

数据表格:

1. 牛顿环 $\Delta_{\text{仪}} = 0.004\text{mm}$, $\lambda = 589.3\text{nm}$

环的级数	m	20	19	18	17	16
环的位置/mm	$x_{\text{左}}$					
	$x_{\text{右}}$					
环的直径/mm	$d_m = x_{\text{左}} - x_{\text{右}} $					
环的级数	n	15	14	13	12	11
环的位置/mm	$x_{\text{左}}$					
	$x_{\text{右}}$					
环的直径/mm	$d_n = x_{\text{左}} - x_{\text{右}} $					
d_m^2 / mm^2						
d_n^2 / mm^2						
$(d_m^2 - d_n^2)_i$						
$\overline{d_m^2 - d_n^2}$						
R	$R = \frac{\overline{d_m^2 - d_n^2}}{4(m - n)\lambda} = \frac{\overline{d_m^2 - d_n^2}}{4 \times 5 \times \lambda} = m$					
$S_{d_m^2 - d_n^2}$	$S_{d_m^2 - d_n^2} = \sqrt{\frac{\sum_{i=1}^6 [\overline{d_m^2 - d_n^2} - (d_m^2 - d_n^2)_i]^2}{5 - 1}} = mm$					
$\Delta_{d_m^2 - d_n^2}$	$\Delta_{d_m^2 - d_n^2} = \sqrt{S_{d_m^2 - d_n^2}^2 + (2\Delta_{\text{仪}}^2)^2} = mm^2$					
Δ_R	$\Delta_R = \frac{\Delta_{d_m^2 - d_n^2}}{4 \times 5 \times \lambda} = m$					
结果表达式	$R \pm \Delta_R = m$					