

I. INTRODUCTION

GOOD MORNING

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Good Morning. I am Vinod Krishan and this is the IAU Symposium on Basic Plasma Processes on the Sun. Make sure you are at the right conference! During the last year, I have exchanged several messages with most of you. In the beginning, there was chaos, as we received queries about this symposium and that symposium. We first proposed a symposium with the title "From Solar to Astrophysical Plasmas" inspired partly by the availability of a tremendous amount of high-quality observations and theory for the Sun and because most of the basic plasma physical processes (like magnetic reconnection, plasma physical acceleration, radiation, generation of magnetic fields and so on) which are being studied in depth on the Sun also occur in the rest of the Universe. The rest of the Universe, however does not reveal itself the way the Sun does. Studies of the solar interior have brought out the role of rotation and the magnetic field. One also is aware how the rotation and magnetic field could turn a core collapse into an outgoing wave; hence, according to Fowler and Hoyle, our best chances of testing pulsar and supernova ideas may be in the solar context. We would like to know the signatures of particle acceleration processes such as might occur at the supernovae shock waves, turbulence generated in supernova ejecta or of the acceleration by strong pulsar electric fields. In the near future, we will not be able to make in situ observations of, for example, a supernova shock wave. However, despite the limited range of parameters, the study of acceleration processes in the heliosphere may provide a good foundation. Thus the Sun is not only our Provider, it is also our Teacher.

However, the IAU Executive Committee did not agree with our proposal. It suggested that we might narrow down our horizons to Basic Plasma Processes on the Sun, but we have still sneaked in references to the rest of the universe. In fact, for example, Prof. Zheleznyakov has not changed the title of his talk, which is "From Solar Plasmas to Plasmas at Neutron Stars". Perhaps he should hold a symposium on "From Solar to Astrophysical Plasmas" in future.

Anyway, we have plenty to discuss in concentrating on the Sun. We have ventured to study the Sun from inside out. The interior of the Sun, which as William Press stated, is more distant than the most distant galaxies, being separated from the surface by an optical depth of 10^8 . The medium in between is a highly turbulent one, with complex interactions of velocity and magnetic fields. In fact, the whole Sun Quiz can be neatly divided into three rounds consisting of: (i) nuclear interactions; (ii) interactions of velocity and magnetic fields; and (iii) interaction of charges with electromagnetic fields. But the boundaries of their play are not so well defined. This is why we are here.

We believe that we know enough about these processes to transfer our knowhow to a study of other objects, while the ensuing discussions will reveal how much more needs to be discovered. This dichotomy of thought, has seeped into the scientific programme. We have here, in the participants, experts from a variety of fields, from superconductivity to supernovae; for electrons when in Rome behave exactly as at home; for inhomogeneity induces impulse.

The Scientific Programme has been prepared by the Scientific Organising Committee with lot of trading in cash and kind. My anxiety must have reached its peak in August because that's when I started thinking about the conference all day long, except while sleeping because then I dreamt about it. In one dream, I found that none of the first-day speakers had arrived. So, I thought that at least I could begin with my talk, but at that very moment amnesia struck me. I could not recall a word about velocity and magnetic fields. In this state of acute agony, I woke up.

I am extremely happy to see all of you here. We have a packed programme and it may even be overbooked. Let us work for the next few days without a care in the world and in the middle we shall go for a picnic. But first let us meet our captain, the host of this Conference, our Director, Professor J C Bhattacharyya.