

# Microscope

## Experiment Data

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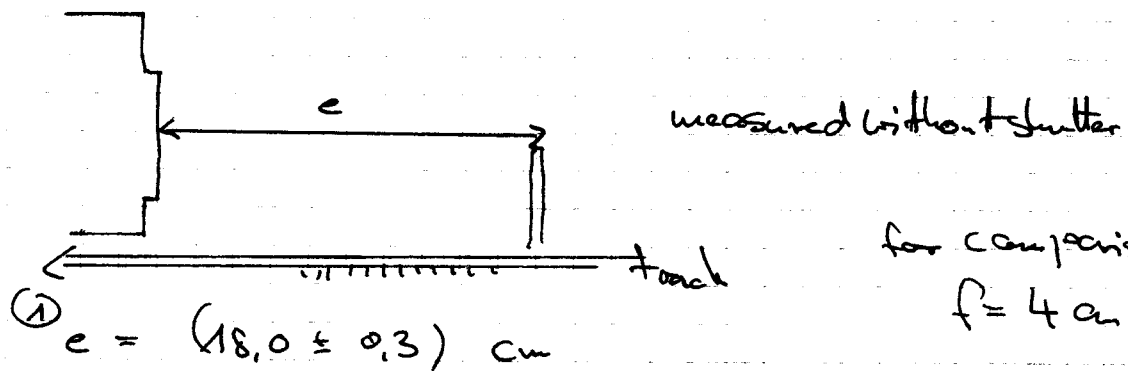
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Start 15<sup>30</sup>

End 18<sup>00</sup>

## Assignment 1



measurement of  $(a-a')$  using the scale on the track (absolute position)

demagnified:  $(30,8 \pm 0,2) \text{ cm}$

magnified:  $(25,5 \pm 0,2) \text{ cm}$

②  $e = (22,5 \pm 0,3) \text{ cm}$

demagnified:  $(36,2 \pm 0,2) \text{ cm}$

magnified:  $(24,5 \pm 0,2) \text{ cm}$

## Assignment 2

①  $t = (15,0 \pm 0,1) \text{ cm}$

ocular lens:  $f = 4 \text{ cm}$

~~$1 \text{ mm} \rightarrow (25 \pm 2) \text{ mm}$  (wrong  $a_0$ )~~

$a_0 = (250 \pm 10) \text{ mm}$

$1 \text{ mm} \rightarrow (23 \pm 2) \text{ mm}$

$a_0$  can probably not take into account because of glasses!

②  $t = (20,0 \pm 0,3) \text{ cm}$

$a_0$  unchanged

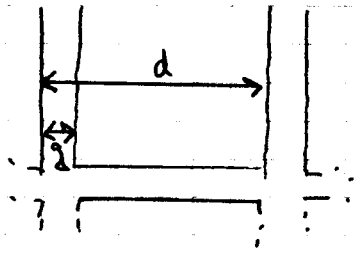
$1 \text{ mm} \rightarrow (30 \pm 2) \text{ mm}$

③  $t = (30,0 \pm 0,3) \text{ cm}$

$1 \text{ mm} \rightarrow (44 \pm 2) \text{ mm}$

### Assignment 3

Calibration : 1 mm object scale  $\rightarrow (75 \pm 3)$  small units



$$4d = (32 \pm 2) \text{ small units}$$

$$g = (2 \pm 0,5) \text{ small units}$$

$d = 0,1 \text{ mm}$  from label

2<sup>nd</sup> try

$$4d = (28 \pm 2) \quad g = (2 \pm 0,5)$$

3<sup>rd</sup> try

$$4d = (29 \pm 2) \quad "$$

with shutter position changed (to focal plane of obj.)

4<sup>th</sup> try

$$4d = (29 \pm 2) \quad g = (2 \pm 0,5)$$

### Assignment 4

Smallest possible shutter position : 0.3 mm

grid not visible at 0.2 mm shutter

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