Euclid CMBXC WG Meeting

October 6th, 7th, 2022

ECLT, Venice, Italy

Remote Meeting via zoom, at this link,

Notes & Discussions

First Day, Morning

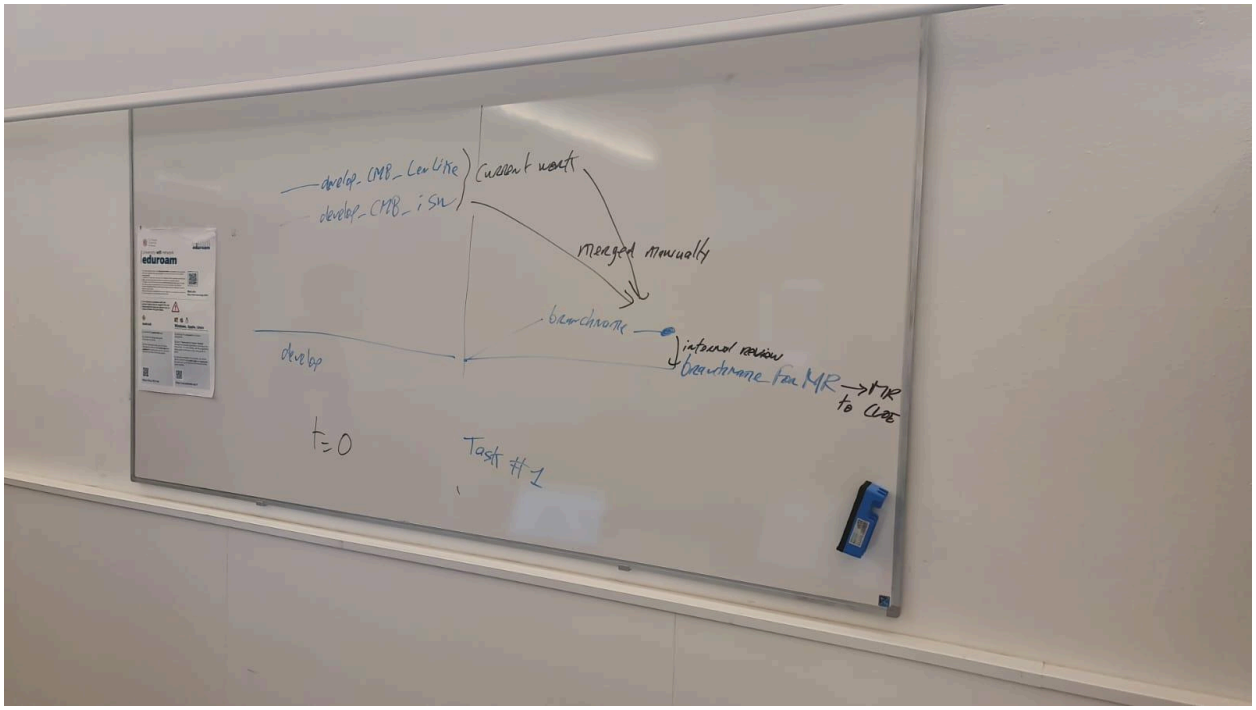
- Welcome, Introduction, Remarks
- Melita reporting on schedule on KP2.1, on track for Spring.
- Sandeep reporting on Covariance estimation
    - **ACTION** on carlo to check SO specs with Giulio to save time for plots in the papers both for the simulation pipeline and the covariance. Louis: git repository noise level available https://github.com/simonsobs/so_noise_models
- Pauline on voids in CMBXC, paper in preparation
    - Marco: machinery ready for application to more models, with other resolution and extension, at thi link.
    - Andrei, Paul: application to void Euclid catalogue is possible. Pauline: also that is going to be planned.
    - Carlos: halo bias effects and sensitivity to neutrino masses. Melita: voids identified with haloes with large bias are more sensitive to neutrino masses.
- Carlos on ARF projects, document is ready for submission to the Publication Group, with A&A and Euclid Style.
    - **ACTION** in progress for Carlo and Carlos to propagate the proposal to the Editorial Board. Daniele: need to set meetings for starting the project, timescale, 2 weeks.
- Viviana on ISW-RS-Lensing XC, cusp depending on neutrino masses,
    - Carlos: relevance of lensing relevance? Viviana & Melita: effects are separated.
- Marco on sims, keeping track of all exploitations here:
    - https://docs.google.com/presentation/d/1jfAYDU4EBaixbyfPea2ZF4_nyqHcMfBbS2JG0AF8N60/edit#slide=id.g11bb63327fd_0_15

First Day, Afternoon

- Alessandro, Marina on KP status on TG XC, KP on track for Spring.
    - Carlo: interface with simulations of KP on simulations? Alessandro, Marina, to be set on post-Spring KPs.
- Viviana on Galaxy correlated Gaussian maps
- Summary & Discussion
    - KP on sims on schedule, Melita et al., criticalities? None in particular.
    - KP on ISW estimators on schedule, Alessandro G., Marina et al., criticalities? None in particular.
    - New: Needlet, Bianca and Alessandro G., progress, approach with Alessandro, Marina for comparable checks with traditional estimators elements in place for progressing further.
    - ARF SP to be submitted to the PG by Carlos, **ACTION** in progress.
- Pauline on Voids, general paper out, SP comes next, **ACTION** in progress.
- Huge work on sims, Baldi et al., Interface with KP6-C for papers, criticalities? **ACTION** on Carlo & Sims & Cov teams for cross-checking content needed, timescale, 2 weeks.

Second Day, Morning

- ISW-g Validation by Margherita and Viviana
    - No criticality foreseen for the Estimator and Likelihood KP. **ACTION** recommended by Max to check interface with OU-EXT, gathering elements internally to our group first, drafting very concisely what is our idea of CMB external dataset, and then contacting, scheme of the action in 2 weeks, one first meeting with them within the end of the year.
- Louis, Raphael, Shabaz, Development of Lensing Likelihood
    - No criticality is foreseen, synchronization with simulation specs, items to be discussed: KP on lensing XC, merge Likelihood and Estimators as in the ISW case? To be discussed, **ACTION** in progress. Post-launch papers, plan to be re-inspected, **ACTION** in progress, timescale 2 weeks, to be sorted out in the Estimator and Likelihood forthcoming calls. Louis: Raphael progressing with tests and formulation of the data vector, to be discussed in the forthcoming calls.
- Data vector is discussed, option A & B discussed with pros and cons, going for option A (full data vector), to be discussed with ISTs, **ACTION** in progress, Version 2 of CLOE in progress, if we go for option A no need for discussion.
- Fabien, Max on CMBXC Likelihood
    - Issues: Archive for Likelihood, Internal Review. Suggestions by Fabien & Max are taken. Structure discussed at the blackboard, scheme agreed:



Second Day, Afternoon

- Fabio on KP on extended forecasts, on schedule for 6 months timescale as the others discussed at the meeting, draft is in place, with specs discussed in specific talks.
- Angelo on IG.
    - **ACTION**: synchronize relativistic corrections, iterating in Bologna next week, discussion on magnification lensing.
- Jose' on Primordial non-Gaussianity,
- Daniele on GR corrections,
- Davide Sciotti on Super Sample Covariance for Euclid.
    - Fabien stresses the relevance of SSC contributions from new methodology.

Discussion

- Consortium the week of 19th June Copenhagen
- Targeting the Spring meeting of the CMBXC in France, **ACTION** on Carlo to ask Stephanie and Pauline for organization in Marseille.