and further to the right lies an S-shaped formation in Vela-Puppis. Between Puppis and Ophiuchus lies the brightest and most dramatic part of the visual Milky Way. This part is also more whitish in color than the rest. Although the Milky Way in Sagittarius is on the whole the most luminous, the brightest spot of the Milky Way lies visually around η Carinae. The faintest part of the Milky Way lies in the "Backyard" region of Auriga. The dark matter appears to form a continuous belt whose length and breadth is broken in a few places. Beginning in the faintest region, Perseus, the dark strip is easily traced on the luminous blotches of Cassiopeia, Cygnus, Aquila, Ophiuchus, Sagittarius, Centaurus, Carina, Vela, Puppis, Canis Majoris, Orion, and Auriga. In other words, the dark girdle pierces the Milky Way in its midriff and thus divides the Milky Way in two almost equal parts. With the aid of this visual sketch of the Milky Way, one can draw a profile of the Milky Way as seen at a great distance from the sun.

The luminous areas of the Milky Way were quantitatively expressed in terms of the Large Magellanic Cloud, which I estimated to be -1.0 mag. visually. As the Milky Way was rolling up and as I was moving from place to place (Australia, Indonesia, India, Europe, and Massachusetts) the different luminous parts of the Milky Way were intercompared in estimation of brightness. Thus it was possible to express the brightness of the whole circuitous span of the Milky Way on a uniform scale. For example, the brightest region in the north (Carina) is -3.5 mag., that in the south (Sagittarius) is -3.2 mag., the brightest cloud in Cygnus is -1.0 mag., and the whole Milky Way is -5.5 mag.

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Halliday, Ian. Auroral green line and collision effects in meteor wakes.

New observational material on meteor wakes has been obtained at Meanook and Newbrook, Alberta, Canada, during 1958. Five spectrograms showing the auroral green line have been secured. The line is observed between heights of 115 and 79 km. The cameras were occulted 12 times per second but there is no perceptible decay of the green line across the occulted portions of the trails. An upper limit of not more than 5 de-exciting collisions per second for the metastable oxygen atom is derived. The light curves indicate that in those cases where the line disappears

at relatively great heights the cause is a lack of some reagent, presumably atmospheric oxygen in atomic form, rather than an increased importance of de-exciting collisions. The persistence of the green line below 90 km is surprising, since, in addition to more than 10^4 collisions per second with atmospheric particles, collisions with ablated meteor atoms become frequent and might be expected to quench the forbidden line. The height to which the green line remains visible appears to be correlated with local geomagnetic activity. The line is observed down to lower heights at times of increased activity.

Two high-dispersion spectrograms of a bright Perseid were secured, one of which shows a strong wake spectrum. The magnesium plus iron feature near $\lambda 5176$ is resolved in the wake and confirms that iron is the main contributor to this wake feature. A combination of the two spectrograms shows that iron atoms released at the terminal flare coasted for 180 meters before the energy of re-exciting collisions dropped to an optimum for the lowest iron multiplets. The deceleration is reasonable for coasting atoms but not for solid particles.

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Hawkins, G. S., Southworth, R. B. and Stienon, F. Recovery of the Andromedids.

The spectacular displays of the Andromedid meteors in 1872 and 1885 have never been repeated and they have often been listed as a "lost stream." Precise photographic measurement with the Harvard Super-Schmidt cameras over the period 1952-56 have disclosed 24 meteors that follow the orbit of Biela's comet and represent the remnants of the swarm. The individual orbits show evidence of perturbations caused by the earth and Jupiter. It is deduced that the orbit of the Andromedid swarm now passes 0.05 a.u. below the earth's orbit. The Andromedid meteors described here have been perturbed in the plane of the comet orbit, similar to the dispersion observed in the sunward tail of the comet Arend-Roland.

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Henize, Karl G. A new planetary nebula NGC 6164-65 (Cederblad 135a, b).

Objective-prism photographs of NGC 6164-65 taken in the light of $H\alpha$ and $[NII]$ in the course of the Michigan-Mount Wilson $H\alpha$ Survey show a markedly symmetrical distribution of gas about