Meet the Physicists

Veronica Bindi
Dr. Bindi’s main research topics are the study of dark matter, cosmic rays, solar modulation of cosmic rays, solar energetic particles, and space radiation for future manned missions to the Moon and Mars.

Xerxes Tata
Dr. Tata has taught classes in supersymmetry, quantum physics and a variety of other areas of physics. He has written a textbook in advanced particle physics.

Claudio Corti
For his PhD thesis, Dr. Corti contributed to the AMS-02 data analysis for the time variation of proton fluxes, focusing on the study of the energy losses in the detector, the errors in the AMS electronics due to radiation damages and the unfolding of the flux.

Questions and Notes:

Simulation of a Higgs Boson event in the CMS detector, this image and blue particle tracks image taken from CERN

Graduate Students in Physics at UH Manoa
Andrew Kuhlman
Christopher Freeman

Particle Physics Masterclass
March 14, 2020

Particle Physics Masterclass
Sponsored by Quarknet
Welcome Students!

7th annual Particle Physics Masterclass in Honolulu

Congratulations on making time to learn more about this exciting realm of cutting edge physics. Students from other schools and different grades are all here to learn from local physicists and teachers.

Use this space to come up with questions for our experts.

Agenda

10:30am Arrival, Sign In
Student investigations in classrooms M102, M103 and M104
Switch between classrooms and keep learning!

12pm Lunch
Enjoy pizza with peers and physicists in the classrooms M102, M103 and M104
During lunch take a short tour of the small particle detector in M103

12:45pm Group Welcome
Introductions in Cornuelle Lecture Hall
Talks from Dr. Bindi and Dr. Tata
Panel discussion with physicists

2:30pm Data Analysis
Bring your laptops to Cornuelle for data analysis

4pm Data Discussion
Wrap up of results found with physicists. Preparation for videoconference.

4:30pm Videoconference with Fermilab
Share results with other schools as well as with Fermilab physicists

5pm Concluding Remarks
Final thoughts, evaluations

Questions for your day

What is the Standard Model?
How do physicists know characteristics about particles such as mass, charge, etc?
How do particle detectors work?
What does it mean to “detect” a particle?
What is dark matter? Why are the words “dark” and “matter” used?
How can dark matter be detected? What is the difference between direct and indirect detection?