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Direction Dependent Calibration for the KAT-7 radio data

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Abstract content
 (Max 300 words)
Formatting &
Special chars

Signals from radio sources in the universe are detected by radio telescopes after passing through the medium between sources and radio telescopes. During the process, the signal propagation is highly affected by the intervening medium, such as the atmosphere, and the primary beam. These are direction dependent effects, which essentially give wrong information about the sources of interest if they are not estimated and corrected properly with suitable models.

The main objective of the presentation will be to discuss how we are dealing with them for the KAT-7 observations. More importantly, we emphasise on the results that have been obtained so far from the KAT-7 observations when applying only direction independent models and both direction independent and dependent models. Additionally, we discuss how the models are logically developed using mathematical formulation of electromagnetic wave, which is known as the Radio Interferometer Measurement Equation (RIME).

Apply to be
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Level for award
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 PhD, N/A)?

PhD

Main supervisor (name and email)
and his / her institution

Oleg Smirnov. Email: osmirnov@gmail.com. Institution: Rhodes University.

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