

E113-027

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Giant Chromospheric Jet observed with Hinode and Magnetic Reconnection Model

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A solar space telescope mission Hinode Revealed that solar chromosphere is much more dynamic than had been thought and is full of tiny jets, which may be a key to resolve the puzzle of chromospheric and coronal heating. With its unprecedented high quality instruments at both optical and X-rays, Hinode discovered a beautiful, giant jet with both cool and hot components at the solar limb. Simultaneous observations of Hinode and TRACE satellite with EUV telescope revealed the dynamical relation between hot (5×10^6 K), cool (10^4 K) and intermediate (10^6 K) plasma motions. With the quantitative comparison between these observations and magnetohydrodynamic simulations based on magnetic reconnection, we showed, for the first time, how hot and cool jets are heated and accelerated, suggesting a proto-type of reconnection model of solar jets.