

Primordial GWs from the axion-SU(2) gauge fields during inflation

Friday, 26 June 2020 13:00 (1 hour)

Zoom meeting: <https://cern.zoom.us/j/7930190483> (password: see email)

Format: 40 minutes talk + 20 min discussion

Virtual Axion Institute: The discussion on this talk can be continued in Tomohiro's virtual guest office. <https://mattermost.web.cern.ch/axions/channels/tomohiro-fujita>

Abstract: Having on-going and upcoming experiments to detect them, we hope primordial gravitational waves (PGW) will be observed in the near future. PGWs produced during inflation are the unique probe for very high energy physics beyond the reach of particle accelerators, and now is the time to study what we can learn from PGWs. In this talk, I will demonstrate that much more information than the energy scale of inflation can be extracted from PGWs by using a model as an example. In the model, SU(2) gauge fields coupled to a rolling axion during inflation generate detectable PGWs, which are non-gaussian, maximally chiral, and may have non-trivial spectral shape depending on the axion potential.

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Session Classification: Gravitational waves