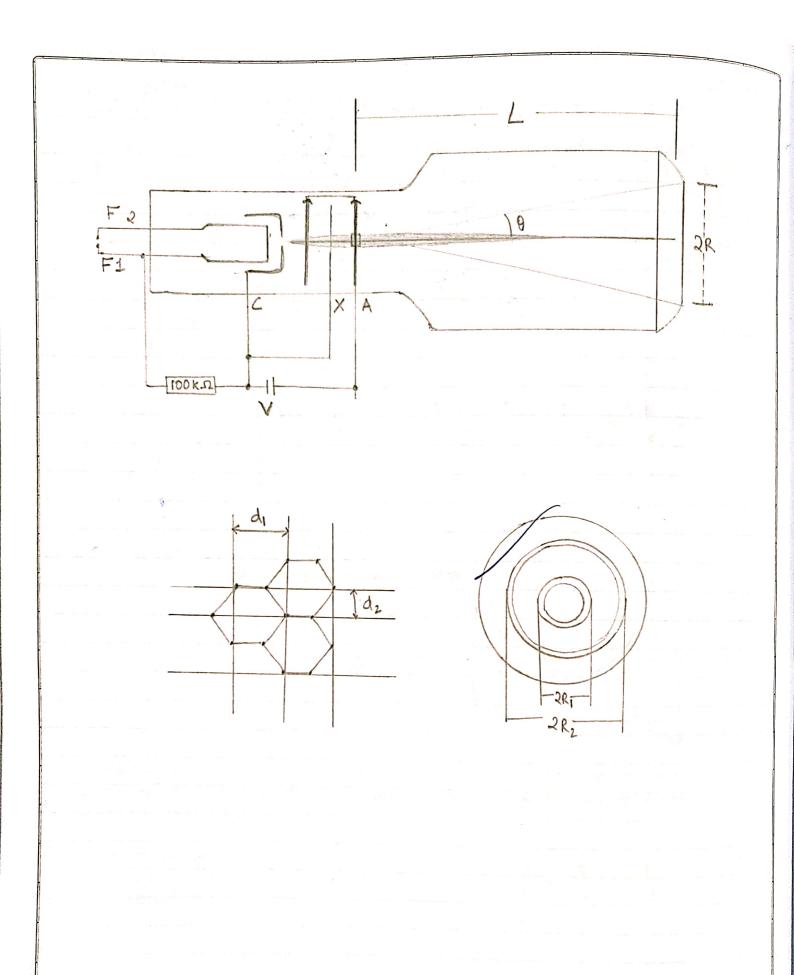
Date 06-12-2018

Fx	xpt. No. 1	Date de l'Alkais					
Expt. No. 1 Electron Diffraction Page No. 1							
	Apparatus Required:						
(1)	STATE OF CONTRACT CON	6M2					
4	Electron diffraction tube with stand						
2.		RIMBER					
3.							
	Plastic measuring scale						
V D							
	Objective !- 10	23100					
200	To calculate the interplanar spacing in graphite from the						
i,	diffraction pattern.						
	Basic Information:						
	In this experiment electrons get transmitted through a very thin						
	polycrustalline graphite sheet. The schematic sketch is snown in rig. 1.						
	Compatible has 2 independent entire spacings (de & de) & mese are						
	shown in Fig. 2. The 2 diffraction rings that will be seen at each						
	voltage are due to these 2 planes.						
9 - ;	TORRE WIE COME TO THE PARTY						
	Applying the diffraction formula for first order, we have,						
	THE MIT WAS TO THE MET						
	$\lambda = d sim \theta$	(1)					
	where λ is the de Broglie wavelength of the electron, d is the interplanar spacing & θ is the angle of diffraction. Electrons are accelerated through a potential difference of 'V'volts and hence						
	interclanary encourse & A is the angle of diffraction. Electrons are						
	accolated through a potential difference of Vivol	ts and hence					
	their de Parelle regellength is.						
	their de Broglie wavelength is,	A COLUMN TO THE STATE OF THE ST					
	$\lambda = 12.3 \text{ A}^{\circ}$	(2)					
	V						
	Teacher's Signature :						



		the state of the s	0.0.0	2/87		
RING	V(KV)	2R, (cm)	R, (cm)	٦(A)		de
MINOL	4.0	2.55	1.275	0.194	0.094	3.06
INNER	4.5	2.45 in	1.225	0.183	0.0903	2.02
HAITCH	5.0	2.25	1.125	01174	0.083	2.09
	and the continue of the state o	RR2 (cm)	R2(cm)	100/0350	4.5000	d
	4.0	4.4	2.2	6.194	0.161	1.20
OUTER	4.5	4.1	2.05	6.183	0.120	1.22
1911 1916 (1)	5.0	3.95	1-978	0.174	0.144	1,508
				rallad	noîto d	1.

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where h is the do enople, abovelorally of the electron, of it the or elect the distribution of polytribution as it is the to be use

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	Date
Expt. No.	Page No. 2
From geometry of Fig. 1 we have	re, \$3)
$sin 0 = R$ $\sqrt{R^2 + L^2}$	(3)
Upon simplifying & using fixed vo	alue of L=13.5 cm & Rexpressed in
$\sin \theta = \frac{\left(1 + \left(\frac{13 \cdot 5}{R}\right)^2\right)}{\left(1 + \left(\frac{13 \cdot 5}{R}\right)^2\right)}$)•.5
equ 2 eqn (9) into it	culated from eqn (1) by substituting
Safety guidelines & Precaution 1. Never accelerate beyond 5kV.	
2. Never touch any controls on the p switch & the voltage varying knot	ower supply other than the 'on-Off'
3. Metal scales are not allowed. Result:-	
The interplanar spacings in gro	aphite were measured as :-
d1 = 2.061 Å	
d2 = 1.211 pm Å	
	Teacher's Signature :
	188110272