

**XXIX-th International Workshop
on High Energy Physics**

**NEW RESULTS and ACTUAL PROBLEMS
in PARTICLE & ASTROPARTICLE PHYSICS
and COSMOLOGY**

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Information Bulletin
INSTRUCTIONS
and
QUESTIONS

Version 2

Instructions to Speakers and Session Chairs

Speakers

1. Speakers should make themselves known to their session chair and the technical support staff at least 5 minutes prior to the session.
2. It would be very helpful if speakers could bear in mind that the large part of the audience are not experts in the subject of their report.
3. Presentations are limited to 25 minutes for the talk proper with 4 additional minutes for discussion and 1 minute for transition to the next presentation and introduction of the next speaker.
4. Speakers should observe their allotted time and pay attention to the signals of the session chairperson when it remains 5 minutes and then 1 minute to the end of the talk.

As a rule, attempts to go beyond the limits of allotted time irritate the audience and can spoil the impression of your talk.

Session Chairs

1. Session chair should contact speakers in her/his session during the break prior to each session, if speakers have not already introduced themselves to their session chair.
2. Session chair should clearly invite each next speaker calling her/his name and affiliation and then the title of the talk.
3. Session chair should ensure that every speaker should closely follow his allotted time. To this end he lets know the speaker that it remains 5 minutes, then 1 minute to the end of the allotted time. Presentations are limited to 25 minutes for the talk proper with 4 additional minutes for discussion and 1 minute for transition to the next presentation and introduction of the next speaker.
4. Session chair should encourage discussion on each talk in the session that they are chairing but deny all questions which are more appropriate for a subsequent panel discussion.
5. After the last talk of the session the chairperson announces the panel discussion and invites panelists and the moderator to take their place on the scene. Then he presents the moderator to the audience and this is the end of his duties.

Instructions to Panelists and Moderators

Moderators

1. You assume your duties when the chairperson of the relevant session announces the panel discussion and introduces you to the audience.
2. After a brief introduction that states the topic(s) (they will be highlighted) and why it is being discussed, introduce each member of the panel (name, affiliation, characterizing features of her/his work).
3. Ask questions to keep the debate/panel going and to clarify or ask for further explanation.
4. Every panelist is treated on equal foot with another. The order of speaking is determined by moderator.
5. Keep track of time. Normally a 45-minute discussion is envisaged which can be – in exclusive cases - enlarged up to 60 minutes.
6. Control the debate.
7. Monitor audience questions (it is recommended to get questions from the audience during the last third of the session except clarifying questions).
8. Conclude the debate/discussion.

In general, you are expected to be impartial, which means you do not take sides and your personal opinion is not revealed. Your expertise is presenting the topic, leading the panel discussion, inviting panelists to speak, and being a liaison between the audience and the panelists.

The moderator has to give a concise and clear summary of the panel discussion.

Panelists

1. Panelists should make themselves known to their moderator at least 5 minutes prior to the session.
2. Every panelist has to prepare a short account of his view on the debated problem.
3. By invitation of the moderator each panelist makes a statement of point-of-view on the topic of the panel session.
4. Discussion between panelists ensues in the form of questions and answers.
5. The order of participation in the discussion is defined by the moderator.

Questions for Panel Discussions

Panel Discussion I.

- *If the SM with elementary Higgs field is completely confirmed with the discovery of a heavy scalar boson at LHC and Tevatron?*
- *Does the Higgs mass value of 126 GeV point to the need of new physics below the Planck scale?*
- *Do we need the next Higgs factory to solve problems with its identification?*
- *How can we distinguish extended Higgs sector from the standard one as well as from the composite Higgs?*

Panel Discussion II.

- *In which case experiment could unambiguously (dis)prove the existence of Quark-Gluon Plasma?*
- *If the investigations of HI collisions can clarify the confinement problem?*
- *Is there time enough for establishing the local thermodynamic equilibrium in the course of the HI collision?*
- *Can HI collisions imitate the early instants of the Universe evolution?*

Panel Discussion III

- *How well do we need to know the standard neutrino sector parameters?*
- *Neutrino and the lepton/baryon asymmetry in the Universe.*
- *Are there new species of neutrino (e.g. the "sterile" one)?*
- *What are the most important problems of neutrino physics?*
- *Perspectives of neutrino experiments.*

Panel Discussion IV.

- *Does QCD help us to understand strong interactions?*
- *Does the SM theory with Kobayashi-Maskawa (CKM) quark-mixing matrix describe all CP-violation and rare decays phenomena observed in the heavy quark sector?*
- *Can quantum loop corrections reveal new physics mass scales well above the TeV scale, by means of indirect searches?*
- *Is the low-energy supersymmetry of TeV scale in trouble after the LHC results on its direct search?*

Panel Discussion V.

- *Is there a definitive observational/experimental proof of the existence of black holes?*
- *Are there theoretical problems with black holes?*
- *Are any understanding of mass gap between the supermassive black holes in centers of spiral galaxies and star-range black holes ascribed to probable candidates?*
- *Do we need to get primordial black holes from the first times?*

Panel Discussion VI.

- *To what extent Dark Matter and Dark Energy are necessary to explain the observed properties of the Universe?*
- *Why the Dark matter profiles so universal at the galactic scales?*
- *Are there viable candidates of modified gravitational dynamics to exclude the dark components of Universe?*
- *Have we any perspectives to distinguish the Dark Energy from the cosmological constant?*
- *Are there any certain indications for the sterile neutrinos in the cosmos?*
- *How does the Planck data change the view to the inflation of early Universe? What is an origin of inflaton plateau? So far, what else is interesting about the Planck data?*
- *What are nearest crucial points in cosmological observations?*
- *Can we be more decisive discriminating between anthropic principle, super-stringy landscape, fine tuning or dynamics as concerns for the cosmological coincidences?*