

T.C.

GEBZE TECHNICAL UNIVERSITY

PHYSICS DEPARTMENT

OPTICS LABORATORY

EXPERIMENT REPORT

NEWTON'S RINGS

DATA and RESULTS

Name: _____

TA: _____

Department: _____

Partners: _____

	<i>yellow</i>	<i>green</i>	<i>violet</i>
<i>n</i>	$r_n(mm)$	$r_n(mm)$	$r_n(mm)$

1. Plot the radius of the interference rings, r_n , as a function of the order number, n , for various wavelengths. Show the experimental data of the yellow and green color filters on the same graph to make an easier interpretation.
 2. Find the slopes on the graph for the yellow and green color filters, respectively, with least squares fitting method.
 3. What is the radius of curvature?
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4. What is the air wedge?
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5. Explain the conditions of the light interference.

DISCUSSION & CONCLUSION

1. What are the possible errors in the experiment?
2. What kind of approximations did you take into consideration while you were obtaining the physical quantities and how do they affect your results?
3. What discrepancies did you encounter between the calculated quantities and theoretical or literature values?
4. What is your overall conclusion?