

# THE FORMATION OF HIGH-FIELD MAGNETIC NEAR-CHANDRASEKHAR MASS WHITE DWARFS IN BINARY WHITE DWARF MERGERS

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Recent observational evidence has demonstrated that white dwarf (WD) mergers are a highly efficient mechanism for mass accretion onto WDs in the galaxy. In this talk, I will explain how WD mergers naturally produce highly magnetized, uniformly rotating WDs, including a substantial population within a narrow mass range close to the Chandrasekhar mass ( $M_{\text{Ch}}$ ). These near- $M_{\text{Ch}}$  WD mergers subsequently undergo rapid spin up and compression, either leading to a type Ia supernova (SN Ia) or a pure deflagration SNe Iax subluminescent event. I will present a range of implications of these findings, from SNe Ia explosion mechanisms, to galactic nucleosynthesis of iron peak elements including manganese.