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Facets of radio-loud AGN evolution : a LOFAR surveys perspective

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Propositions associated with the thesis

Facets of radio-loud AGN evolution a LOFAR surveys perspective

1. The lowest LOFAR frequencies are crucial for identifying turnovers or ultra-steep spectrum sources. *(Chapter 3)*
2. Direction dependent effects, especially ionospheric phase distortions, have to be accounted for in low frequency radio data to achieve both high sensitivity and angular resolution. However, careful consideration of the number of free parameters in the calibration models used is necessary to avoid overfitting. *(Chapters 2 & 4)*
3. The AGN population at higher redshift is different to that of the contemporary Universe: Higher redshift AGN reside in less massive and bluer galaxies and accrete gas more through the ‘cold-mode’. *(Chapters 5 & 6)*
4. In the absence of spectroscopy, high quality multiband photometric data, especially including the far infrared, are invaluable for separating SF galaxies and AGN and are a viable means to determine the accretion modes of AGN. *(Chapter 6)*
5. Astronomical surveys are worth the effort; their legacy value is important for the whole field of astronomy.
6. One man’s noise is another man’s data. A good example is ionospheric phase corruptions.
7. Counting radio sources is harder than you think.
8. No data can be better than bad data.
9. Astronomy is an ideal tool for the stimulation of STEM fields in developing countries.
10. Science fiction plays an important role both in inspiring young people to pursue careers in science, and in promoting science to the public.
11. Living and working in an international community gives you new perspectives and broadens your horizons.

Wendy L. Williams,
Leiden, November 2015