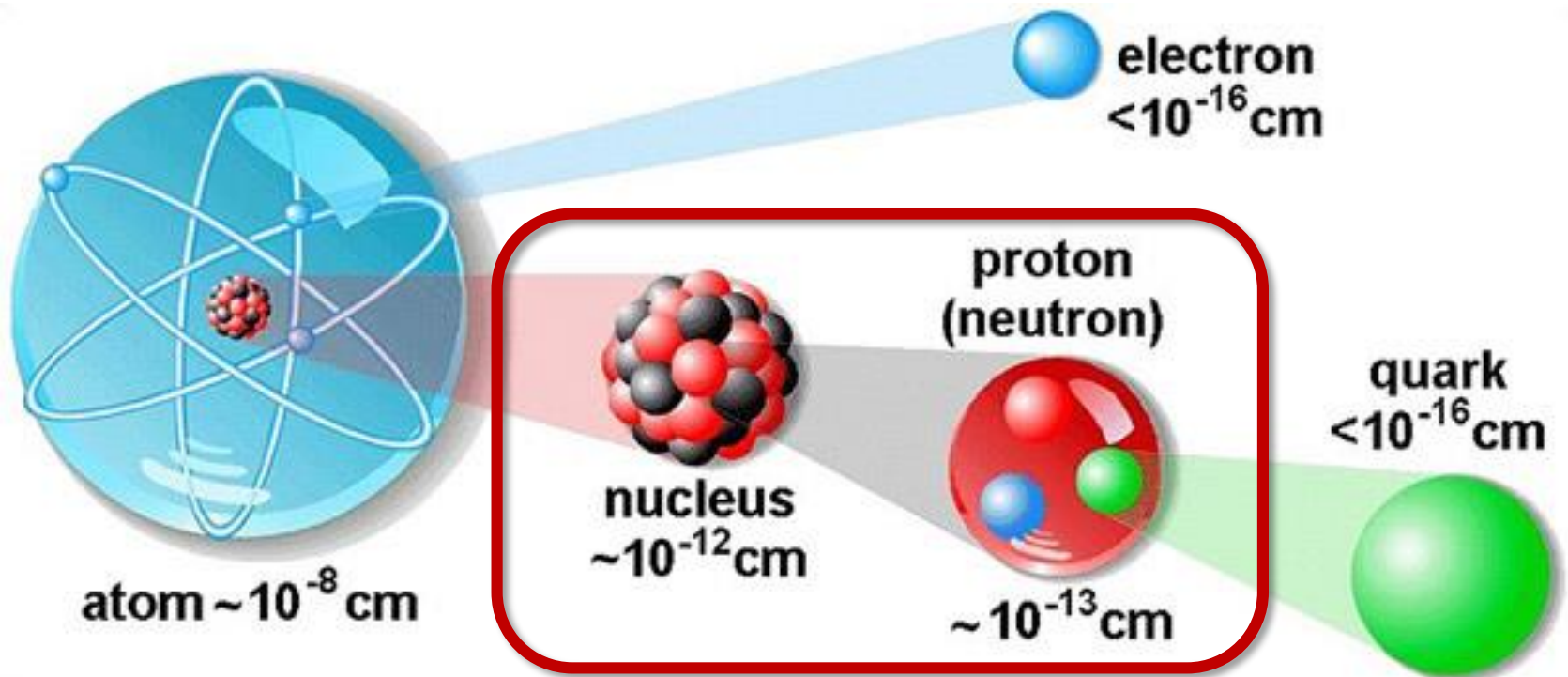
Division of Nuclear Physics

Karin Schönning
Department of Physics and Astronomy
KoF2017 meeting
May 11th, Uppsala, Sweden



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Nuclear physics





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Nuclear Physics

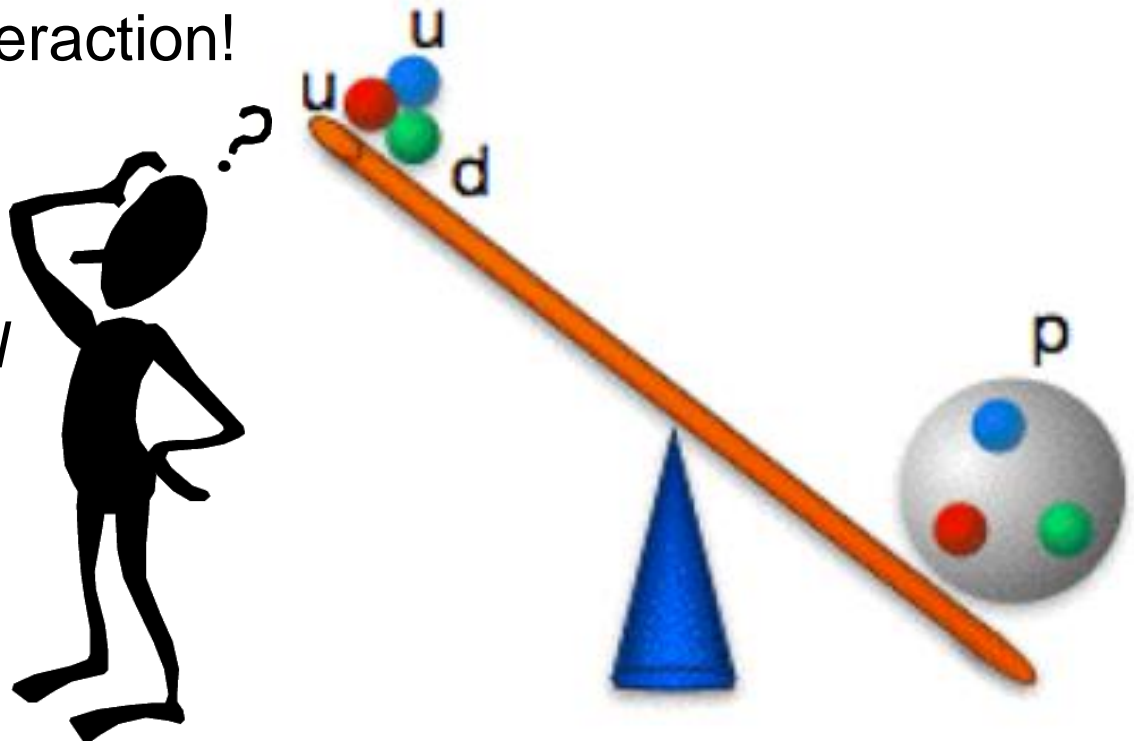
Q: - What is the origin of 99% of the visible mass of the Universe?

A: - From the strong interaction!

Q: - But how?

One of the fundamental questions of nuclear physics.

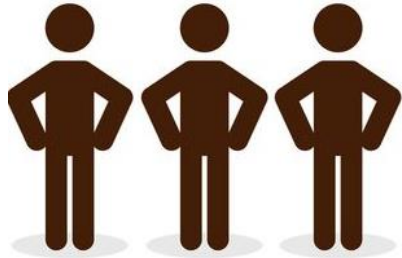
“We’re the 99%!”





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Our division



3 professors

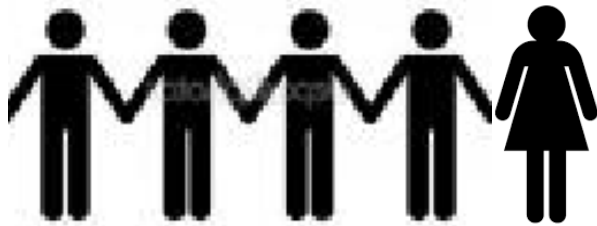
1 senior lecturer



1 assistant senior
lecturer



1 senior research engineer



5 researchers

8 PhD students,
2 guest PhD students

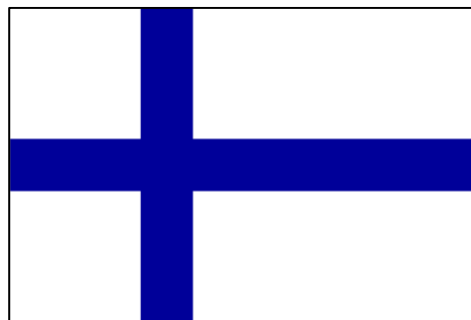
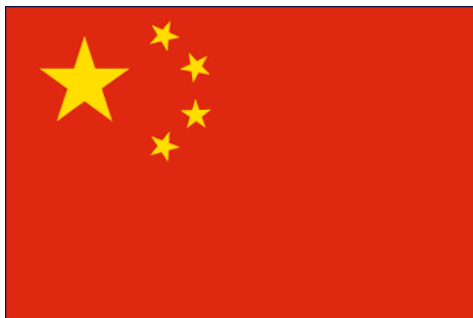


Coming: 1 post doc, 3 PhD students, 1 engineer



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Our division





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Leadership and internal communication

- Division head = program professor.
- Division head link between division and department head.
- Regular meetings with division board.
- Weekly meetings for staff and students.
- Research activities organised in subgroups led by other senior faculty.





Link division ↔ faculty of science

- Physics dean from NP (division head).
- Regular faculty colloquia.
- Regular newsletters from faculty.
- 2 out of 6 members of the physics electors from NP.
- The physics electors:
 - represent physics in the faculty electors' council
 - meet other electors once per month
 - take part in electing representatives in different university committees and boards
 - discuss faculty matters at small meetings and with other colleagues.





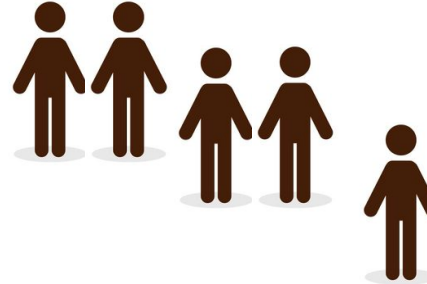
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Research organisation

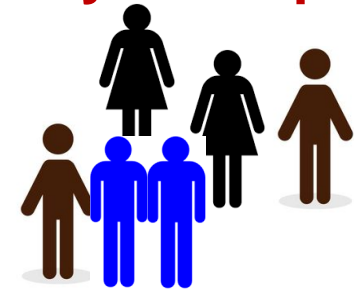
Nuclear Structure



Meson decays



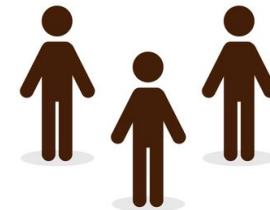
Hyperon physics



Hadron theory



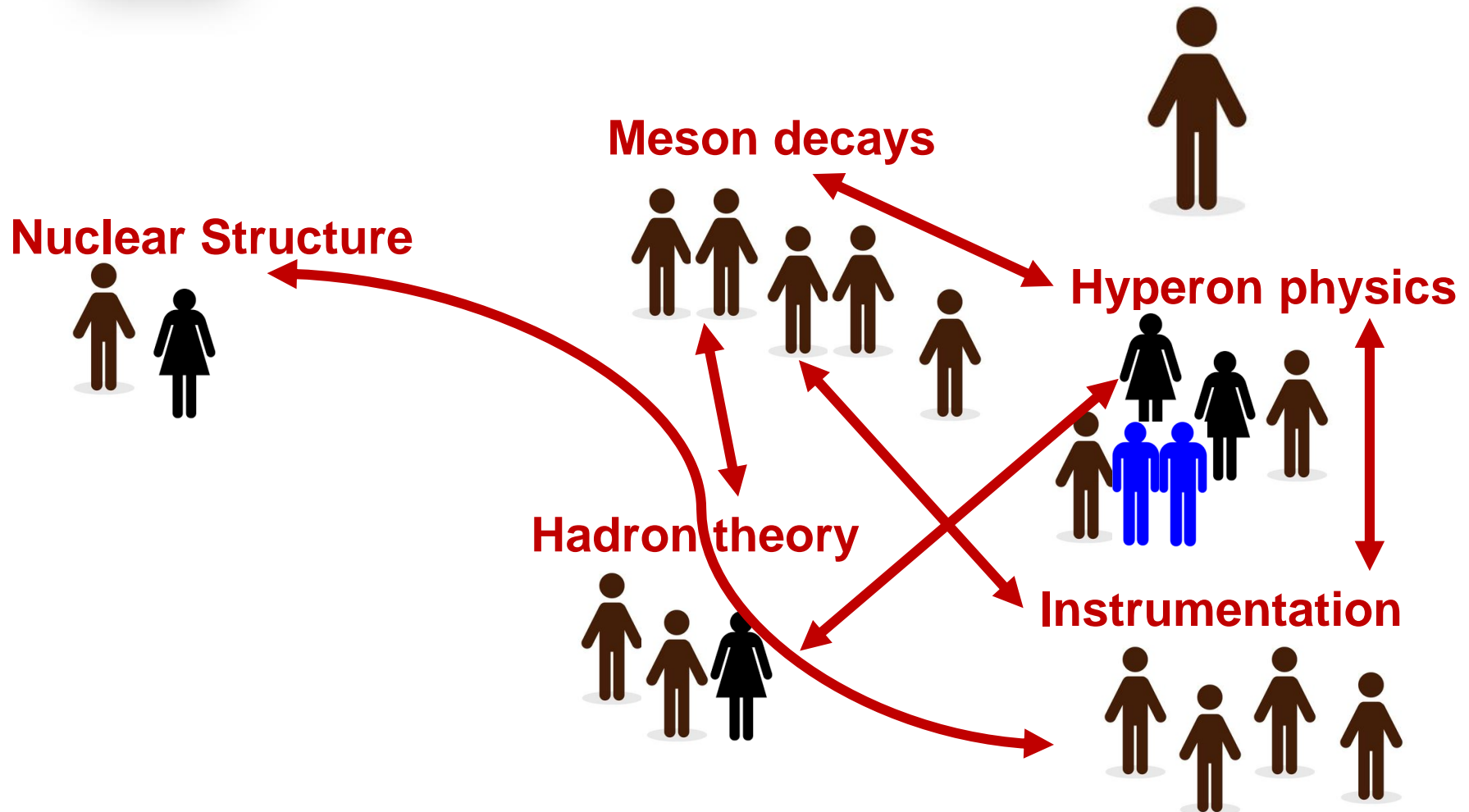
Instrumentation



All senior faculty / researchers lead or co-lead a project.



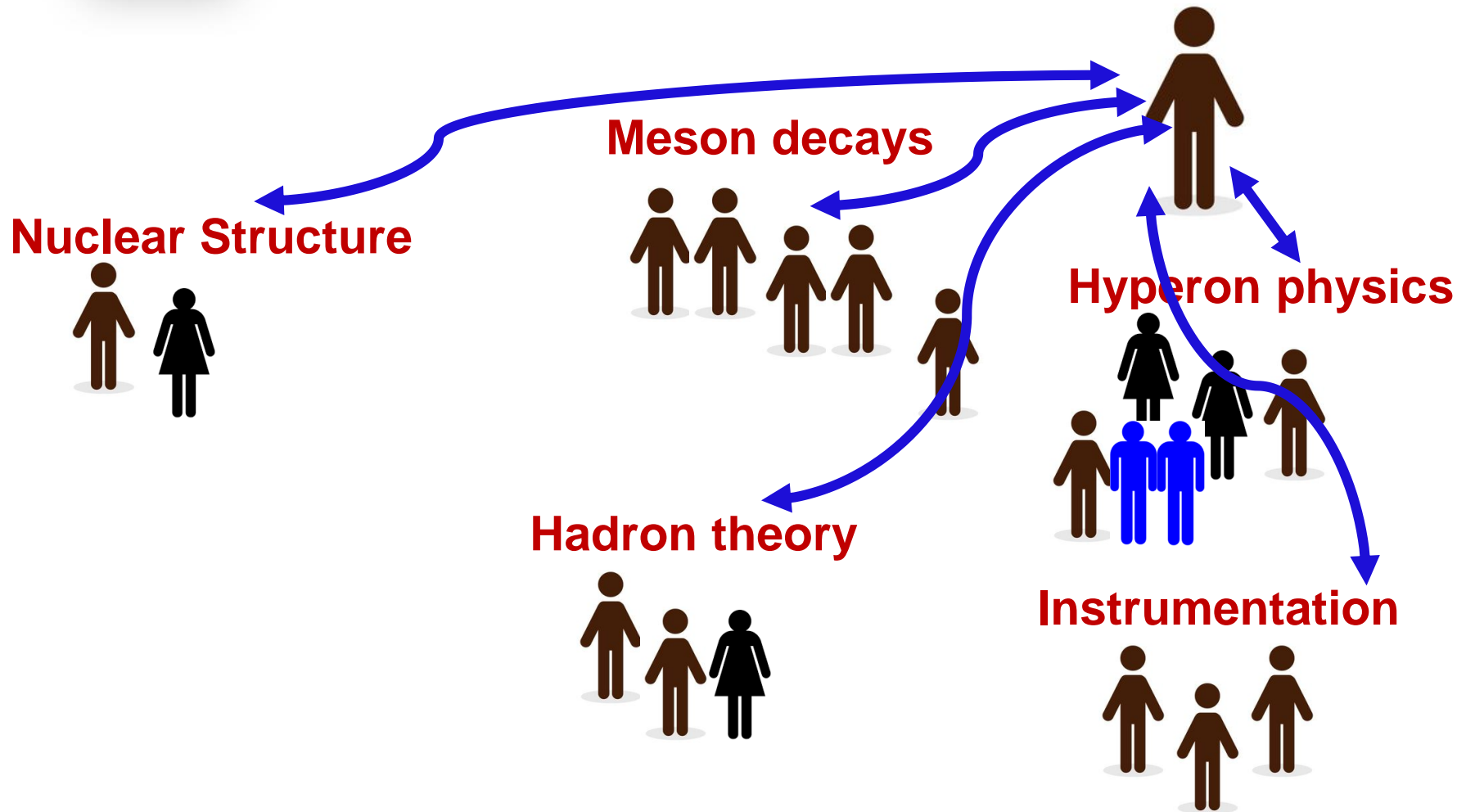
Research organisation



A lot of fruitful interplay between the sub-groups...



Research organisation



...and active but "horizontal" interplay with division head



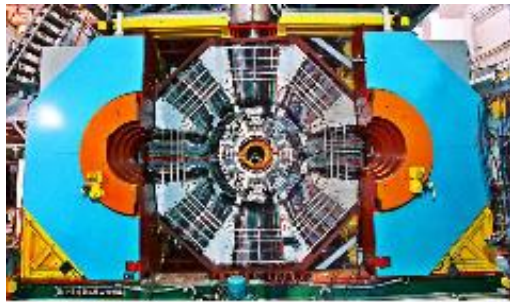
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Facilities



Present

AGATA

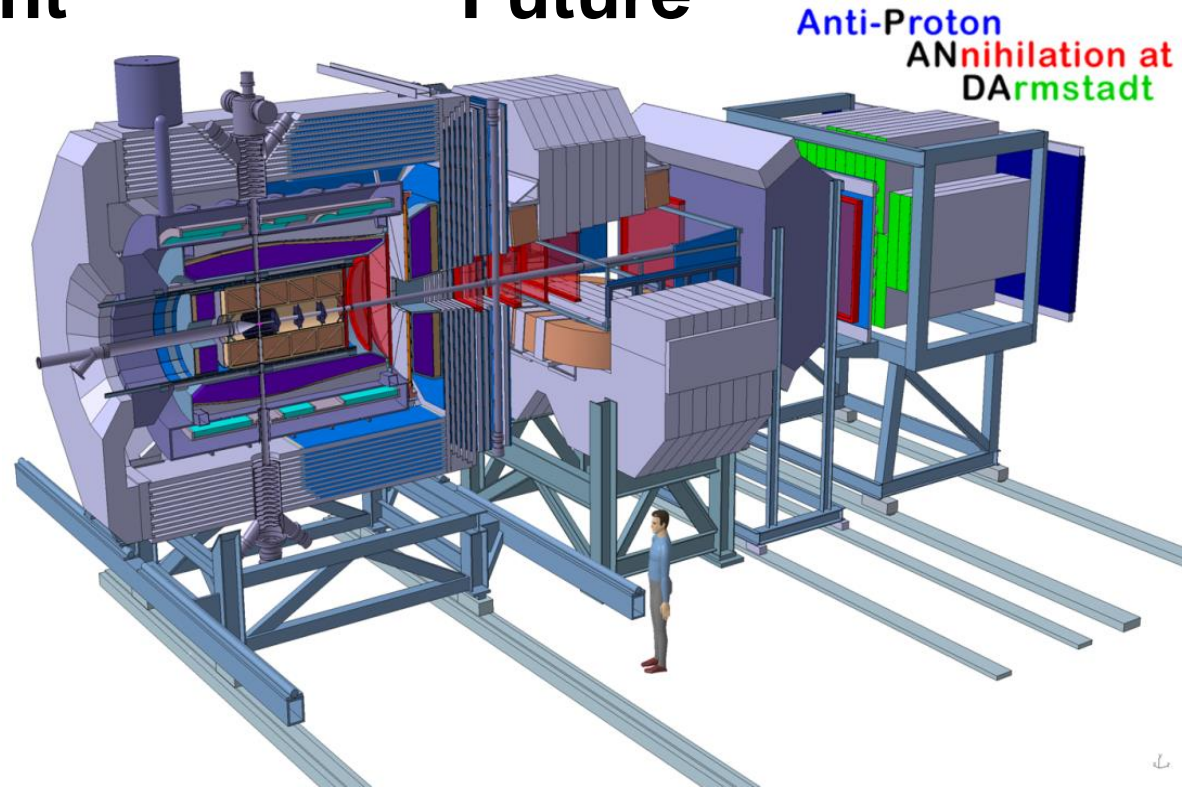


BES III in Beijing



KLOE2 in Frascati

Future



PANDA @ FAIR, Germany

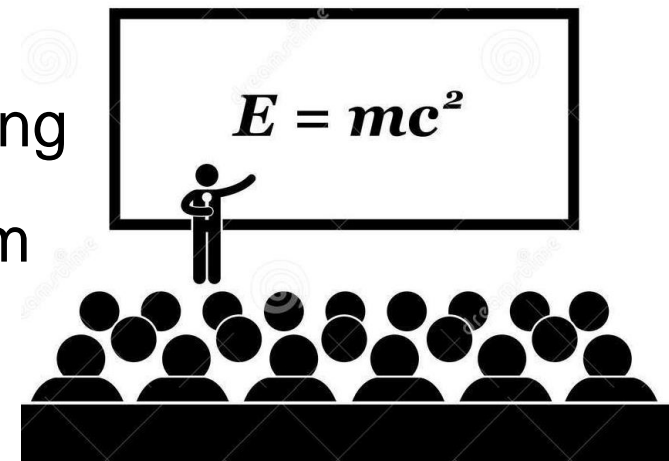


Finances: costs

Expenses 2016 [MSEK]

Personnel	Research	Premises	Total
10.3 (58%)	6.2 (35%)	1.2 (7%)	17.7

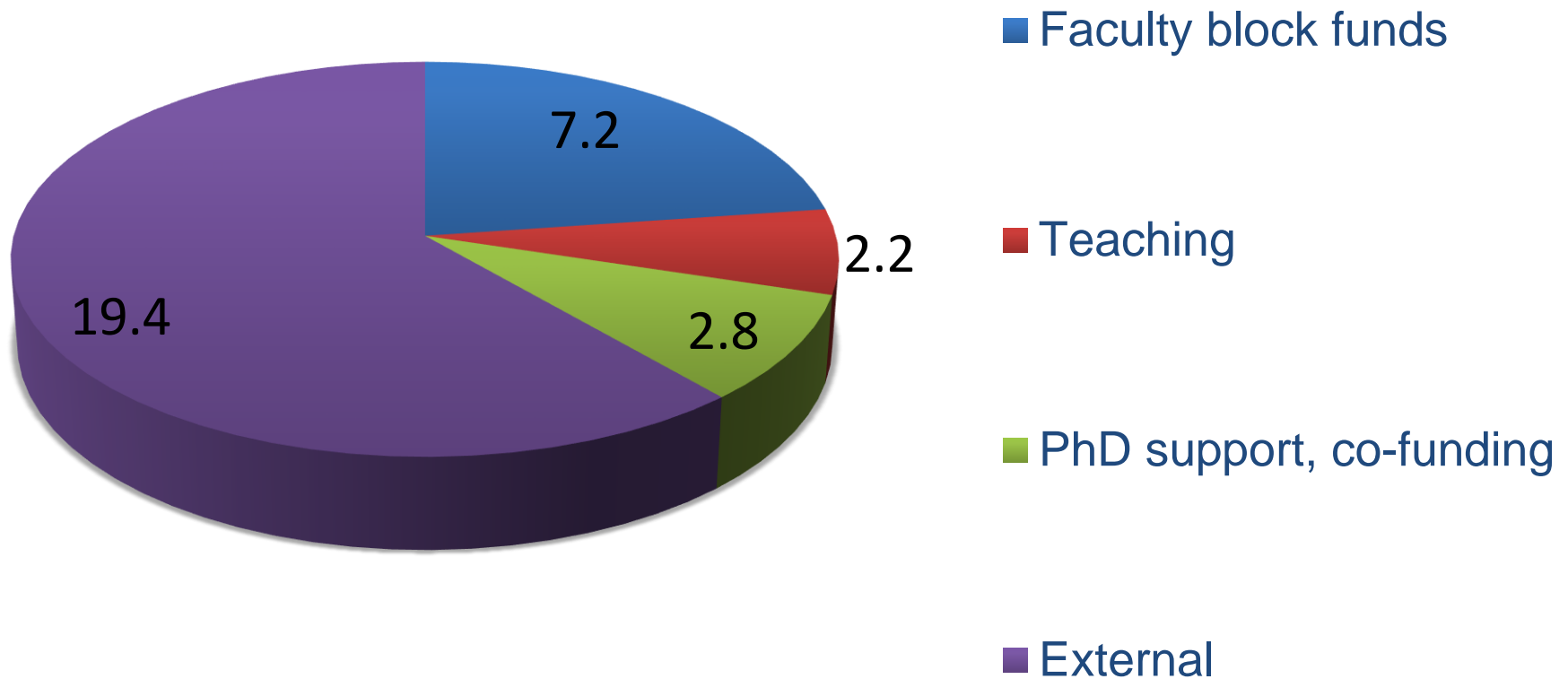
- Most senior faculty funded by faculty funding (teaching + research)
 - Teaching varies: 10%-25%
 - 2.5 researchers on external funding
- 6 PhD students faculty grants, 2 from external funding
 - Teaching ~10%





Finances: sources

MSEK during 2017





Finances: problems

Swedish funding system:

- “Strategic funding” from government rarely directed to basic / curiosity driven research.
- External funding crucial
 - lack of continuity.
 - time scale of funding periods < time scale of research projects / commitments
- Writing applications very time consuming.
- Bibliometry a poor tool to evaluate Big Science.





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Finances: possibilities



- Increase efforts to obtain ERC grants
- Awareness at governmental/university level



Issues

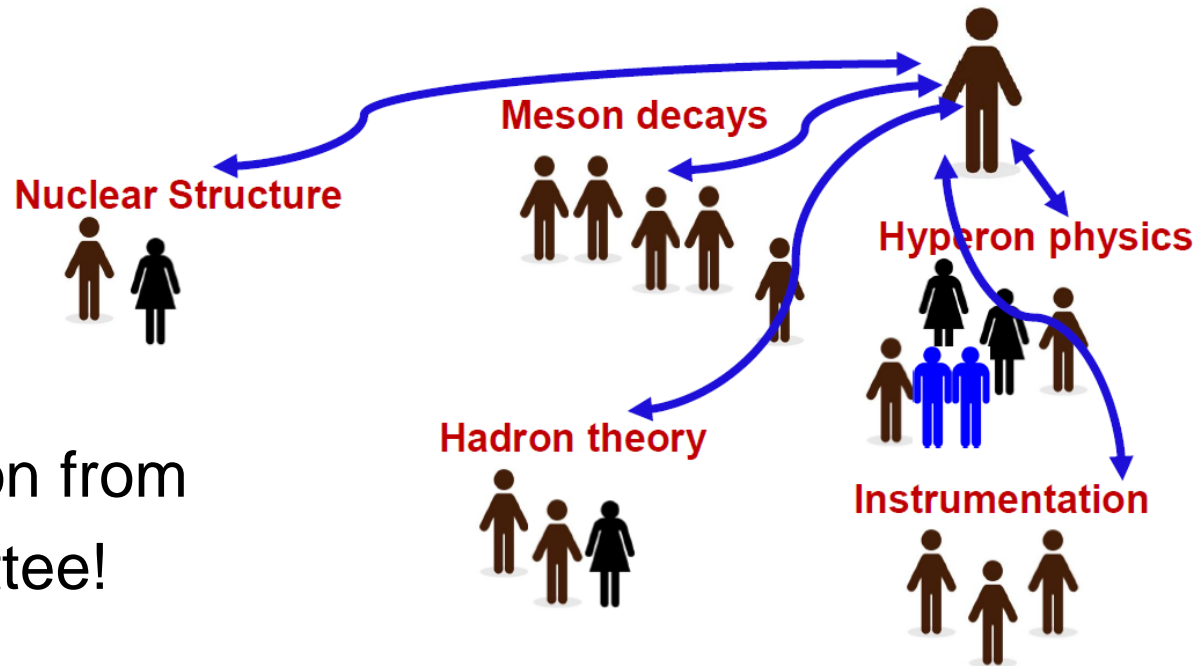
- Too much centralization of support
 - IT service.
 - Administrative routines cause a lot of work.
 - Procured products and services do not meet acceptable standards.
- Better integration between divisions
 - Regular colloquia.
 - Meetings about department issues.
 - Support structure for junior faculty
- Improve gender equality
 - Recruitment.
 - Awareness.
 - Summer school.





Future

- Retirement of program professor 2018.
- The present structure of the division has been successful
 - Largest hadron physics group in Sweden
 - Important to keep the professorship in hadron physics
 - Also conclusion from expert committee!





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Thanks for your attention!



Backup: finances of activities

Activity	Location	Funding source	Status
Nuclear Structure	GSI, GANIL, INFN	UU VR RFI	Running
Hadron theory	UU	UU	Ongoing
KLOE-2	Frascati	UU EC	Running
BES III	IHEP Beijing	UU VR EC WAF	Running
PANDA	FAIR	Faculty funds (UU) VR VR RFI WAF	Under construction

Finances: sources

- **Faculty funds (UU):**
 - 10.5 MSEK/y research 2016
 - 2.2 MSEK/y teaching (5.5 jointly with HEP) 2016
- **The Swedish Research Council (VR)**
 - 0.7 MSEK/y 2017-2020 project grant
 - 1.1 MSEK/y 2014-2017 young researcher grant
- **The European Commission (EC)**
 - 0.5 MSEK 2017 BES III
- **Carl Tryggers Stiftelse (CTS)**
 - 0.22 MSEK 2017
- **Wallenberg Academy Fellowship (WAF)**
 - 0.75 MSEK/y from the KAW foundation
 - 0.75 MSEK/y co-financing from UU vice chancellor, faculty and department.
- **The Swedish Research Council, infrastructure (VR RFI)**
 - 26 MSEK 2016-2018 PANDA @ FAIR
 - 1.4 MSEK 2016-2018 NUSTAR @ FAIR

