

## 2.2 Resolution

Grating	$\phi$ / mm	$n$
1	<del>2.9</del>	10 / M
2	-1	6 *
3	-1	10
4		9 *
5		6

$n \leq$  Number of Maxima observed on oscilloscope

$\phi = 2.9$   
 $\Delta\phi = 0.5 \text{ mm}$

\* Lowest possible peak might coincide with peak from trigger signal

~~$\phi$  measured 5 times in order to increase the exactness~~

## 2.5 Phase grating

Calibration:

We chose  $f$  such that the central local maximum was minimal (0th order  $\Rightarrow J_0(0)$  minimal).

$a := 1972.01 \text{ Hz} ; 9.04 \text{ V}$   
 $b := 2132.05 \text{ Hz} ; 9.05 \text{ V}$   
 $\Rightarrow$  choose

Measuring $U/V$	File	$f/\text{Hz}$
0.00	1	2132.1
0.50	2	32.3
1.01	3	32.3
1.49	4	32.3
2.00	5	32.3
2.50	6	32.5
3.00	7	32.2
3.51	8	32.2
4.00	9	32.3
4.50	10	32.7
5.01	11	32.6
5.50	12	32.0
6.01	13	32.6
6.50	14	32.7
7.00	15	32.4
7.50	16	32.5
8.00	17	32.2

\* Double Range at oscilloscope

$U/V$	File	$f/\text{Hz}$
8.50	18	2132.4
9.00	19	32.7
9.50	20	32.3

Comments:

$\Delta U = 0.01 \text{ V}$  (oscillating)  
 $\Delta f = 0.5 \text{ Hz}$  (oscillating)

Measuring time:

25 minutes