

From which :

North Pacific Torrid Zone,	Mean,	30.093
South Pacific Torrid Zone,	29.965
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Mean of North and South Pacific,		30.029
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North Atlantic Torrid Zone,	Mean,	30.003
South Atlantic Torrid Zone,	29.895
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Mean of North and South Atlantic,		29.949

I was chiefly led to the calculation of these barometric means, by the idea, that *perhaps* a difference of level between the two oceans might be the result. May not the irregularities resulting from the motion of the ship, winds and weather, be lost in the number of partial observations, giving errors both in excess and defect? If they are of any value in this point of view, they would indicate the level of the Pacific to be lower than that of the Atlantic Ocean. To find the amount, using Dabuisson's Portative Table, given in his *Geognosie*, i. 467. :

30.029 In.	= 768.7 mill.	= elevation,	76
29.949	= 760.7	=	97

Difference,

 21 metres = 69 feet,

neglecting all corrections for temperature, &c. as these will operate in the same direction, and nearly about the same amount, on both barometric columns. *N. B.* The cistern of the barometer used was about 10 feet above the level of the water.

My observations on the temperature of the surface strata of the ocean were daily made throughout the voyage at 7-8 A. M., noon to 2 P. M., and sunset. It would occupy too much space to give here the detail of these observations. I shall therefore merely give you their abstract, following two methods, by comparing which, more correct conclusions will be formed than by either method singly.

Method 1.—Where the temperatures given are the means of the observations on the days when the parallels indicated were crossed.