

Outreach in Denmark

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Open University / AOF

General
public

- Public lectures within several frameworks
- Not *education* per se but rather a chance for the GP to interact with researchers
- People enroll for "courses" and pay money to come



English translation for
the German word
"Bildung"?

Media

General
public

- Articles
 - Newspapers
 - Vocational magazines
 - Popular science
- Radio and TV interviews

Weekensavis | **bliver** SEKTIONER #30 18. MAJ 2018

Klumme. På mindste niveau, hvor den såkaldte kvantemekanik råder, kan man både være og ikke være på samme tid. Det lyder vældigt teoretisk, men kan snart vise sig nyttigt i den digitale verden.

At være og ikke at være

POUL HENRIK DAMGAARD
Faglærer i fysik, Niels Bohr International Centre

Kvantemekanikken – beskrivelsen af virkeligheden på atomart niveau og derunder – involverer en udvidelse af vor begrebsverden, der i en vis forstand er ufattelig. Det ubegribelige ligger på mange niveauer. Et første hug til vor virkelhedsopfattelse kommer fra den fundamentale lovmasighed, at eksperimentelle målinger er baseret på sandsynligheder. Her ryger, hvad der kan kaldes klassisk determinisme. I vor dagligliv er alting heldigvis deterministisk. Resultatet af det, vi gør, bliver nøjagtigt det samme hver gang, hvis betingelserne i øvrigt er de samme. Sådan er det ikke dybest ned, på atomart niveau. Men andre af de fundamentale kvantemekaniske love er lige så ualmindelige. En af lovene siger, at en tilstand (vi kan for eksempel tænke på en

Article in a major Danish newspaper about why Schrödinger's cat is relevant to you...

Culture Night

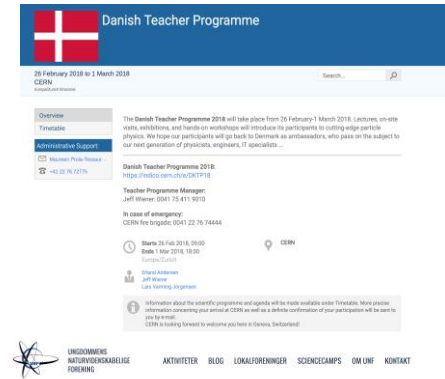
General
public

- City-wide event in Copenhagen
- National interest
- Visit parliament, freemasons, museums, clubs ... and universities.
- Lectures + meet & greets for the grown-ups
- Build your own cloud chamber for the not-so-grown-ups.



High schools

- Visits (NBI / CERN)
- MC of course (IceCube / ATLAS / ALICE)
- [CERN Danish Teacher Programme](#)
- UNF
 - National youth science club
 - Lectures + camp
- Youth lab
 - Build your own cloud chamber
 - Build your own PET scanner
- Senior projects



På Niels Bohr Institutets ungdomslaboratorium kan du komme på besøg med din gymnasieklasser og lave eksperimenter, som normalt ikke kan lade sig gøre på skolerne.



A note on curricula

- Particle physics is done as a subject in high school... or is it?
- Next three years: Medical physics
 - Interaction of ionizing radiation with matter
 - Particle therapy
 - Hence the workshop on PET scanners
- Also, many physics teachers now have templates (and materials) for teaching PP.

Not-so-high schools

- Big Bang til naturfag
 - Inter-disciplinary (PP → biology)
 - Workshops for teachers (350 teachers, 86 schools)
 - Target: 20% of all science teachers
 - Being sought recast for high schools
- Interns
 - 9th grade students get to play University students
- Diary of South Pole scientist



Next year, hopefully



- Contact established after last years autumn IPPOG meeting
- Preliminary project description sent to RF
- Different from WOMAD but should be fun.

Summary

- PP community in Denmark engaged at many levels in public discourse
 - Culture Night
 - Open University
 - ...
- Many opportunities for (high) school students and teachers.
 - Easy access to scientists
 - Plenty of support for visits and activities
- Actual *new* initiatives count
 - Big Bang til naturfag
 - DIY PET scanners
 - Roskilde Festival