JD18

High Energy Transients

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INTRODUCTION

Over the last few decades phenomena involving high energy particles (mostly electrons) and/or photons have become increasingly part of the astronomical work. Opening new spectral windows has revealed many phenomena that have deeply changed our perception of the Universe. High energy astrophysics, as this field of astronomy is known, is now very well integrated in the astronomical research. This is shown by the fact that the high energy astrophysics results are published in the leading astronomy and astrophysics journals of the world rather than anywhere else. Nonetheless, this still young field has not yet quite found its way in the structure and working of the IAU.

JD18 on High Energy Transients had, thus, its origins in the realization by two members of the IAU Executive Committee (vice presidents Pacini and Trimble) that the previous two General Assemblies had had almost no activities in the area of high energy astrophysics, that many senior X- and gamma-ray astronomers were not participating (in fact were not even IAU members), and that the vote by Comm. 48 (High Energy Astrophysics) to merge itself with Comm. 44 (radio astronomy) was unlikely to improve the situation.

The original intention was to include the full range of astronomical objects and phenomena whose high energy output varies rapidly: solar flares, all kinds of neutron star and black hole binary sources, supernovae, gamma ray bursters, active galaxies, and whatever else anybody could think of, though X-rays from cataclysmic variables were omitted from the beginning as "belonging" to the realm of Comm. 42

Commissions 44 and 28 agreed to support the proposal, and a scientific organizing committee was assembled. Early advice from the SOC and some potential speakers removed SNe from the program on the grounds that nothing much had happened lately (though with the understanding that posters on any subject even remotely relevant to high energy transients would be accepted). It was also initially our feeling in September 1996, when the preliminary program went to press, that gamma ray bursters were unlikely to be the topic of new and exciting data. We were right about the supernovae and badly wrong about the GRBs! In addition, in the interim, a completely new category of transient X-ray source turned up, comets.

As the event approached, the usual series of mishaps began. One scheduled speaker was told by his doctor not to fly long distances and was replaced by a postdoctoral colleague (as a result of which, we believe, JD 18 was the only IAU event with two speakers from Georgia — the country, not the state). Another failed to get travel money and was replaced by someone who had a stroke days before the meeting started and was replaced by the bearer of the bad news. A third had decided not to come for some other reason, but we learned this only when he didn't appear for his talk in an earlier session. This permitted scheduling of oral presentations by a few of the poster contributors. And, of course, there were last minute poster submissions roughly equal in number to those that had been sent on time but whose authors did not get to Kyoto.

In retrospect, we believe that the traditional topics of X-ray binaries and active galaxies were well covered from both observational and theoretical sides (starting with the superb introductory talk by Roger Blandford). We were lucky with the comets: Joachim Truemper, who had already agreed to address ROSAT results in general, knew all about them. In the solar area, there was perhaps not as much synergism between the observational and theoretical presentations as we had hoped for. And the gamma ray burst session suffered from the absence of the radio and optical data from the May 8th event. The people who had gathered the data were all too busy analyzing and writing to come, and they were unwilling to have their results summarized by others.

J. Andersen (ed.), Highlights of Astronomy, Volume 11B, 749–750.

The pages which follow include reports of most oral presentations. Of those not represented, published versions can be found elsewhere. In particular, the observational presentations of gamma ray bursts results using SAX and BATSE can be found in the proceedings of the symposium 188 "The Hot Universe" that took also place in Kyoto. The theoretical presentation by P. Meszaros is, however, included here.

The page limitation is such that no format could do justice to the poster presentation in the proceedings. We therefore provide at the end of these proceedings a list of the posters including the authors, the title and a one or two line summary. We include those posters that were both received before the 15 May deadline and actually displayed.

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