
Fast (coherent) radio transients and pulsars

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Résumé

Recent pulsar surveys have discovered what appears to be a population of millisecond-duration, non-repeating radio bursts of plausible extragalactic origin. If properly localized, a large sample of such bursts would provide a unique new cosmological probe of the matter between galaxies. The basic origin of these "fast radio bursts" is also a mystery and a hot topic of debate. I will review our current understanding of this phenomenon and, in a more general sense, discuss fast (coherent) radio transient and pulsar searches: how they are done, what is being found, and how SKA can transform the field through its ability to monitor large areas of sky at high time resolution.

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