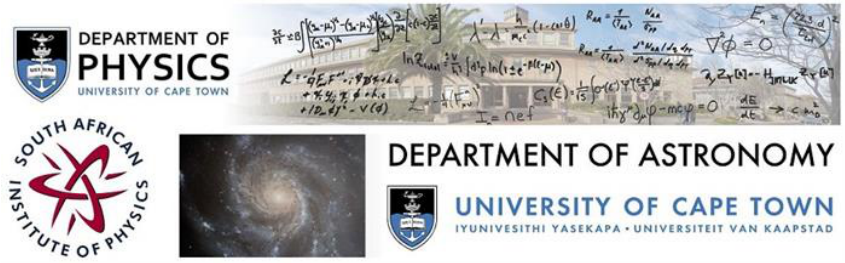

Contribution ID: **453** Type: **Oral Presentation**

Low mass supermassive blackholes of quasars and the low frequency radio luminosity correlation.

Friday, 8 July 2016 10:20 (20 minutes)

Abstract content
   (Max 300 words)
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The low frequency (151 MHz) radio luminosity of moderate to high redshift AGNs has been found to correlate with the supermassive blackhole (SMBH) mass. This correlation if found to be weak at 5GHz and is not seen in 1.4GHz All Sky Surveys.
The 151 MHz correlation has a small number of AGNs whose blackhole masses are limited to between about 10^(8.5) and 10^(9.5) Solar masses. To investigate if this correlation holds at lower blackhole masses, we use quasars from the Seventh Cambridge Redshift Survey catalogue, whose blackhole masses are as low as 10^(6.5) Solar masses.

We find that the two samples overlap for SMBH masses of ~10^9 but for lower mass blackholes they diverge. This may suggest that the slope of the correlation for quasars is not as steep as the slope for AGNs. Alternatively, it may suggest that the correlation between SMBH mass and Radio luminosity at 151 MHz is as weak as it is at 5GHz and the apparent strength of the correlation is due to the luminosity bias of the SMBH at optical frequencies in the surveys that were used.

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