# Timescale for detecting super-Chandrasekhar white dwarfs in gravitational wave astronomy

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Over the past decades, various researchers have indirectly predicted at least a dozen super-Chandrasekhar white dwarfs (white dwarfs which violate the Chandrasekhar mass-limit) from the luminosity observations of type Ia supernovae (SNeIa). Several research groups around the world proposed different models to explain the massive white dwarfs. Among these models, the model for increasing mass due to the presence of magnetic fields and rotation is the most popular one. In my presentation, I will explain that if such white dwarfs are rotating with an angular frequency following specific conditions, they can efficiently emit continuous gravitational waves, and these gravitational waves can be detected by various futuristic detectors, such as LISA, BBO, DECIGO, Einstein Telescope, etc., with a significant signal-to-noise ratio. I will also show various timescales over which these white dwarfs can emit dipole and quadrupole radiation. In this way, in the future, we can detect the super-Chandrasekhar white dwarfs directly, and thereby can single out the exact theory to explain all the white dwarfs.