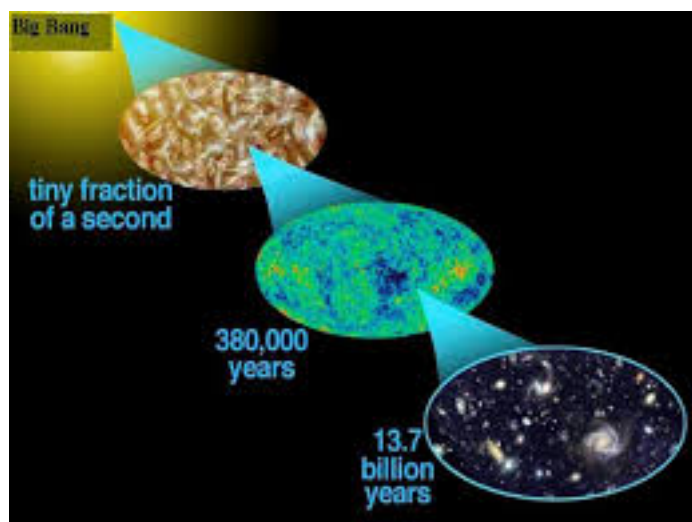


International WORKSHOP on ``Emerging trends in High Energy and Condensed matter Physics''



понедельник, 11 января 2021 г. - вторник, 12 января 2021 г.

Scientific Programme

Department of Physics, GDC, Budgam, J&K, India is organizing (ONLINE) Workshop on "Emerging trends in High Energy Physics and Condensed matter Physics"

The purpose of this Workshop is to give participants an opportunity to present results and discuss various aspects of the High energy physics and Condensed matter Physics.

This meeting will allow the experts from different fields to exchange ideas that have over the years been at the forefront of these disciplines.

We are intending to arrange two sessions every day with three talks of 20 + 5 minutes duration. After each presentation there will be a question answer session for 5 minutes (max).

TOPICS TO BE DISCUSSED

High Energy Nuclear and Particle Physics

- > Strongly-interacting matter at finite temperature
- > QCD phase structure at non-zero baryon density
- > QCD phase diagram under strong external magnetic field
- > QCD phase diagram in astrophysics
- > Transport phenomena and related issues
- > Experimental results and future facilities
- > Theoretical ideas and experimental searches of the critical point
- > Inhomogeneous phases in strongly interacting matter
- > QCD phase structure with chiral imbalance
- > QCD equation of state and Neutron stars
- > Particle production in Heavy Ion Collisions at RHIC, LHC
- > Rapidity and Transverse momentum distributions of particles at various collision energies
- > High multiplicity phenomenon in Heavy Ion Collisions
- > Multifractal analysis of photon multiplicity distribution
- > Standard Model and beyond
- > CP violation

Cosmology

- > Fundamental Theory and Cosmology. ...
- > CP violation
- > Critical tests of the inflationary paradigm. ...
- > Gravitational waves and signatures of the early Universe. ...
- > Mutability of the laws of physics. ...
- > Black Holes. ...
- > Other research: dark energy and dark matter.

Condensed Matter Physics

- > high temperature superconductivity.
- > strong correlations.
- > topological phases of quantum matter.
- > quantum magnetism.
- > Bose-Einstein condensates.
- > nanostructures.
- > quantum computing.
- > synthesis of new quantum materials.

- > Computational Condensed matter physics
- > Transport properties
- > Electronic properties
- > Thermodynamic properties

qcd phase diagram

Strongly interacting matter at finite temperature

QCD phase structure at non-zero baryon density

QCD phase diagram under strong external magnetic field

QCD phase diagram in astrophysics

QCD phase diagram in astrophysics

Transport phenomena and related issues

Experimental results and future facilities

Theoretical ideas and experimental searches of the critical point

Inhomogeneous phases in strongly interacting matter

QCD phase structure and chiral imbalance

QCD equation of state and Neutron star

Fundamental theory and cosmology

Critical tests of the inflationary paradigm

Gravitational waves and signatures of the early universe

Mutability of the laws of Physics

Black holes

Dark energy and dark matter

High temperature superconductivity

Strong correlations

Topological phases of matter

Quantum magnetism

Bose-Einstein condensate

nanostructures

quantum computing

Synthesis of new quantum materials

Particle production in Heavy Ion Collision at RHIC, LHC

Rapidity and Transverse momentum distributions of particles at various collision energies

CP violation

Computational Condensed matter Physics

Transport Properties

Electronic properties

Thermodynamics properties

Standard Model and Beyond