

# **Distribution of Electric Current in Solar Plasma Loops**

Baolin Tan (1,2), Guangli Huang (1), and Haisheng Ji (1)

(1) Purple Mountain Observatory, the Chinese Academy of Sciences, Nanjing, China (2)  
Graduate School of the Chinese Academy of Sciences, Beijing, China (bltan@pmo.ac.cn)

Based on the observations of vector magnetograms, we analyzed the component and distribution of the electric current in solar current-carrying plasma loops. We supposed that the electric current is composed of the convective current (CC) and neoclassical bootstrap current (NBC). According to the observations of the high-resolution vector magnetograms observed by Big Bear Solar Observatory, we may derived the total electric current and its distribution, and the distribution of the neoclassical bootstrap current can be obtained from the theory of neoclassical bootstrap current. Then the distribution of the convective current can be obtained by the way of subtracting the bootstrap current from the total current. With these results, we may get a self-consistent interpretation of the current genesis.