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## Bayesian TiRiFiC

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The tilted-ring model describes a galaxy as a set of rotating rings, each of which is parameterized by a set of parameters representing surface brightness, rotation speed, and orientation of the disk. Our implementation of the tilted-ring model, TiRiFiC ("Tilted-Ring-Fitting-Code") works by directly fitting galaxy models to spectroscopic data cubes (as observed with the SKA and its progenitors) and is most suitable to be used for radio surveys of emission lines, e.g. with the SKA and its progenitors. While the method is well tested, it currently lacks a solid approach to quantify statistical errors and correlations between parameters. We attempt to overcome this problem by making use of a robust Bayesian statistical framework, which enables a full exploration of the posterior probability distribution and can be used to estimate errors and quantify the correlation between parameters. This forms a report of the implementation of this technique.

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