QuarkNet Neutrino Workshop Resources

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Rick Dower

Classroom activities from the MINERvA experiment: https://neutrino-classroom.org

Neutrino Mystery and History (Rick Dower)
Recording of QuarkNet Webinar talk (length with Q&A = 1:13:30):
https://notredame.zoom.us/rec/play/6JJ7drutrW83S9ec5QSDAv9xW9W5KKus0SFPqaUJyEazUSJQNgWgMLcbM7Cqdo-EY-AzyI3dqh0DajpF?startTime=1588791662000&_x_zm_rtaid=m3eFqIf4TJKKYRfDxcEFjQ.1591110807852.fa0ab8e843a13e607b919a1e099d3e45&_x_zm_rhtaid=747

Slides: https://quarknet.org/sites/default/files/Nu%20Mystery-History.pdf

Script: https://quarknet.org/sites/default/files/Nu%20Mystery-History%20Script1.pdf

Neutrinos on YouTube
Don Lincoln:
Neutrinos Nature's Ghosts (4:57) https://www.youtube.com/watch?v=J8dRZjOD_ME

Neutrinos: Nature's Identity Thieves (5:57) https://www.youtube.com/watch?v=RGv-pcKRf6Q

How Do You Detect a Neutrino? (9:33) https://www.youtube.com/watch?v=gKO8f79Ekew

How Do You Make a Neutron Beam? (5:18) https://www.youtube.com/watch?v=y8kJFXhN7Po

What is the DUNE Experiment? (10:20) https://www.youtube.com/watch?v=2os1rfVXRCM

Sterile Neutrinos and Seesaws (7:19) https://www.youtube.com/watch?v=bgg32f6wl4o

Martin Archer: Three-way coupled pendulum& Neutrinos (5:05)
https://www.youtube.com/watch?v=YqVF3NSc5xg

SuperKamiokande: "The giant science experiment hinting for the 'ghost particle', neutrinos" (6:31) https://www.youtube.com/watch?v=aE6vRfCp4E4

CERN: First Appearance of the Tau Neutrino (6:41)
https://www.youtube.com/watch?v=M3aB_zUZ1c8

"Measuring the Unexpected – Ice Cube" (7:53)
https://www.youtube.com/watch?v=aE6vRfCp4E4

Books

Neutrino, Frank Close, Oxford University Press, 2010

A concise (181 pages) and engaging history of efforts to explore and understand neutrino interactions.

Neutrino Hunters, Ray Jayawardhana, Scientific American/Farrar, Straus, and Giroux, 2013

A short (243 pages) and lively account that combines a look at neutrino history with references to current experiments like Ice Cube and KATRIN.