

## Theory of Magnitudes

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### **Abstract**

This is a way to look at a photos of stars and make sense to get a value that shows the closest star: in the vicinity: It uses star's apparent magnitudes to get theses inverse magnitudes and to get a nearby star of the largest ratio ; of the inverse apparent magnitude divided by the distance. Now the beginning reference star obeys this ratio . For the greater the distance the lower the value. And we want the highest value . The greater the brightness enlarges and the greater the distance makes the value lessons. After trying to use aspects of General Relativity's Tensor Calculus, I found I could not find my formulas to fit the data . In an original way I used the inverse Apparent Magnitudes in Astronomical to get a consistant formula that is data proven with general ideas from Global analysis. It works with Star charts/photos. Before I even tried using the inverse of the determinates of linear algebra. But my attempts were to no avail. Therefore I became inspired by basic formulas in General Relativity but that did not work. Using Global Analysis in an new I succeeded. Keywords Using my new formula I can obtain the distance between a reference star , using its inverse apparent magnitude, I obtain the distance to from another star using certain restrictions which the measurement in centimeters to this other star from its reference star nearby.

**Keywords** : Apparent Magnitude; Natural Logarithm;; centimeters;

These rules on Apparent Magnitudes are arranged for use in this paper. The first of 3 laws I will state: Invert the Apparent Magnitudes for the purpose of science for the understanding That the greater the value using a number the greater the stars label (number) .

The second law is the measurement of values in theory concerning the ratio Of the Inverse Apparent Magnitude over the distance from the reference star To another nearby star. The highest value of the ratio of the reference star to the Other star would be a likely candidate to fulfill this ratio

**Remark 1 ;** The new star value over the distance in centimeters; for the greatest value concerning This value is the desired answer (number).

The 3 law is this publication will use to be a connection between Apparent Magnitudes And a reference star using centimeters , on a star chart/photo measuring the Distance between them ; while obeying these 3 l

**Remark 2 ;** This theory is based on postulates that the highest ratio of the number for the Magnitude, Is the inverse Apparent Magnitudes over the distance measured in centimeters; from a nearby star To the original reference star on the star photo/chart./

**Remark 3 ;** One can use the centimeters on a ruler to measure , on a star photo/chart, the distance between the chosen reference star and the other using the ratio rule

**Remark 4 ;** The sector between 2 stars is pi over 2 times the measure in centimeters between the 2 stars In Astronomy the Apparent Magnitude of a star is a value(number) seen from the earth.

I do not use Absolute Magnitudes. This publication will show a connection between Apparent Magnitudes and the distance from itself as a reference star to star obeying Inverse Apparent magnitudes

**Remark 5 ;** This publication will show a connection between Apparent Magnitudes and distance from itself to other stars which must obey the previous rules. By inverting the Apparent Magnitudes you Thus get the rules for my theory. In General Relativity the Magnitudes of my theory ,do not correlate with mass and brightness in Einstein's way

Concurrently in Astronomy , the Apparent Magnitudes use the world as the reference; while Absolute Magnitudes are seen without the same references. I concentrate on using Inverse Apparent Magnitudes. By taking the latter's inverses the values can be used To the idea the greater the magnitude the brighter the star (on it's photo/ chart)

**Remark 6** ; This is my basic formula using Microsoft office word.

The constant ; the square root of 2-pi times the fraction ; This inverse of apparent magnitudes Divided by 2 and then times the value ( 1 plus the magnitude 1 ) Then Mag #2 divided by 2 Mag# 1 minus 1 . This completes the top part of the fraction.

The bottom is Mag #1 plus Mag# 2 plus one and the number of stars in the sector near the Stars. Multiply .this value by 8pi and discretely add the LN of the 2 stars Mag 1# and 2# Then take the the square root of these and then the Natural Logorithm LN Of all the rest. This now completes the bottom of the fraction.

Now divide the Top by the bottom and get a number. This number is the distance between 2 stars on A star photo that is the greatest value using Inverse Apparent Magnitudes value Divided by the distance in centimeters away from the reference star to nearest star Mag#1 and a guess at nearest Mag#2 which is the greatest value divided by distance measures in centimeters.

The sector containing the stars form this equation is pi/s times the measure of stars between the 2 stars.

The order of values for the inverse apparent magnitudes is (going from smallest to greater value is 1/5; 1/4; 1/3; 1/2; 1/1; 1 plus 1/5; 1 plus 1/4; 1plus 1/3 ect.. The later is a small value when the stars brightness is little and large when it has a greater value. For use in science. The brightest stars have many variables to degrees of luminosity .

**Remark 7** for Conclusion; this is a way to directly analyze star harts/photos using centimeters.

And point the way in understanding the uses of star's Apparent Magnitudes Using a kind of formula for mathematics called Codacci's equation I have adapted part of my equation so that it seems to be similar to this formula ( Ra;b//a minus – Ra, a//b) which is similar in the sense for each X contained in TM and the vector field Y on M .

The algebra is appears like the Weingarten equation which is an analog of the Gauss formula

To my equations Magnitude  $2/2(M1 \text{ plus } M2)$  minus Magnitide  $2/2 (1 \text{ minus } - M2)$

**Remark 8** ; My main formula is analogous to this Lorentz coordinate formula  $H_{ij} = \text{summation}$   $H_{hk} Y_h Y_k$  whereby  $H = AtHA$   $d/dx H = H(At; \text{plus } A)$  It is similar to Square root  $\sqrt{\pi M2/2}$  (m1; plus  $M2/2$  minus 1 ) divided by a Group of constants ;all shown in the paper

**Remark 9** ; There is an Lorentz chart analagous also to my equation it is ;  $Aab(Yb(ka) \text{ plus } AabYB \text{ plus } kb$   $Aab = \text{Square root of } 2 \text{ pi}$ .

## **References**

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