Investigating the environment of acceleration sites in the supernova remnant G1.9+0.3 with Athena X-IFU

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G1.9+0.3 is the youngest known Galactic supernova remnant (SNR) and an ideal target to study non-thermal emission from accelerated electrons. Broad emission lines are detected in G1.9+0.3 based on Chandra observations. We use Athena X-IFU instrument simulations to measure the expansion velocity by Doppler broadening and investigate the plasma state to understand the environment of acceleration sites in G1.9+0.3. This SNR is not listed in the Athena Mock Observing Plan, which is the prime target list. We plan to propose an observation about G1.9+0.3 for a future observation cycle. Here we present our preliminary results based on simulations using the SIMX simulator.