

Talk at Splinter Meeting

Splinter B

NON-PARAMETRIC ESTIMATION OF MORPHOLOGICAL LOPSIDEDNESS
IN GALAXIES

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Asymmetries in the neutral hydrogen gas distribution and kinematics of galaxies are thought to be indicators for gas accretion and gas removal processes. These are of fundamental importance for galaxy formation and evolution. Upcoming large blind HI surveys will provide tens of thousands of galaxies for a study of these asymmetries in a proper statistical way. Due to the large number of expected sources and the limited resolution of the majority of objects, detailed modelling is not feasible for most detections. We need fast, automatic and sensitive methods to classify these objects in an objective way. Existing non-parametric methods suffer from effects like the dependence on signal to noise, resolution and inclination. We show how to take these effects into account and discuss how to correct for them. We will use existing and modelled data to give an outlook on the performance expected for the various sky surveys planned for APERTIF and ASKAP.