数据处理过程

环数i	30	25	20	15	10	5
dn	20.431	20.790	21.290	21.635	22.120	22.772
d n	29.228	28.874	28.481	28.045	27.532	26.901
D _{nk} ∓d _n -d	8.797	8.084	7.691	6.410	5.412	4.129

环数i	30	25	20	15	10	5
dn	20.385	20.745	21.140	21.571	22.090	22.749
ďn	29.225	28.872	28.480	28.042	27.529	26.870
D _{nk} =d _n -d	8.840	8.127	7.340	6.471	5.439	4.121
n	0.040	0.127	7.540	0.471	0.100	1.121
	30	25	20	15	10	5
n						
环数	30	25	20	15	10	5

环数	30	25	20	15	10	5
D	8.827	8.107	7.456	6.448	5.428	4.125
仪器误差∆ 仪	0.005	0.005	0.005	0.005	0.005	0.005
UD	0.082	0.076	0.655	0.111	0.049	0.015

 $\lambda_{$ 钠黄光平均波长 $}=589.3nm$

$$U_l = 0.3nm \ n = 3, rac{t_p}{\sqrt{n}} pprox 2.5$$

$$S_x = \sqrt{rac{\sum (x_i - ar{x})}{n-1}}$$



$$egin{aligned} |\Delta_{/\!\!ee}| &= (5 + rac{L}{15})(\mu m) \ U_s &= \sqrt{ig|\Delta_{/\!\!ee}|^2 + (rac{t_p}{\sqrt{n}}S_x)^2} \end{aligned}$$

误差传递公式:

$$U_p = \sqrt{(rac{\delta_\phi}{\delta_y} U_x)^2 + (rac{\delta_\phi}{\delta_y} U_y)^2}$$

$$\Rightarrow U_{\overline{D_n^2-D_m^2}}=0.76mm^2$$

$$\Rightarrow R \pm U_R = 1.048 \pm 0.020$$

$$|\Delta_{\langle\!\!ec{\chi}}|=(5+rac{L}{15})(\mu m) \hspace{1cm} L=34.756mm \ U_l=0.007mm$$

次数n	1	2	3
I ₀ (mm)	35.061	32.970	29.100
ľ ₀ (mm)	32.721	30.567	26.645
I (mm)	2.340	2.403	2.455

$$n=3, rac{t_p}{\sqrt{n}}pprox 2.5 \ egin{aligned} &ar{d}=Nrac{\lambda}{2}=10\lambdarac{l}{ar{l}} \ S_x=\sqrt{rac{\sum(x_i-ar{x})}{n-1}} \ \end{pmatrix} \Rightarrow ar{d}=0.08537mm \end{aligned}$$

$$U_l = 10\sqrt{(rac{l}{\overline{l}}U_\lambda)^2 + (rac{\lambda}{\overline{l}}U_l)^2 + (\lambda Lrac{l}{\overline{l}^2}U_{\overline{l}})^2} pprox 0.0029mm$$

$$\Rightarrow d \pm U_d = 0.08537 \pm 0.0029 mm$$