to fry the wide-field-corrector and the instruments. Moreover, the Sun elevation of 21°.4 was very low and precluded a reliable use of the primary mirror cover, which already had rather slow 15-second opening or closing time. We thus developed a quick-acting manually-operated "Solar Shutter," with the help of Hood Sailmakers furling gear, to prevent unexpected sunlight on the primary mirror and to ensure safety to the PF cage instruments. In addition, we decided to use a blind offsetting technique: fortunately, a bright (m_v= 3.7) star, δ Geminorum, happened to lay very close to the Sun and was indeed to be used as a reference star for speckle work, by the Hamamatsu video camera. To begin, therefore, we decided to guide on another bright star, at a similar elevation and an azimuthal difference ~90°, until ~T_2 - 5 minutes, and then offset to δ Gem. This gave some hope of achieving the final centering just at the beginning of the observations, and even of tweaking the focus if needed. As the real timing of a Solar Eclipse is always some seconds off from the official one, we got a permanent monitoring of the Sun with a video camera, courtesy M. Jean Moet, which would be used for the GO and STOP marching orders.

Final & Only Performance: 06:30-08:30 AM, July 11, 1991

The actual sequence, with a few surprises in store, went approximately as follows:

T_2 – 109 minutes. Sunrise, gorgeous aesthetically, disgusting on the astronomical point of view (Pinatubo haze + high altitude cirrus + close-by rolling fog). Elevator and phones disabled to avoid interferences.

T_2 – 90 minutes. β Orionis (m_v = 0.14) star acquired at the center of the Hamamatsu. Telescope guiding, with rather large corrections (low elevation!).

T_2 – 65 minutes. β Orionis disappears. Due to the increased brightness of the day sky, related to the Pinatubo cloud, compounded by the absence of gain control on the Hamamatsu.

T_2 – 50 minutes. After some minutes of intense thinking, offsetting of β Orio from the Hamamatsu to the Sony video camera, which has gain control. Just succeeded, as the star appears at the corner of the 1 arcmin field!

T_2 – 16 minutes. Re-offsetting of β Orio to the Hama–matsu, with the hope that it would be in the field and that the sky is dark enough to avoid target saturation. Fully successful!

T_2 – 12 minutes. Fog begins to roll inside the dome. β Orio momentarily lost. This eventuality had been discussed previously, and we took the agreed upon action: None.

T_2 – 6 minutes. Solar Shutter in place. Telescope, then dome, offsetted to the position of δ Gem.

T_2 – 1 second. Final GO. Solar Shutter opened in 3.5 (estimated) seconds! δ Gem (barely) visible near the center of the field of the Hamamatsu. Any idea of adjusting the focus quickly forgotten. All instruments working.

T_2 + 120 seconds. Rotation of the Bonnette ~ 25°. The Sony video camera crosses the solar chromosphere.

T_2 + 242 seconds. Final STOP. Solar Shutter closed in place in less than 2 seconds! Telescope and dome sent on runaway.

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Summary

On the 5th Floor, the team members had visual contact, so to speak, with the eclipse process. The buildup, during partial phase, was unexciting, except when foggy cloud banks rolled up from the south to cover the summit, drifting into our dome at T_2 – 5 minutes. But, at the instant of totality, everything changed. A truly all-encompassing feeling of other-worldliness, never before experienced; this totally black spot in the sky, surrounded by intense white-pink-green pulsating light: these were definitely not our well-know friends: the sun and moon! They were new, strangely different apparitions, not even disguises. For four minutes, vocabularies compressed to one quiet, drawn-out, breathless phrase....."wo..ow!" The spectacular finale, the sparkling diamond-like Bailey's beads, came much too soon, as we averted our eyes, our telescope and the dome.

G. Monnet & J. Sovka

On-Line Pre-Processing

The on-line pre-processing scheme developed at CFHT by the software group (with the help of the French cooperant E. Vallauri) has been first inaugurated during the last November '91 FOCAM run. The observers and CFHT staff were very pleased with the performance of the scheme. A complete description has been published in the CFH Bulletin No.25 (I 1991).

The Editor

User's Coordinate Lists Via E-Mail

We have received many requests from observers who want to transmit their lists of objects to CFHT in advance of a run, and have them available on line during the run. We have been accommodating a few observers who had enormous coordinate lists, but this took a lot of manual work. A complete, automatic system of handling mailed observer coordinate lists will be available in TCS IV, but that is still well in the future.

To accommodate current requests, a limited, interim system has been developed on TCS III. It still requires manual intervention, as the HP 1000 systems are not on the ethernet. However, the amount of work is very small, and quite acceptable.

The system stores coordinate lists in named files with a capacity of 500 stars. Multiple files may be used by an observer. The e-mail data must be in an exact format, and is semi-automatically converted to the internal format of the TCS III. The observer and telescope operator will be presented with a printout of the file contents and object numbers, which are needed to access the objects at the telescope. Coordinate files may be kept between runs, although this cannot be guaranteed. Once the data on the system, the files may be updated, or added to as needed. Unfortunately, this can only be done by the T.O., as the data is only available on the TCS III HP 1000 computer system. Also, there is no provision for retrieving updated, or newly created lists.

A complete description of the system is available for those observers interested in making use of the facility. The best contact is the staff astronomer assigned to support your observing run.

W. Cruise and M.J. Link