

# Danish Outreach Activities

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ULAB  
Experimental Subatomic Physics  
EPIC  
Niels Bohr Institute

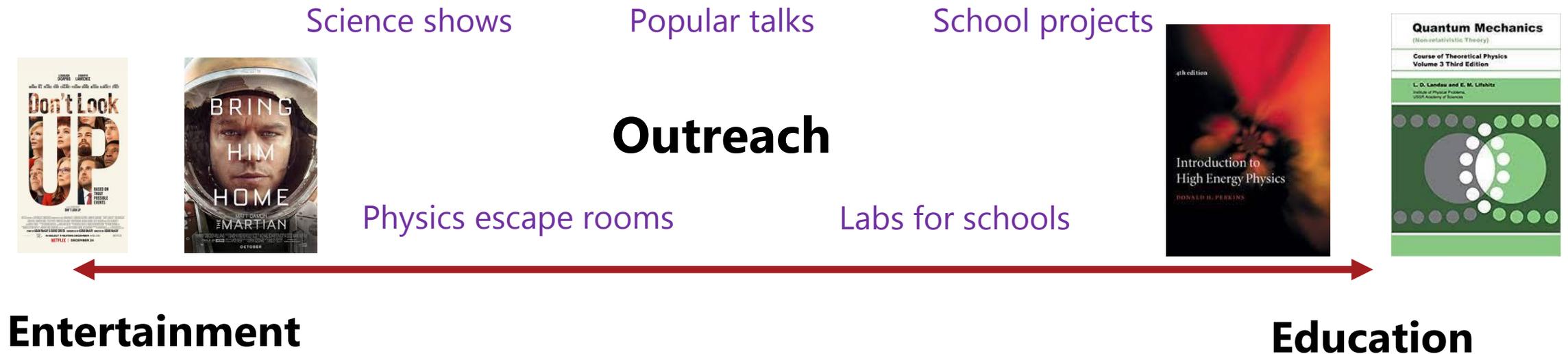


# PLAN

- Activities: how do we try to reach the public?
- Resources: what do we have to do this?
- Dream: what would we like to have?

# First, though,

## What is it?



- Goals:
- spark interest among taxpayers who allow us to do physics
  - build scientific capital in young people
  - share our joy of doing physics with the humans

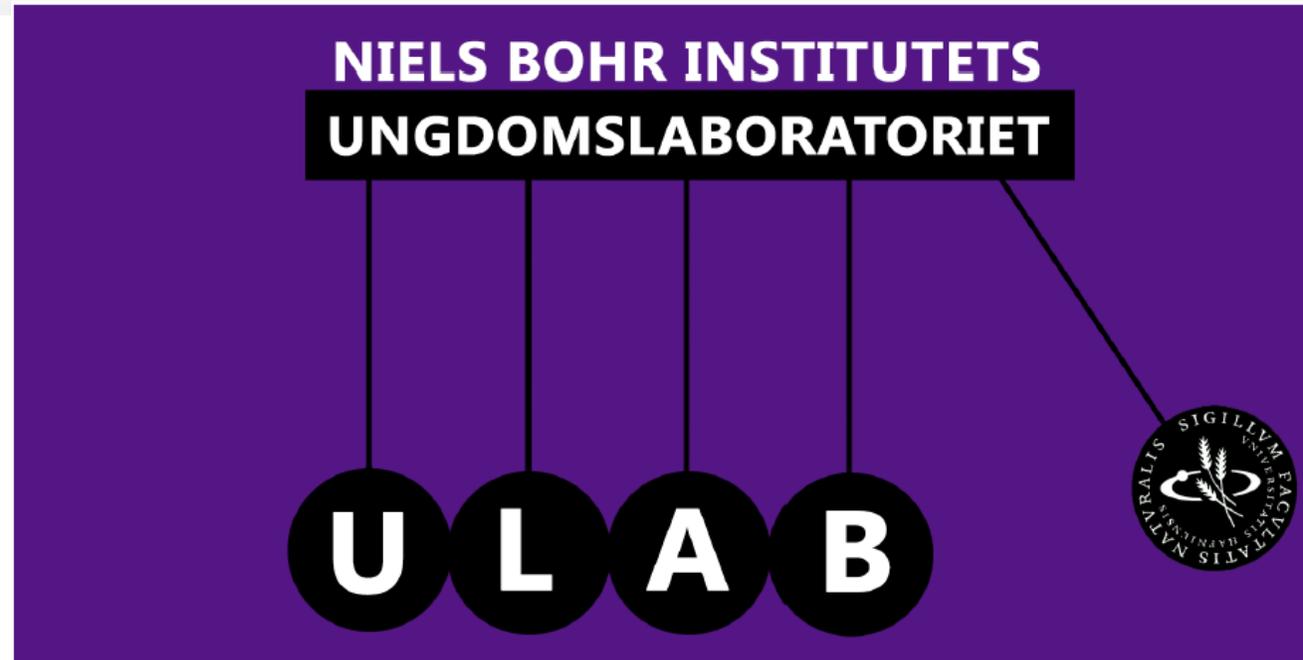
# Activities:

In Denmark, we do much of what is done other places:

- Public talks (IFA, Århus does this particularly well)
- Class visits to Uni/Institutes
- Web based
  - SDU "Kvante Karina" ([www.kvantebanditter.dk](http://www.kvantebanditter.dk))
  - NBI "Spørg om fysik" ([www.nbi.dk/spoerg\\_om\\_fysik](http://www.nbi.dk/spoerg_om_fysik))
- Visits to classes: "Order a researcher"
- High school teachers to CERN (Børge Svane Nielsen, Jørgen Beck Hansen)
- Masterclasses (ALICE, ATLAS, IceCube)

# Also, activities that aren't as common

- Kulturnat ("Night of Culture")
  - Citywide evening of cultural activities.
  - NBI gets  $\approx 2500$  visitors
  - ALICE, ATLAS, ICECUBE well represented!
- NBI Ungdomslaboratoriet (YouthLab)
  - Classes visit to do experiments they can't do in their school
  - General physics (Greenhouse Gasses, Momentum, Superconductivity)
  - Several Nuclear and Particle experiments!
  - Cooperative projects with selected schools (Fukushima 2019; Iceland 2022)
- SRP & SOP (major final year project for Secondary Schools)
  - Muon lifetime (JBH)
  - Muon flux (IGB)
  - Neutron activation (IGB)



## Real Labs for Young Physicists

Build interest in physics via exciting and interesting experiments

Everyone has something to contribute

Methods and understanding, not "good" results

# ULAB TEAM

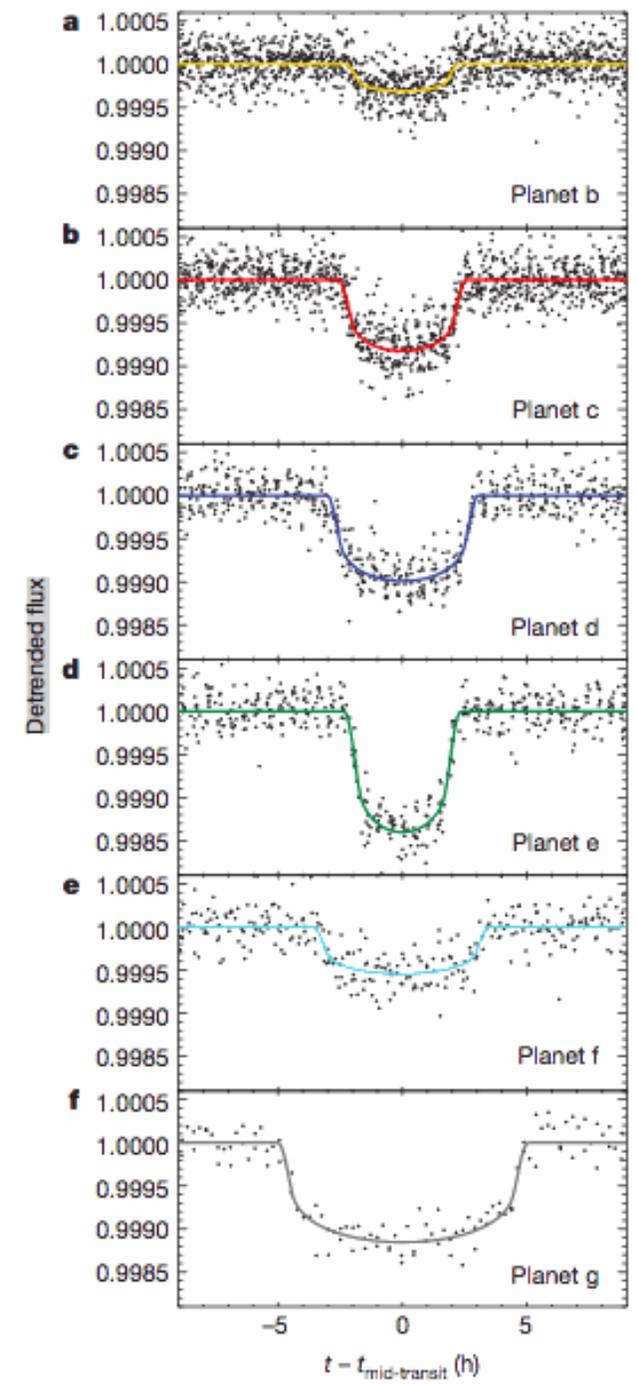
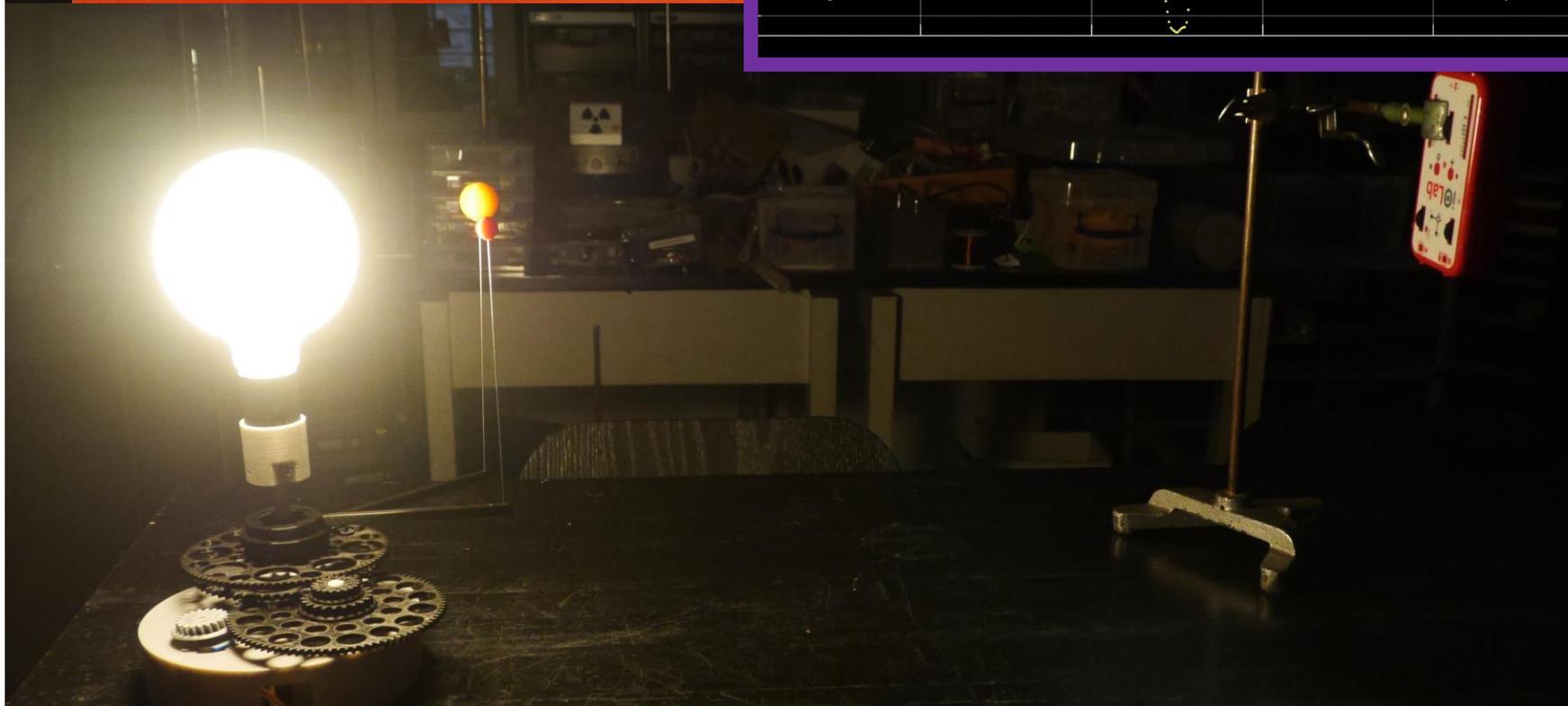
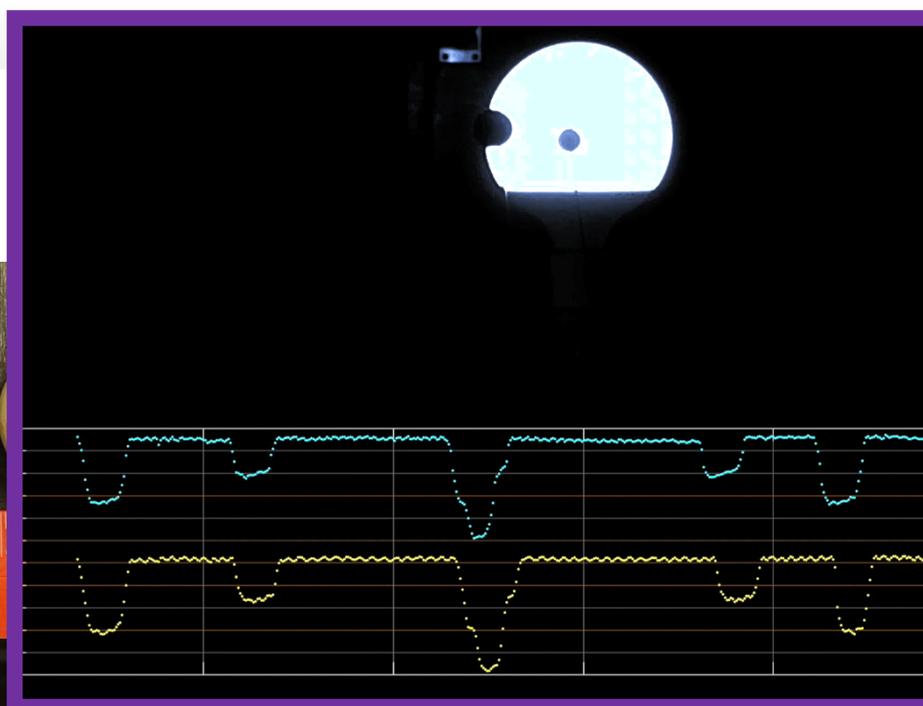


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# Øvelser for unge fysiker

- SUPERLEDERE
  - IMPULS
  - DRIVHUSGASSER
  - DIY TÅGEKAMMER
  - EXOPLANETER
  - GAMMA SPEKTROSKOPI
  - DIY PET Scanner
  - LYSETS HASTIGHED
- GUITAR FYSIK ( efterår 2022)
  - IBN AL-HAYTHAMS FYSIK (efterår 2022)
  - BYG DIT EGET ALPHA DETEKTOR (efterår 2022)
  - Myon Teleskop (forår 2022)

# EXOPLANET:



# DIY TÅGEKAMMER



# Resources:

- **1 dedicated outreach position**
  - **SDU (Outreach coordinator, Louise Kindt)**
- **Institutes**
  - **Lab space when available**
  - **≈100kDKK/year (nationally)**
- **Private foundations**
- **Lots of us working hard in our “free” time.**
  - **Sustainable?**

# Dream:

- **People dedicated to outreach**
  - **CERN specific would be amazing!**
- **Better coordination with CERN**
  - **We can certainly do better than we have**
- **Dedicated long term funding**
- **Better communication channels**
  - **general public**
  - **Schools**