

Safe Operating Procedure for use of ^{57}Co sealed source in NPL 102/165

PI: Alvaro E Chavarria, 2021/07/05

A sealed ^{57}Co γ -ray button source with an activity of $\sim 1 \mu\text{Ci}$ will be used in the Selena test system in NPL 102. The source will be installed in the source holder above the CMOS/aSe detector inside the vacuum chamber. When not in use, the source will be stored in the small lead castle in NPL 165.

- Only handle the source if you have completed the sealed source radiation safety training.
- Perform a reference background measurement with the CMOS/aSe detector before the source is installed. There should be no measurable ^{57}Co γ rays.
- Minimize exposure (minimize time, maximize distance) when handling and installing the source.
- Wear gloves when handling the source and wash your hands afterward.
- After the source is removed, perform a background measurement with the CMOS/aSe detector. If any ^{57}Co is detected, it indicates a radioactive leak. You should contact your supervisor and inform Eric Smith, Gary Holman, or Alejandro Garcia.
- When not in use, secure the source in the storage location marked **X** in the floor plan below.

