Contribution ID: **13**   Type: **SKA Data Science Challenge**

SKA Data Challenge 3b: Inference

Monday, 27 January 2025 11:05 (20 minutes)

The SKA Data Challenge 3 is divided into two related yet independent challenges: ' Foreground' and 'Inference,' or SDC3a and SDC3b, respectively. The former challenge ended last year, and the SKACH team participated, obtaining remarkable results. As a continuation of this effort, the SKACH team, in collaboration with the Science working group from Sweden, is participating in the second part (SDC3b), which asks participants to infer the cosmological and astrophysical reionization properties from the power spectra of the hydrogen-21cm signal from the Epoch of Reionisation corresponding to different redshift ranges.

These challenges are designed to enable the community's future efforts in addressing scientific questions pertinent to the Epoch of Reionisation while utilizing the SKA-Low telescope.

In this presentation, I will illustrate the challenge goal and the SKACH team's current result, which comprises standard inference techniques and machine learning approaches.

Primary author: BIANCO, Michele (ETH Zurich)

Co-authors: FINLAY, Chris (UNIGE); PIRAS, Davide (University of Geneva); Dr DENZEL, Philipp (Centre for Artificial Intelligence, ZHAW); GIRI, Sambit (Stockholm University)

Presenter: BIANCO, Michele (ETH Zurich)

Session Classification: HPC