$$m = 6$$
,

$$egin{array}{ll} \overline{\delta_{\min}} &= rac{1}{m} \sum \delta_{\min} \ &= rac{1}{6} (38^\circ 36' + 38^\circ 36' + 38^\circ 37' + 38^\circ 55' + 38^\circ 57' + 38^\circ 56') \ &= 38^\circ 46', \end{array}$$

$$egin{aligned} S_\delta^2 &= rac{1}{m-1} \sum (\overline{\delta_{\min}} - \delta_{\min})^2 \ &= rac{1}{5} (10'0''^2 + 10'0''^2 + 9'0''^2 + 9'0''^2 + 11'0''^2 + 10'0''^2) \ &= rac{1}{5} (0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.003^2 + 0.00001 \ \mathrm{rad}^2, \end{aligned}$$

$$egin{array}{ll} S_{\overline{\delta}} &= rac{S_{\delta}}{\sqrt{m}} \ &= \sqrt{rac{0.00001}{6}} \ &= 0.001 \, \mathrm{rad}, \ U_A &= t_{0.683} S_{\overline{\delta}} \ &= 1.11 * 0.001 \ &= 0.001 \, \mathrm{rad}, \ U_B &= 1' \ &= 0.0003 \, \mathrm{rad}, \ U_{\delta} &= \sqrt{U_A^2 + U_B^2} \ &= \sqrt{0.001^2 + 0.0003^2} \ &= 0.001 \, \mathrm{rad}, \end{array}$$

$$egin{array}{ll} U_{\overline{n}} &= rac{\partial n}{\partial \delta} U_{\delta} \ &= rac{\cos rac{1}{2} (lpha + \overline{\delta_{\min}})}{2 \sin rac{lpha}{2}} U_{\delta} \ &= 0.001 \cos rac{60^{\circ} + 38^{\circ}46'}{2} \ &= 0.001 \ \mathrm{rad}, \end{array}$$

$$egin{align} \overline{n} &=rac{\sinrac{1}{2}(lpha+\overline{\delta_{\min}})}{\sinrac{lpha}{2}} \ &=2\sinrac{60^\circ+38^\circ46'}{2} \ &=1.518, \end{aligned}$$

$$n = \overline{n} \pm U_{\overline{n}}$$
$$1.518 \pm 0.001.$$