

NEUTRON TEST FACILITY



Over the last two decades, Fifth Gait Technologies has led the way in evaluating neutron single event effects (nSEE) and developing fundamental approaches to nSEE testing. Our Neutron Test Facility (NTF) became operational in the summer of 2023 with the installation of a 14 MeV neutron generator. In 2024, a 2.45 MeV source was installed.

In addition to offering turnkey testing solutions for electronics and sensors in support of neutron displacement damage (NDD) and nSEE, Fifth Gait's facility is available for customer rental, with support for dosimetry and material handling.



SOURCE SPECIFICATIONS

DT-110

14.1 MeV deuterium-tritium generator

- » **Max flux (4π)**
 1×10^{10} neutrons/sec
- » **Max fluence (100 mm²)**
 7.9×10^7 n/cm²/s at
1" from drift tube
(90% uniformity)

DD-109

2.45 MeV deuterium-deuterium generator

- » **Max flux (4π)**
 4×10^9 neutrons/sec
- » **Max fluence (100 mm²)**
 4.9×10^7 n/cm²/s at
1" from drift tube
(90% uniformity)

NEUTRON TEST FACILITY



Your neutron facility rental includes a test operator, dosimetry (neutron and gamma, for personnel and test articles), ESD workstations, power (120 VAC and 208 V 3-phase), material handling (activation measurement and secure radioactive material storage). We offer laser alignment, a test cart for setup, and HDPE shielding bricks, and (if needed) two different prefabricated enclosures for moderated 14.1 MeV runs.



We can also design custom fixturing for tests to allow for multi-article tests or to accommodate unusual parts. Please contact our team to see how we can ensure your test gives you the best possible data.

- » **Personal electronics allowed in test area**
- » **Photography provided by FGT staff**
- » **Guest network for internet access**
- » **Loading dock access for hardware shipments**

STANDARD OPERATIONS

Monday through Friday 8 am-4 pm

12-hour operations and Saturdays available for additional fee

Email neutrons@5thgait.com for availability and inquiries

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5thGait.com