High-Resolution Spectroscopy of a Blue Straggler Candidate:Evidence for Binarity and Lithium Signatures

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Blue straggler stars (BSS) are intriguing objects in stellar clusters, appearing bluer and brighter than the main-sequence turn-off and often contradicting conventional stellar evolution pathways. Their formation mechanism is believed to involve either mass transfer in binary systems or stellar collisions, a topic that remains under active investigation. High-resolution spectroscopy serves as a crucial tool for examining their atmospheric properties. This study presents high-resolution spectroscopy of a potential Blue straggler in a spectroscopic binary system. We report on radial velocity variations and lithium abundances to confirm the blue straggler classification.