

A CRITIQUE OF THE KINEMATIC PART OF EINSTEIN'S ON THE ELECTRODYNAMICS OF MOVING BODIES

Imagine a planet that is similar to the earth in many respects. For example, on this imaginary planet it is quite warm around the equator and it becomes cooler as an observer moves toward either the north pole or the south pole and at either pole it is very cold. Also, the temperature decreases as an observer's altitude increases so that the temperatures measured on the highest mountain peaks are quite cold. On the earth temperature decreases with elevation through the troposphere at a rate, normally, of about 3.5° Fahrenheit for every 1,000 feet. On our imaginary planet the temperature will decrease exactly 3.5° Fahrenheit for every 1000 feet.

This imaginary planet has several aspects that are different from the earth. For instance, at the equator it is always 90° Fahrenheit and at the north pole and the south pole it is always -90° Fahrenheit. In fact the temperature of this imaginary planet is quite uniform. As an observer moves away from the equator for every degree in latitude that he increases

his distance from the equator in either a northern or southern direction, the temperature decreases by precisely 2° Fahrenheit if you are at sea level. One reason there is such a uniform distribution of temperature on this planet is that the land masses and the oceans form a huge spherical checker board pattern.

If you are at sea level, then you can determine your latitude by measuring the temperature in degrees Fahrenheit and employing this formula: $\frac{1}{2}(90^{\circ}\text{F} - \text{observed temperature in } ^{\circ}\text{F}) = \text{degrees of latitude}$. If you are at some elevation above sea level, you can still determine the latitude of your position by determining your elevation in feet and the temperature in degrees Fahrenheit. From this data you can determine the temperature at sea level by employing this formula: $\text{observed temperature in } ^{\circ}\text{F} - (\text{elevation in feet}/1000 \text{ ft.})(3.5^{\circ}\text{F}) = \text{temperature in } ^{\circ}\text{F at sea level}$. Once you have determined what the temperature would be if you were at sea level (but otherwise your coordinates remained unchanged) instead of at your present elevation, you can employ the formula given for an observer at sea level to determine your latitude.

This imaginary planet seems strange because it is based

on a vastly oversimplified model of the earth, which has been altered to fit a particular schema. If we were to formulate that by definition on this imaginary planet: latitude in degrees = $\frac{1}{2}(90^{\circ}\text{F} - \text{observed temperature in } ^{\circ}\text{F})$, what would the outcome be for our understanding of this imaginary planet?