

Abstract Submitted  
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**Radio continuum emission and HI gas accretion in the NGC 5903/5898 compact group of galaxies** PAUL WIITA, The College of New Jersey, GOPAL KRISHNA, MUKUL MHASKEY, NCRA/TIFR — We investigate the nature of the multi-component radio continuum and HI emission associated with the nearby galaxy group comprised of two dominant ellipticals, NGC 5898 and NGC 5903 and a dwarf lenticular ESO514-G003. Striking new details of radio emission come from the ongoing TIFR.GMRT.SKY.SURVEY (TGSS) which provides images with a resolution of  $\sim 24'' \times 18''$  and rms noise of 5 mJy at 150 MHz. Previous observations of this compact triplet include images at higher frequencies of the radio continuum as well as huge HI trails originating from the vicinity of NGC 5903. The TGSS 150 MHz image has revealed a large asymmetric radio halo around NGC 5903 and also established that the dwarf SO galaxy ESO514-G003 is the host to a previously known bright double radio source. The radio emission from NGC 5903 is found to have a very steep radio spectrum ( $\alpha \sim -1.5$ ) and to envelope a network of radio continuum filaments bearing a spatial relationship to the HI trails. Both its radio loud members are also the only galaxies that are seen to be connected to an HI filament. This correlation is consistent with the premise that cold gas accretion is of prime importance for triggering powerful jet activity in the nuclei of early-type galaxies.

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