

go, in putting forward this hypothesis, expresses the conjecture that the intense blue color of the sky, which I have myself measured upon the loftiest part of the Cordilleras, though with instruments which are certainly still very imperfect, may afford a convenient opportunity for frequently observing these mountain-like clouds in the outermost atmosphere of the Sun.\*

When we consider the zone in which solar spots are most commonly observed (it is only on the 8th of June and the 9th of December, that the spots describe straight lines on the Sun's disk, which at the same time are parallel with one another and the Sun's equator, and not concave or convex), we are struck by the fact that they have rarely been seen in the

nous empêchât d'admettre que des masses nuageuses de 25,000 à 30,000 lieues de long flottent dans l'atmosphère du Soleil; que ces masses, comme certains nuages de l'atmosphère terrestre, ont des contours arrêtés, qu'elles affectent, ça et là, des formes très tourmentées, même des forms en surplomb; que la lumière solaire (la photosphère) les colore en rouge. Si cette troisième enveloppe existe, elle donnera peut-être la clef de quelques-unes des grandes et déplorables anomalies que l'on remarque dans le cours des saisons." "On examining more closely the grounds on which these rose-colored protuberances are compared to clouds (of the third atmosphere), we do not find any principle in physics which would oppose the assumption that masses of clouds extending from 25,000 to 30,000 leagues, float in the Sun's atmosphere; that these masses, like some clouds in our terrestrial atmosphere, assume contours exhibiting here and there much-involved forms, appearing sometimes even sloping or inverted, as it were; and that they are colored red by the light of the Sun (the photosphere). If this third atmosphere actually exist, it may, perhaps, tend to solve some of those vast and deplorable anomalies which we observe in the course of the seasons."—Arago, in the *Annuaire* for 1846, p. 460, 467.

\* "Tout ce qui affaiblira sensiblement l'intensité éclairante de la portion de l'atmosphère terrestre qui paraît entourer et toucher le contour circulaire du Soleil, pourra contribuer à rendre les proéminences rougeâtres visibles. Il est donc permis d'espérer qu'un astronome exercé, établi au sommet d'une très haute montagne, pourrait y observer régulièrement les *nuages de la troisième enveloppe solaire*, situés, en apparence, sur le contour de l'astre ou un peu en dehors, déterminer ce qu'ils ont de permanent et de variable, noter les périodes de disparition et de réapparition . . . . "Whatever will perceptibly diminish the brilliant intensity of that portion of the terrestrial atmosphere which appears to inclose and touch the circumference of the Sun, may contribute to render the rose-colored protuberances visible. We may therefore, hope that an experienced astronomer may succeed, on the summit of some high mountain, in making systematic and regular observations of the *clouds of the third solar envelope*, which appear to be situated on the margin of the Sun, or a little beyond it, and thus determine the permanence or variability of their character, and note the epochs of their disappearance and reappearance . . ."—Arago, *Ibid.* p. 471.