

Measuring infrared light in xenon

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Xenon, a heavy noble gas, is an ideal target for direct dark matter detection. Several experiments utilize its ultraviolet scintillation to study interactions with nuclei and electrons. It is also known that gaseous xenon emits infrared light, which has been less extensively studied.

A major reason for this is the availability of sensors that meet the stringent sensitivity and radioactivity requirements for dark matter searches. Our group at the MPIK is currently investigating interactions in gaseous xenon using infrared-sensitive photomultiplier tubes and plans to soon explore emissions in the liquid phase.

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