LATTICE DEFECTS AND LOW TEMPERATURE SPECIFIC HEAT PEAKS IN SOFT CARBON AND POLYCRYSTALLINE GRAPHITE

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The specific heat of a soft carbon and a polycrystalline graphite was investigated using a dilution refrigerator at the NASA Lewis Center in Cleveland, down to 75 milidegrees. The variation in height of the two specific heat peaks and of the linear effect with heattreatment, neutron irradiation dose and thermal anneal, support the contention that the peaks are due to formation of antiferromagnetic islands throughout the randomly distributed localized electronic spin system.

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