

Wide-Field Plate Archives

When the IAU WG on Wide-field Imaging was created in Buenos Aires last July, it was immediately decided that one of the tasks would be to establish a *computer readable file of all wide-field plates in plate archives all over the world*. This would provide a very powerful tool for future research. For instance, it would become possible to learn on which plates, in which archives, a particular object is present. That would enhance the astronomical value of the plates and make archival studies, e.g. of the earlier behaviour of particular objects, much easier.

I was asked to organise this and have since been busy communicating with observatories in many parts of the world. In a first Circular letter which was sent out in early September 1991 to more than 200 institutes, I asked about some preliminary information in order to establish the basic facts about the existing archives: where they are; how many plates they contain; which telescope they were obtained with; whether a computerized list exists, etc.

Up to now I have received positive answers from 44 observatories and institutes, representing 89 wide-field instruments in operation since the end of last century, as well as information on about 10 additional, separate plate archives at different observatories. In total, these plate archives contain information on about more than 1,200,000 plates/films. I also received 15 negative answers and 25 observatories which had active wide-field instruments did not answer so I have no information up to now about their plate archives.

I have prepared a first list of astronomical observatories/institutes, which have Wide-field Plate Archives (WFPA) with a number of entries, which I list here to give an impression of the information contained therein:

1. Location of observatory/institute and a description, mainly according to the list of observatories in the *Astronomical Almanac* (1990);
2. East longitude and latitude;
3. Elevation of the observatory/institute above sea level;
4. Telescope parameters: Clear aperture (m), diameter of mirror (m), focal length (m) and scale (arcsec);
5. Type of telescope(s): Schmidt, Astrograph, Camera or Reflector;
6. Field of the telescope (degrees);
7. Year of the beginning of operation or the time of possession of the plate archives;
8. Information about the type of archive; Plates, Films or Glass Copies of the original surveys;
9. Number of direct and objective prism plates/films;
10. Information about listings of the archived plates/films: in Table form, Computer readable form, or Table form and not complete computer readable form.
11. Name of the astronomer responsible for the plate archive or of the director of the institute/observatory.

I have a few general remarks about this work: 1) A similar compilation was initiated by Dr. B. Hauck some ten years ago and the resulting information was apparently stored at the 'Centre de Données Stellaires' in Strasbourg, France. This is now being looked into. 2) Another parallel project ('Archiving and Distribution of Spectroscopic Data'), including also wide-field objective prism photographs was recently started by the initiative of IAU Commission 29 (Stellar Spectra); this information was received from Dr. R. Viotti (Italy). I shall endeavour to coordinate our work with the spectroscopic people. 3) In some letters I have received there is the question about what is the size limit of 'wide-field'. A $1^\circ \times 1^\circ$ field seems a reasonable limit, but if there exist some comparatively big plate archives with smaller-field plates obtained with reflecting telescopes, I propose to publish a separate list with these data. 4) Many of the observatories/institutes and astronomers do not report about the plates obtained at other observatories which they now possess.

The main problem appears to be that so far only 9 archives are available in complete computer readable form, while 22 others are in the process of preparing and implementing this. This means that even after the plate archives have been identified and their contents surveyed, there will still be lots of work to do, before all plate data are in a global computer catalogue. I am looking into how this may best be done.

The next step will be to send in January 1992 a second Circular letter to all observatories. It will include the available information, as contained in the first list (see above), in order to check the details and also in the hope that other observatories and institutes which did not answer, but which are known to have wide-field instruments, will then react.

I shall report on the progress of this large undertaking in the next issues of the Newsletter. I also expect at a later date, perhaps by the middle of 1992, to make available to all WG members the complete list of archives, as described above. This will undoubtedly help to identify further plate archives not yet in the list.

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