

# **My life studying new forms of matter**

Christine Nattrass  
Yale University

# *The early years*

- A bit mischievous ...
- House rule: You can't keep it as a pet if you can't identify it
- House rule: No eating while standing on your head



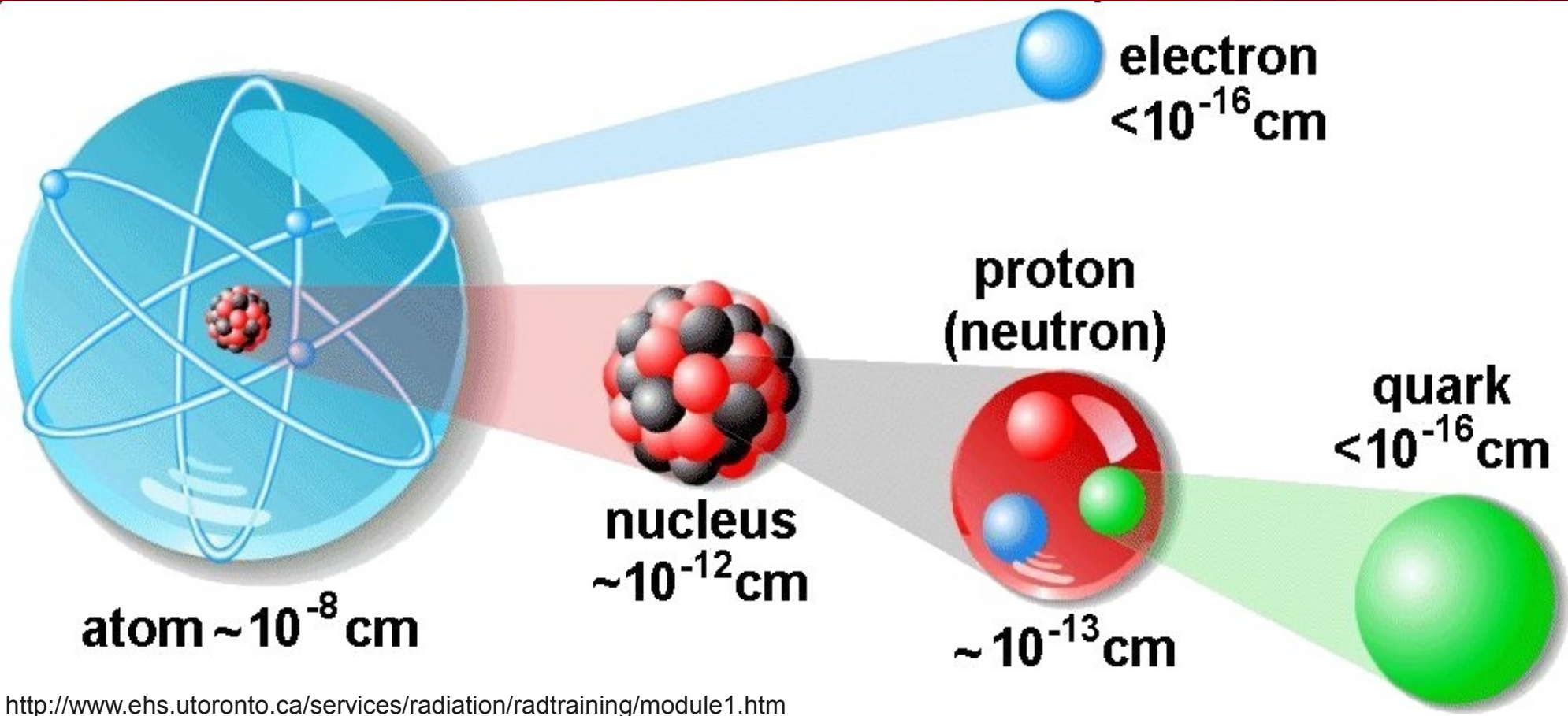


# *Middle school*

- Introduction to atoms...  
and then quarks

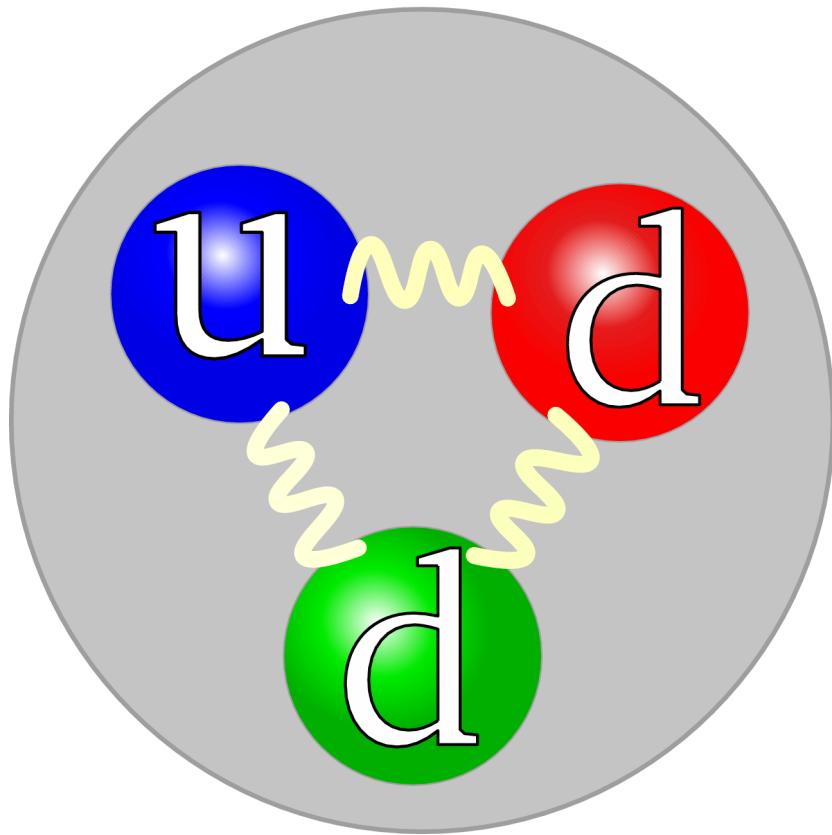


# *The structure of matter*



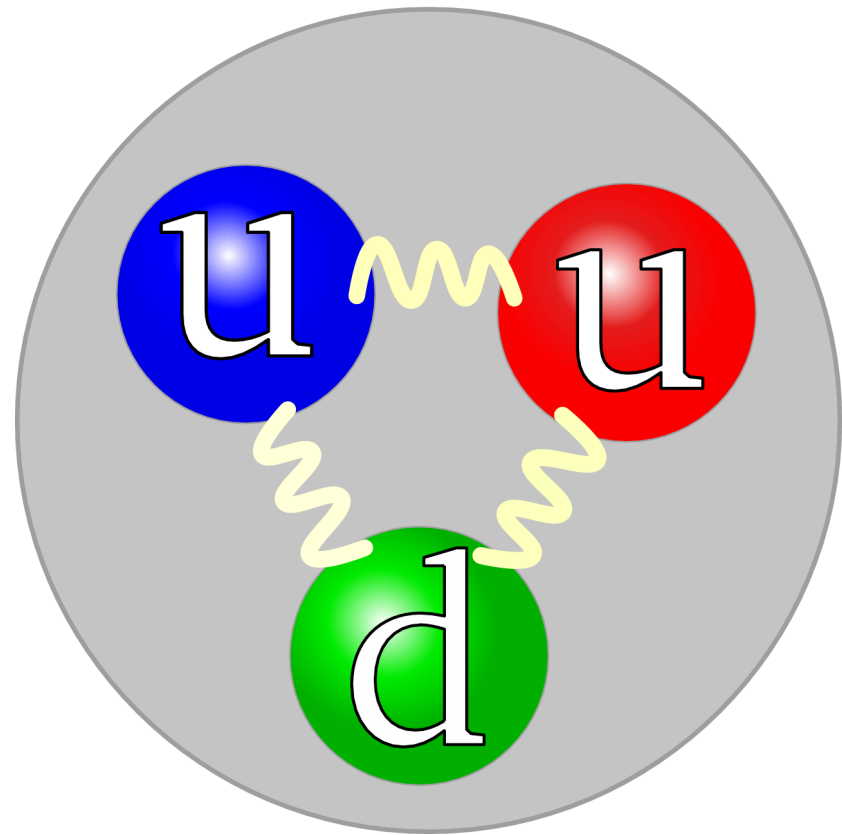


# *Nucleons – the proton and neutron*



Neutron

[http://en.wikipedia.org/wiki/Image:Quark\\_structure\\_neutron.svg](http://en.wikipedia.org/wiki/Image:Quark_structure_neutron.svg)



Proton

[http://en.wikipedia.org/wiki/Image:Quark\\_structure\\_proton.svg](http://en.wikipedia.org/wiki/Image:Quark_structure_proton.svg)

# *High school*

- Wanted to be a musician
- Terrible math experience
- Didn't take challenging science classes





# *Undergraduate*

- Hey, they give you money if you do good in school!
  - About \$25,000 in scholarships
- Paid internships are good!
  - North Carolina, Colorado, the Netherlands, and Switzerland
- Colorado State University
  - Physics, biochemistry, and Physical science majors, chemistry, math, and German minors



Colorado State University  
College of Natural Science  
Commencement-May 17, 2003



# *Graduate School*

- Applied only in physics
  - Accepted at Yale
- In my sixth year, graduating some time soon



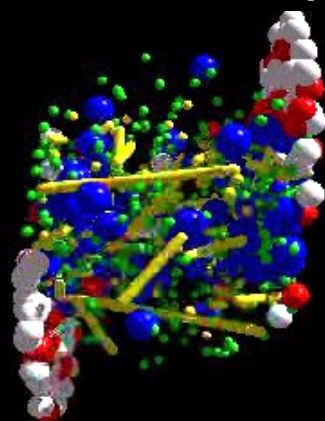


# *A heavy ion collision*

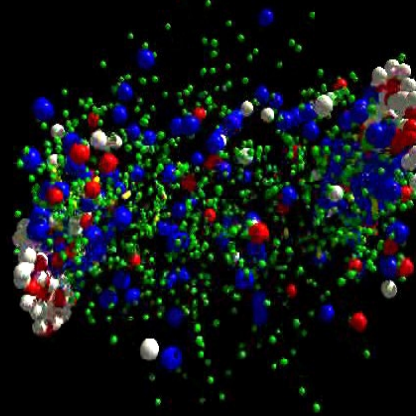
Relativistic pancakes



Quark soup

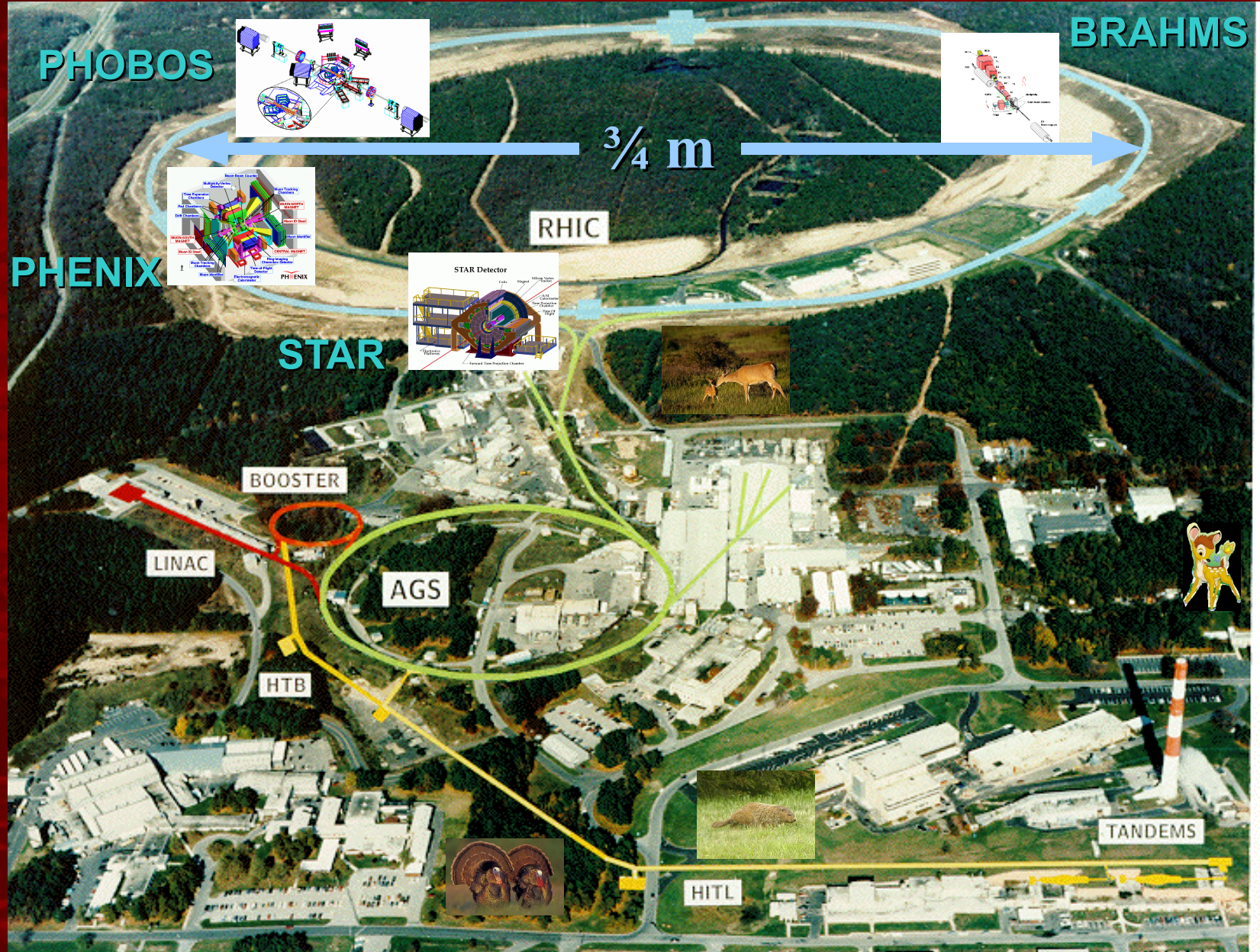


Explosive hadron soda



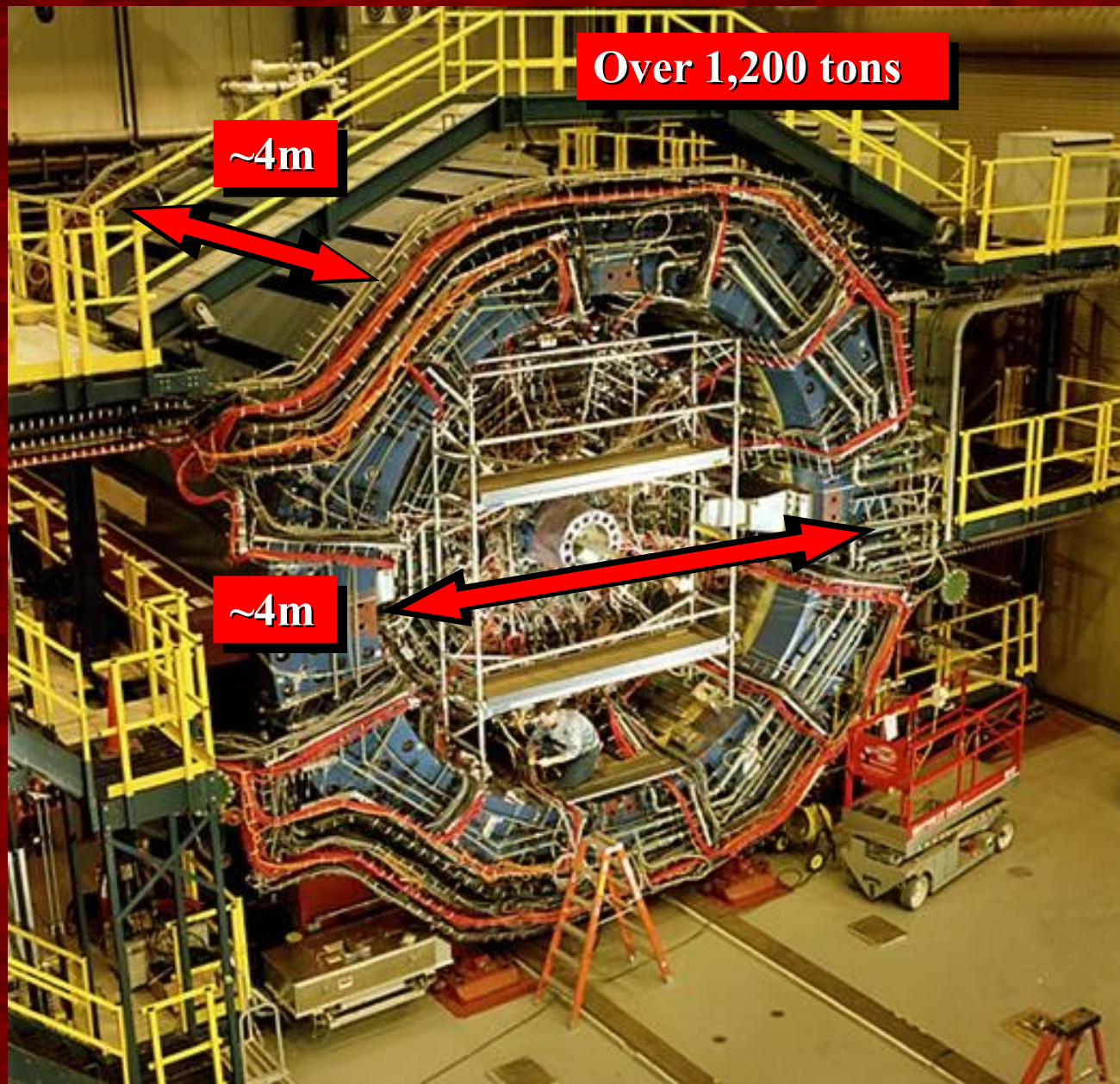


# Relativistic Heavy Ion Collider





# *The STAR detector*





# *Me at work*



*Christine Natrass (Yale), Riverhead Middle School, BNL, May 23, 2008*



# *My collaboration*



*Christine Natrass (Yale), Riverhead Middle School, BNL, May 23, 2008*



# My travels





# *Being a scientist*

- Hard work – hard classes, long hours
- Interesting problems
- You do something different every day
- Meet interesting people
- See different parts of the world
- A lot of flexibility in work hours
- Little flexibility in location – you live where the jobs are
- Solid paychecks, scholarships