

The Comprehensive Nuclear-Test-Ban Treaty prohibits nuclear explosions worldwide and uses the International Monitoring System (IMS) for treaty verification. One IMS detection area is radionuclide monitoring, which uses the detection of radioactive xenon isotopes as an indicator of nuclear testing. These systems are typically based on organic plastic scintillators, which have limited energy resolution. Chemists at Sandia National Laboratories have recently developed an organic glass scintillating (OGS) material that has the potential to improve these radionuclide detection systems by replacing the currently employed plastic scintillators. The glass exhibits pulse shape discrimination capabilities, high light output, and fast timing and, as an amorphous solid, can be melt-cast into a variety of shapes and sizes. In this work, we present coincident time resolutions and pulse shape discrimination (PSD) capabilities of organic glass scintillators of varying geometries, reflective wrappings, and age. The scintillators are coupled to photomultiplier tubes, and the coincident timing resolution experiment uses a ^{22}Na source, while the PSD experiment uses a ^{252}Cf source. The effects of reflective wrappings on the PSD capabilities are studied, as well as geometric effects such as scintillator thickness and height. Additionally, the PSD capabilities of two OGS cylinders of the same dimensions, one cast several years ago and one cast recently, are compared. The older OGS cylinder has yellowed over time and is no longer transparent. The PSD performance of the older OGS cylinder is only slightly worse than the newly cast sample.