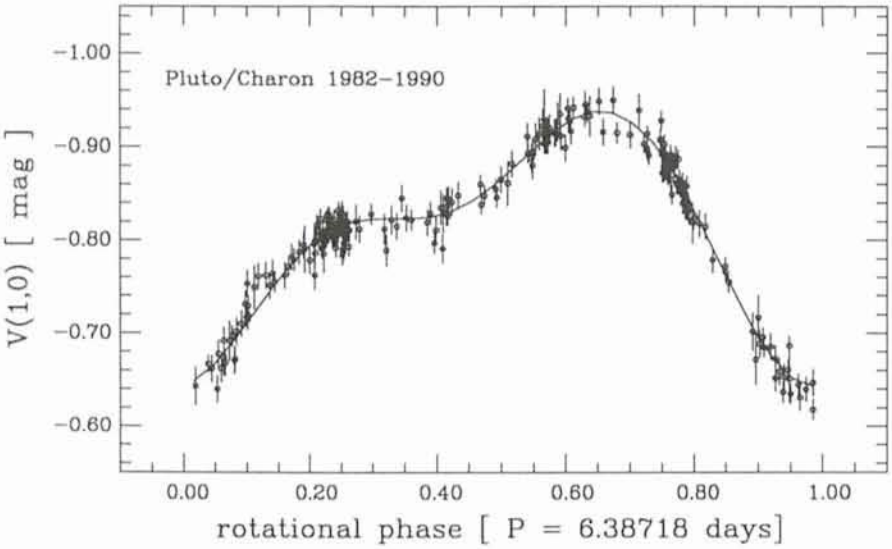

Figure 6: *The rotational light curve of Pluto and Charon observed between 1982 and 1990. The continuous line represents our analytical description of the light curve used for the deconvolution.*

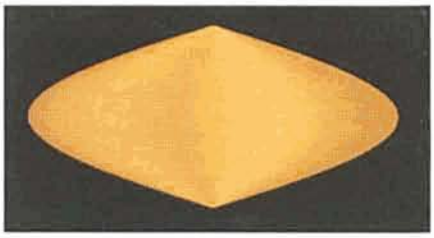

Figure 7: *Longitudinal albedo distribution on Pluto derived by deconvolving the rotational light curve in Figure 6.*

of Pluto with high precision photometry to track the secular variation of the rotational light curve. The 'SHELF' model of Buie and Tholen (1989) predicts an immediate reversal of the secular variation (i.e. general brightening and a reduction in amplitude of the rotational light curve) whereas Stern et al. (1988) predict that the reversal should take place 7–17 years after passing perihelion due to the thermal inertia of Pluto's surface.

The physical parameters of the Pluto-Charon system seem to be well established now. The largest uncertainty that remains lies in the exact determination of the semi-major axis of the system which measures only 0.9″ on the sky. This is the scaling factor of the diameters and the total mass of the binary components. Future observations with high spatial resolution (e.g. with the HST or the ESO-NTT) will allow a more accurate determination of Charon's orbit. One physical parameter which is independent of this scaling length is the mean density of the system that can be calculated from the binary period and the dimensions of Pluto and Charon relative to the binary separation. The mean density of about 2 g/cm^3 indicates that the Pluto-Charon system has a high rock mass fraction similar to that of the larger satellites of the giant planets.

The mutual eclipse series of Pluto and Charon has provided us with many new aspects of the binary planet Pluto-Charon. The albedo maps computed by different observers will hopefully converge as the data of all observers will be combined. The spatial resolution that can be obtained by eclipse mapping is superior to that offered by the HST even if it would be working to design specifications. It will not be before the end of the first decades of the next century that space probes may provide more detailed pictures of the surfaces of Pluto and Charon.

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ESO's Early History

The readers of the *Messenger* will be pleased to learn that the recent series of eleven articles about the early history of ESO, written by Professor Adriaan Blaauw, have now been collected in a book. The text has been thoroughly revised and includes photos which were not in the *Messenger* articles.

The narrative begins with the developments in the early 1950's when leading European astronomers initiated a search for the best possible observatory site under the comparatively unexplored southern sky. Ten years later, in 1962, ESO was established by an international convention and soon thereafter a remote mountain top in the Chilean Atacama desert, La Silla, was acquired. It took another decade to transform this site into the world's largest optical observatory.

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Professor Adriaan Blaauw, well-known Dutch astronomer, has been closely associated with ESO during all of this time. He actively participated in many of the events described and as a former Director General of ESO (1970–74) he possesses first-hand knowledge of the organization and the way it works. A scientist of international renown, Professor Blaauw is also a noted amateur historian in his home country.

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