

OPEN POSITIONS AT UNIVERSITY OF TENNESSEE



DR. TOVA HOLMES
CMS JOB MATCHING EVENT
21-25 SEPTEMBER, 2020

LOGISTICS FOR POSTDOC

- **Posting now available:** https://ut.taleo.net/careersection/ut_system/jobdetail.ftl?job=20000000120
- **Begin reviewing applications October 16, 2020**
 - Will be held open until the position is filled
- **Start date target is January 2021**
- **Roles:**
 - Supervision and mentoring of students
 - Leading analysis development
 - Integration and development of the L1 Track Trigger algorithm for HL-LHC
- **Can be based in either Knoxville or Geneva**

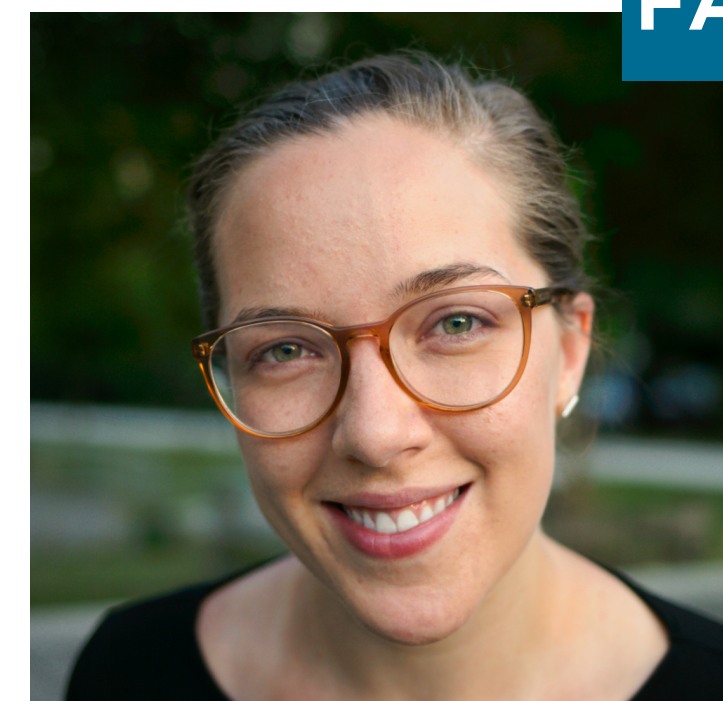
LOGISTICS FOR GRAD STUDENT

- **Typical American posting — goes through the university admissions**
 - <http://www.phys.utk.edu/graduate/degree-options.html>
 - Applications due January 15, 2021
 - Start date August 2021
 - Typical length: 5-6 years
- **Location:**
 - Presumably based in Knoxville for first few years (depending on COVID & online classes)
 - Can spend a significant portion in Geneva, also possible to be based at Fermilab in Chicago for some portion of PhD

THE GROUP

- **University of Tennessee based in Knoxville, TN**
 - Tova based in Geneva
 - L1 Track, Long-lived Particles
 - Stefan based in Knoxville
 - Tracker Upgrade R&D, Rare Higgs Decays
- **Postdoc will be supported by Tova**
 - PhD positions available for both

FACULTY



Tova Holmes



Stefan Spanier

CURRENT POSTDOC

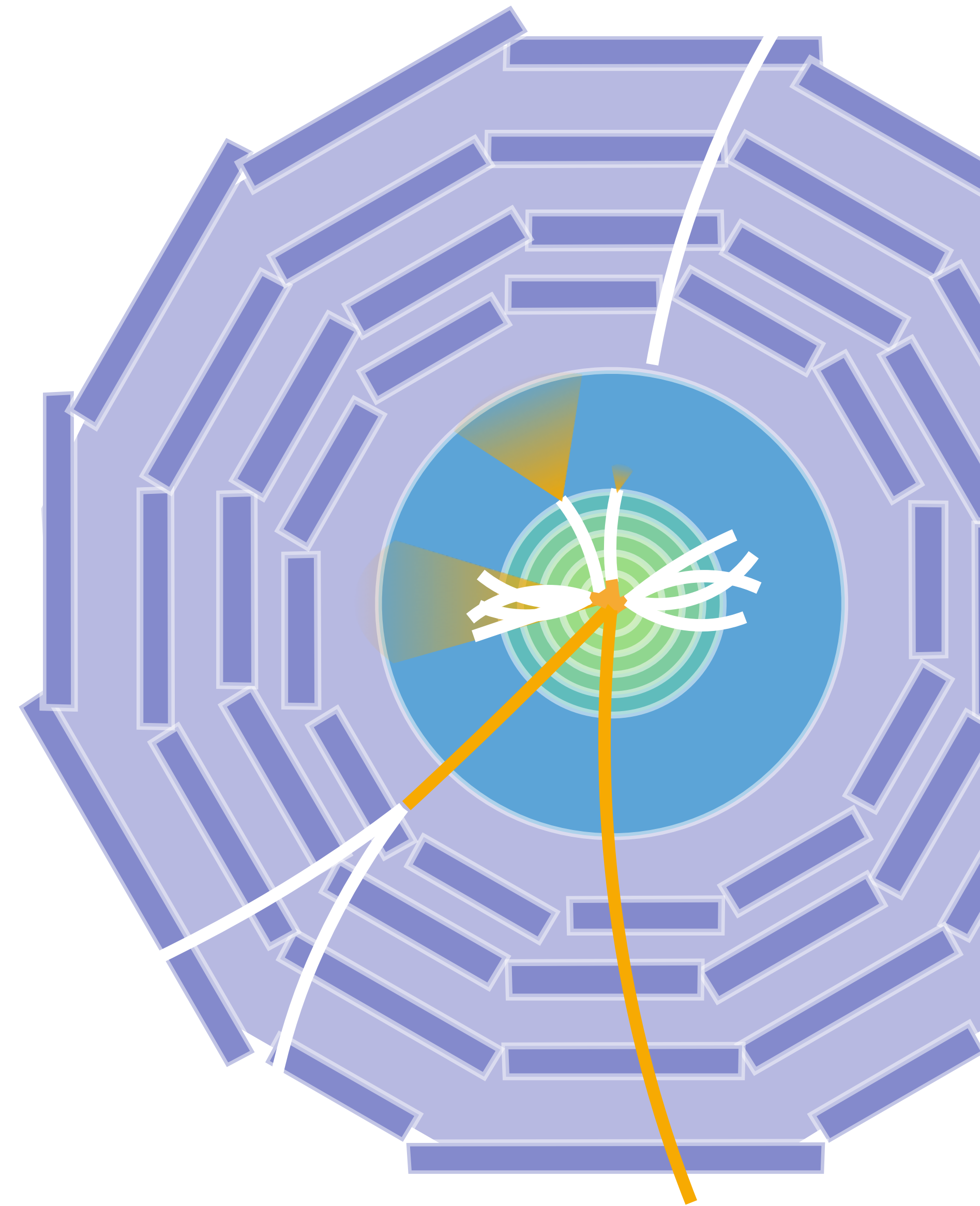
Andrés Delannoy

CURRENT STUDENTS

Jesse Harris
Himal Acharya
Ibrahim Mirza
+ several interested
younger students

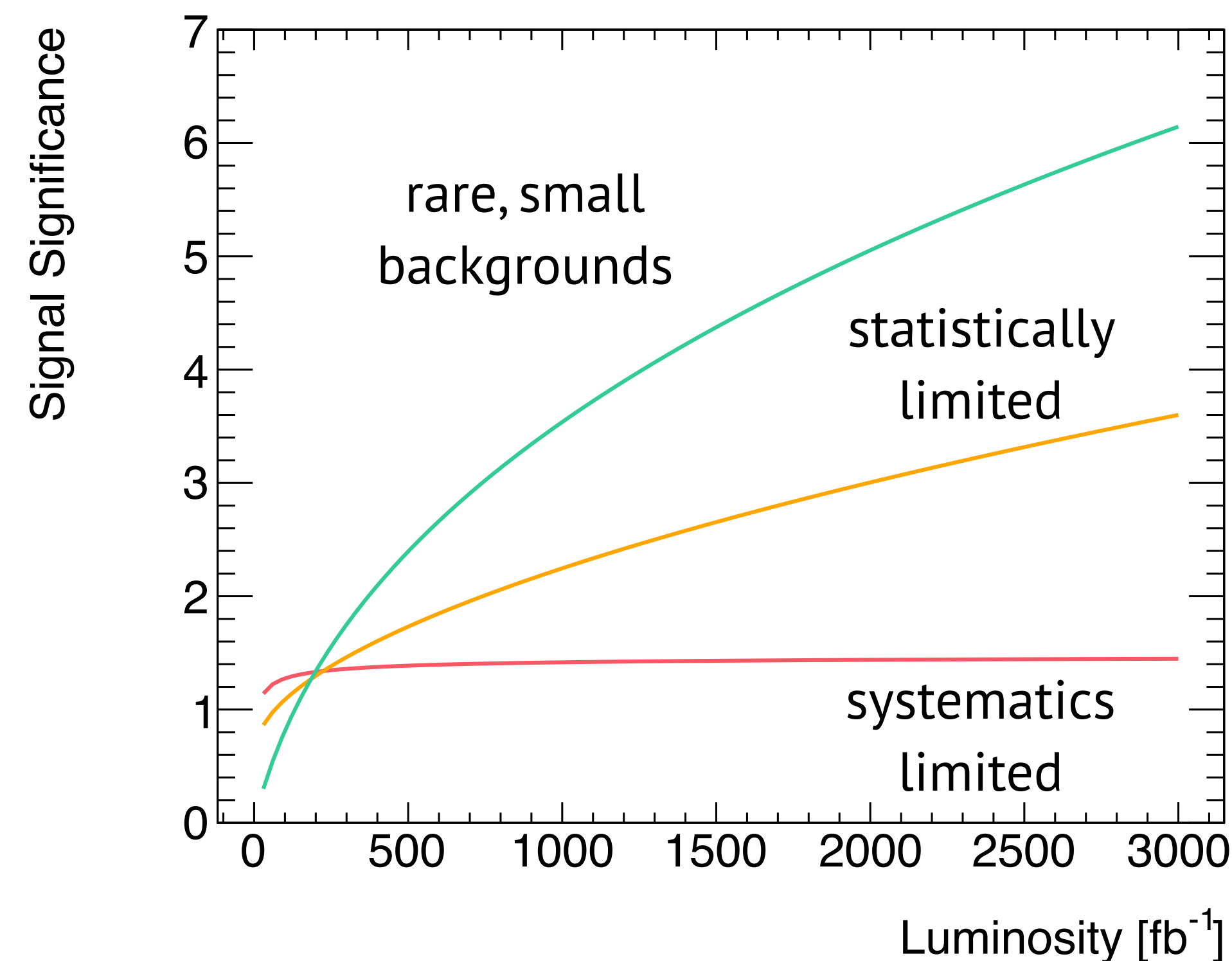
ANALYSIS WORK

- **Long-Lived Particles (and other exotic signatures)**
 - Highly motivated as a place to find **TeV scale** physics that hasn't been excluded by the LHC
 - Continues to be interesting as we collect more data
 - Can develop new **triggers** to target new scenarios
 - Many **new searches** that haven't been done
 - Rare or hard to reconstruct processes with low backgrounds have the **most to gain** from more lumi



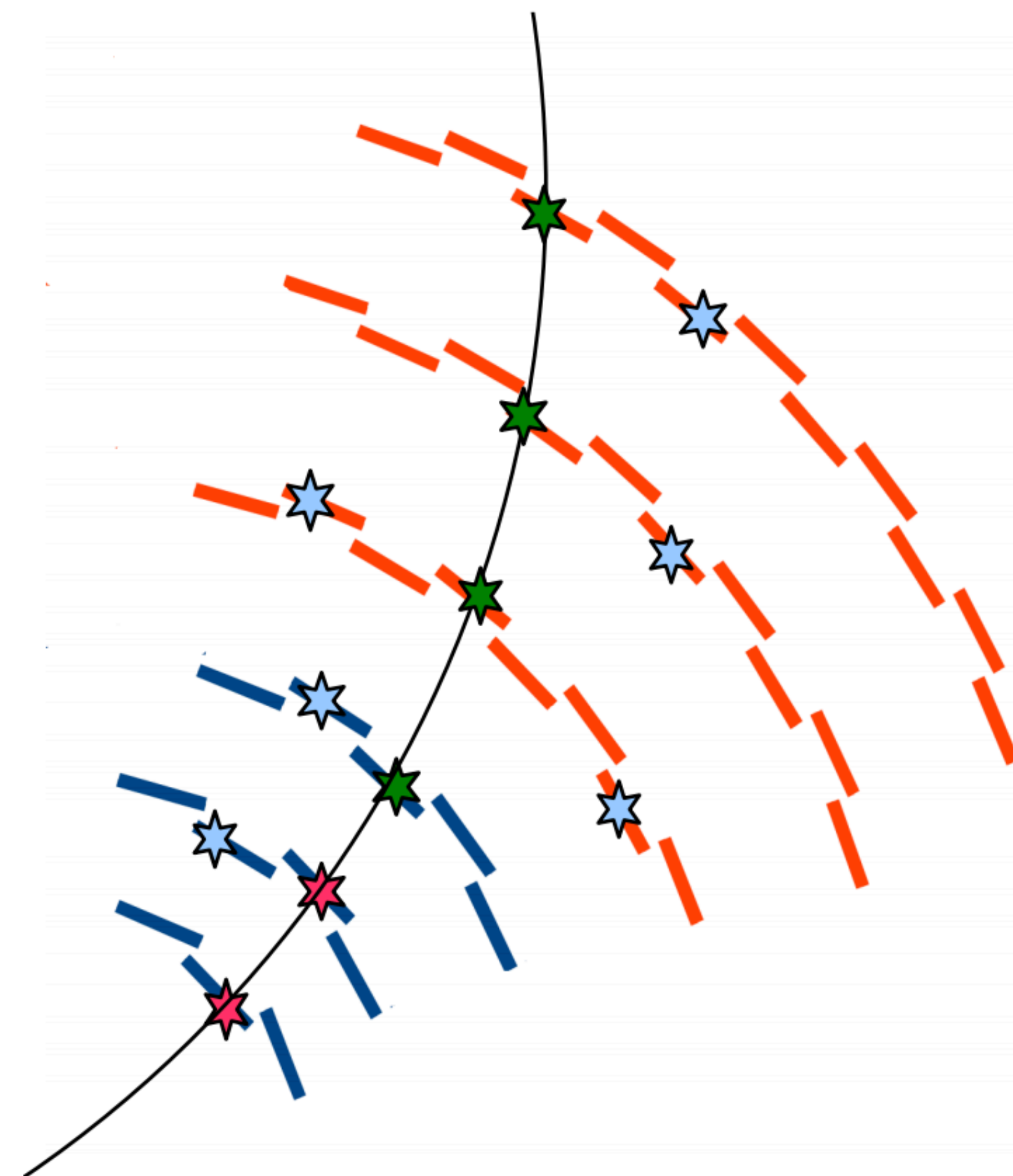
ANALYSIS WORK

- **Long-Lived Particles (and other exotic signatures)**
 - Highly motivated as a place to find **TeV scale** physics that hasn't been excluded by the LHC
 - Continues to be interesting as we collect more data
 - Can develop new **triggers** to target new scenarios
 - Many **new searches** that haven't been done
 - Rare or hard to reconstruct processes with low backgrounds have the **most to gain** from more lumi



TRACK TRIGGER

- **Work on building the new L1 Track Trigger for HL-LHC**
 - Ties in with long-lived particles:
 - Tracks are often the **key signature** for identifying a LLP
 - Goal is to incorporate (**displaced**) tracking into L1 for HL-LHC
 - Main tasks for postdocs and students:
 - Design and implement the tracking **algorithm** (including displaced tracking) to be run on FPGAs
 - **Integrate and commission** the boards



LOCATIONS: GENEVA/KNOXVILLE

VERY GOOD RIVERS



LOCATIONS: GENEVA/KNOXVILLE

VERY GOOD MOUNTAINS



LOCATIONS: GENEVA/KNOXVILLE

SMALLISH BUT NICE CITIES



LOCATIONS: GENEVA/KNOXVILLE

SMALLISH BUT NICE CITIES



VERY EXPENSIVE (COLA)

LOTS OF WINE



VERY CHEAP

LOTS OF BEER

© InsideofKnoxville.com

CONTACT ME IF
YOU'RE INTERESTED

tholmes@cern.ch