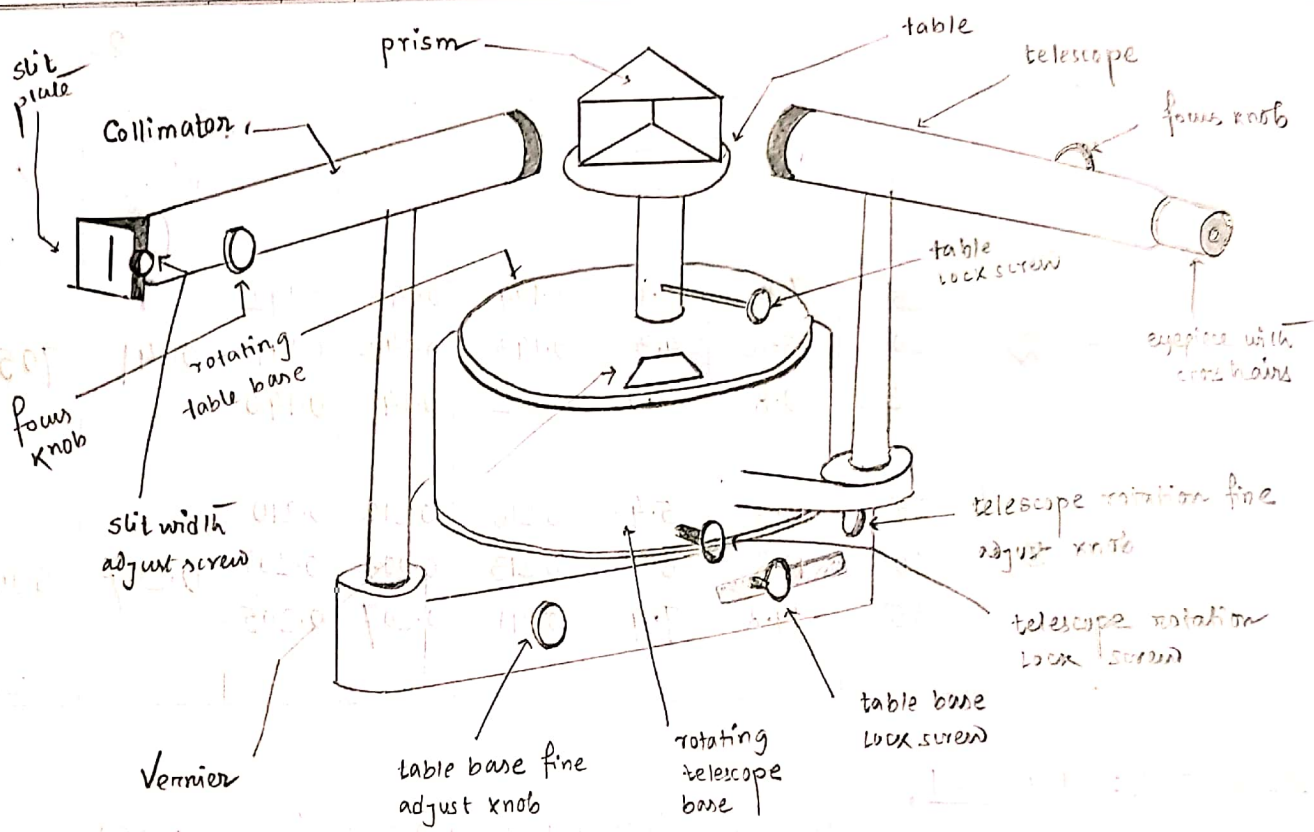

Fig. Schematic diagram of a spectrometer

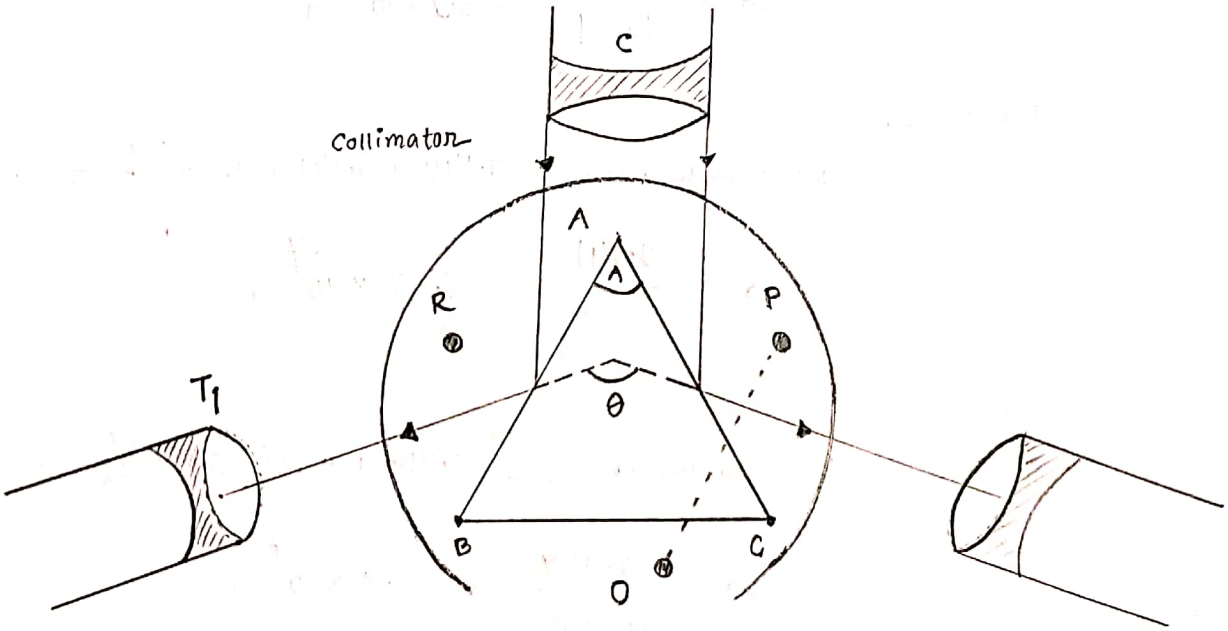

Fig. Ray diagram of angle of prism

Date 7/8/2019

Expt. No. 2 Page No. 3

TOPIC: Integrated Optics [Angle of Prism]

AIM: To determine the apex angle of the given prism using a spectrometer.

APPARATUS:

- Spectrometer
- Spirit level
- Magnifying glass
- Glass prism
- Sodium vapour lamp

TABULATION: least count = $\frac{0.5^\circ}{30 \text{ no. of div.}} = \frac{30'}{30} = 1'$

Reading of reflected ray	Vernier A			Vernier B		
	MSR	VSR	Total	MSR	VSR	Total
Reflection from side (a) AB	114°	$14'$	$114^\circ 14'$	324°	$8'$	$324^\circ 8'$
Reflection from side (b) AC	263°	$9'$	$263^\circ 9'$	263°	$9'$	$263^\circ 9'$
Difference between a & b	$118^\circ 55'$			$118^\circ 1'$		

Mean θ = $59^\circ 14'$

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RESULT: The Apex angle of the given equilateral prism = $59^\circ 14'$

Teacher's Signature _____