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YANDASoft: an imaging and calibration solution for small and large scale deployments.

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In order to facilitate wider adoption and deployment of the software package developed by CSIRO for the calibration and imaging of data from the ASKAP telescope. it has recently been restructured and made publicly accessible. The package is called YandaSoft [1] and it has been released as both a source package, to permit community involvement in development, and pre-packaged containers for easy deployment. This was primarily preformed to allow science groups to generate bespoke pipelines on platforms other than those provided by ASKAP operations, but has the added benefit of presenting a complete calibration and imaging software suite to the wider astronomical community.

I will describe the capabilities of the package and discuss, via use cases, some of the novel algorithmic approaches taken within the software. Approaches that permit highly distributed processing, joint deconvolution and the incorporation of multiple primary beam parameterisations, I will also present some lessons learned during the process moving development of the package into a modern continuous integration and deployment workflow and of restructuring the mature ASKAP software pipeline into the new publicly available YandaSoft package.

References

[1] The package is available on github at https://github.com/ATNF/yandasoft.git. Containers are available on dockerhub at csirocass/yandasoft