

Line Spectra Notes

Line Spectra mean the spectrum or _____ of _____ produced by an _____.

I. **All _____ produce _____.**

1. When they are heated, they give off a _____ color.
2. The resulting _____ helps scientists _____ the _____ (or atom.)
3. Examples:
 - Sodium= _____
 - Potassium= _____
 - Strontium= _____
 - Lithium= _____
 - Calcium= _____
 - Copper= _____

II. **Line Spectrum**

1. You may use a _____, a tool that spreads _____ out in a _____ of _____
2. _____ show distinct colored lines that are used to _____ an _____.
3. No two _____ have the _____ line _____.
4. An _____ line _____ is it's _____
5. This is how we know which _____ are in the _____
etc.

III. **The Spectroscope**

1. Type of " _____ " that detects the _____, _____ and speed of _____.
2. Detects the _____ spectrum
3. ROY G. BIV = _____

IV. Types of Spectra

1. _____ = unbroken band of color
2. _____ = unevenly spaced series of _____ lines and brightness (not all _____ present)
3. Every element has a _____ bright line spectra
4. Comparisons of a star's spectra to elements tested in a lab tell the _____ of a star

V. Detecting the Speed of Stars

1. Compare a star's spectrum with the right-line spectra of an element in a lab on various dates
2. If the dark bands move toward the _____ end of the spectrum, star is moving away from the earth (called _____)
3. If the dark bands move toward the _____ end of the spectrum, the star is moving toward the earth (called _____)
4. Because of the red shift of distant stars, Dr. Edwin Hubble formulated the theory of an _____ universe.