Dr Ellis Rintoul, Department of Physics

**Abstract** –

This picture shows a semiconductor crystal, cut and polished into a cuboid shape, and placed on a board that allows us to read out to a computer what it detects. And that’s all it is really, a detector. Of gamma radiation to be specific. We built this system to be part of a camera that can be used to image breast cancer using gamma rays to produce high-quality images. These gamma rays require special techniques to make pictures with as they’re too energetic for a normal camera to see. Their high energy though allows us to produce contrasting images and so enables the detection of cancerous tissues that other breast imaging methods wouldn’t catch. There’s a way to go yet, but I hope that one day we’ll see some of the techniques that are being developed in the nuclear physics lab at Liverpool deployed in hospitals around the country.