



Contribution ID: 50

Type: **not specified**

## Vacuum Phototriode (VPT) Studies

The poster I will be presenting is based on my research accomplished during the first year of my PhD at Brunel University London. This research involves modelling, characterising and testing Vacuum Photo-triode's (VPT). VPT's are used to convert a light pulse into an electrical signal where the magnitude is proportional to the light's intensity. VPTs are modelled using COMSOL; which is a multi-physic simulation package. Accurate replicas of the VPTs are designed and recreated. This will go onto creating various testing models to test VPTs in various different environments. Alongside this, the quality and degradation effects on actual VPTs being in a 4-T magnetic field are being monitored during a long period which takes place at Brunel University London. This Long term testing on a single VPT is to monitor its behaviour when interacting with high and low frequency LED pulses. This has been running for 7 months and will continue until there is sufficient data to carry out a thorough analysis, with the latest results shown on the accompanying poster.

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