

**2018 Mo-99 TOPICAL MEETING ON
MOLYBDENUM-99 PRODUCTION TECHNOLOGY DEVELOPMENT**

**SEPTEMBER 23-26, 2018
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**3 MeV Van de Graaff Irradiations at Argonne's LEAF Facility
in support of
Mo-99 Production**

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ABSTRACT

In support of the domestic production of Mo-99 the low energy (3 MeV) Van-de-Graaff accelerator provides the capability of delivering high levels of electron/photon dose rates to critical components without presenting activation and handling hazards of the irradiated targets. The functionality of the irradiated critical components is monitored during and after the irradiations. Van-der-Graaff irradiation experiments have been performed to study radiation stability and performance for various parts and materials for the Mo-99 production systems. Van-de-Graaff experiments coupled with MCNPX calculations prove to be a successful and valuable method to investigate radiation hardness and stability of different critical components.