Magnetic configuration of solar filament barbs

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Filaments are a spectacular phenomenon in solar physics. Similar structures exist in galaxy clusters, with much larger scales. Solar filaments are cold and dense materials suspended in the hot and tenuous corona, supported against gravity by magnetic tension force. A filament is composed of a spine and several barbs protruding out from the spine. It is still unclear what type of magnetic configuration is responsible for the filament barbs. One popular notion is that each filament barb corresponds one foot of the filament, hence the corresponding magnetic field is characterized by bald-patch shaped field lines. In this talk, I will present the evidence that a filament barb is not necessary to be a filament foot, and it can be simply extended magnetic dips.