# Basics of astrophysics revisited. IV Gravitation redshift, gravitation lensing, superhot solar corona hoaxes

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Stellar rotation and factors from palette of Tesla/Alfven have obviously caused mentioned errors. Shortcomings of astrospectroscopy are highlighted.

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Correct interpretation of optical and spectroscopic measurements is critical for astrophysical and cosmological theories. In praxis, however, both disciplines tend to develop within circular logic, avoiding independent systemic analysis of their status. Every attempt to verify astrophysical and cosmological tales outside of their circular logic so far ended with failure. Thus early attack of Kozyrev to Bethe (2005 (republished)) showed, that standard stellar model has thermal impossibilities. Attempts to model stars by astrophysical recipes yield multivariant results (Gautchy) which invalidate Russel-Vogt theorem. It is not clear, if neutrinos exist at all (Mathis, 2013) therefore „solar neutrinos" case is unsettled. Finding high redshift objects in low redshift galaxies (Arp, 2005) as well as just isotropic cosmic microwave radiation background (Lerner, 1992) challenges Big Bang cosmology. One of the pillars of astrophysics and cosmology- Kirchhof's law of thermal emission- has recently been shown to be wrong (Crothers, 2017). Contrary to mainstream thoughts the Sun has been shown to be very probably liquid (Robitaille, 2013). Recently author had attacked another pillar of astrophysics- inappropriate conclusions, derived from Hertzsprung-Russell diagram (Alksnis, 2017). Mass-luminosity relation appears, as James Jeans had once said, mathematical trickery, hiding important regularities. Stellar evolution theory suddenly lost its ground. It is not clear at all why stellar evolution should begin with dense small stars and not with thin giants.

First, let us remember complexity of astrospectroscopy. We can read in Payne (1925) that:

1) some spectral lines predominates at low temperatures, other becomes stronger with rise of temperature,

2) widths of Fraunhofer lines is hard to measure and difficult to interpret,

3) the maximum number of Balmer lines that had been produced in the vacuum tube was five while over twenty could be traced in absorbtion of some stellar atmospheres,

4) the work of Wood has produced fourty seven lines of the Balmer absorbtion series of sodium in the laboratory- there is no supporting theory,

5) the pressure, and hence the proximity of the atoms, has some influence upon the possibility of the production of a spectral line,

6) for the strong lines... large increase of number of absorbing atoms present alters the strenght of the line very little. For the weak components... absorbtion under ordinary conditions is incomplete and the strenghtening (in the spectra of sunspots) is noteworthy,

7) the emmission lines observed in stellar spectra differ more widely among themselves than do the absorbtion lines without theoretic explanation. Furthermore, spectra of gaseous nebulae are almost entirely composed of emmission lines, and completely abnormal types of stars with spectra partly or wholly composed of emmission lines might also be mentioned. The conditions under which bright lines appear vary so widely, that no theory can explain this,

8) the familiar Balmer series appear as emmission lines (not absorbtion lines) in the Wolf-Rayet stars,

9) the intensivity of the hydrogen lines is at maximum in the neighborhood of class A0. They vary greatly in width, however, within a given spectral class. The maximum of the Balmer lines has been placed by Menzel at A3, beyond A5 their intensity falls off rapidly,

10) spectroscopical properties of lines of hydrogen and helium is difficult to explain. The largest number of hydrogen lines recorded is thirty-five, measured by Mitchell in the flash spectrum. Thirty-three were observed in emission in the solar chromosphere, and Deslandres traced twenty-nine in the spectrum of a bright solar prominence.

11) strong lines are often conspicuously winged,

12) the helium lines vary much in width and definition and are often winged. Their intensity does not certainly appear to vary with absolute magnitude within a given spectral class.

No doubt, astrophysical technique is improved since times of dissertation of Payne-Gaposchkin. However principles of visible spectroscopy has not changed much in 125 years so author suspects certain *covenant* in field of astrospectroscopy regarding principles of interpretation of spectra, a covenant, which may not be perfect at all. In this line I offer a simpler explanations for gravitation redshift, gravitation lensing and “superhot” corona phenomena.

**Gravitation redshift** is the simplest case, because mainstream gravitation is not about gravitation between two bodies, but about orbital movement.
„If a photon of frequency $\boldsymbol{\upsilon_0}$ is emitted radially outward from the surface of a gravitational mass **M**, then the photon energy observed at a distance from the mass will be observed to be lower, or "red shifted". If observed at a great distance, we could denote the observed frequency as $\boldsymbol{\upsilon_\infty}$**.** The result of general relativity using the Schwarzschild metric is

$$\frac{\nu_\infty}{\nu_0} = \left(1 - \frac{2GM}{r_0 c^2}\right)^{\frac{1}{2}}$$

**GM** here is about rotation of central body. It can be seen by processing of equation of Newton’s disciples

$$\mathbf{GMm/r^2 = mv^2/r}$$

$$\mathbf{GM = v^2 r}$$

Since heavier stars typically rotate faster than lighter ones here is connection between mass and stellar spin. Stellar spin obviously can appear as factor, causing spectral redshift.

**Gravitation lensing**
„Gravitation” lensing is effect of (perturbed ether) from spinning objects (cf. fig.1).

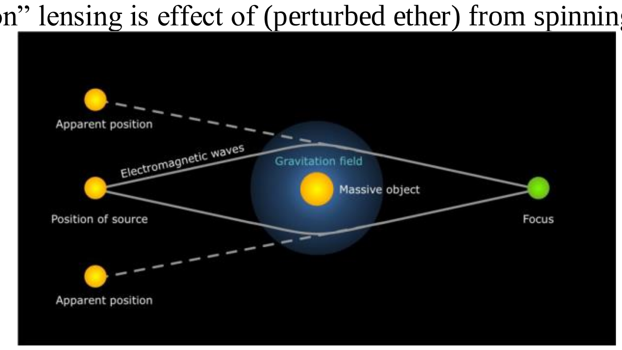


**Fig.1 Gravitation lensing.** *Credit: One-minute astronomer webpage*.
Here also is mass-self rotation speed relation for celestial objects which masks actual interaction.

**“Superhot” solar corona**
This story strongly reminds us facts from dissertation of Payne:
„*Early observations of the visible spectrum of the corona revealed bright emission lines at wavelengths that did not correspond to any known materials. This led astronomers to propose the existence of "coronium" as the principal gas in the corona. The true nature of the corona remained a mystery until it was determined that the coronal gases are super-heated to temperatures greater than 1,000,000°C (1,800,000°F). At these high temperatures both hydrogen and helium (the two dominant elements) are completely stripped of their electrons. Even minor elements like carbon, nitrogen, and oxygen are stripped down to bare nuclei. Only the heavier trace elements like iron and calcium are able to retain a few of their electrons in this intense heat. It is emission from these highly ionized elements that produces the spectral emission lines that were so mysterious to early astronomers*”.
https://solarscience.msfc.nasa.gov/corona.shtml
„*The glow of the corona is a million times less bright than that of the photosphere, so it can only be seen when the disk of the Sun is blocked off... The corona during the active Sun period shows many streamers at all angles around the disk of the Sun, while the corona during the quiet Sun period shows larger bottle-shaped streamers (the helmet streamers mentioned earlier) concentrated in latitudes near the equator”.*
http://www.pas.rochester.edu/~blackman/ast104/corona.html

***“Why is the corona so dim?***
*The corona is about 10 million times less dense than the sun’s surface. This low density makes the corona much less bright than the surface of the sun.*
***Why is the corona so hot?***
*The corona’s high temperatures are a bit of a mystery. The corona is in the outer layer of the sun’s atmosphere—far from its surface. Yet the corona is hundreds of times hotter than the sun’s surface.*
*A NASA mission called IRIS may have provided one possible answer. The mission discovered packets of very hot material called "heat bombs" that travel from the sun into the corona. In the corona, the heat bombs explode and release their energy as heat”.*

So, scientists have no real explanation for „ultrahigh” coronal temperatures. Survived comet C/2011/W3 Lovejoy shows us without doubt, that coronal temperatures are thousands, not millions of degrees and some unaccounted physical processes are present.

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