



## **Modelling of the Saturnian Kilometric Radiation (SKR)**

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The Saturnian Kilometric Radiation (SKR), discovered by the Voyager spacecraft in the 1980's, is observed quasi-continuously by Cassini since 2003. A previous statistical study of 3 years of SKR observations by RPWS (Radio and Plasma Wave Science) revealed two characteristic features of SKR dynamic spectra : (i) discrete arcs, presumably caused by the anisotropy of the radio emission pattern combined to the observer's motion, and (ii) the existence of equatorial shadow zones (observed near perikrones).

We present here first results of SKR modelling using the code PRES (Planetary Radio Emission Simulator) that assumes radio emissions to be generated via the Cyclotron Maser Instability for simulating observed dynamic spectra. We show how we can model arc-like structures thanks to radio sources in partial corotation, located on magnetic field lines of invariant latitude comprised between  $70^\circ$  and  $75^\circ$ , and with an aperture angle of the emission cone around  $70^\circ$ .

Then, assuming a distribution of radio sources all around the planet along a typical oval, we show how we can retrieve the disappearance of the emission when Cassini crosses equatorial shadow zones near a perikrone.