nificant deviations from the mean values in the last line (which includes 26 stars at other longitudes). The stars are mostly main sequence objects, and deviations within any spectral type interval are not correlated with variations in the corresponding mean values of M_{sp}. The marked reduction in rotational velocity at O9-B1 seems to be real. It is not so evident in existing observations (e.g. refs. 4 and 5).

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BLAEUW'S CELESTIAL GLOBE DEDICATED TO TYCHO BRAHE

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In this age of unprecedented progress in astrophysics, it becomes increasingly meaningful to reconsider historical documents which help us retrace the modest beginnings of this science. Blaeuw's celestial globe is such a document. It carries the imprint of the general state of astronomy in Europe at the time of its construction. The globe was built in 1640 by Guiljelmus Jansonius Blaeuw of Amsterdam, a distinguished mathematician, geographer, and astronomer, and by some untraceable channels found its way to Prague where it is located in the Philosophical Hall of the ancient Strahov Dominican Monastery. Blaeuw, who devotedly called himself Tycho's disciple, dedicated this precious work to the Danish astronomer whose portrait is engraved at the head of Ursa Major. However, what makes this celestial globe of paramount value are several records and commentaries on novae of 1572, 1600, and 1604. It is the first celestial globe in the history of astronomy to carry such records. These records are considerably faded; for their preservation, careful photographic reproductions were obtained to secure a transcription of all important legends, which is the primary purpose of this report.

1/*f* NOISE AND THE ASTRONOMICAL OBSERVATION

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Both photoelectric and photographic records commonly exhibit an excess of noise over that to be expected from the shot effect. This excess noise produces a random modulation of the light with an amplitude proportional to $1/f$. For a photoelectric system, f is the bandwidth in cycles per sec (or, $f = 1/2RC$ where RC is the "time constant"). For the photographic case, f is the spatial frequency in cycles per mm and must be considered to extend to dimensions corresponding to the entire image area.

The $1/f$ characteristic is a consequence of minute step changes in gain, transparency, sensitivity, or source flux, and follows from the fact that the Fourier components of a step function, or distribution of step functions, vary as $1/f$.

The effects of $1/f$ noise may be minimized and the shot limit closely approached by employing a large bandwidth and then averaging many records. Examples of the application of this technique applied to spectrophotometry to the measurement of solar magnetic fields are given.

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