these distances directly with the actual metallic bar which is preserved at Paris as the standard metre.

That he should have been the first systematically to attack the stellar distances, with an instrument which with his own hands and eyes he had proved to be equal to this difficult enterprise, was a splendid thing.   But that he himself should have provided all the necessary steps of the measurement and triangulation, from the interior of the *Bureau des poids et des mesures* in Paris, where lies the standard metre, right on by continuous triangulation to α Centauri, Sirius, and a number of other stars, is a feat of measurement which has never been equalled, and is not likely ever to be surpassed.

It may have been an accidental concatenation of circumstances and temperament that led to his doing all this; it is very unlikely that he ever realized that he had accomplished the combined feat.   That it was done, and done with such superlative accuracy, has evoked the enthusiasm of all astronomers.

Without dealing with details about precautions, and checks upon the work let us look broadly at a portion of what was accomplished in these three great researches.

First, he procured a measuring bar, transported it to Paris, and measured upon it the exact length of the standard metre.

Second, he took this to South Africa to measure a base line on the ground, a few miles long, and from this base, with a theodolite, he extended his survey by a series of triangles over an arc of meridian.

Third, latitude observations, at the two ends of this arc measured in metres gave him the means of determining the diameter of the earth in terms of the standard metre at Paris.

Fourth, taking a definite portion of this diameter of the earth, as a base line, over which he was carried by the earth's diurnal rotation, he extended his triangulation to the minor planet Victoria.   This gave him the scale for measuring the solar system.   Thus his triangulation gave him the diameter of the earth's orbit.

Fifth and finally, he still further extended the triangulation which was begun in South Africa, and, using as a base line the diameter of the earth's orbit, over which he was carried by the earth's revolution round the sun, he completed his triangulation from the bar of metal in the Paris bureau to the distant fixed stars.

Thus, without any extraneous help, he measured the distances of the stars with the Paris standard metre.

Stated thus, the stupendous nature of the triple problem captures the imagination.   Meanwhile, practical astronomers, studying in sober earnest the voluminous records of the triple undertaking, are uplifted in admiration, not only at the unrivalled skill of hand and eye, not only as the mathematical instinct that guided his steps, but even more at the dogged persistence and steady effort, which enabled him to overcome every obstacle.   Other astronomers have had the skill, other astronomers have had the instinct, and other astronomers have had the persistence and steady effort.   There are few to whom all have been given to the degree required for the completion of this stupendous work.