

A Study of An Active Region Filament Near A Sunspot

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We have observed an active region filament located near a single sunspot. Line-of-sight magnetograms and H-alpha filtergrams of three different wavelengths, line center and $\pm 0.5\text{\AA}$ were taken at Big Bear Solar Observatory in October of 2000 with the cadence of 1 minute each. During the 8 hours of observing run, the active region filament shows persistent mass motions along the main body together with considerable changes of photospheric magnetic fluxes around the filament channel. The present study examines the changes of the photospheric magnetic fluxes and surrounding H-alpha structures to discuss their morphological responses to mass motions.