DECIMETRIC TYPE-IV SOLAR RADIO BURSTS AND DAOCHENG T-ARRAY DECIMETRIC SOLAR RADIOHELIOGRAPH (DATA)

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I will present our latest study on the decametric type-IV solar radio bursts. The bursts occur within a frequency range of a few hundreds of MHz to 1–2 GHz, with clearly-defined lower and upper cutoff frequencies. The bursts present continuum emission with lots of fine spectral structures, such as the wideband pulsations, zebras, spikes, absorptions, etc. The emission mechanism remains elusive/controversial for decades. Our analysis of both EUV and radio imaging data provides strong evidence for this type of radio bursts to be from the electron cyclotron maser emission.

I will also introduce our plan of constructing a new T-array solar radio heliograph for decametric wavelength in the city of Daocheng, with 100 elements. The radioheliograph will observe the Sun from 500 MHz to ~ 8GHz, each element consists of a 4-m parabola and a high-performance digital receiver. We welcome collaborations under the framework of IMCP and between universities/institutes.