JOINT PROJECTS

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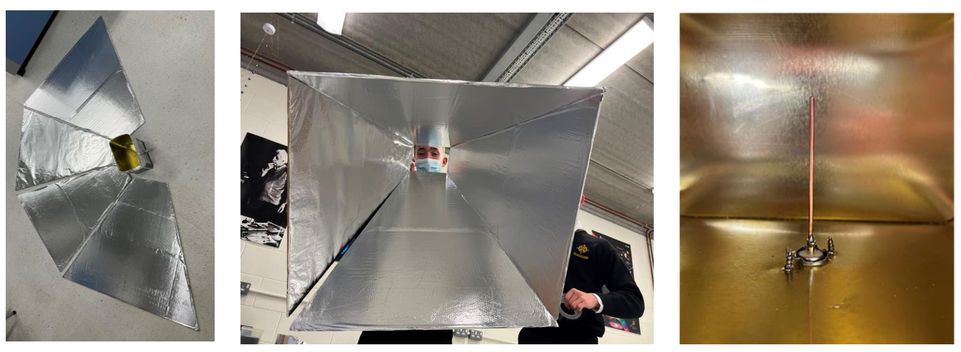
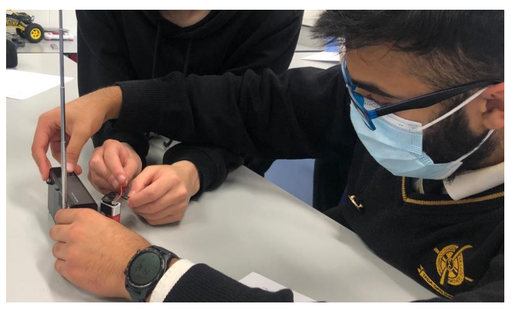
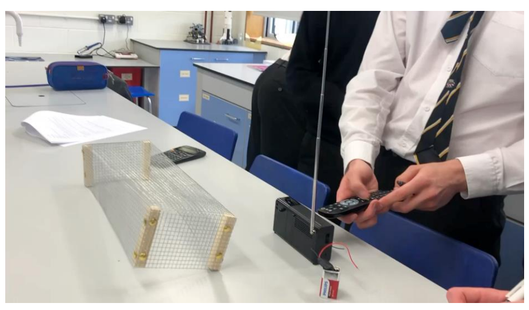
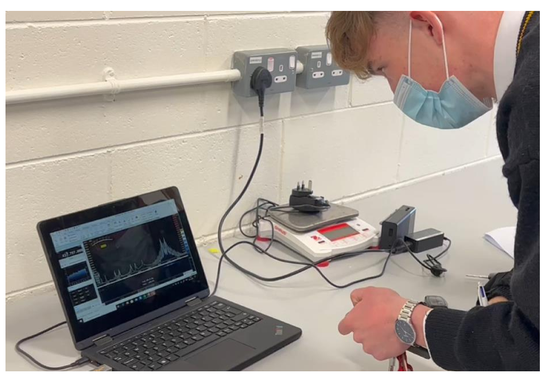
Radio Astronomy in Schools

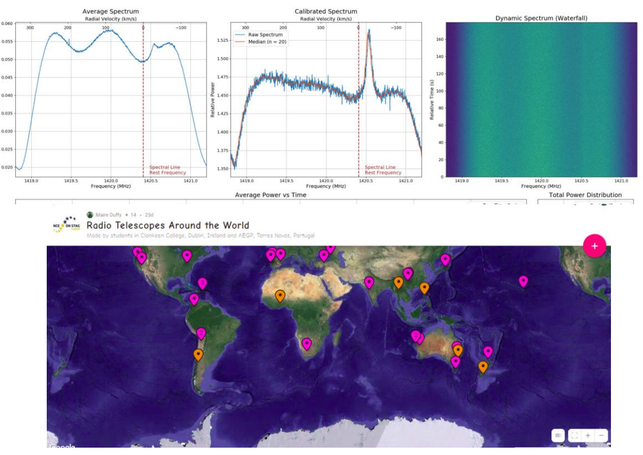
Radio Astronomy at School is a project that aims to promote students' interest in astronomy and physics in the area of radio waves emitted by celestial bodies.

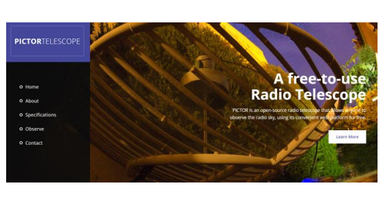
Students were involved in building three different types of radio telescopes.

1. An Itty Bitty Telescope using a t.v. Satellite dish and a signal finder to detect radio waves from the sun.
2. A horn antenna to detect the 21 cm hydrogen line from our milky way.
3. A 2.5 m parabolic dish radio telescope in Portugal. The dish itself was donated from AMRAD.





Conclusion: This project allowed students to apply their physics knowledge to real world applications and brought radio waves to life!

Students also investigated RFI (radio frequency interference) in the lab from electrical appliances, the effect of a Faraday cage on radiowaves, detected radiowaves using a Software Defined Radio (SDR) and a RTL-SDR dongle, made simple astronomical telescopes as a comparison to radio telescopes and investigated the night sky for the 21cm hydrogen line using Pictor telescope and Stellarium online. Students from both countries collaborated on a map of radio telescopes around the world using Padlet, which allowed them to see the best place to locate a telescope with the least amount of radio interference. Thanks to all the advice from both AMRAD, Portugal and I-LOFAR, Ireland.