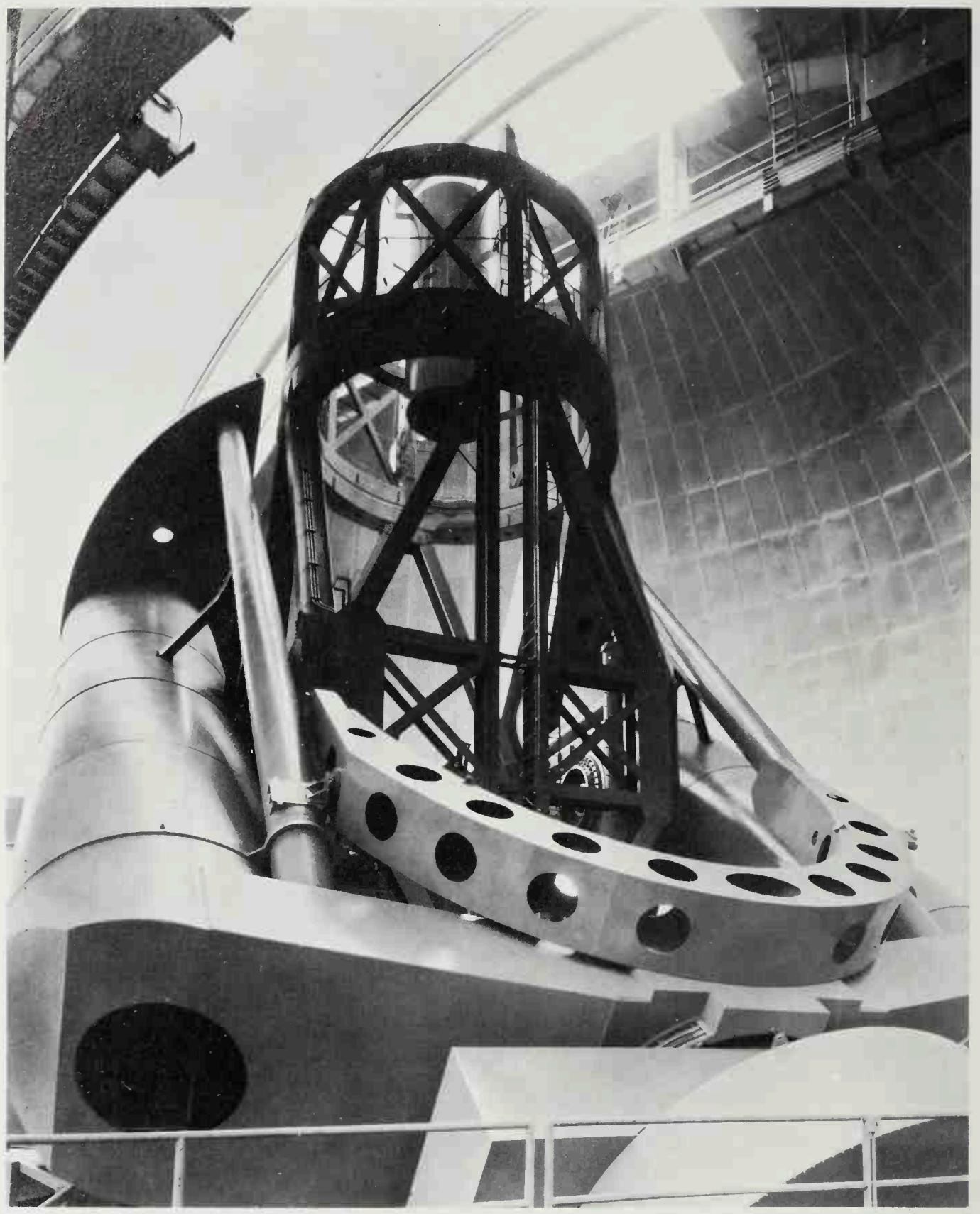

The Serrurier tube in its original form on the 5 m Palomar reflector.

Mountings

A telescope of any kind must be mounted so that its optical parts remain in alignment and it can be directed to any part of the sky, requirements which may seem obvious enough but which are not always easy to achieve. In a refracting telescope, a solid tube is used with the object-glass fitted to a 'cell' at one end, the component lenses being adjustable by set-screws on the cell. In a reflector, the mirror must be supported at its back and its sides so that it does not bend or distort in any other way when the tube points in different directions, and either a compensated lever system or an arrangement of hydraulic pads is used. Forced air circulation is also employed around and below the mirror, but is unnecessary above it because in a reflector the tube is always open. Nowadays the open tube is of **Serrurier** type, which is a framework with a ring at the upper end and a triangular arrangement of struts, named after Mark Serrurier who first designed such a tube for the Palomar 5-m (200-inch) reflector.

The optical system, complete with its tube, has to be supported not only so that it may be directed to any point in the sky but also so that it may readily track the curved apparent path of a celestial object as it moves across the sky due to the Earth's rotation. There are two main types of mounting which achieve