

director of the *Deposito hidrografico* of Madrid, at  $5^{\circ} 38' 11''$ , in a table of positions which he communicated to me on leaving Madrid. M. de Churruca fixed the Morro at  $5^{\text{h}} 39' 1''$ . I met at the Havannah with one of the most able officers of the Spanish navy, Captain Don Dionisio Galeano, who had taken a survey of the coast of the strait of Magellan. We made observations together, on a series of eclipses of the satellites of Jupiter, of which the mean result gave  $5^{\text{h}} 38' 50''$ . M. Oltmanns deduced in 1805, the whole of those observations which I marked for the Morro, at  $5^{\text{h}} 38' 52.5'' - 84^{\circ} 43' 7.5''$  west of the meridian of Paris. This longitude was confirmed by fifteen occultations of stars observed from 1809 to 1811, and calculated by M. Ferrer: that excellent observer fixes the definitive result at  $5^{\circ} 38' 50.9''$ . With respect to the magnetic dip, I found it by the compass of Borda (Dec. 1800),  $53^{\circ} 22'$  of the old sexagesimal division: twenty-two years before, according to the very accurate observations made by Captain Sabine, in his memorable voyage to the coasts of Africa, America, and Spitzbergen, the dip was only  $51^{\circ} 55'$ ; it had therefore diminished  $1^{\circ} 27'$ .

The island of Cuba being surrounded with shoals and breakers, along more than two-thirds of its length, and as ships keep out beyond those dangers, the real shape of the island was for a long time unknown. Its breadth, especially between the Havannah and the port of Batabano, has been exaggerated; and it is only since the *Deposito hidrografico* of Madrid published the observations of captain Don Jose del Rio, and lieutenant Don Ventura de Barcaiztegui, that the area of the island of Cuba could be calculated with any accuracy. Wishing to furnish in this work the most accurate result that can be obtained in the present state of our astronomical knowledge, I engaged M. Bauza to calculate the area. He found, in June, 1835, the surface of the island of Cuba, without the Isla dos Pinos, to be 3520 square sea leagues, and with that island 3615. From this calculation, which has been twice repeated, it results, that the island of Cuba is one-seventh less than has

the Almirante, a plantation of the Countess Auenavista; San Antonio de Beitia; the village of Managua; San Antonio de Bareto; and the Fondadero, near the town of San Antonio de los Banos.