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High-resolution gamma-ray spectroscopy with a NASA/GSFC microcalorimeter at the Lawrence Livermore National Laboratory GREG BROWN, BRET BECK, JOHN BECKER, PETER BEIERSDORFER, LLNL, KEVIN BOYCE, RICH KELLEY, CAROLINE KILBOURNE, F.SCOTT PORTER, NASA/GSFC, ANDY SZYMKOWIAK, Yale University — A 32 pixel laboratory microcalorimeter spectrometer built by the NASA/Goddard Space Flight Center and in operation at the Lawrence Livermore National Laboratory is now being used for gamma-ray spectroscopy. The second generation laboratory instrument, dubbed the XRS/EBIT, has been used to measure up to 60 keV gamma rays with a resolution of 60 eV or less. The microcalorimeter makes it possible to resolve many gamma-ray spectral ines for the first time. An overview of the operating parameters and measurement capabilities will be given, as well as example spectra. Work by the Univ. of California Lawrence Livermore Nat'l Laboratory was performed under the auspices of the D.o.E. under contract No. W-7405-Eng-48.

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