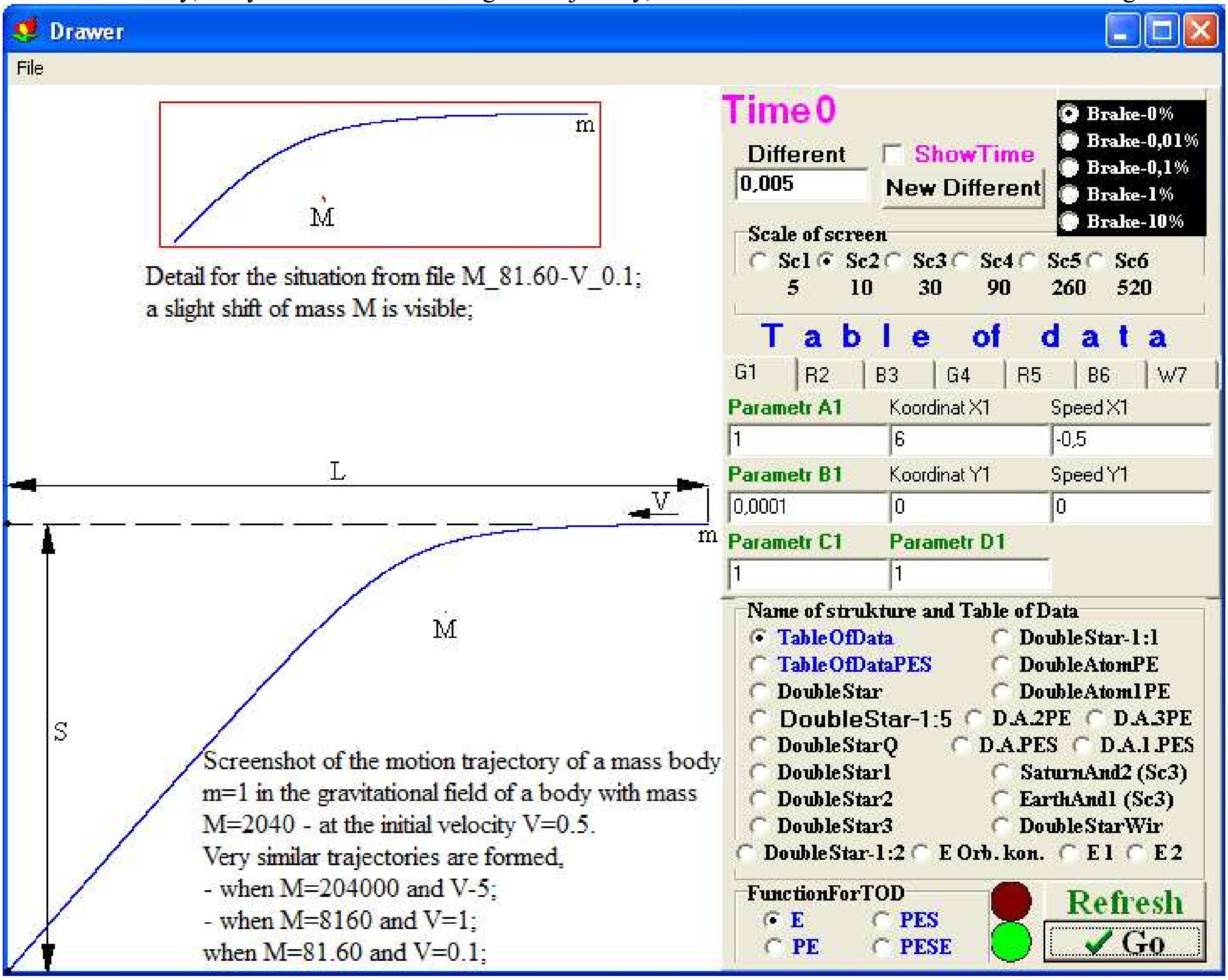
Deceived minds of 20th century physicists

We are already in the 21st century. Today, physicists need not feel responsible for the mistakes that were made in the past century. They should look at the past with distance and try to understand what the mistakes of 20th-century physicists consisted of. This is not easy, because, after all, these mistakes must be attributed to people who have been and are still considered scientific authorities so far. Because, in doing so, one has to conclude that the authority was wrong, that they did not recognize their own mistakes. Because one has to challenge the authority and stand above it.

Before we see how the minds of 20th century physicists were fooled, let's look at the following figure. The figure shows a snapshot of a computer screen, on which (this computer) situations with two bodies interacting (in the sense of gravitational interaction) were modeled using the modeling program Drawer.exe. One body has a mass of **m=1 MU** (mass units) and is a kind of test body that moves not far from a body with a mass **M** that is many times greater than the mass of m. This situation is repeated in several exercises, and in each of these exercises the test body moves in the same direction and at the same distance relative to body **M**. The massive body **M** has an initial velocity of zero, while body **m** has a certain initial velocity. If the massive body **M** were not in the vicinity, body **m** would move along the trajectory, which is marked with a dotted line in the figure.



When the massive body has a mass **M=8160 MU** (mass units) and the test body has an initial velocity **V=1 VU** (velocity units), then the trajectory has the shape shown in the figure. Further exercises with the program consisted of changing the initial velocity **V** of the test body **m** and changing the mass of the body **M** (corresponding to this velocity) such that the test body continues to move in approximately the same trajectory. Thus, when the test body had an initial velocity five times greater, that is, when **V=5 VU**, then in order to obtain a similar trajectory shape, the mass of the body **M** had to be 25 times greater, that is, **M=204000 MU** Two more exercises were performed in which the initial velocity of the test body was ten times smaller than the above initial velocities, that is, in one case the initial velocity was **V=0.1 VU**, and in the other case **V=0.5 VU**. Then, in these two cases, in order to obtain a similar trajectory of motion of the test body, the massive body had to have a mass equal to **M=81.60 MU** and **M=2040 MU**, respectively.

The following are the relationships between the parameters that exist between the path of motion **L** of the test body running parallel to the **X** axis, the initial velocity **V**, the time of motion **t** of the test body and the magnitude of the shift **S**, which is caused by the gravitational influence of the body **M**. This magnitude of the shift **S**, at a distance **L** from the initial position of the test body **m** and located perpendicular to the **X** axis, can take on different meanings. Because it depends on the relationship between the values of the mass of **M** and the initial velocity of the test body. But the exercises conducted with bodies **M** and **m** had a specific purpose - the goal was to find the corresponding magnitudes of mass **M** and initial velocity **V** of the test body, at which the test body **m** moves along the same (approximately) trajectory.

$$L = V_1 \cdot t_1 = V_2 \cdot t_2$$

$$\frac{t_1}{t_2} = \frac{V_2}{V_1} = n$$

$$S = \frac{a_1 \cdot t_1^2}{2} = \frac{a_2 \cdot t_2^2}{2}$$

$$a_2 = a_1 \cdot \frac{t_1^2}{t_2^2} = a_1 \cdot \left[\frac{V_2}{V_1}\right]^2 = a_1 \cdot n^2$$

$$\frac{M_2}{a_2} = \frac{M_1}{a_1}$$

$$M_2 = M_1 \cdot \frac{t_1^2}{t_2^2} = M_1 \cdot \left[\frac{V_2}{V_1}\right]^2 = M_1 \cdot n^2$$

The magnitude of shift S is presented in the formula in a simplified way. Namely, it was presented with the assumption that a certain average acceleration with a constant value a acts on the test body (on the shift path S). For the sake of simplicity, the fact that in the initial velocity V it is possible to determine the component velocity, which in this system will be initial velocity relative to the body M.
There is also a simplification in the calculation (determination) of the time t, which appears in the formula for the path L. Because in reality this time also depends on the influence of the body M.
But as you can see, such replacement and simplification does not change the relationship between the parameters.
In the theoretically derived final formula, the relationship is the same as the one that occurred in the practical computer exercise. Specifically, when the speed of the test body is n times greater, then in order to obtain the same trajectory of motion of the test body in the gravitational field of body M, the body M must have a mass n times greater squared.

Classical physics teaches that force F=m*a, where a - the acceleration, m - the mass of the body being accelerated, and also teaches that energy (or work) E=F*S, where S - the path over which the force acts.
You can write energy as E=m*a*S. We can associate this formula with the energy that is used in the exercises presented above to move a body of mass m along the path S in different situations. These situations differ in that while in one case the body m is moving at a speed V, in the other case the same body m is moving at a speed V*n.

On the basis of the exercises carried out, it can be written that while in one case the gravitational interaction of a body of mass M and the average acceleration a given by this body was sufficient to move a body m along the path S, in the other case the mass of the body had to be M*n^2, and the acceleration given by this body had to be a*n^2. From this it follows that in the former case for moving a body m along the path S it would be necessary to consume energy E, while in the latter case energy E*n^2 would have to be consumed.
In the first case, the transfer of energy along the path S would last for a certain time t. In this case, during this process, its power was E/t. In the second case, the time of energy transfer lasted for t/n, while the power of the

process was (E/t)*n^3.

The presented exercises and their results allow us to draw some conclusions. The first conclusion is that a law of nature, which is called: The law of negligible action. This law was described in 2006 in the article "The law of negligible action and related phenomena" and you can read it on http://pinopa.narod.ru/05_ZakonND_pl.pdf (in Polish), http://pinopa.narod.ru/05_ZakonND.pdf (in Russian). In the computer exercises presented, the gist was to eliminate the effect of this law - and the effect of this law was eliminated. The effect of this law occurred in the form of less and less curvature of the trajectory of motion of body m in the vicinity of a massive body M due to the increasing initial velocity of body m. The removal of this effect was carried out in such a way that the size of the mass of body M was increased. More specifically, the effectiveness of the law of negligible action, which occurs with an n-fold increase in the velocity of body m, was eliminated in such a way that the size of the mass of body M was increased n times to the second power.
Based on the results obtained in the exercises, the effectiveness of the law of negligible action can be evaluated. Because the results obtained show that with an n-fold increase in the speed of body m relative to body M, the effectiveness of the manifestation of the law of negligible action increases n times squared. That is, the manifestation of the law of negligible action increases to the same extent that the effectiveness of the cause that can eliminate its effects must increase.

The second conclusion requires a completely new look at the procedure for changing the mass size of the body M that was used in the computerized exercises presented. The body M, together with the procedure used in the exercises to change the size of the mass, can be looked at as a device with which small bodies or particles can be accelerated. Instead of body M and the procedure applied to it, let's imagine that there is a device that physicists know as a accelerator. Such a particle accelerator is a technical device. It accelerates particles, and this acceleration takes place according to the laws of nature. That is, during the operation of accelerator, regardless of the method of accelerating particles, the law of negligible action also manifests itself.

Based on the results of the exercises, it can be concluded that in order to keep the particles on the same circular trajectory in the accelerator at n times their velocity, n times squared energy consumption is required. Such a accelerator must have a large power reserve, because in such a situation the power of the device must be increased n times to the power of the third.

It should also be borne in mind that during each exercise, the shift of the body m on the path S was associated with giving it an appropriate velocity in the direction in which the shift occurred. This newly given velocity in the direction of shift S had to be appropriate and proportional to the initial velocity V of the body m. Because only then was the desired effect achieved in such a form that the body m moved along the planned trajectory. This should be borne in mind especially because even the linear motion of particles in a linear accelerator requires redirecting the motion of particles which earlier, i.e. at the beginning of the acceleration process, do not move in the direction in which they are intended to be accelerated.

The relationships listed here are obvious, but only when the mechanism of their formation is known. When the mechanism is unknown, it is easy to suggest that the difficulties arising in accelerating particles to higher and higher velocities are due to the increase in particle mass.

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