

Glenn Extreme Environment Rig (GEER)

Jeffrey Balcerski¹ < Jeffrey.balcerski@nasa.gov>, Leah Nakley², Tibor Kremic², Gary Hunter², Kyle Phillips², Sara Port³, ¹Ohio Aerospace Institute, ²NASA Glenn Research Center, ³NASA Postdoctoral Program

KEY POINTS

- The most comprehensive Venus surface simulation facility in the world.
 - Simulates temperature, pressure, and chemistry
- Unsurpassed long-duration capability.
 - Demonstrated 80-, 60-, and 40-day tests to date with the ability to run longer
- Critical for understanding Venus science on future missions and advancing technology readiness level through relevant environment demonstration.
- 800 L internal volume.

UNIQUE CAPABILITIES

- 8 independent trace gas streams, high-pressure liquid injection and bulk CO₂ and N₂.
- Real-time monitoring and control of temperature, and pressure, and chemistry.
- Multiple user ports accommodating power and data feedthroughs.

