STRUCTURE AND MAGNETIC FIELDS OF THE STAR-FORMING REGION NGC 6334A

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NGC 6334 is a galactic HII region and molecular cloud complex about 1.7 kpc away, toward the inner Galaxy. It consists of a remarkably linear filament of molecular gas nearly 10 pc long, punctuated by five HII regions at various stages of development along the filament. One of these HII regions, NGC 6334A, is young and shell-like, it appears to be breaking out from the rear side of a dense core of star-forming molecular gas. Studies of the Zeeman effect in 1665 and 1667 MHz OH absorption lines reveal magnetic fields of up to 0.7 mG, strong enough to significantly affect the dynamics of the region. Previous studies of NGC 6334A suggested that classic bipolar structure extends to the north and south of the central shell of ionized gas. More recent IR and radio data suggest that this picture is incorrect, with much of the ”bipolar” structure apparently unrelated to the NGC 6334A HII region.