



Vadim Chernov. 2010: Personal diploma of the Minister of Natural Resources of the Russian Federation for many years of fruitful work in the field of search for oil and gas fields. 2008-2010: Presented papers at the annual EAGE conferences on the application of geophysics to solve problems of oil and gas geophysics and geology 2000: Master of Geological Sciences. Moscow State University, Russia. "Profile Interpretation of Data of Frequency Sensing of Induced Polarization" 1996: Bachelor of Geological and Geophysical Sciences.

Moscow State University, Russia. (Prize of the Euro-Asian Geophysical Society for the best thesis work in the specialty of geophysical research methods)

RALF-1 algorithm (patent 2011612714RF Russia) which makes solution of inversion problem more precision.



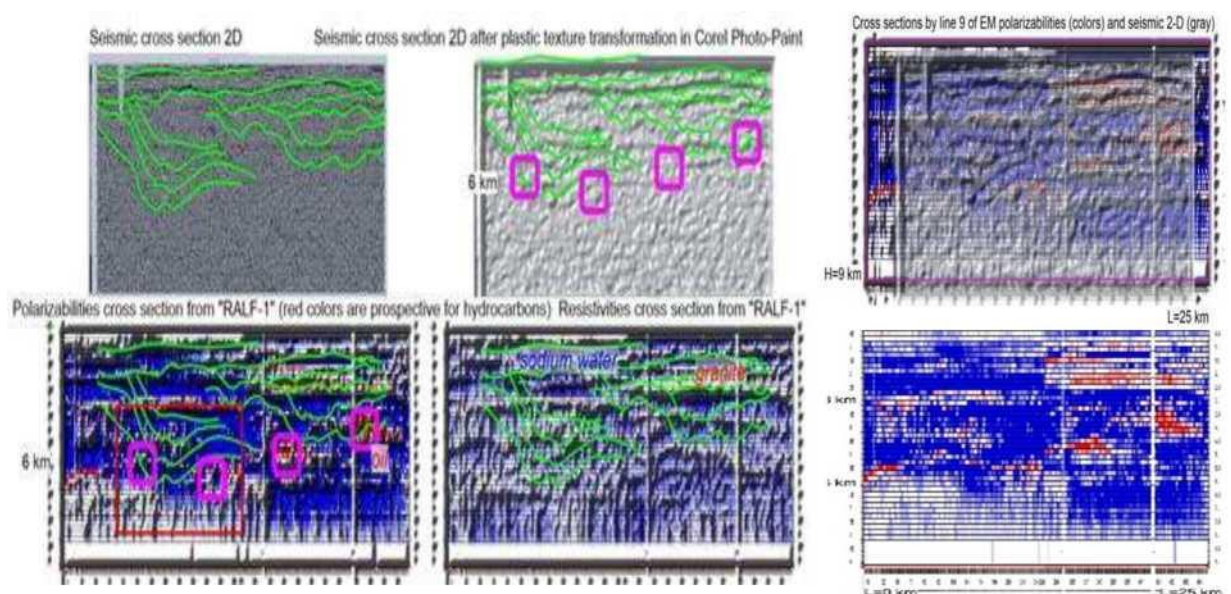
Vadim Chernov developed the algorithm and wrote the software product "Reflection on Actions of Lorentz Forces - 1" reg. # 2011612714RF ("RALF-1", 06.04.2011) The program is intended for obtaining a set of physical properties of an object through which the current flows and the magnetic field operates and represents a programmatic realization of the method of mathematical mapping of a compact action of the forces of Lorentz into a compact property of a physical body or space . It can be used for solving practical problems in solid state physics, nuclear physics, medicine, numerical methods of analysis, and many other areas in which there is no possibility of obtaining exact results due to the lack of direct interaction of the object with the measuring devices for the confident determination of the properties of the object, which determine the effect of the forces of Lorentz. The program provides the following functions: transformation of derivatives, numerically obtained with changes in the physical parameters of the investigated object, affecting the action of Lorentz forces; provides parallelization of the procedures for finding these derivatives.

- Everyone knows that inverse problems are incorrect, and the effects that we observe are just decimals of a degree. Even its derivatives with respect to the desired parameters are smooth and weakly differentiated functions. Many scientists gave up their work because of this. I did not give up for many years. And I know how to work with these smooth functions so that they give such a differentiated picture. Now it is not only me, who can do it. My inversion software of RALF-1 is in the public domain. This can be done by everyone in an automatic mode. Another question - how does it work? But this is not a physics, but a mathematics problem- says Vadim Chernov.

RALF-1 makes possible to obtain the distribution of resistivities, resistance anisotropies, and the Induced polarizations processes for 2D and 3D. The algorithm can give not only electrical parameters of geological layers but also precise depths. Using big samples of parameters is making solution of inversion problem clear in borders of Shannon theorem.

- The uniqueness of my solution is that I get independent solutions for all unknown parameters that are not correlated with coefficient of correlation 100%. On the RALF-1, you can see not the most exact solution, but something that does not correlate. This is specific of each parameter. So, I remove the background. It is some kind of filtering, not spatial, not time-frequency, but logical. Based on the formula you saw (but note that formula is incomplete). None the less, the exact solution is sought for every point of probing. In the program table you see the exact solution, but it does not mean that the 2D

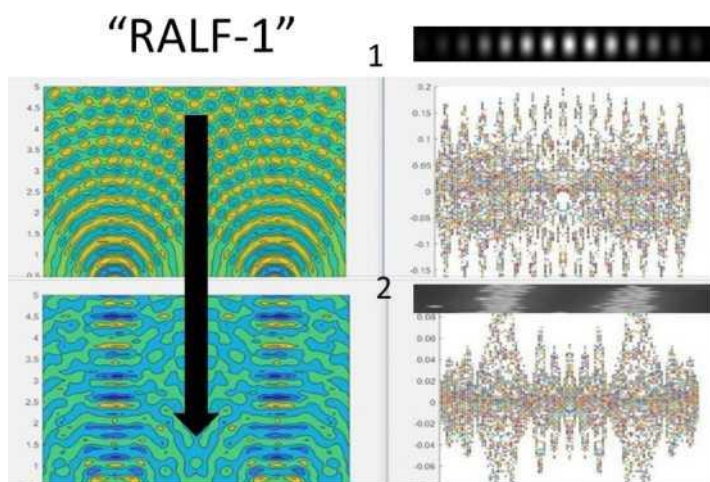
section should look like an exact solution. You can always remove the background. This is standard practice. The background prevents seeing details. To prove it, enter into this formula  $K_i=1$  in the inverse problem (that you have, and compare the results without this formula. I checked this in 2007. It was another 3 years, before patent of RALF-1. I think that even with  $K_i=1$  you will get an indelible impression. A 90% of EM geophysics based on high-frequency induced polarization. It means, we are looking for polarizability in the upper layers. Usually, a zone of oxidation-reduction reactions and pyrites zone are formed above HC reservoirs. People do not bother and look for pyrites in the upper 500 meters. But what about situations of multi-layer deposits? The problem is that nobody tried to solve inverse EM problem for such volume of frequencies and parameters as we did it. Now we can get information about more than 100 parameters from one sounding in one physical point. Such parameters as polarizabilities, anisotropies, resistivities and thicknesses for each layer. In most cases of EM frequency probing all polarizabilities are fixed, except one in the perspective depth interval. I suggested mathematical solution. In my case thickness of each layer can be 100-200 m. And for each layer polarizability, resistivity-, anisotropy of resistance and polarizability are variables of inversion problem. It is an incorrect problem and hard to understand how is possible in principle. For example, I have 45 parameters are searched on 70 frequencies, which differ very little in derivatives. Intervals of deposits 2.6 km and 2.8 km have two different prospective contours. Normally EM can see only one common contour. I see everything separately in a frame of Shannon theorem (if derivatives are not same with 100%). This is possible because there is a difference still present between the derivatives of the parameters, when there is enough measured data. This difference is enough to work with the intervals separately. For most of EM methods, granite rocks will be something unified without precise depths, but not for my' method. And now, you can see it too. That is the difference. RALF-1 also can see anomalies in prospective layers collectors as low polarizabilities zones in small local geometric areas in a big massive of rocks which are highly saturated by mineral water and have high level of polarizabilities. RALF-1 can also see hydrocarbon reservoirs in depths of 3-4 km under 1 km of granites in crystalline shields.



$$\tilde{\Delta}_i = K_i \cdot \left( \Delta_i + \bar{\Delta} \cdot \left( \frac{\sigma(\Delta_i - \bar{\Delta})}{\sigma(\bar{\Delta})} - 1 \right) \right)$$

Formula of RALF-1. Where  $\Delta_i$  - original increment of the residual on the i-th parameter,  $\tilde{\Delta}_i$  - changed increment of the residual on the i-th parameter,  $\bar{\Delta}$  - average increase residuals for all parameters,  $\sigma$  - operator variance,  $K_i$  - normalization factor for the modified residual.

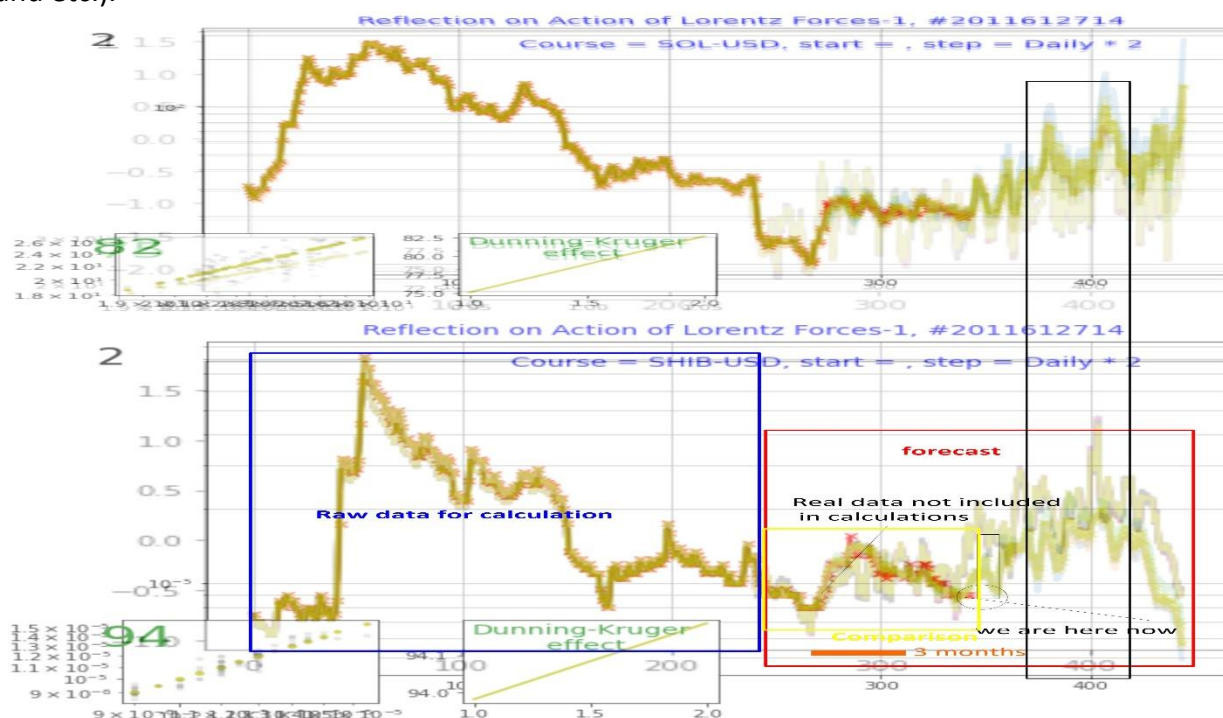
The “RALF-1” algorithm is a key to solving main problem of quantum physics - Problem of Observer.



Thomas Young's Experiment with 2 slits. If the beam of light passes through two slits, then it can show two different results. When no one observes this beam, the result on the projection wall is an interference pattern in which the maximum intensity lies in the center of the wall between the projections of two slits. Demonstration by Thomas Young was proof of the justice of wave theory. 2. However, when there is an outside observer, then the light is displayed outside in front of the slits on the

projection wall. The second result shows the corpuscular nature of the light. Thus, the light can behave differently in these two cases. Applying the formula of “RALF-1” in modeling of Young's experiment, the author obtained the result of what the Observer is doing. Therefore Vadim Chernov replaced the Observer with the program code.

This Observer can predict future events. For example, a course of cryptocurrencies (BTC, LTC, ETH and etc.).





Also it can predict meteorology and other future events.

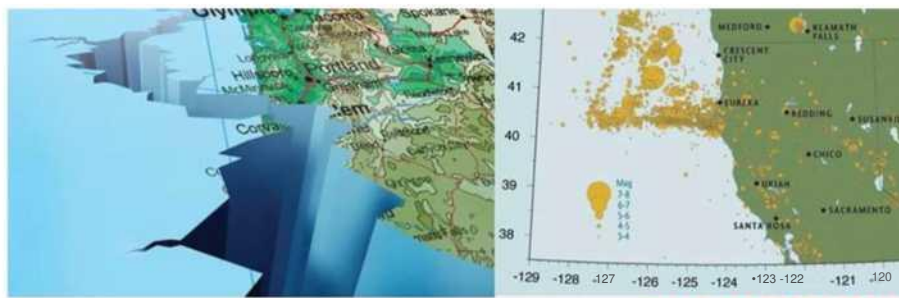
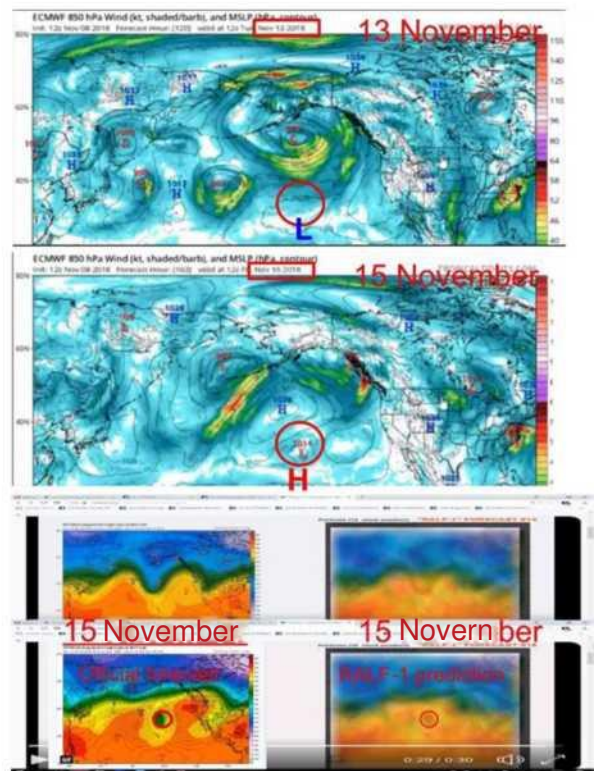
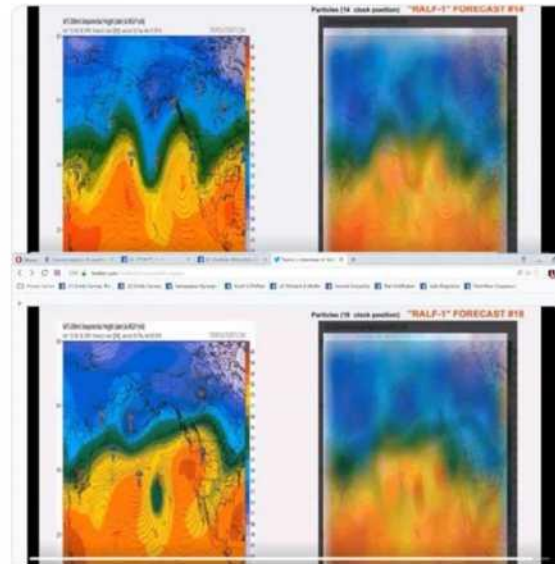


Vadim Chernov [§](#)VadimChernov2 2 нояб.

В ответ [@scook2214](#)

scook2214 That is, there are two scenarios. One scenario of events (the left part) is the original, the second scenario (the right part) is RALF-1 from Vadim Chernov. Do you think there could be a second scenario?

Ф Перевести ТВИТ

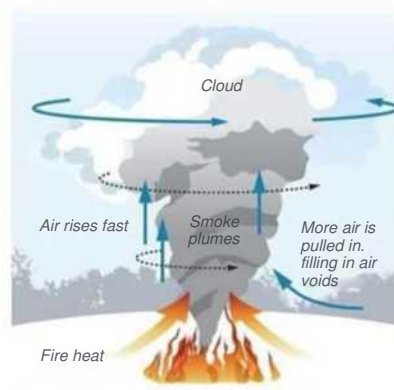


### Inside the Redding fire vortex

Radar analyzed by atmospheric sciences professor Neil Lareau shows the detection of a rapidly spinning fire vortex in northwest Redding between 7 p.m. to 8:30 p.m. on July 26 as the Carr fire rapidly spread toward the city. The National Weather Service said winds from the fire whirl may have been in excess of 143 mph.

### Tornado-like vortex on ground

The fire spins underneath a fire-generated cumulus cloud at 7:52 p.m.



Sources Neil Lareau, professor of atmospheric sciences, University of Nevada, Reno; Times reporting Graphics reporting by Rong-Gong Lin II Lorena El ebee / dlatimesgraphics

### Particles (16 clock position) "RALF-1" FORECAST #16

