<u>cn.3</u>		Page and the large				
Photoelectric effec-	+					
J J J Torka	A CONTROL OF THE PROPERTY OF T	hode is a	A COLUMN TO THE PARTY OF THE PA			
+	Py ALLESTER	metal like				
EM Rad		EL SAN BODY	on termina	172		
		507 0 - 5 Ym 1961	Na Leaville			
			-			
Wave model				- IK		
Bush bal O		Prediction	Obs	Color model		
Bright Red	High Amp	Note	5.	many photons		
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				1000 E		
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	•			- 47 - 77		
am Blue	low amp	No	Yes	few photons		
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Olean						
Observations						
Threshold frequency 1	De pach and a					
Below threshold, no		no orthorne he	2 2 10 - 1-1			
Above threshold even	Veni dim light o	auses emitte	d a = (but	the light		
immediately!	sord ann lidin	coses entitle	J E (DOT (any a lew)		
above threshold, if you	ou include frea.	of light it i	ncludes KF	of emitters		
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	· glowing of a block when heated = atoms in the block heleasing energy.								
	growing or a place with the state of the place reliability deligy.								
	Sample		White CONTROLLED	spectrometer/					
	A A DIO 213			'spectrograph					
		2020014	2	determines exact wavelengths emitted.					
	o sunlight -	→ gives y	ou a continu	ous spectrum					
				ew specific wavelengths (by metal)					
	111111111111111111111111111111111111111								
				invovs or line spectrum UK					
	· From prior exp	veriments, you	know where 2	's for the film.					
	IF film is exp	osed, at one spi	ecific location	Q have me 2.					
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	(Arenii Arren)	aview.	was fin	n=6.605 × 10-34					
and the same of th	PI	E = h	Pa9 (8010	e for Eafter) Js.					
The same of the sa	Santa Carlos		TARRET OF	C= 2.998×108					
	Hydrogen Emiss	ion Spectrum		m/s					
ar sacratures pa		9.11			mana.				
				* emission of different					
and the state of t				frequencies by hydrogen	-				
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				can absorb different amount of					
	line 1	J (8-1)	energy	energy 10/c photons of different	_				
	1 191.47	2.468×1015	1.635×10 ⁻¹⁸	frequencies are emitted.	_				
	ə 10ə.50	2.995× 1015	1.938×10 ⁻¹⁸	and three area in the late					
	3 97.18	agent Tay	2.044×10-18	* = energy that a hydrogen atom	_				
	HE STATE STATES		00011	must absorb in order to	_				
	108+ 9L15	3. 289 × 1015	(2.179 × 10-18)	remove an electron from an					
/	S	- 57 V		H+ atom,	Andrew Print				
	* = energy release	ed when an elect	M						
	binds to an	H+ 100 (50 / / -	H+ 2.1	79 × 10-18 5 -> H+ + e-	_				
. 1	n=2, 8-1,65 m				-				

Ch. 6: Bohr's Model of the Atom

Bohr's Hypothesis:

He used:

- 1. knowledge of physics of orbiting objects
- 2. E = hv
 - 3 Rutherford's Model

Hypothesis: electrons occupied stable orbits, energylevels, around the nucleus

- · electrons would jump farther from the nucleus when the atom absorbed a quantum of energy. Cenergy gained, energy electrical potentia chargy
 - · electrons would jump closer to the nucleus when the drom released

a quaintum of energy, benergy released OL Derived a theorethical extens:

E = Pitene422 (Page)

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e= charge

z = charge of nucleus.

* energy/photons is created when electrons move back

ionization energy: removing an electron from a hydrogen atom.

Bohr's model:

atoms exist in quantized energy states, only certain specific quanta can be absorbed or emitted when atoms are excited or relaxed.

Hydrogen: $E = 2.179 \times 10^{-18} \left(1 - \frac{1}{n^2}\right), n = 1, 2, 3...$