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**Pair Distribution Function Study of  $Zr_{55}Cu_{35}Al_{10}$  Bulk Metallic Glasses** CANG FAN, T.W. WILSON, W. DMOWSKI, H. CHOO, Dept. of Mat. Science & Eng., University of Tennessee, J.W. RICHARDSON, E.R. MAXEY, IPNS Division, Argonne National Laboratory, P.K. LIAW, Dept. of Mat. Sci. & Eng., University of Tennessee — Despite strong interests in bulk metallic glasses for a variety of engineering applications, details of their structures still remain uncertain. During annealing bulk metallic glasses show heat release prior to the crystallization, which corresponds to the structural relaxation. To investigate the changes in local atomic structure (short-range to medium-range order) associated with the structural relaxation and partial crystallization, we carried out neutron-scattering measurements on the  $Zr_{55}Cu_{35}Al_{10}$  bulk metallic Glasses subjected to three different heat treatment conditions: (1) as-quenched, (2) annealed at 703 K for 2.1 ks to induce structural relaxation, and (3) annealed at 703 K for 4.2 ks to partially crystallize. The neutron-scattering results were studied by pair distribution function analysis. In addition, high-resolution transmission electron microscopy and x-ray diffraction have been performed to investigate the as-cast structure and crystallization processes to complement the neutron-scattering structural studies. *This work is supported by the NSF International Materials Institutes Program under DMR-0231320 with Dr. C. Huber as the Program Director.*

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