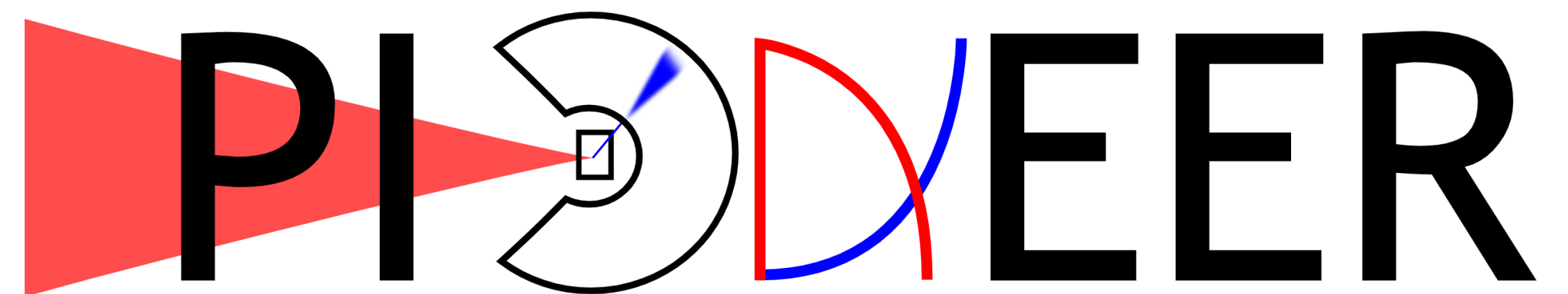


Opening: Postdoctoral Research Fellow



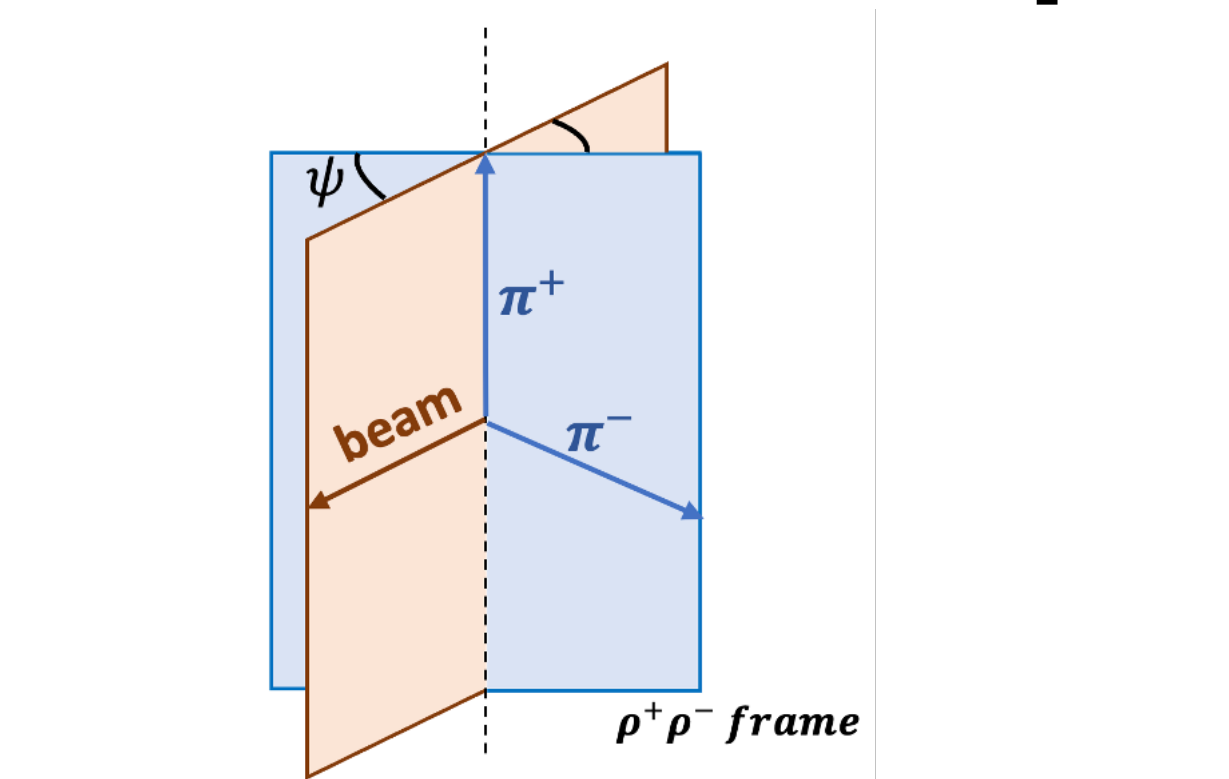
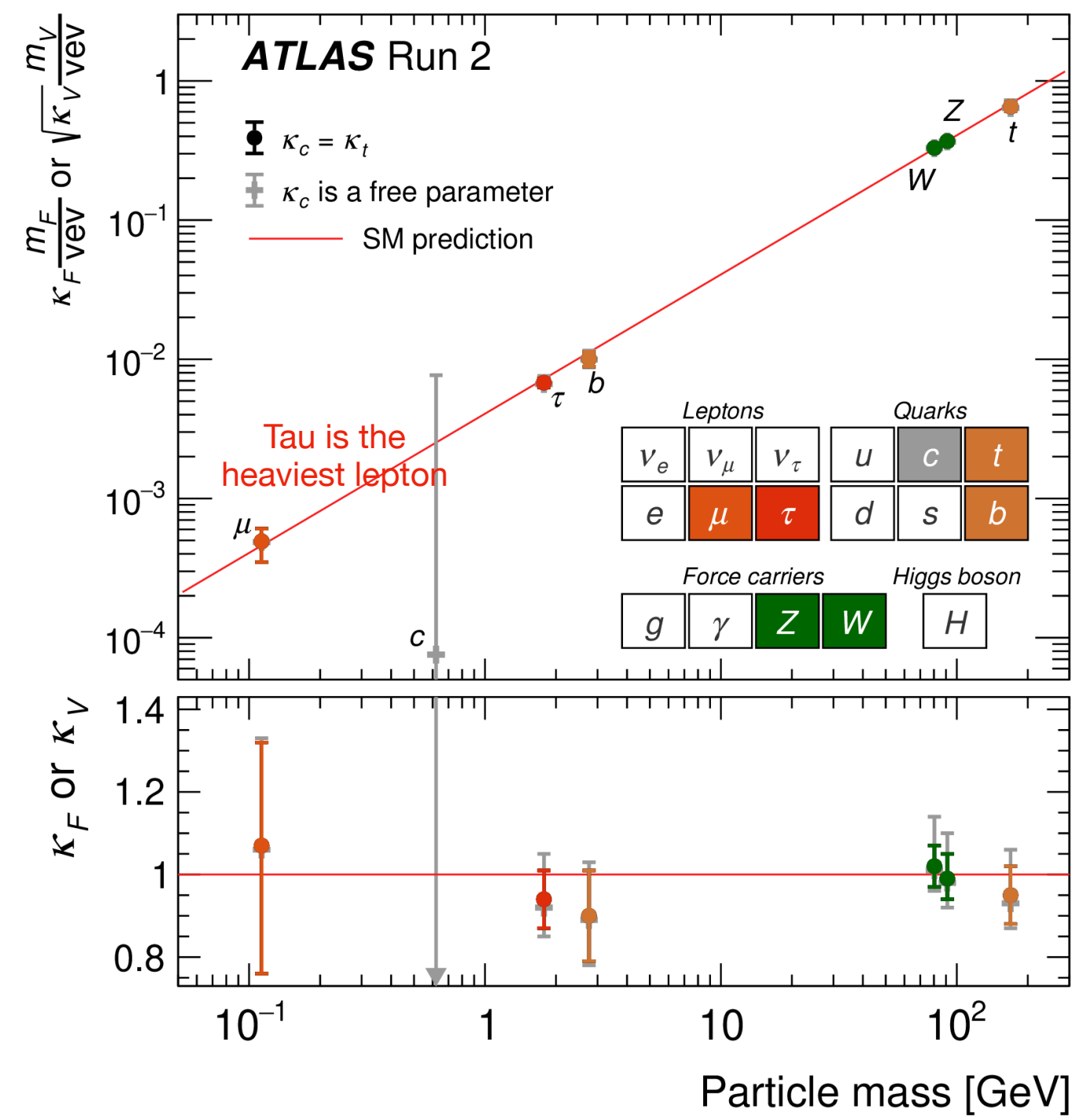
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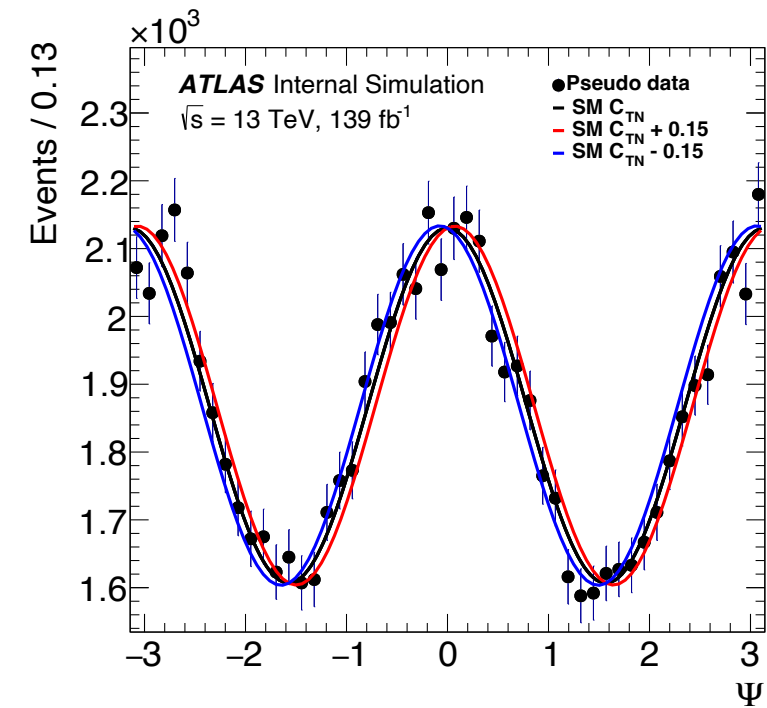


ATLAS Program

Electroweak measurement with tau leptons



$$\frac{d\sigma}{d\psi d\epsilon_{\rho^+} d\epsilon_{\rho^-}} \propto \alpha + \kappa(\epsilon_{\rho^+})\kappa(\epsilon_{\rho^-}) [C_{TT} \cos 2\psi + C_{TN} \sin 2\psi]$$



Explore fermion mass hierarchy
 $H \rightarrow \tau\tau$ is the most sensitive fermionic channel

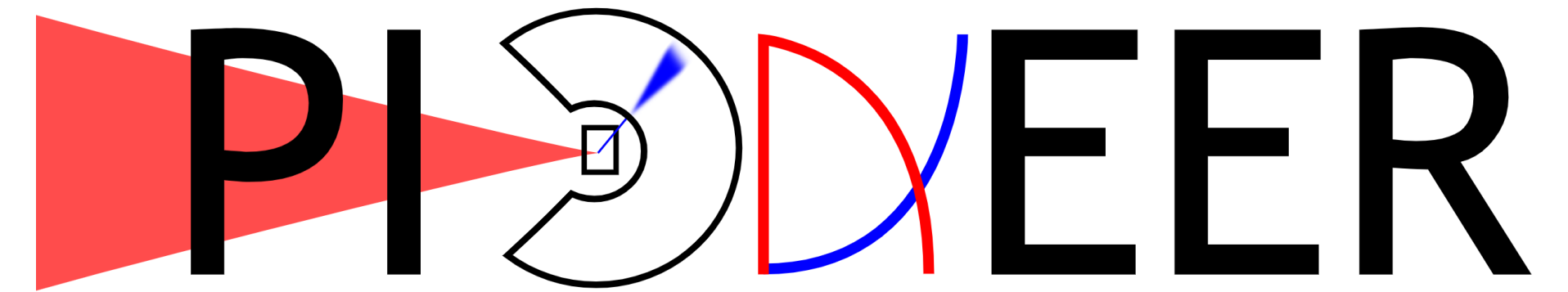
Search for CP violation in the charged lepton sector using
 $Z \rightarrow \tau\tau$ events



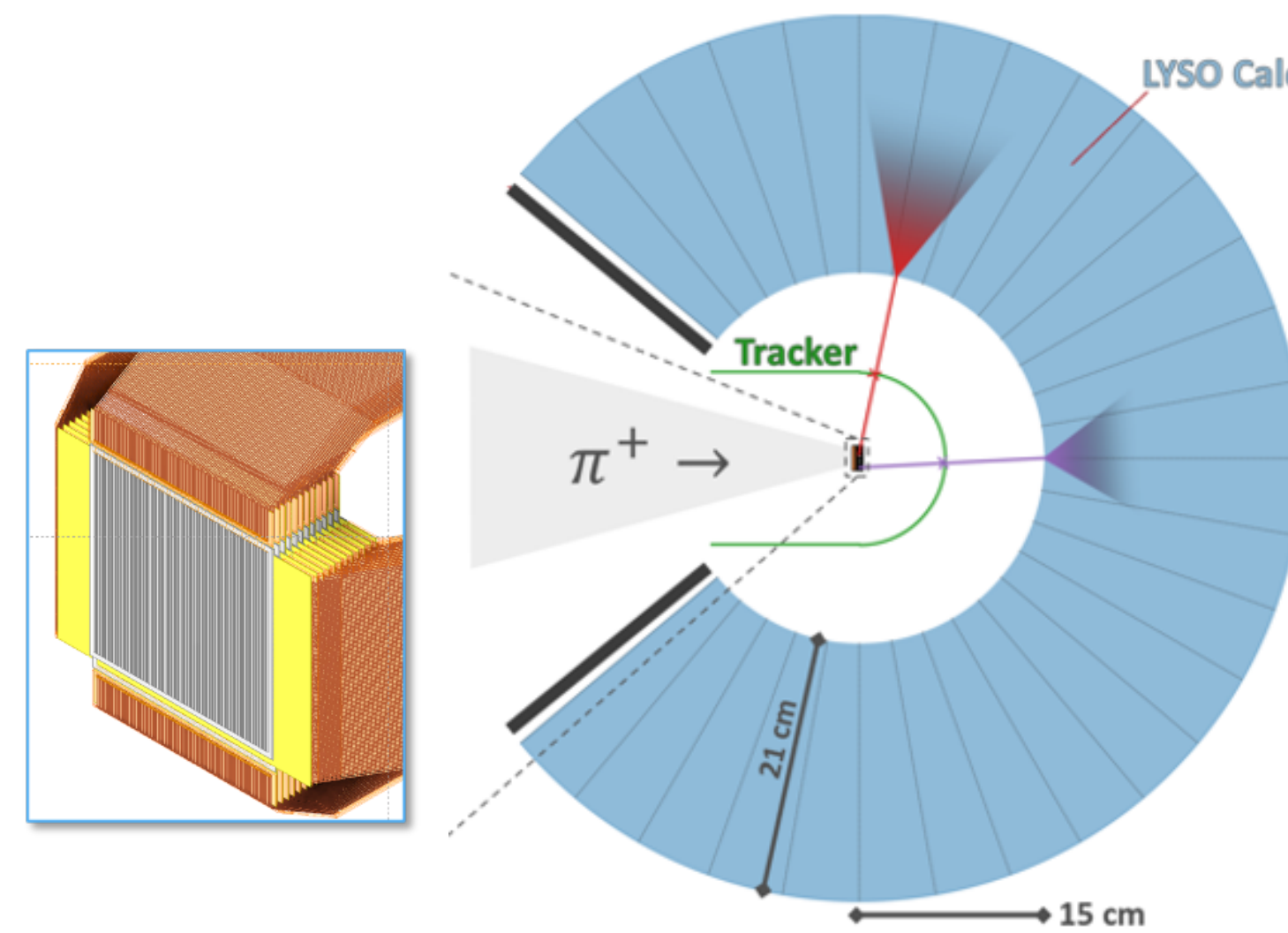
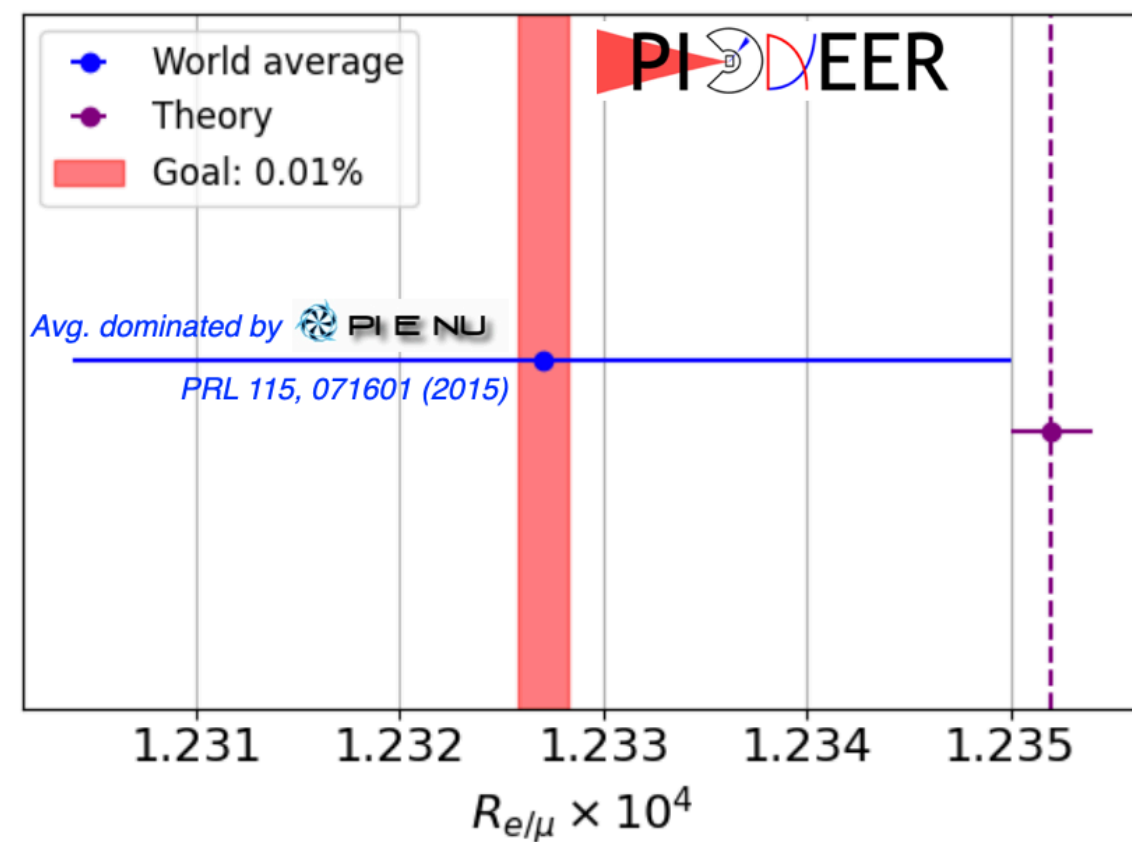
Tau CP: foundational models for tau reco
 Tau Trigger: new trigger algs, operations

PIONEER Program

Rare pion decay measurements



$$R_{e\mu} = \Gamma(\pi \rightarrow e\nu(\gamma)) \div \Gamma(\pi \rightarrow \mu\nu(\gamma))$$



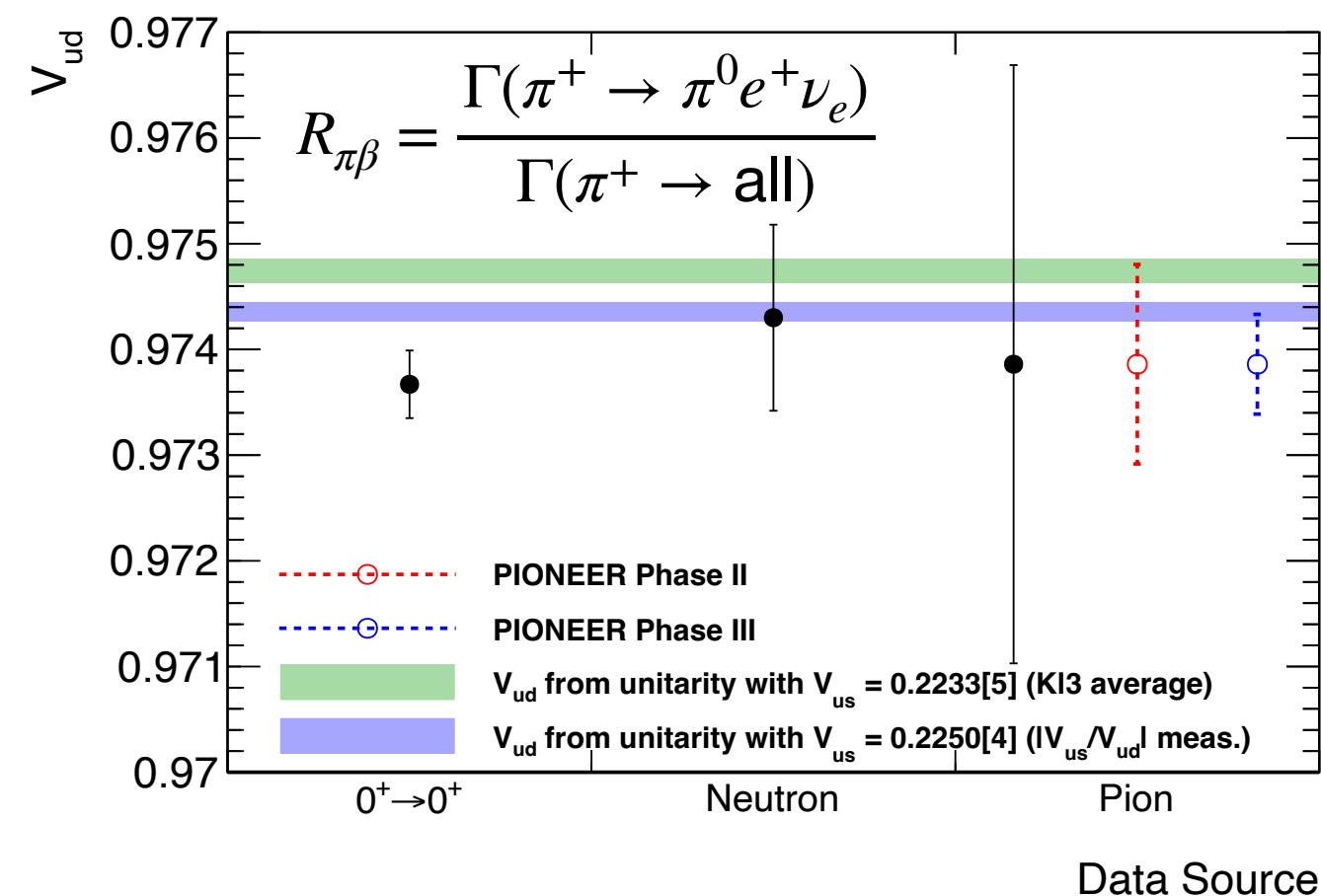
Opportunities:

Simulation work

Detector prototyping

Test beam campaigns at PSI (near Zurich)

Development of a high granularity 5D tracking device using LGADs



The position

For more information: qbuat@uw.edu

- Based at CERN or Seattle
- Primary objective is to conduct EWK measurements with tau leptons at ATLAS
- 1 year renewable upon funding availability and mutual agreement (typically up to 5 years)
- UW has large efforts on ATLAS (5 PIs) and PIONEER (3 PIs), ideal environment to make important contributions to both projects
- Application deadline: December 15
- Anticipated started as early as Feb 2025 but flexible
- Interfolio: <https://apply.interfolio.com/158065>

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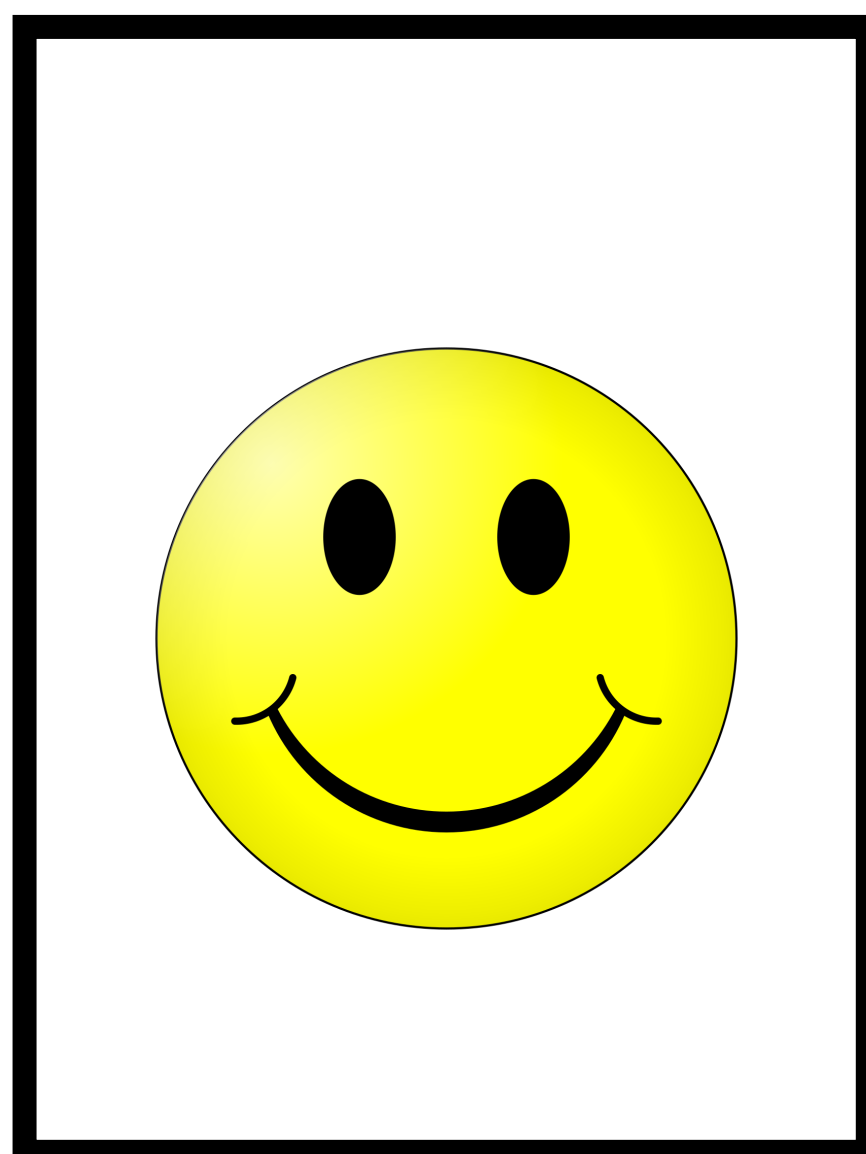


Seattle Campus

Buat Group at UW



Quentin Buat



New Postdoc



**UW Grad Student
Jessie Yang**



**UW Grad Student
Ali Garabaglu**



**UW Grad Student
Miles Cochran-Branson**



**UW Undergraduate Student
Matt Foresi**