

M21b **A Magnetic Reconnection Model for Solar Penumbra Microjets Discovered by Hinode**

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We present a result from magnetohydrodynamic simulations performed for the solar penumbral microjet discovered by Hinode. Following the idea that non-parallel magnetic field lines tend to reconnect and release magnetic energy (magnetic reconnection), we used a model in which two isolated flux systems (penumbral flux tube and inter-penumbra fields) interact in a 3-dimensional space, to investigate how the reconnection proceeds to produce a jet. The simulation reproduced that the jet forms in the direction of the inter-penumbra fields and its speed is about 100 km/s, which is basically consistent with the Hinode's observations. This result suggests that the reconnection is a possible mechanism by which a penumbral microjet is produced. We demonstrate a detailed process related to the formation of the penumbral microjet in our poster.