

Scientific program: FWP at IFPU on "Parity violation through CMB observations", 27-31 May 2024

Schedule of the IFPU FWP "Parity violation through CMB observations"

Each day is tentatively organised as follows:

09:30 - 11:00 Talks

11:00 - 11:30 Coffee break

11:30 - 12:30 Discussion

12:30 - 14:00 Lunch break

14:00 - 15:30 Talks/Discussions

15:30 - 16:00 Coffee break

16:00 - 17:30/18:00 Discussions

and the idea to dedicate each day to a specific topic, as follows

Monday, May 27: Review current constraints on birefringence

Morning session:

E. Komatsu, "Introduction to parity-violating signals in CMB observations"

P. Diego Palazuelos, "Recent Planck constraints on isotropic birefringence"

T. Namikawa, "ACT constraints on anisotropic birefringence"

Afternoon session:

Y. Chinone, "Polarbear constraints"

A. Cukierman "Cosmic birefringence with BICEP"

Tuesday, May 28: Focus on parity violating signals from Large Scale Structure survey

Morning session:

Z.Slepian, "Introduction to parity-violating signals in LSS", TBC

A.Caravano, title to be given

Afternoon Session:

S.Alexander, (remote) "Parity, Gravity and Particle Cosmology"

S.Arcari, "Cross-correlating anisotropic birefringence and LSS data"

T.Moretti, "Different mechanisms/examples of parity-violating Inflationary scalar trispectrum"

Wednesday, May 29: Theoretical interpretation**Morning session:**

G.Gubitosi: "Introduction to theoretical models for parity-violating signals", TBC

A.Greco: "Fitting isotropic cosmic birefringence and its implication for the anisotropic counterpart"

T.Namikawa, "Time-dependent birefringence"

Afternoon session:

M. Galaverni, "Isotropic birefringence from cosmological pseudoscalar fields"

I.Obata, "Parity-violating signals from the effective field theory of Standard Model"

M.Lembo, "Probing Lorentz-violating electrodynamics through CMB polarization"

Thursday, May 30: Systematic effects**Morning session:**

Y.Chinone, "Calibration and verification of CMB instruments (for parity violation measurements)"

A.Ritacco, "Absolute angle calibration in microwave polarization experiments"

Afternoon Session:

A.Cukierman, "Magnetic misalignment of interstellar dust filaments"

L.Vacher, "Spectral distortions of the galactic EE, BB and EB signal: a potential problem for the detection of cosmic birefringence?"

Friday, May 31: Forecasts (and possibly discussions left from previous days)**Morning Session:**

K.Benaded, "SPT constraints and forecasts"

Z.Slepian, "Forecast parity-violating with LSS", TBC

P. Diego-Palazuelos, "LiteBIRD forecasts", TBC

Note that on Friday in the morning at 11:30 in Room D (IFPU building) there is the IFPU Colloquium entitled "*Are We Ready for Next Generation Cosmological Surveys?*" held by Jia Liu (IPMU, Tokyo).

The organisers, 17 May 2024