**CONCLUSION:**

- Simulations and physical testing are still ongoing.
- Using similar techniques to the Gamma-Ray Burst Monitor, we are developing a novel fast neutron detector which overcomes the limitations of current portal monitoring neutron detectors.
- MCNP6 simulations have shown our ability to separate ambient background neutrons and neutrons from fissile sources being smuggled.
- The UMPBT method paired with MCNP6 simulations have estimated the sensitivity limitation for our detector in an ideal case.