

LATITUDE of MOUNT COOK OBSERVATORY by ZENITH TELESCOPE.

Pairs of Stars. (From the Melbourne Catalogue.)	Latitude.			v.	Pairs of Stars. (From the Melbourne Catalogue.)	Latitude.			v.
	°	'	"	"		°	'	"	"
407 and 429 ...	41	18	00.90	.31	639 and 653 ...	41	18	00.65	.06
457 and 477 ...	41	18	01.76	1.17	689 and 699 ...	41	17	59.78	.81
507 and 517 ...	41	18	00.18	.41	709 and 736 ...	41	17	58.68	1.91
585 and 595 ...	41	18	00.31	.28	β Corvi and 633	41	18	00.25	.34
607 and δ^2 Corvi	41	18	01.29	.70	650 and 653 ...	41	18	00.85	.26
β Corvi and 633	41	18	00.59	.00	668 and 695 ...	41	18	01.62	1.03
639 and 653 ...	41	18	00.54	.05	709 and 736 ...	41	17	59.79	.80
689 and 699 ...	41	17	59.67	.92	774 and 779 ...	41	18	01.00	.41
433 and 435 ...	41	17	59.49	1.10	779 and 783 ...	41	18	01.87	1.28
457 and 477 ...	41	18	01.46	.87	799 and 806 ...	41	18	00.42	.17
507 and 517 ...	41	18	01.68	1.09	β^1 Scorpii and 816	41	18	00.98	.39
507 and 517 ...	41	18	01.64	1.05	607 and δ^2 Corvi	41	17	59.79	.80
585 and 595 ...	41	18	01.31	.72	β Corvi and 633	41	18	01.73	1.14
650 and 653 ...	41	18	00.13	.46	642 and 657 ...	41	18	01.83	1.24
507 and 517 ...	41	18	00.12	.47	668 and 695 ...	41	18	01.18	.59
607 and δ^2 Corvi	41	18	00.14	.45	730 and 746 ...	41	18	00.57	.02
639 and 653 ...	41	17	59.70	.89	774 and 779 ...	41	17	59.40	1.19
689 and 699 ...	41	18	00.16	.43	779 and 783 ...	41	18	00.78	.19
507 and 517 ...	41	18	00.95	.36	799 and 806 ...	41	17	59.72	.87
577 and ϵ Corvi	41	18	00.71	.12	β^1 Scorpii and 816	41	18	01.84	1.25
607 and δ^2 Corvi	41	17	59.86	.73	642 and 657 ...	41	18	00.73	.14
β Corvi and 633	41	18	01.00	.41	668 and 695 ...	41	18	00.43	.16
642 and 657 ...	41	18	01.54	.95	709 and 736 ...	41	17	58.85	1.74
689 and 699 ...	41	18	00.43	.16	774 and 779 ...	41	18	00.19	.40
577 and ϵ Corvi	41	18	01.05	.46	779 and 783 ...	41	18	01.57	.98
β Corvi and 633	41	18	01.38	.79	799 and 806 ...	41	18	00.50	.09
639 and 653 ...	41	18	01.75	1.16	β^1 Scorpii and 816	41	18	01.48	.89
689 and 699 ...	41	18	00.49	.10	668 and 695 ...	41	18	00.26	.33
507 and 517 ...	41	18	00.72	.13	709 and 736 ...	41	18	00.12	.47
577 and ϵ Corvi	41	17	59.36	1.23	774 and 779 ...	41	18	00.40	.19
607 and δ^2 Corvi	41	18	01.08	.49	779 and 783 ...	41	18	01.18	.59
639 and 653 ...	41	18	01.03	.44	799 and 806 ...	41	17	59.86	.73
689 and 699 ...	41	17	59.73	.86	β^1 Scorpii and 816	41	18	00.47	.12
507 and 517 ...	41	18	00.11	.48	779 and 783 ...	41	18	00.54	.05
585 and 595 ...	41	18	01.23	.64	804 and 810 ...	41	18	00.37	.22
639 and 653 ...	41	17	59.97	.62	819 and 828 ...	41	18	00.22	.37
689 and 699 ...	41	18	01.05	.46	668 and 695 ...	41	18	01.26	.67
577 and ϵ Corvi	41	17	59.57	1.02	709 and 736 ...	41	17	59.50	1.09
607 and δ^2 Corvi	41	18	00.61	.02	α^2 Librae and 767	41	18	00.61	.02
β Corvi and 633	41	18	01.48	.89	774 and 779 ...	41	17	59.47	1.12
642 and 657 ...	41	18	00.82	.23	779 and 783 ...	41	18	00.02	.57
689 and 699 ...	41	18	00.70	.11	804 and 810 ...	41	18	00.68	.09
577 and ϵ Corvi	41	18	00.99	.40	819 and 828 ...	41	18	01.44	.85
607 and δ^2 Corvi	41	17	59.90	.69	709 and 736 ...	41	18	00.28	.31
β Corvi and 633	41	17	59.40	1.19	774 and 779 ...	41	17	59.84	.75
642 and 657 ...	41	18	00.16	.43	779 and 783 ...	41	18	00.32	.27
689 and 699 ...	41	18	01.48	.89	799 and 806 ...	41	18	01.50	.91
577 and ϵ Corvi	41	18	01.26	.67					
607 and δ^2 Corvi	41	18	01.08	.49					
β Corvi and 633	41	18	00.22	.37		99) 792	58.67		59.74
642 and 657 ...	41	18	01.59	1.00					
689 and 699 ...	41	18	00.08	.51		41	18	00.59	.60

NOTE.—The numbers in the column marked v give the difference of each observation from the mean.

$$y = \frac{(v)}{m} = \frac{59.74}{99} = .603''.$$

$$r = \text{probable error of a single obs.} = .8454y = .51''.$$

$$r_0 = \text{probable error of final result} = \frac{.51''}{\sqrt{99}} = .05''.$$

$$\therefore \text{Latitude of Mount Cook Observatory} = 41^\circ 18' 00.59'' \pm .05''.$$