A correction of the Right Ascension for *diurnal* aberration is necessary where extreme accuracy is required, of $+0^{s}{\cdot}021 \cos\phi \sec\delta$ for the upper transit and $-0^{s}{\cdot}021 \cos\phi \sec\delta$ for the lower transit, ϕ denoting the Latitude of the place, and δ the Declination of the Star.

Moon-Culminating Stars. (Pages 386 to 414.)

Those Stars are denominated Moon-Culminating Stars, which, being near the Moon's parallel of Declination, and not differing much from her in Right Ascension, are proper to be observed with the Moon, in order to determine differences of meridians. This is effected by comparing the differences of the observed Right Ascensions of such a Star and the Moon's bright limb at any two meridians. If the Moon had no motion, the difference of her Right Ascension from that of the Star would be constant at all meridians; but in the interval of her transit over two different meridians, her Right Ascension will have varied, and the difference between the two compared differences will exhibit the amount of this variation, which added to the differences of the meridians, shows the angle through which the westerly meridian must revolve before it comes up with the Moon; hence, and knowing the rate of her increase in Right Ascension, the difference of Longitude may be easily obtained.

The Right Ascension of the Moon's bright limb and *Declination of her centre*, at the instant of their respective transits at Greenwich, are given for the lower, as well as the upper Culmination, L. denoting the Lower Culmination, and U. the Upper Culmination; the Roman numerals indicate the *bright* limb of the Moon. The Moon's age at the upper transit is inserted in the column containing the magnitudes of the Stars.

The numbers in the column "Var. of ☾'s R.A. in one hour of Long." represent the Variation in Right Ascension of the Moon's Limb during the interval of her transit over two meridians, equidistant from that of Greenwich, and *one* hour distant from each other. They have been deduced from the Right Ascensions of the *bright limb*, and therefore include the effect produced by the change of the semidiameter. They serve to determine the Longitude where the difference of meridians is not great; but where this difference is considerable, that variation in Right Ascension should be used which corresponds to the middle of the interval between the observations. They also serve to determine approximately the Right Ascension of the bright limb at its transit over any other meridian. Thus: Multiply the difference of longitude between Greenwich and the given meridian, by the variation; and, according as the given meridian is East or West of Greenwich, subtract the product from, or add it to, the Right Ascension at Greenwich; the result will be the Right Ascension of the bright limb at transit over the proposed meridian. *Example:* On Mar. 17, 1897, the Right Ascension of the Moon's first limb is $10^{h}\ 59^{m}\ 36^{s}{\cdot}93$, at its upper transit at Greenwich, and the variation in 1 hour of longitude is $134^{s}{\cdot}25$: Required the Right Ascension of the limb at its upper transit at Paris. Paris is $9^{m}\ 21^{s}{\cdot}0$, or $0^{h}{\cdot}156$, East of Greenwich; therefore, multiplying $134^{s}{\cdot}25$ by $0{\cdot}156$, and subtracting the product, $20^{s}{\cdot}94$, we have $10^{h}\ 59^{m}\ 15^{s}{\cdot}99$, for the Right Ascension at Paris.