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Results from GX Fitting 12 April 2002 Flare RICHARD WEN, SABINA JIA, Intern, NATSUHA KURODA, GELU NITA, GREGORY FLEISHMAN, Advisor — A solar flare is a transient, dynamic phenomenon. The variation of electromagnetic emission during a solar flare tells us about variation of the relevant physical parameters in the flare. Here we report an evolving 3D flare model for a flare on April 12, 2002. This model was created with the modeling software GX Simulator by adjusting physical parameters in the flaring loop to fit four minutes of microwave spectra measured by the Owens Valley Solar Array. In the fitting of the data, the spatial distribution of nonthermal electrons was primarily modified, but the energy distribution was also altered, specifically following the peak flare intensity. We found that the spatial distribution of the nonthermal electron increased its peak, cross-section, and width along the loop length as the flare increased in intensity. After the peak, the total number of nonthermal electrons decreased and minimum electron energy increased as the loop decreased in thickness.

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