

PARALLAX IN LONGITUDE.

$$\text{Longitude of Venus} = 254^{\circ} 35' 8''.5$$

$$\text{Long. of the Nonagesimal} = 181^{\circ} 49' 44''$$

$$\text{Therefore,} \quad h = 72^{\circ} 45' 24''.5. \quad \text{Then by Eq. (26).}$$

$$\sin P = 6.079337$$

$$\sin a = 9.813799$$

$$\sec \lambda = 10.000003$$

$$k = 5.893139$$

$$k^2 = 1.7863$$

$$k^3 = 7.679$$

$$\sin h = 9.980029$$

$$\sin 2h = 9.7529$$

$$\sin 3h = 9.792n$$

$$\operatorname{cosec} 1'' = 5.314425$$

$$\operatorname{cosec} 2'' = 5.0134$$

$$\operatorname{cosec} 3'' = 4.837n$$

$$15''.402 = 1.187593,$$

$$''.0003 = 4.5526$$

$$= 8.308n$$

The last two terms being extremely small may be omitted, therefore the parallax in longitude $= + 15''.4 = x$.

PARALLAX IN LATITUDE.

By Eqs. (29) and (30).

$$\tan a = 9.933672$$

$$\sin P = 6.079337$$

$$\cos (h + \frac{x}{2}) = 9.471860$$

$$\cos a = 9.880126$$

$$\sec \frac{x}{2} = 10.000000$$

$$\operatorname{cosec} \theta = 10.013619$$

$$\cot \theta = 9.405532$$

$$k = 5.973082$$

$$\theta = 75^{\circ} 43' 34''.5$$

$$\sin (\theta + \lambda) = 9.986782$$

$$\lambda = 12' 32''.4 \text{ S.}$$

$$\operatorname{cosec} 1'' = 5.314425$$

$$\theta + \lambda = 75^{\circ} 56' 6''.9.$$

$$18''.808 = 1.274289$$

$$k^2 = 1.9461$$

$$k^3 = 7.919$$

$$\sin 2 (\theta + \lambda) = 9.6734$$

$$\sin 3 (\theta + \lambda) = 9.869n$$

$$\operatorname{cosec} 2'' = 5.0134$$

$$\operatorname{cosec} 3'' = 4.837$$

$$''.0004 = 4.6329$$

$$= 8.625n$$

Therefore the parallax in latitude $= + 18''.8 = y$.

In the same way, we find at the second assumed time,

$$a = 27^{\circ} 37'; m = 317^{\circ} 23' 46''; h = - 62^{\circ} 58' 2''.5;$$

$$x = - 10''.3; y = + 20''.8.$$