# You will learn about the concepts and ideas of…

- Particle Physics
- Computing
- Accelerators
- Statistics

## …from leading experts who actively work in these fields!

# Topics: Accelerator

## Particle Accelerators and Beam Dynamics

Foteini Asvesta

## Accelerator Technology Challenges

Susana Izquierdo Bermudez

## Future High Energy Collider Projects

Barbara Dalena

# Topics: Accelerator

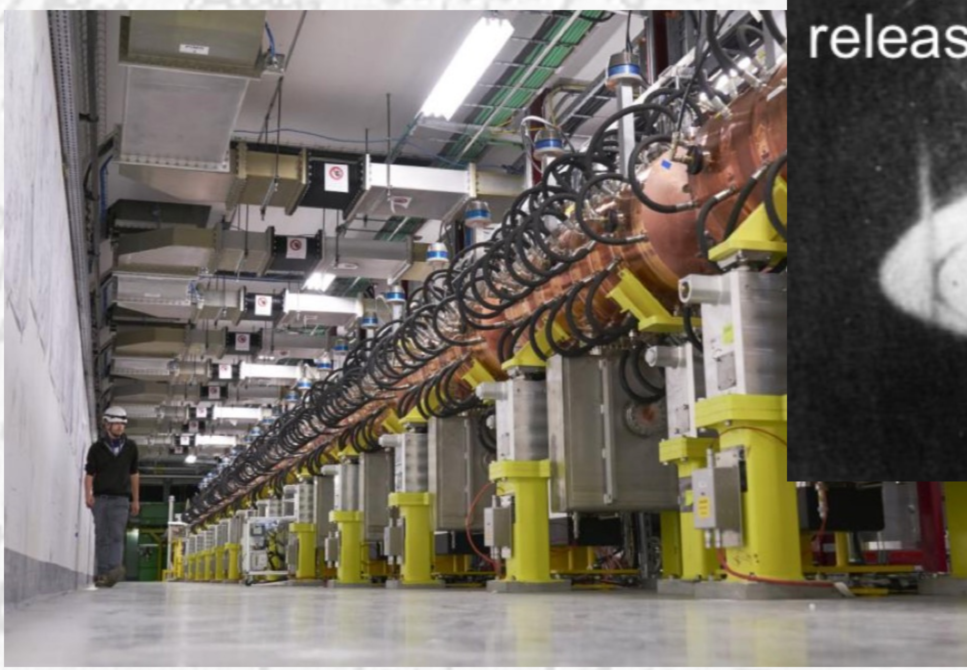
Particle Accelerators and Beam Dynamics

ology Challenges

Collider Projects

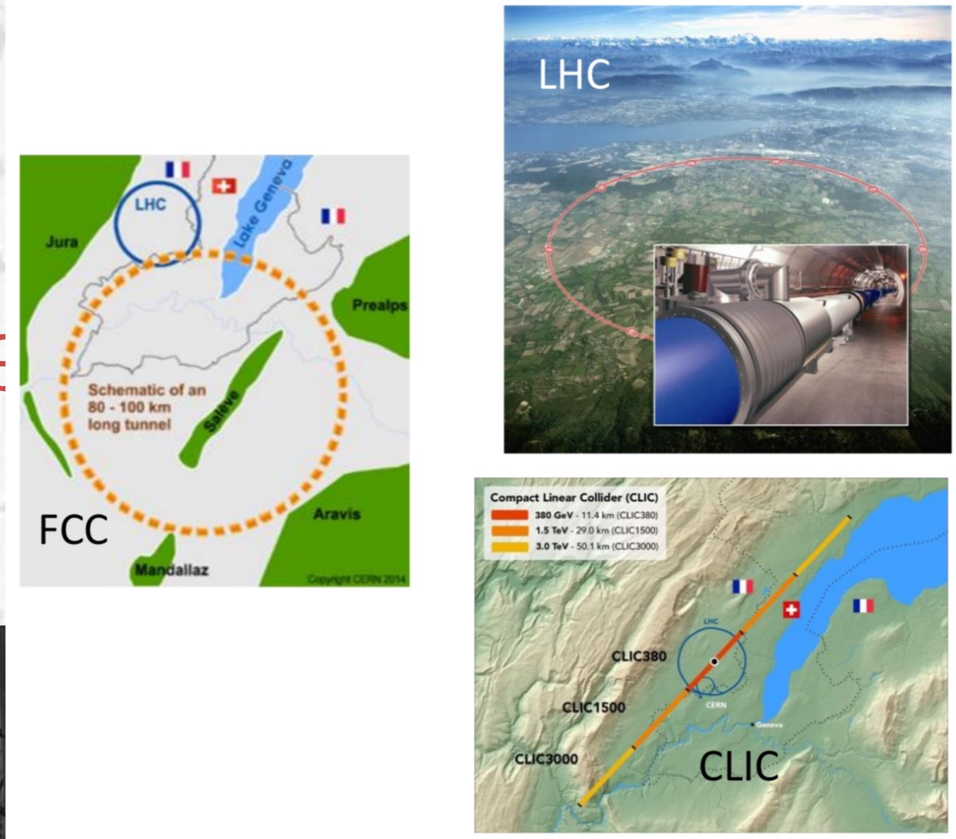
# Topics: Accelerator

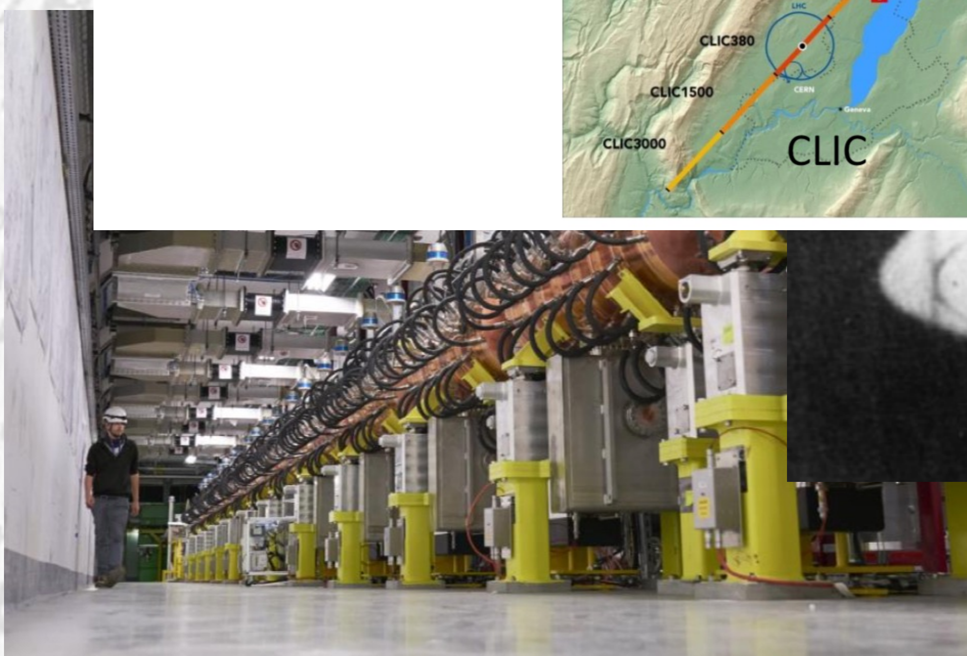
## Particle Accelerators and Beam Dynamics



# elerator

## d Beam Dynamics



# Topics: Detectors

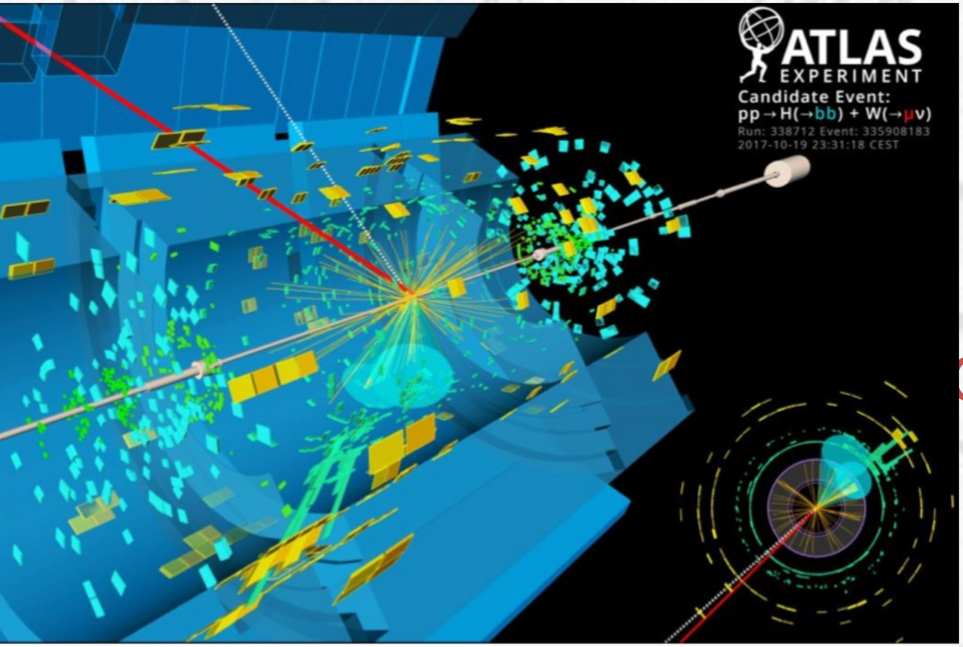
## Detectors

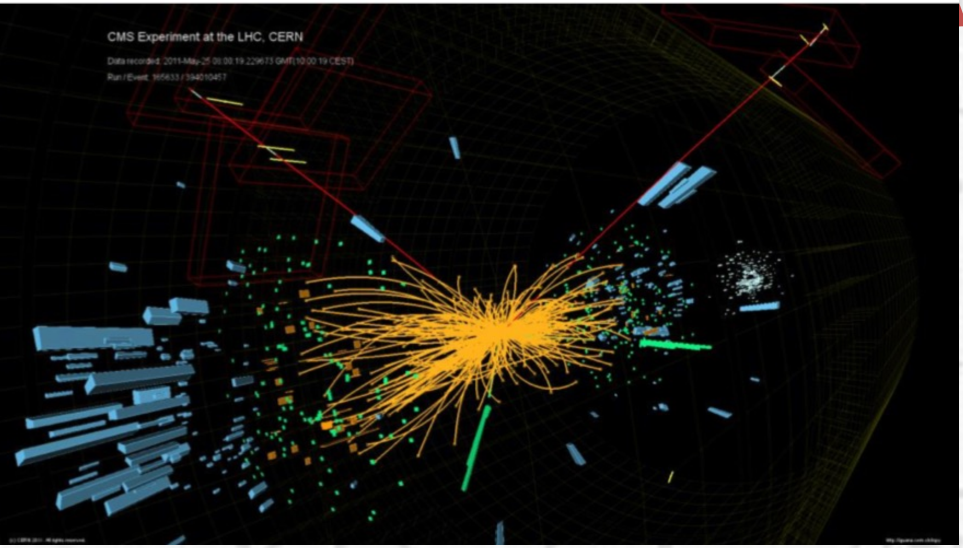
Werner Riegler

## Electronics, DAQ and Triggers

Tommaso Colombo

# Topics: Detectors

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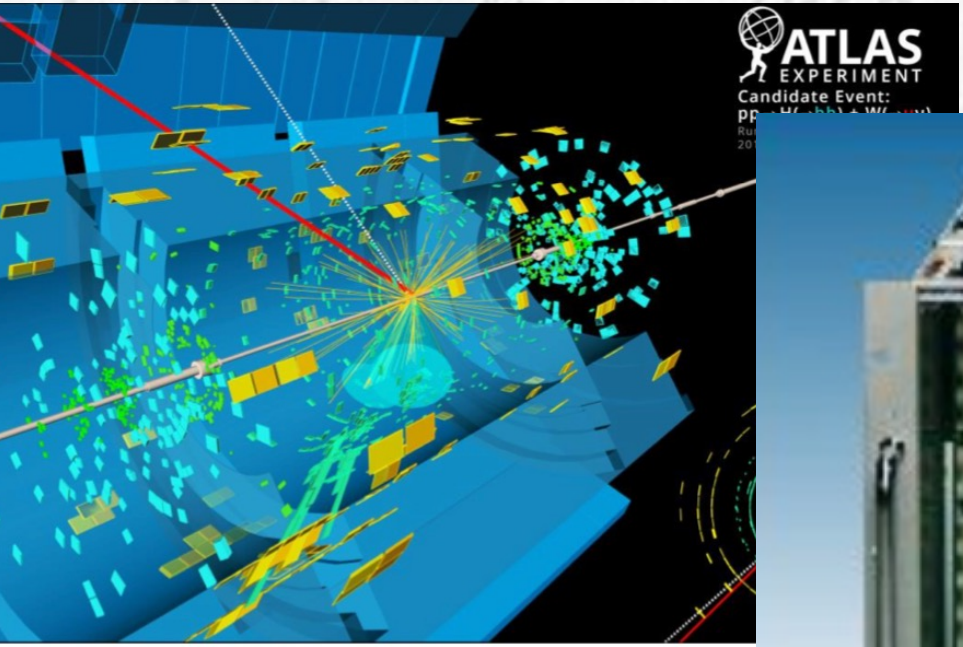
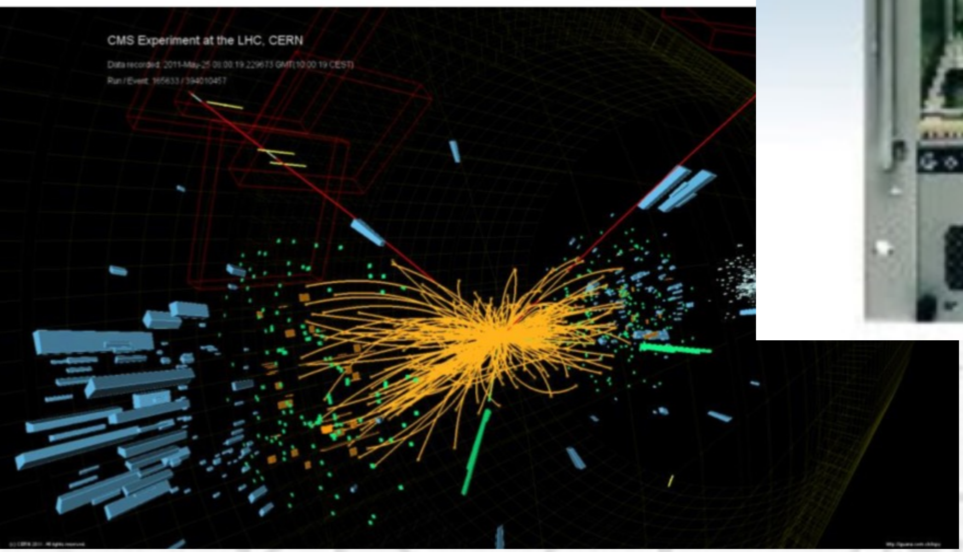
Q and Triggers

# Topics: Detectors




# Topics: Experiment

## From Raw Data to Physics Results

Paul Laycock

## Experimental Physics at Hadron Colliders

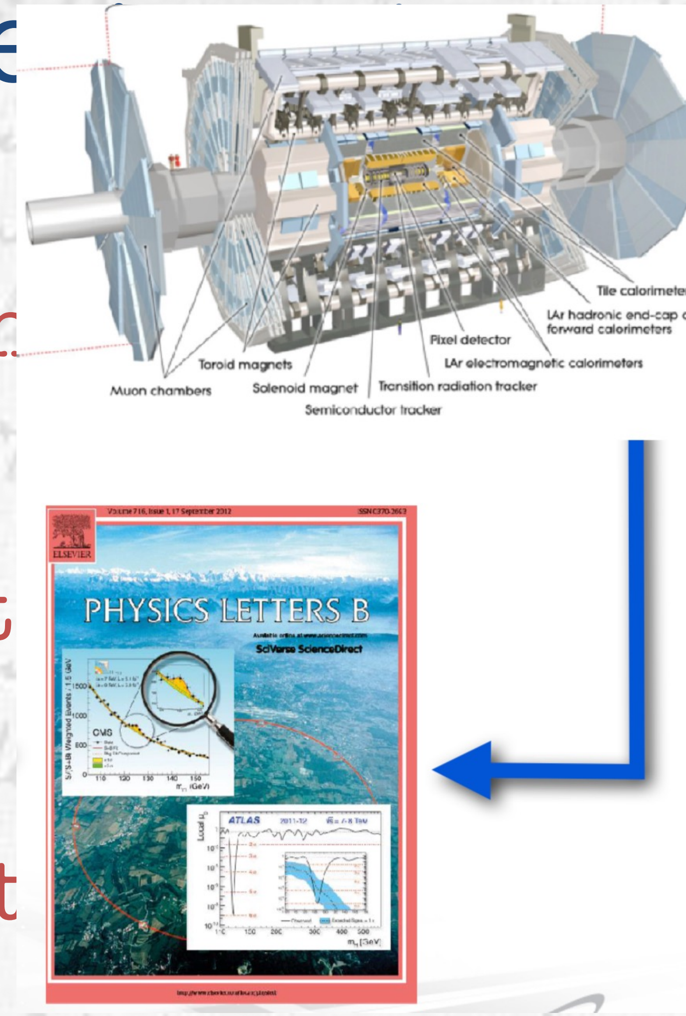
Markus Klute

## Experimental Physics at Lepton Colliders

Frank Simon

# Topics: Expe

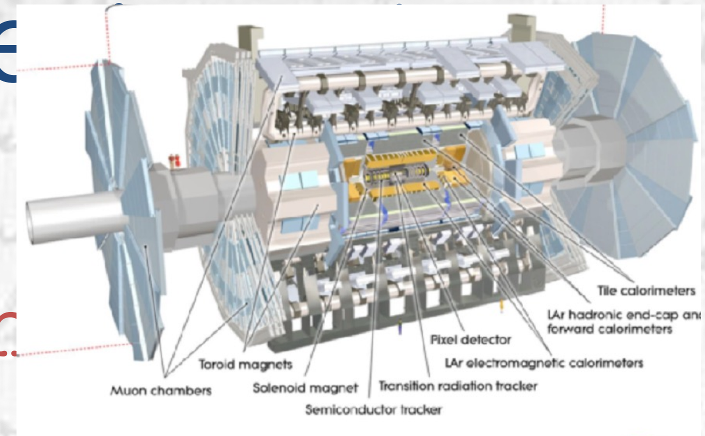
From Raw Data to Ph




Experimental Physics at s

Experimental Physics at s

# Topics: Expe




From Raw Data to Ph

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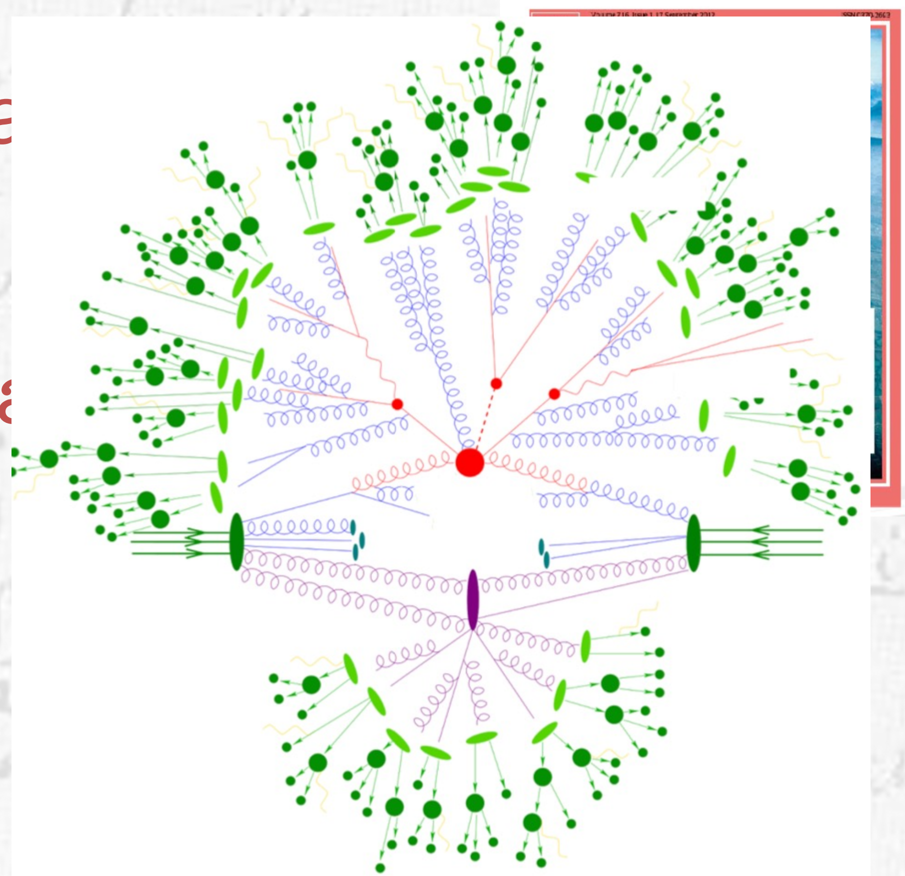
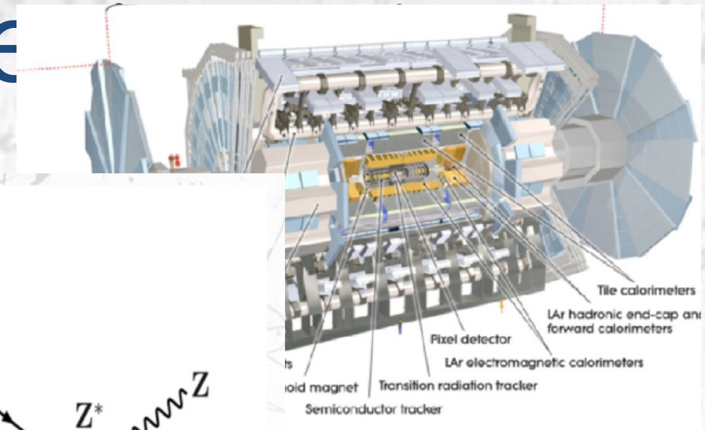
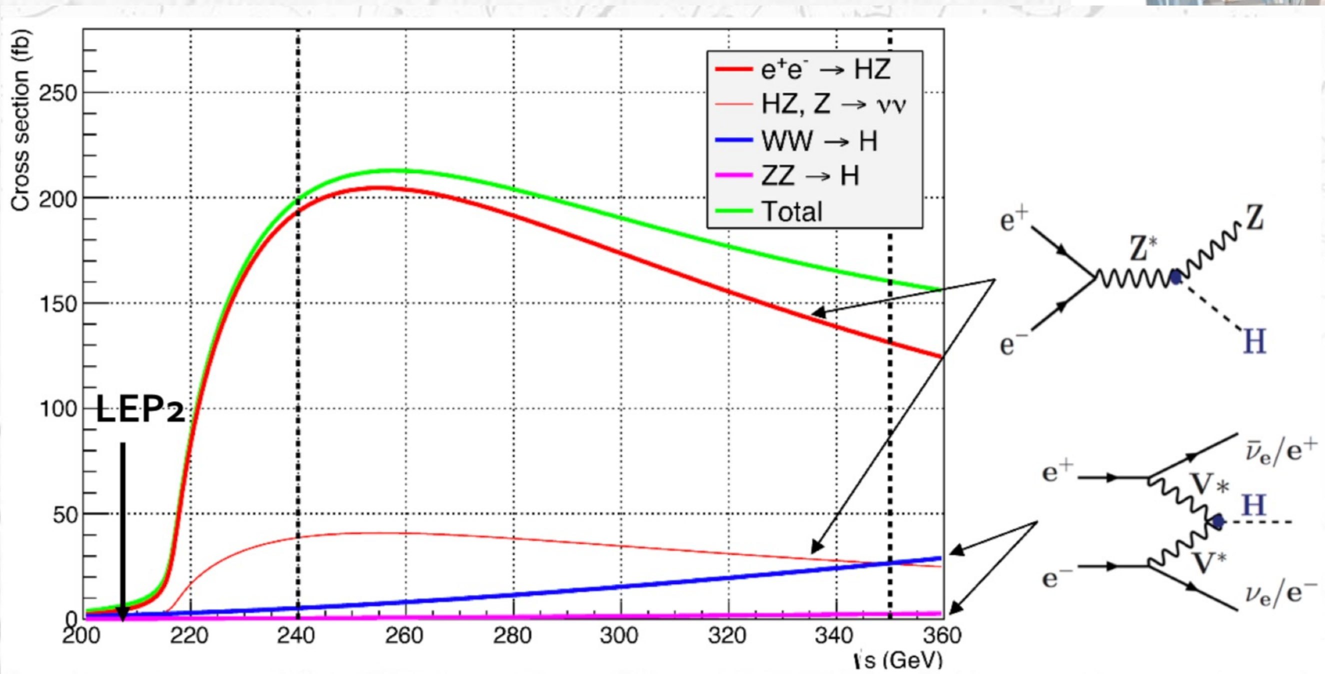
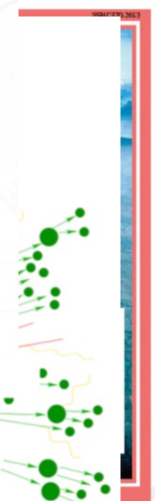
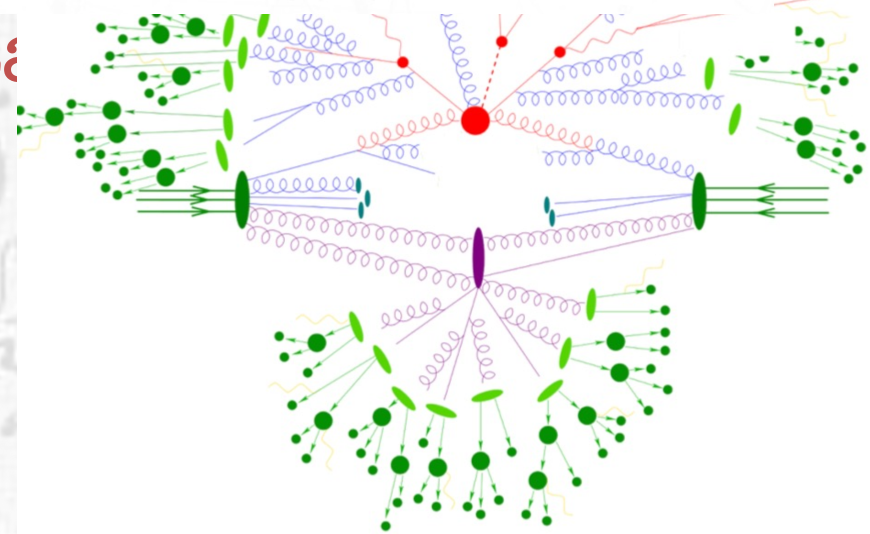


# Topics: Expe





Experimenta

# Topics: Experiment

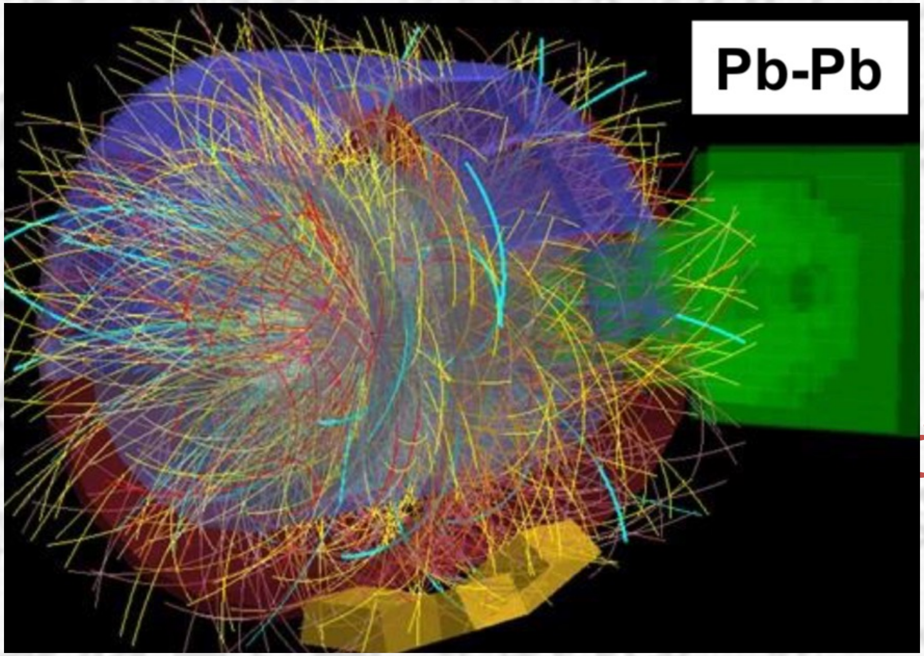
## Heavy Ions
Francesca Bellini

## Nuclear Physics at CERN
Magdalena Kowalska

## Flavour Physics
Mark Williams

## Antimatter in the Lab
Jack Devlin

# Topics: Experiment



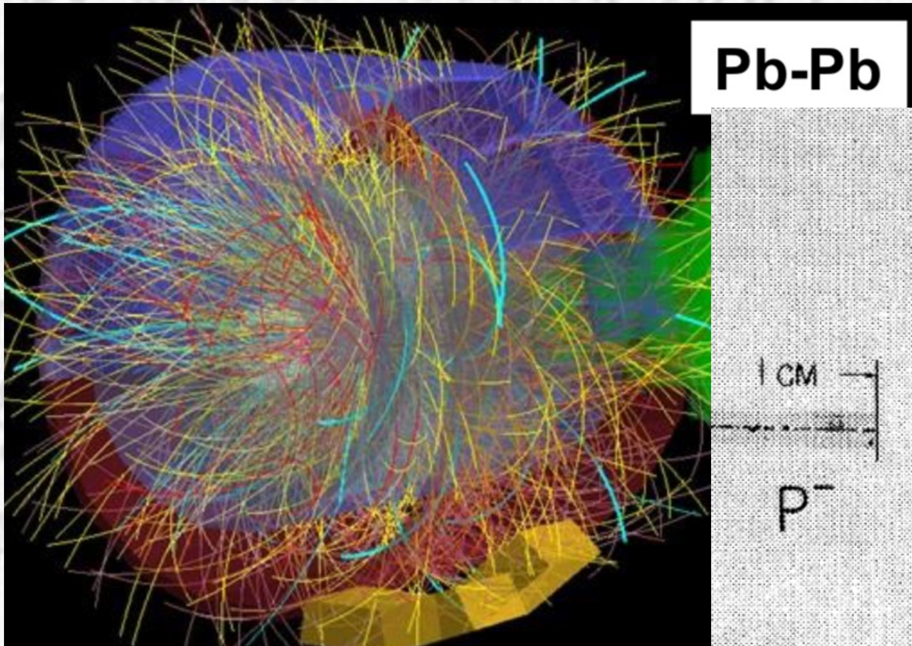

Ions

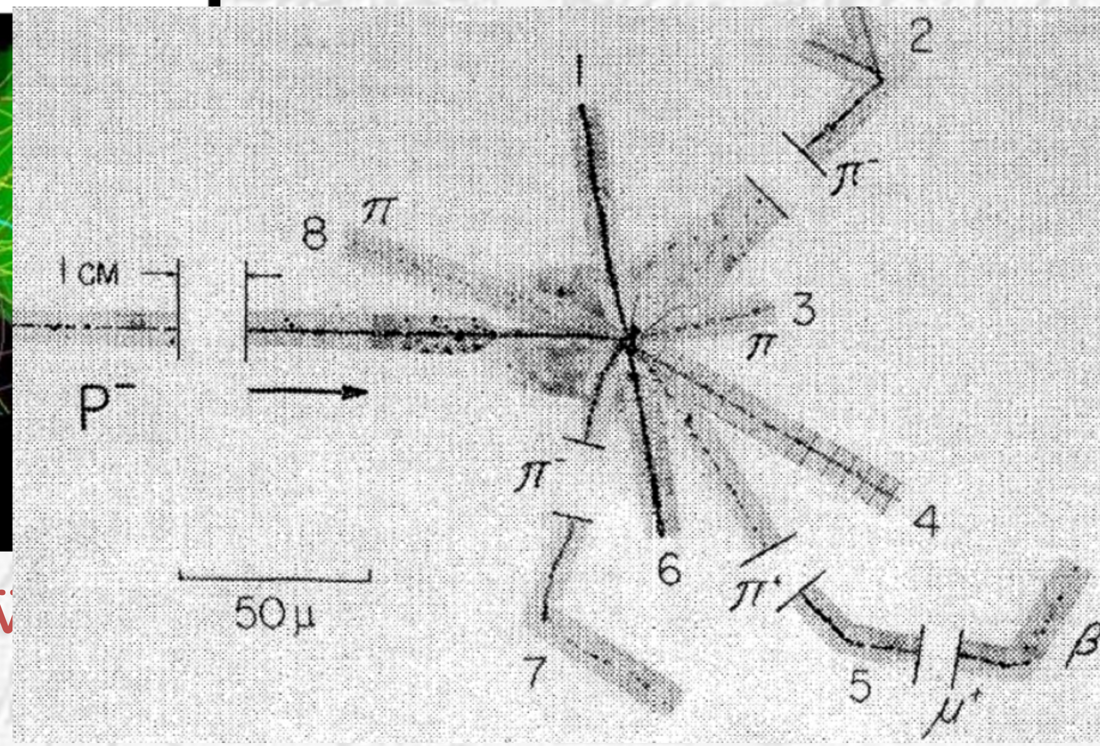
ics at CERN

Flavour Physics

Antimatter in the Lab

# Topics: Experiment

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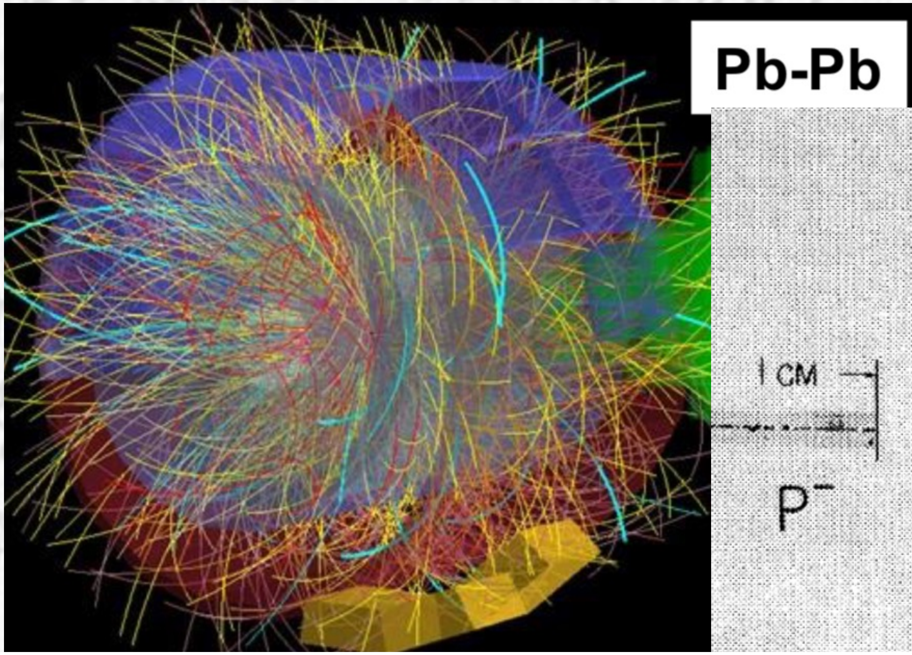
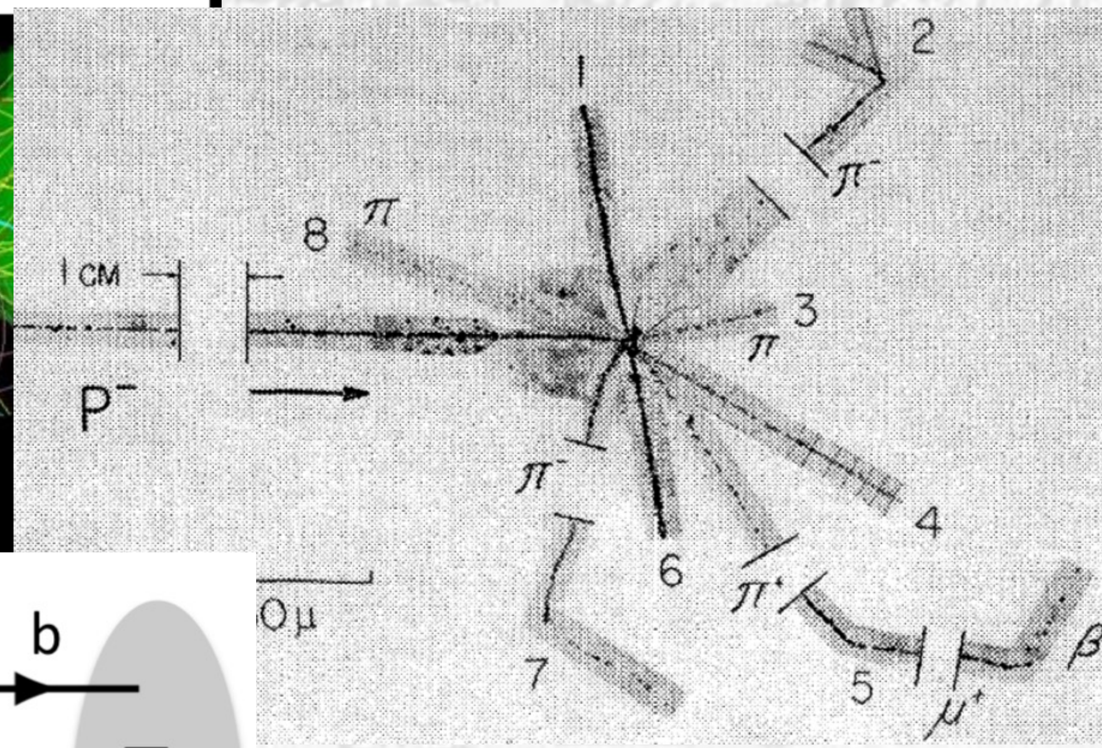
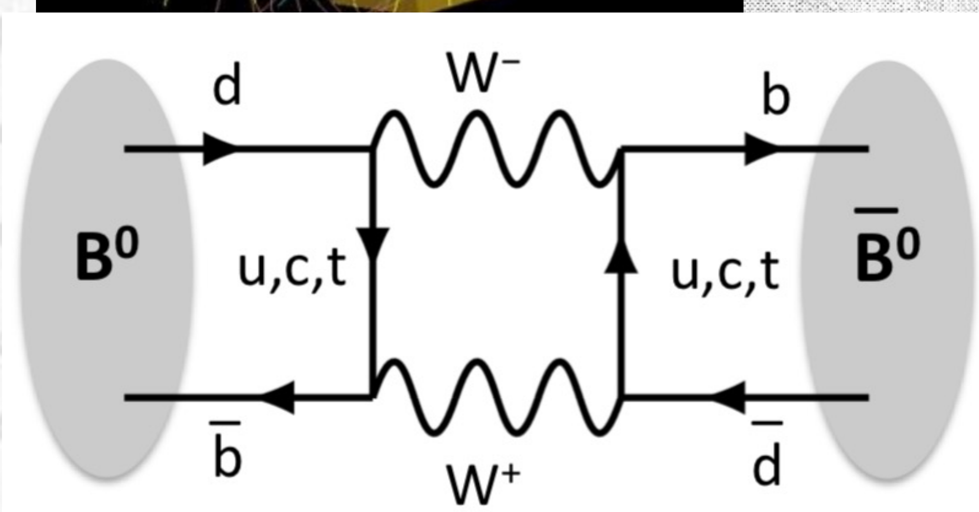
Antimatter in the Lab

# Topics: Experiment

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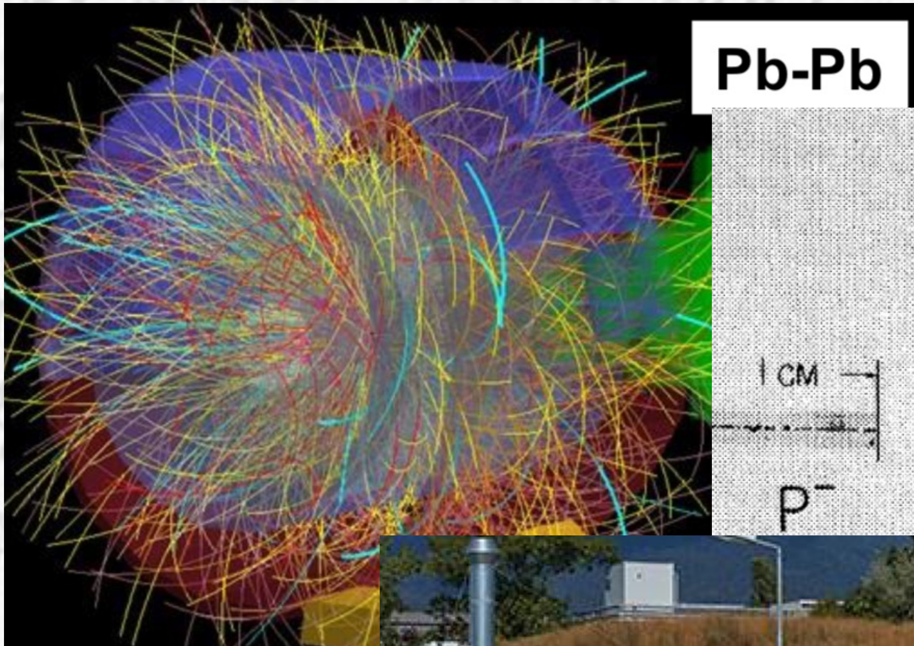
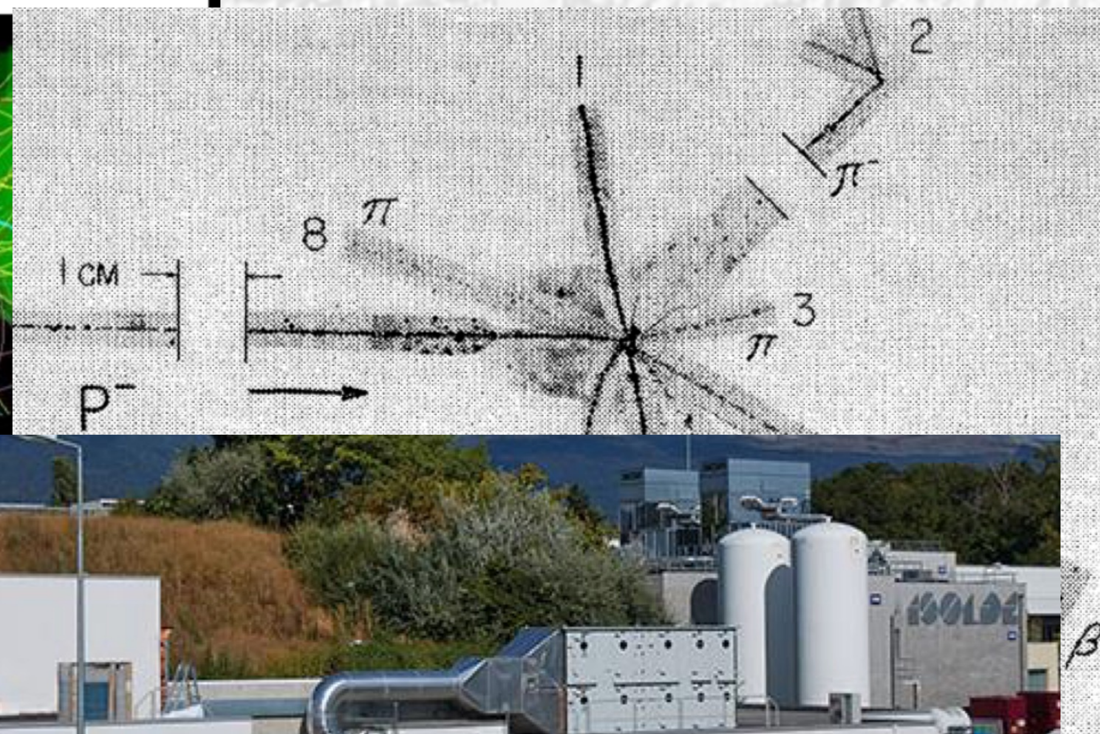
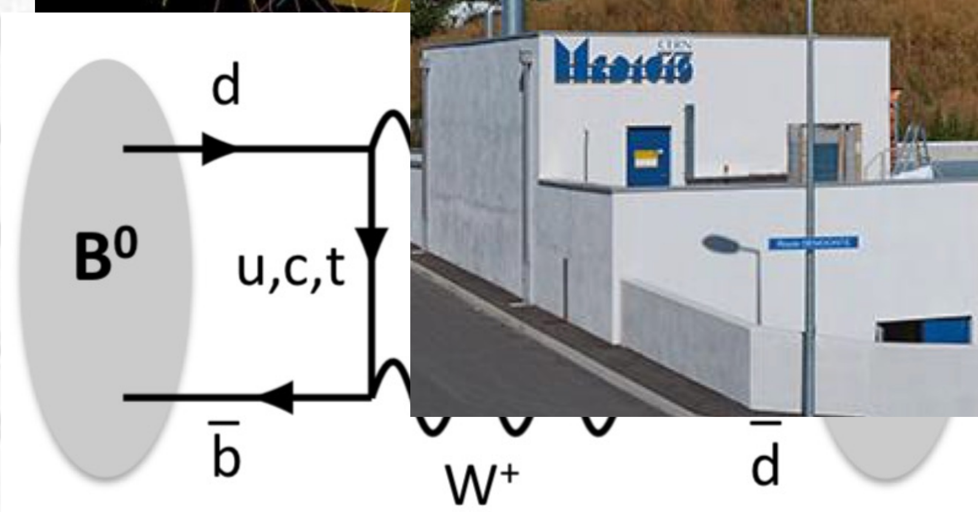
# Topics: Experiment




# Topics: Theory

## Particle World

David Tong

## Theoretical Concepts in Particle Physics

Tim Cohen

## Beyond the Standard Model

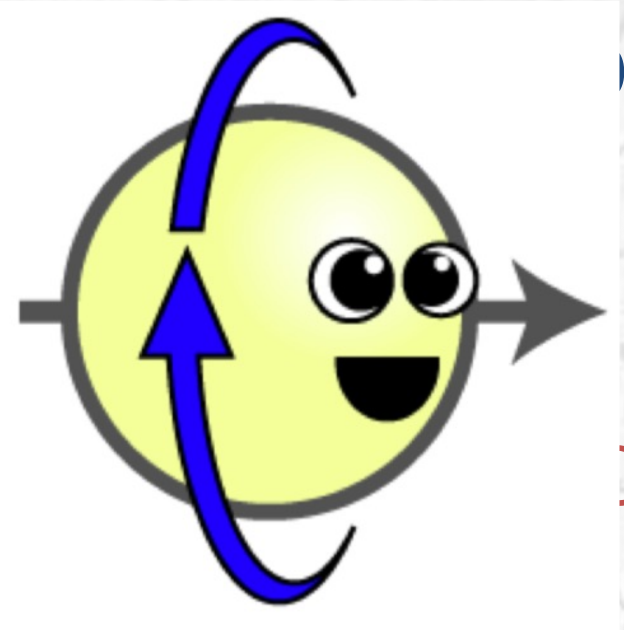
Tevong You

## Making Predictions at Hadron Colliders

Alexander Huss

## What is String Theory?

Timo Weigand



# pics: Theory

Particle World

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Beyond the Standard Model

Making Predictions at Hadron Colliders

What is String Theory?

# pics: Theory

Particle World

$$3 \neq 2$$

Concepts in Particle Physics

Beyond the Standard Model

Making Predictions at Hadron Colliders

What is String Theory?

# pics: Theory

Particle World

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Concepts in Particle Physics

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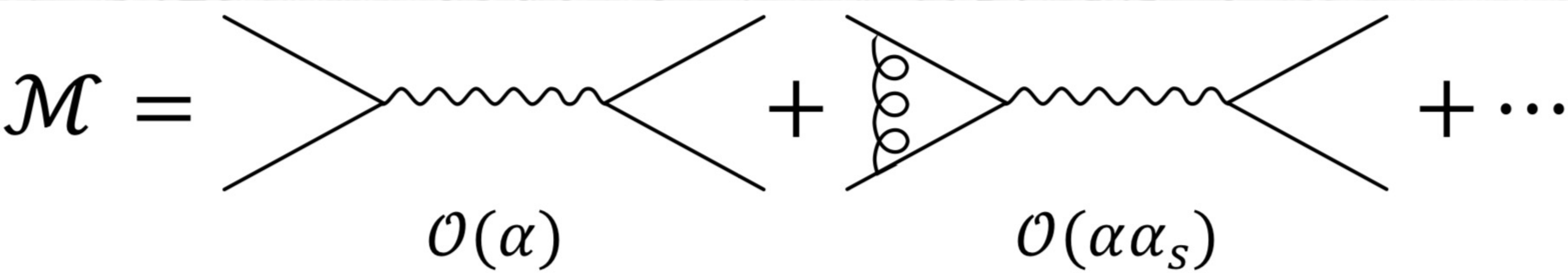

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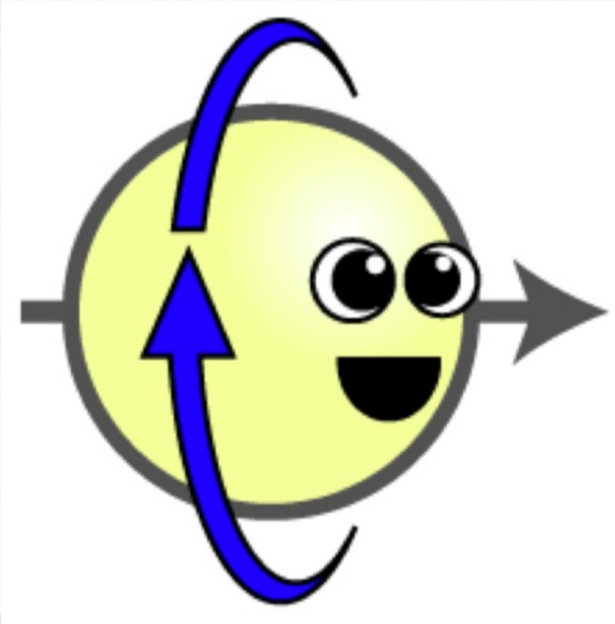

Particle World

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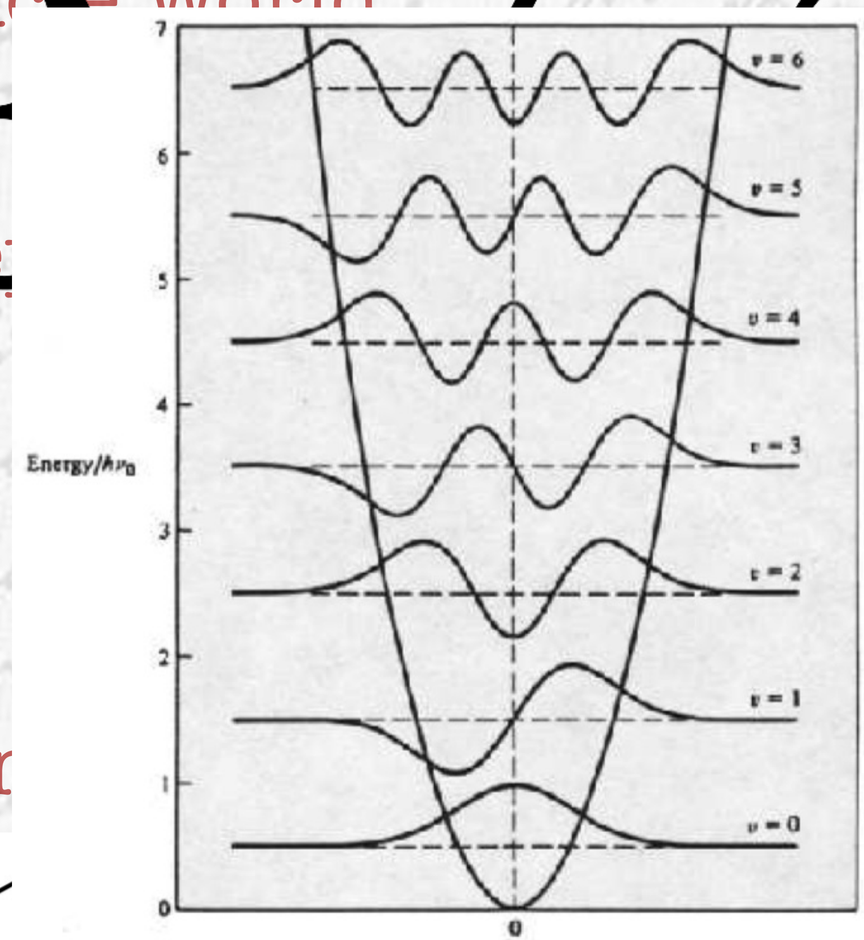
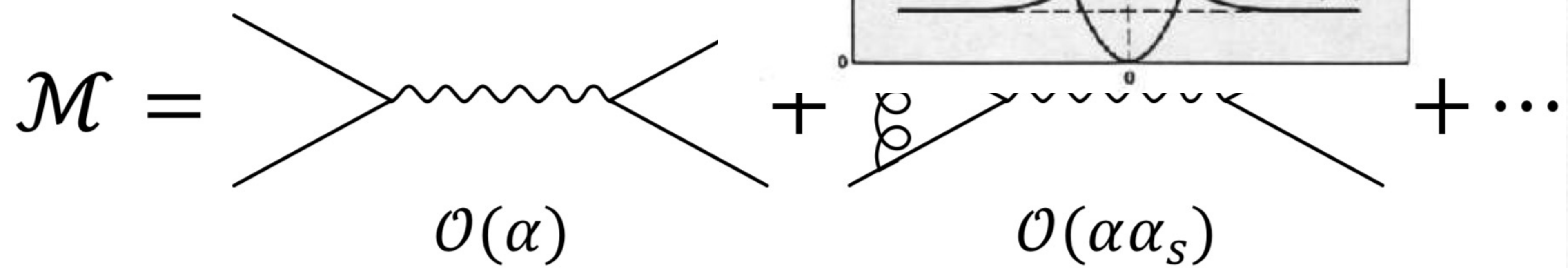
Beyond the

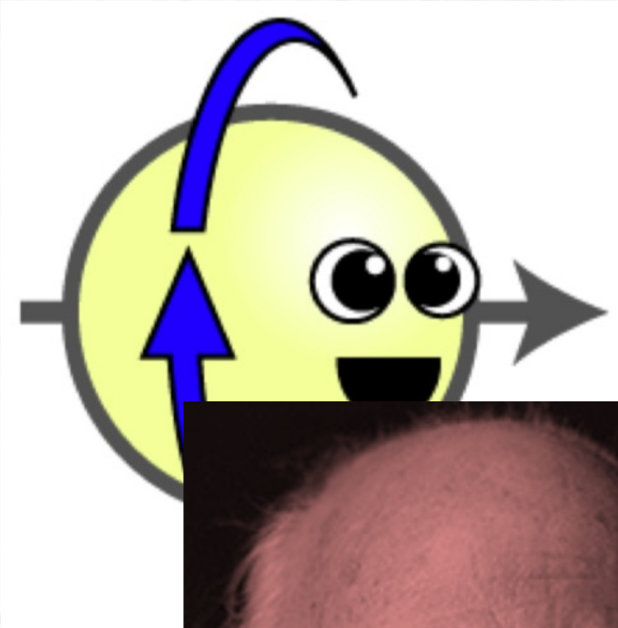
Making Prediction

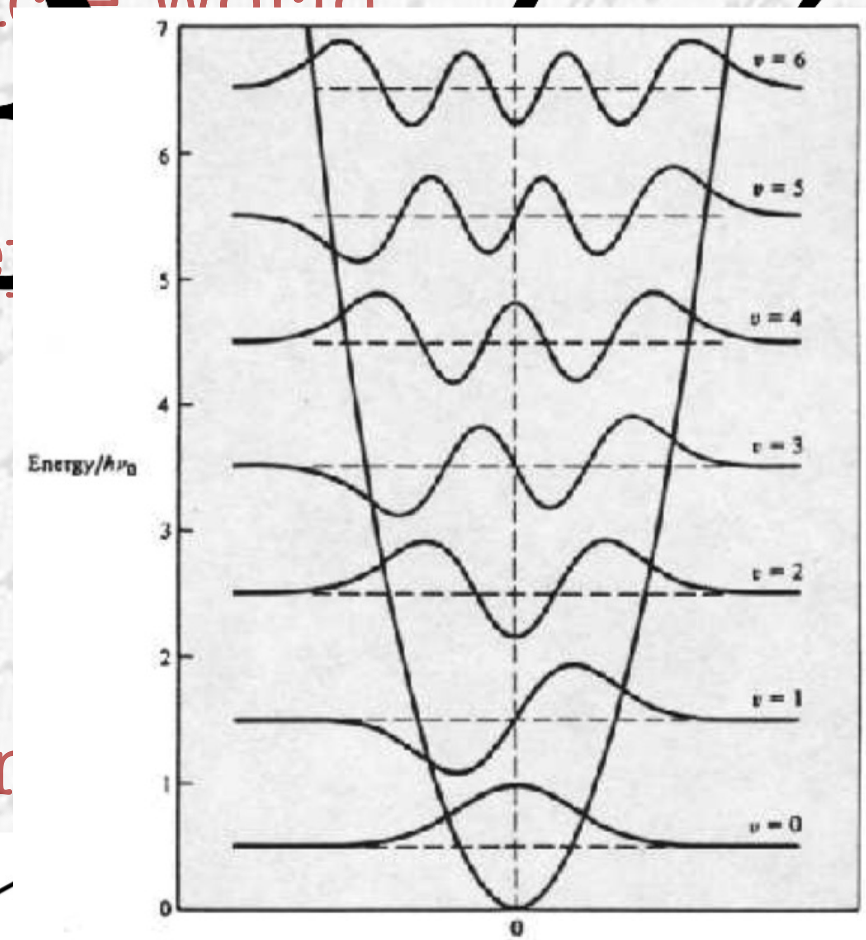


## …pics: Theory

Particle World



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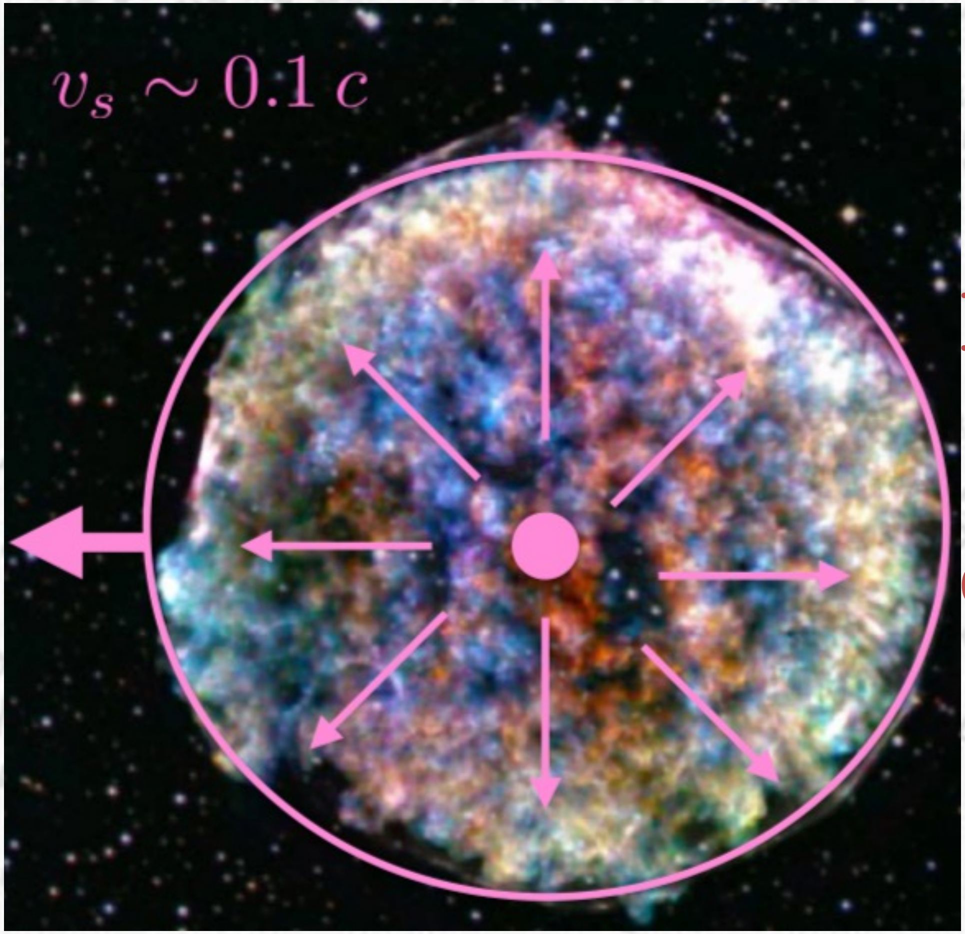
$\mathcal{O}(\alpha)$ $\mathcal{O}(\alpha\alpha_s)$

# Topics: Astroparticle

## Astroparticle Physics
Bradley Kavanagh

## Introduction to Cosmology
Valerie Domcke

# Topics: Astroparticle

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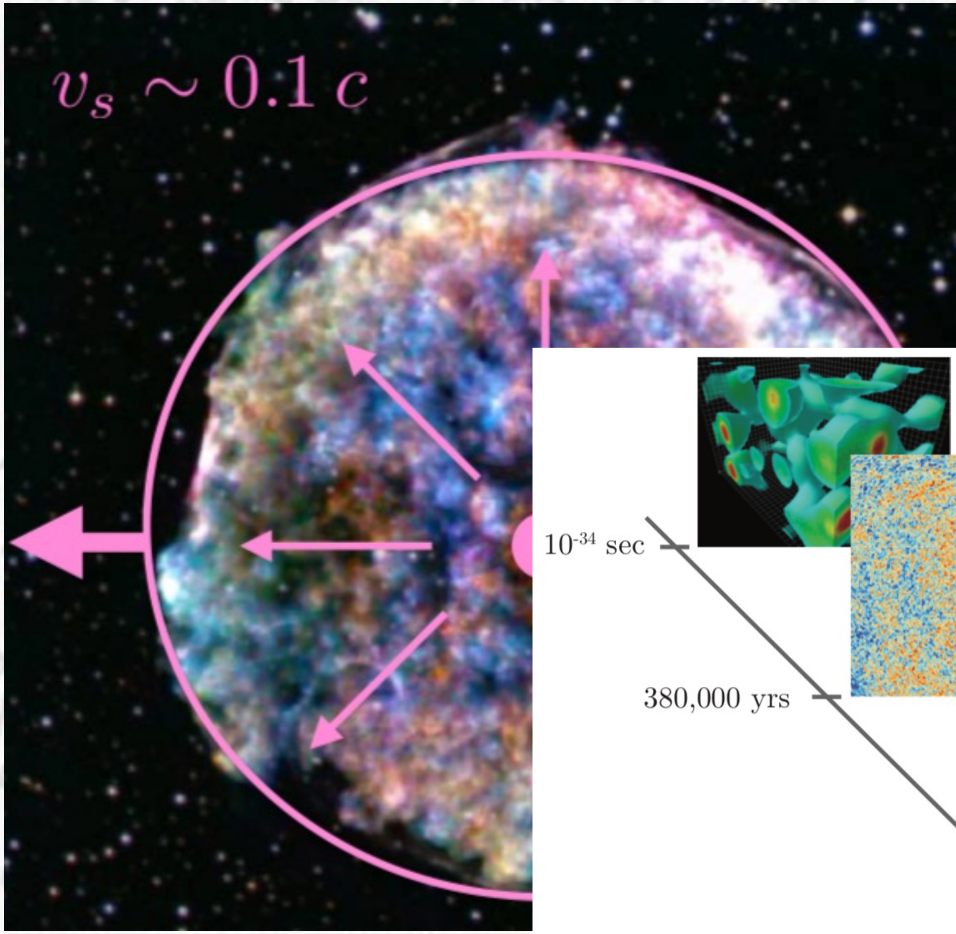
o Cosmology

# Topics: Astroparticle

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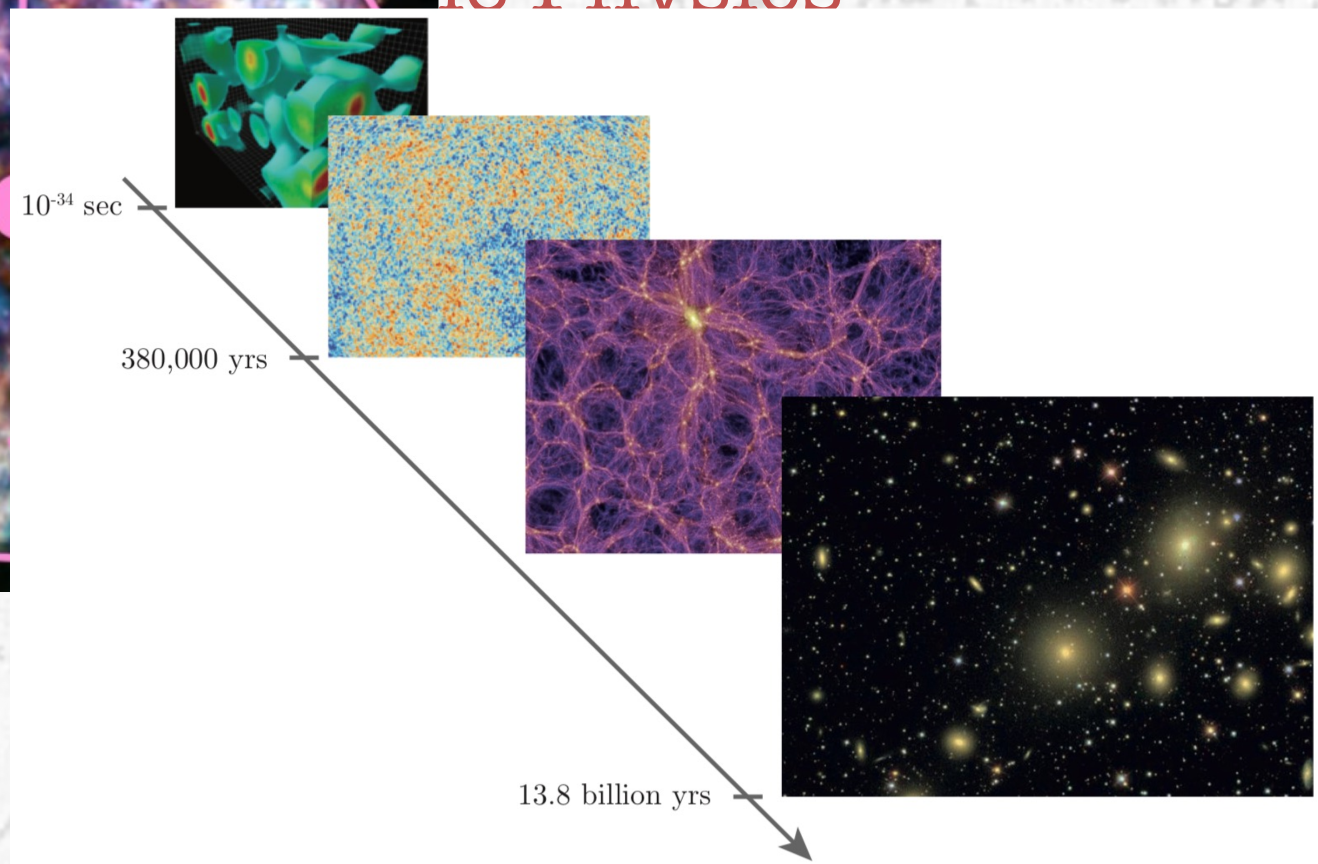


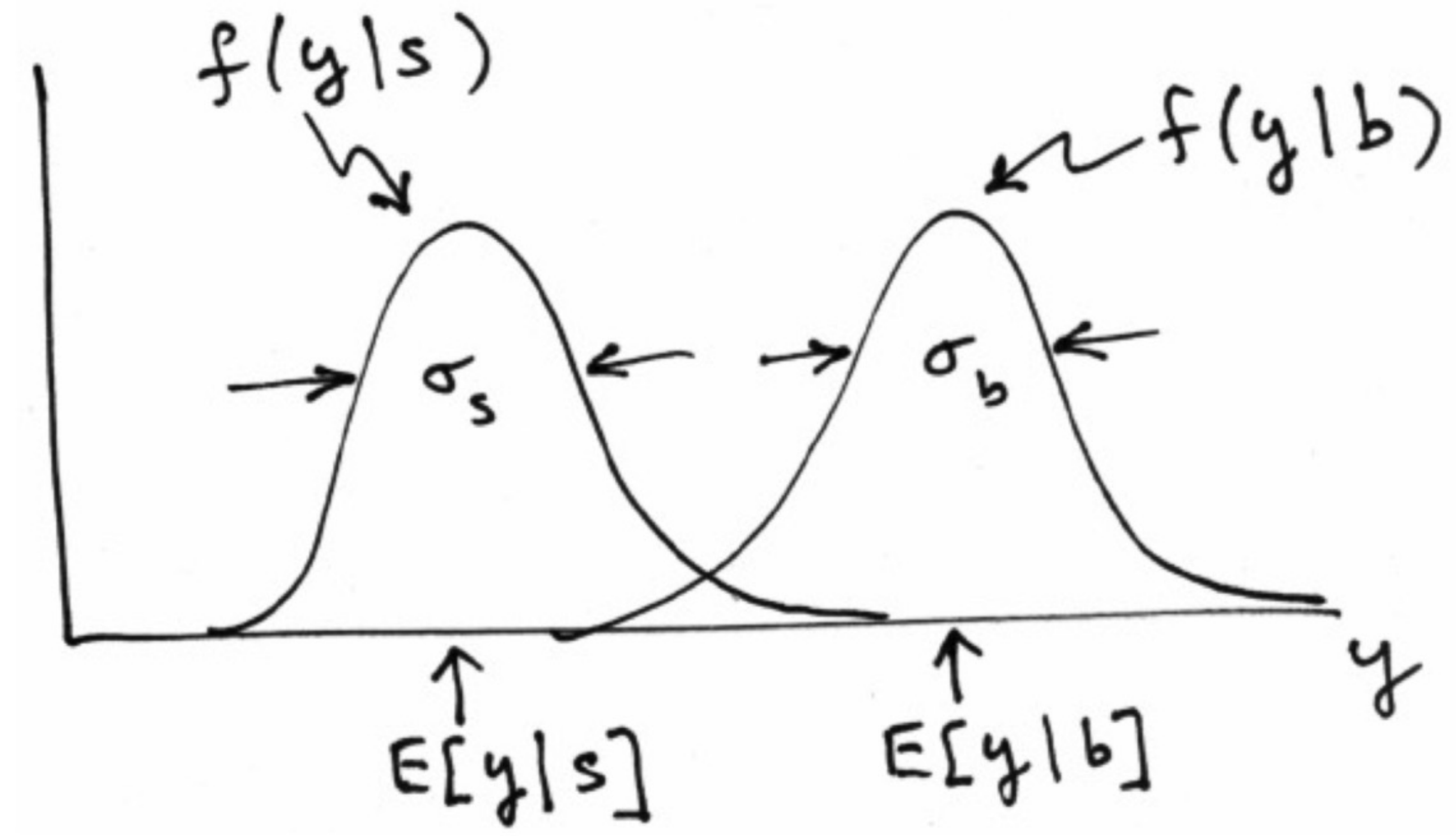
# Topics: Statistics/Computing

## Foundation of Statistics

Glen Cowan

## OpenLab!

# Topics: Statistics/Computing



# Summary

CERN is where these topics and the people who work on them collide!

This is your chance take advantage of the full breadth of topics to learn about!

We hope you have an enriching time at CERN and a fantastic summer!