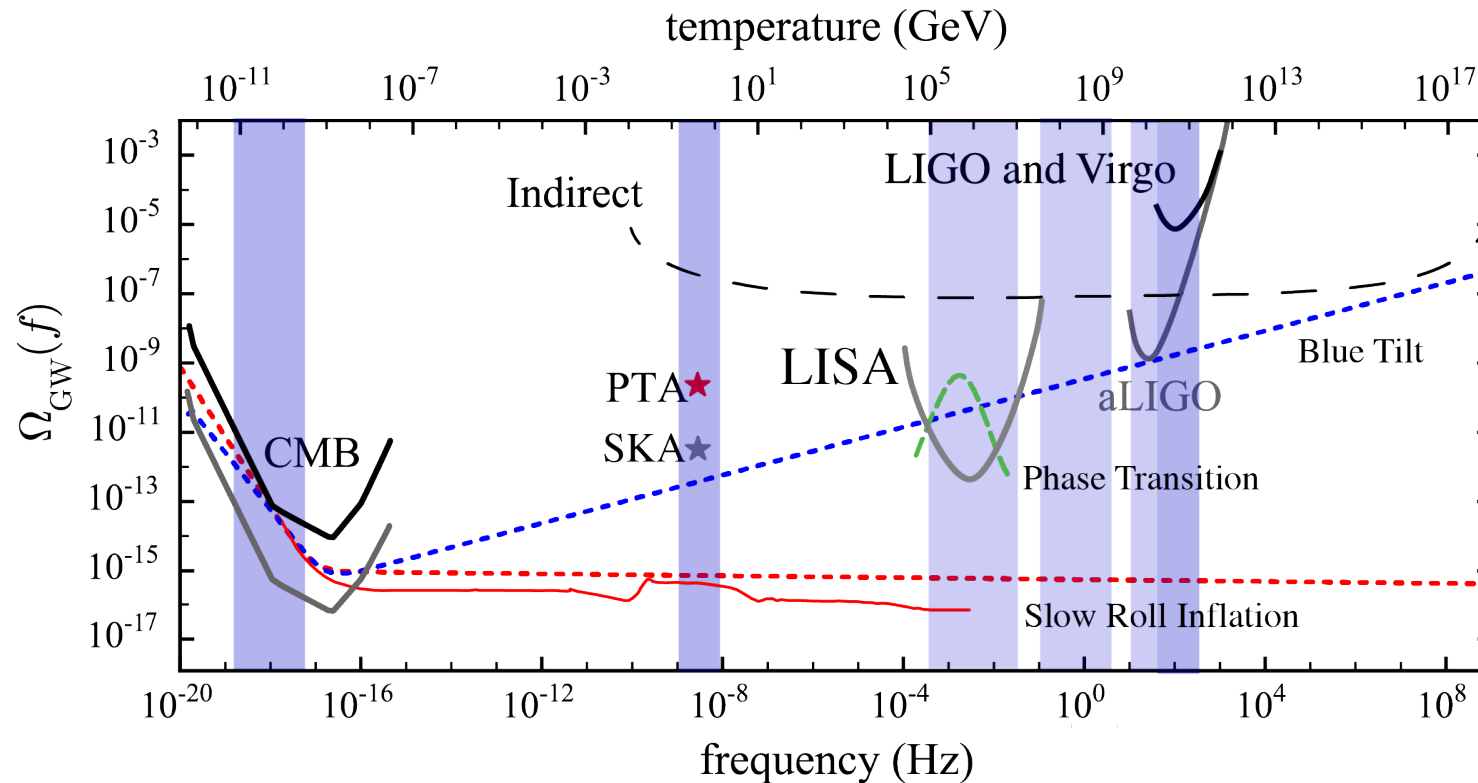


Early Universe: Stochastic Gravitational Wave Background Signatures of Fundamental Physics

Organizers: Vuk Mandic (vuk@umn.edu), RC (robert.r.caldwell@dartmouth.edu)

CF5, CF7 – numerous LOIs



SNOWMASS21-CF5_CF7-EF9_EF0-TF9_TF0_SGWB-102 / Robert Caldwell /
The Stochastic Gravitational Wave Background as a Probe of New Physics from the Early Universe

SNOWMASS21-CF5_CF7-TF9_TF0_LianTao_Wang-138 / Haipeng An, Lian-Tao Wang /
Gravitational Wave as a probe of phase transitions during inflation

SNOWMASS21-CF7_CF5-059 / Yue Zhao /
Probing Fundamental Physics using the Stochastic Gravitational Wave Background from the Early Universe

SNOWMASS21-CF7_CF5-EF2_EF9-TF9_TF0_Ashutosh_Kotwal-104 / Michael Ramsey-Musolf, Ashutosh Kotwal /
Complementarity between collider and gravitational wave signatures of a first-order electroweak phase transition

SNOWMASS21-EF2_EF9-CF5_CF0-TF9_TF0-211 / Marcela Carena /
Probing the Electroweak Phase Transition with Exotic Higgs Decays

SNOWMASS21-CF7_CF0-210 / Huai-Ke Guo /
Phase Transitions: Precision Calculations of Gravitational Wave Spectrum and Thermal Parameters

SNOWMASS21-EF8_EF0-CF7_CF0-TF7_TF9_Da-118 / Da Liu /
Composite Higgs: Collider Signals and Electroweak Phase Transition

SNOWMASS21-CF7_CF3-096 / Vuk Mandic /
Correlating Stochastic Gravitational Wave Background with Electromagnetic Observations

Basic Idea – Unique Connection of Early Universe GWs to Fundamental Physics / HEP

Range of Phenomena includes: Phase Transitions, Topological Defects, Inflation, Dark Matter,
Collider – GW complementarity, GW – EM correlations

Important context: GW observatories, other CF/TF/IF WPs, other WPs or similar docs

Logistics: 1st meeting, 16 Nov 21 (actually also 11 Dec 2020)
~12 attendees, discuss content, layout, assignments

Haipeng An, Yanou Cui, Noam Levi, Michael Ramsey-Musolf, Mairi Sakellariadou,
Kuver Sinha, Liantao Wang, Fengwei Wang, David Weir, Graham White, Yue Zhao,
+ others, Vuk Mandic, RC

next meeting, 14 Dec
goal: rough draft