

stars near the horizon flickering with a singular oscillating motion. Luminous points ascended, moved *laterally*, and fell back to their former position. This phenomenon lasted only from seven to eight minutes, and ceased long before the sun's disk appeared above the horizon of the sea. The same motion was discernible through a telescope, and there was no doubt that it was the stars themselves which moved.* Did this change of position depend on the much-contested phenomenon of *lateral* radiation? Does the undulation of the rising sun's disk, however inconsiderable it may appear when measured, present any analogy to this phenomenon in the lateral alteration of the sun's margin? Independently of such a consideration, this motion seems greater near the horizon. This phenomenon of the *undulation of the stars* was observed almost half a century later at the same spot by a well-informed and observing traveler, Prince Adalbert of Prussia, who saw it both with the naked eye and through a telescope. I found the observation recorded in the prince's manuscript journal, where he had noted it down, before he learned, on his return from the Amazon, that I had witnessed a precisely similar phenomenon.† I was never able to detect any trace of *lateral refraction* on the declivities of the Andes, or during the frequent *mirages* in the torrid plains or *llanos* of South America, notwithstanding the heterogeneous mixture of unequally-heated atmospheric strata. As the Peak of Teneriffe is so near us, and is so frequently

* Humboldt, in Fr. von Zach's *Monatliche Correspondenz zur Erd- und Himmels-Kunde*, bd. i., 1800, s. 396; also *Voy. aux Rég. Equin.*, tom. i., p. 125: "On croyait voir de petites fusées lancées dans l'air. Des points lumineux élevés de 7 à 8 degrés, paraissent d'abord se mouvoir dans le sens vertical, mais puis se convertir en une véritable oscillation horizontale. Ces images lumineuses étaient des images de plusieurs étoiles agrandies (en apparence) par des vapeurs et revenant au même point d'où elles étaient parties." "It seemed as if a number of small rockets were being projected in the air; luminous points, at an elevation of 7° or 8°, appeared moving, first in a vertical, and then oscillating in a horizontal direction. These were the images of many stars, apparently magnified by vapors, and returning to the same point from which they had emanated."

† Prince Adalbert of Prussia, *Aus meinem Tagebuche*, 1847, s. 213. Is the phenomenon I have described connected with the oscillations of 10''-12'', observed by Carlini, in the passage of the polar star over the field of the great Milan meridian telescope? (See Zach's *Correspondance Astronomique et Géog.*, vol. ii., 1819, p. 84.) Brandes (Gehler's *Umgearb. Phys. Wörterb.*, bd. iv., s. 549) refers the phenomenon to *mirage*. The star-like heliotrope light has also frequently been seen, by the admirable and skillful observer, Colonel Baeyer, to oscillate to and fro in a horizontal direction.