

Movement principles of UFO

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Abstract. *In this article are the 5 tables for calculating the average translational velocities of all milisecond pulsars and others fast spinning bodies and shift the center of gravity due to the rotation. Corrections theory ideal spinning circle for real bodies. Extreme values for neutron stars. Summary values for neutron stars. A new perspective on neutronization and nuclear fusion. Consent theory with the real Universe. From well-functioning theory for milisecond pulsars are derived estimates for raelisation new mode of transport on the principle rotation.*

Keywords: stars: kinematics, pulsars: general, [stellar dynamics](#), , [stars: neutron](#),

PACS number: 97.60.Gb, 97.60.Jd,

1.Introduction

The origin of millisecond pulsars is still unknown. The leading theory is that they begin life as longer period pulsars but are spun up or "recycled" through accretion. For this reason, millisecond pulsars are sometimes called recycled pulsars. The standard evolutionary model fails to explain the evolution of all millisecond pulsars, especially young millisecond pulsars with relatively high magnetic fields . Different millisecond pulsars must form by at least two distinct processes.^[30] But the nature of the other process remains a mystery.^[31] The proposed views are in the end of this manuscript.

In article:

Hobbs G., Lorimer D.R., Lyne A.G., Kramer M. : A statistical study of 233 pulsar proper motions, *MNRAS July 1, 2005 vol. 360 no. 3 974-992*

they write ^[9]:

„Neutron stars are high-velocity objects....Many of the one-dimensional (1D) and two-dimensional (2D) speeds (referring to speeds measured in one coordinate only and the magnitudes of the transverse velocities, respectively) derived from these measurements are somewhat lower than earlier estimates

because of the use of the most recent electron density model in determining pulsar distances. The mean 1D speeds for the normal and recycled pulsars are 152(10) and 54(6) km s⁻¹, respectively. The corresponding mean 2D speeds are 246(22) and 87(13) km s⁻¹. PSRs B2011+38 and B2224+64 have the highest inferred 2D speeds of ~1600 km s⁻¹. We study the mean speeds for different subsamples and find that, in general, they agree with previous results. Applying a novel deconvolution technique to the sample of 73 pulsars with characteristic ages less than 3 Myr, we find the mean three-dimensional (3D) pulsar birth velocity to be 400(40) km s⁻¹. The distribution of velocities is well described by a Maxwellian distribution with 1D rms $\sigma = 265$ km s⁻¹. There is no evidence for a bimodal velocity distribution. The proper motions for PSRs B1830-08 and B2334+61 are consistent with their proposed associations with the supernova remnants W41 and G114.3+0.3, respectively.

Using the Taylor & Cordes (1993; hereafter TC93) model, Lyne & Lorimer (1994) found the mean pulsar birth velocity² to be 450(90) km s⁻¹. Recently, Cordes & Lazio (2002; hereafter CL02) provided an updated model which, on average, predicts somewhat smaller distances than TC93 which will clearly have an impact on the calculated velocities. Hereafter, we designate the velocities derived from the two models as V^{TC} and V^{CL}

1. The fastest moving pulsar with a well-defined distance is PSR B1133+16 which has a 2D speed of 640 km s⁻¹. However, according to the CL02 (and TC03) distance model PSRs B2011+38 and B2224+65 both have 2D speeds greater than 1500 km s⁻¹.
2. (iv) The CL02 distance model generally predicts smaller distances, and hence 2D speeds, than the TC03 model. The mean 1D and 2D speeds for pulsars with characteristic ages less than 3 Myr are 192(20) and 307(47) km s⁻¹. The observed 1D and 2D speeds clearly demonstrate that the 3D velocity vector is isotropic.
3. (v) Based on a deconvolution analysis of the new samples of 1D and 2D speeds of young pulsars, we find the mean 3D birth speed to be 400(40) km s⁻¹. The 3D speeds are well fit by a Maxwellian distribution with 1D rms $\sigma = 265$ km s⁻¹. We find no evidence for a bimodal velocity distribution.

The implications of these results for ‘kick’ mechanisms may be summarized by stating that the true space velocities of young pulsars range from a few tens to well over 1000 km s⁻¹ with a mean velocity of 400(40) km s⁻¹. According to [Lai et al. \(2001\)](#): (1) local convective instabilities in the collapsed stellar core can account for velocities up to ~100 km s⁻¹; (2) global asymmetric perturbations can create velocities over 1000 km s⁻¹; (3) asymmetric neutrino emission can provide kick velocities up to ~1000 km s⁻¹; (4) the electromagnetic rocket effect can accelerate pulsars up to similarly high velocities^[9].”

In this manuscript the theoretical values calculated average speeds millisecond pulsar according to a new theory^[1]

2. Theory

$$E_{\text{mov}} = E_{\text{still}} \left(1 - \frac{v}{c} \cos \vartheta \right)^2 \quad (2.20)$$

where ϑ is the angle between the direction of the charge motion (the speed v) and the direction of propagation of intensity^[1].

3. Possible generalization of the theory for gravitational field, where the speed of propagation is finite and equals c .

For the sake of simplicity let us consider for instance the gravitational field of the Earth. Analogically to (2.20), for the intensity of the gravitational field one could write:

$$g_{\text{mov}} = g_{\text{still}} \left(1 - \frac{v}{c} \cos \vartheta \right)^2 \quad (3.1)$$

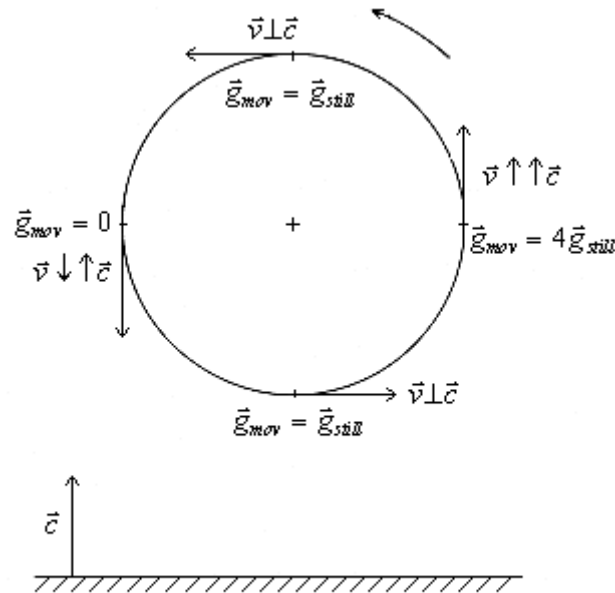


Fig. 3.1. The body is rotating at vertical level

Should we want to withdraw from the gravitational field of the Earth, it will be necessary to aim at $\vec{g}_{m\sigma} \rightarrow 0$.

Then the weight of bodies will be falling down $G = m\vec{g}_{m\sigma} \rightarrow 0$.

However, the mass of bodies remains unchanged. Individual material particles of the body will move in a prevailing measure in direction to the Earth at the highest possible speed (in ideal case $v \cos \vartheta \rightarrow (-c)$), but the center of gravity should at the same time move away from the Earth. This is possible only with the special rotation of body around the axis passing trough the center of gravity, while the body rotates at vertical level (see fig.3.1).

c - the speed and direction of propagation of the gravitational waves of the Earth. The points moving at speed of c towards the Earth ($v \cos \vartheta = -c$) are of no weight. The points moving at the speed of c away from the Earth weight 4x more than is standstill (see fig.3.2).

In consequence of rotation, the center of gravity will be shifted to the part departing from the Earth. This means that the body should depart from the Earth as a consequence of rotation (since the shifted center of gravity is situated in the half emerging during the rotation, i. e. departing from the Earth).

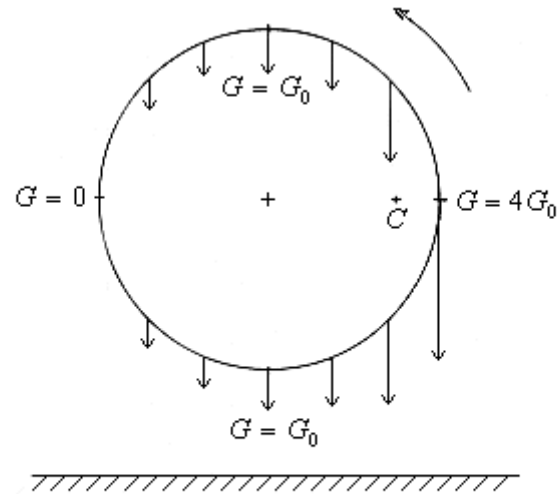


Fig. 3.2. The point moving at speed c away from the Earth
weight 4x more then standstill

For the sake of simplicity, let us consider the rotating body whose mass is evenly distributed on the circle with radius r .

The weight of points to the right from C_{mov} must be equal to the weight of points to the left from C_{mov} which will be written as follows:

$$\int_{\pi-p}^{\pi} G_0 \left(1 - \frac{v}{c} \cos \vartheta\right)^2 d\vartheta + \int_{\pi}^{\pi+p} G_0 \left(1 - \frac{v}{c} \cos \vartheta\right)^2 d\vartheta =$$

$$= \int_{\pi+p}^{2\pi} G_0 \left(1 - \frac{v}{c} \cos \vartheta\right)^2 d\vartheta + \int_0^{\pi-p} G_0 \left(1 - \frac{v}{c} \cos \vartheta\right)^2 d\vartheta \quad (3.3)$$

Where from

$$\frac{v}{c} = \frac{-8 \sin \varphi + \sqrt{(64 \sin^2 \varphi + 8(\pi - 2\varphi)[\sin 2\varphi - (\pi - 2\varphi)])}}{2[\sin 2\varphi - (\pi - 2\varphi)]} \quad (3.4)$$

Substituting for φ we get the Table 1 which represents the dependency of $\frac{r_c}{r}$ on $\frac{v}{c}$, see fig. 3.4.

Table 1

φ°	$\cos = \frac{r_c}{r}$	v/c
89.9999999	0	0.0000000000
80	0.1736	0.0886197118
60	0.5	0.30472815857

40	0.7660	0.765471182633
37	0.7986	0.927252176745
36	0.8090	1.00053925635
32.123	0.847	1.89550406058

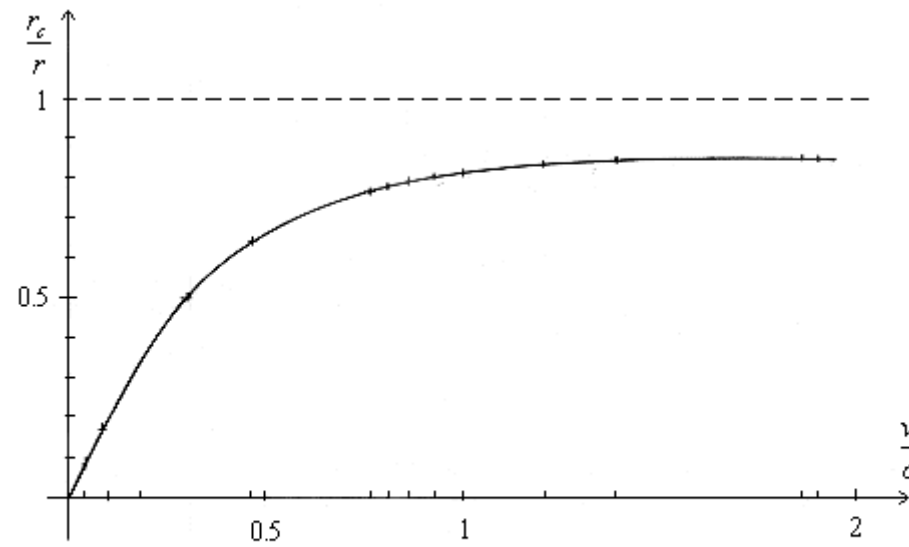


Fig. 3.4. The dependence of $\frac{r_c}{r}$ on $\frac{v}{c}$

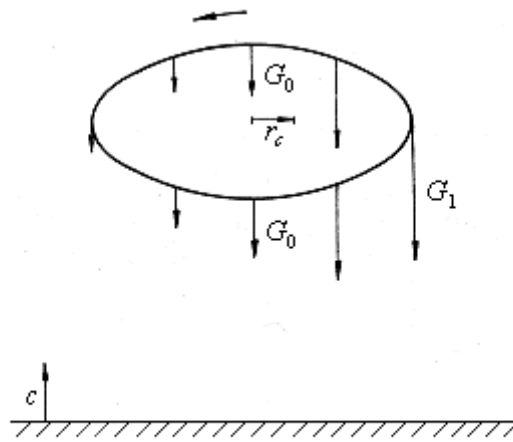


Fig. 3. 7. The rotating "circle" may be getting off the Earth

Any inclination of the circle from the horizontal level when projected at the vertical level results in ellipse. The shift of center of gravity increases in line with the inclination of the „circle" from the horizontal to vertical level. It means that the more the rotating "circle" may be getting off the Earth (see fig. 3.7) . Conversely, if we want to stop the getting off the Earth, it is enough to level the "circle" into the horizontal level. It is evident that the highest speed of getting away from the Earth will be achieved in the rotation in vertical level. If the rotation level of the "circle" forms with the horizontal level an angle of $\varepsilon^\circ = 45^\circ$, the "circle" acquires the average speed of getting off the Earth i. e. by deceleration of the rotating "circle" needs straightening more in the horizontal level. During acceleration it is necessary to swing out the rotating "circle" so that it rotates closer to the vertical level. The real rotating body will qualitatively behave in a way similar to our "circle".

Corrections for real bodies

$I = mr^2$ This is the calculation for an ideal circle **and** for an thin ring.

$I = 0.4 mr^2$ This is the calculation for an solid ball.

$$I_{\text{circle}} = mr^2, I_{\text{ball}} = 0.4 mr^2, I_{\text{UFO}} = 0.33 mr^2$$

For example, the coefficient is 0.33 for UFO : $I_{\text{UFO}} = 0.33 mr^2$

$$0.5 I_{\text{circle}} \omega^2_{\text{circle}} = 0.5 I_{\text{UFO}} \omega^2_{\text{UFO}}$$

$$mr^2 \omega^2_{\text{circle}} = 0.165 mr^2 \omega^2_{\text{UFO}} \quad (r \omega_{\text{circle}} = v_{\text{rot circle}}, r \omega_{\text{UFO}} = v_{\text{rot real UFO}})$$

$$\omega_{\text{circle}} = 0.165^{0.5} \omega_{\text{UFO}}, \quad \omega_{\text{circle}} = 0.406202 \omega_{\text{UFO}}$$

$$v^2_{\text{rot circl}} = 0.165 v^2_{\text{rot real UFO}}, \quad v_{\text{rot circl}} = 0.406202 v_{\text{rot real UFO}}$$

$$v_{\text{rot}}/c = v_{\text{rot circl}}/c = 0.406202 v_{\text{rot real UFO}}/c$$

$$v_{\text{rot real UFO}}/c = 2,4618293361431 v_{\text{rot circl}}/c$$

$$v_{\text{rot real UFO}} = 2,4618293361431 v_{\text{rot circl}}$$

$$v_{\text{rot real UFO}} = 2,4618293361431 * 929379,137 \text{ m/s} = 2287,9728238659571865047 \text{ km/s}$$

$$\text{For } r = 20\text{m} \quad 2\pi r f = 2287972,8238659571865047 \text{ m/s}$$

$$f = 2287972,8238659571865047/2\pi r = 18207,109228909474326891959189485 \text{ Hz} = 18,2071 \text{ kHz}$$

Frequency of rotation UFO (for r = 20m) must therefore be 18.2 kHz, which is very difficult for the technical realization !

$$\text{average } v_{\text{transl UFO}} = v_{\text{climb}} \sin 45^\circ$$

$$v_{\text{climb}} = \text{average } v_{\text{transl UFO}} / \sin 45^\circ = 910/0,70710678118654752440084436210485 \text{ m/s} = 1286,934341 \text{ m/s}$$

$$v_{\text{climb}} = v_{\text{rot circl}} (\cos\phi) / (2\pi)$$

$$929379,137 \text{ m/s} = v_{\text{rot circl}} = v_{\text{climb}}(2\pi) / (\cos\phi) = 1286,934341 * (2\pi) / (\cos\phi) = 8086,0469474482265695689034019105 / (\cos\phi)$$

$$(\cos\varphi) = 8086,046947448 / 929379,137 = 0,0087004825324029482378717345813525$$

$$\varphi^\circ = 89,5014928^\circ, \cos 89,5014928^\circ = 0,008700482212408174946104980883774$$

$$(\cos\varphi) / (2\pi) = 0,0013847247513878707105418162046161 \quad 89.5014928 \quad 89,5014928$$

$$V_{\text{climb}} = v_{\text{rot circle}} (\cos\varphi) / (2\pi)$$

If the rotation level of the "circle" forms with the horizontal level an angle of ε° , $v_{\text{transl}} = v_{\text{climb}} \sin \varepsilon^\circ$.

$$\text{For } \varepsilon^\circ = 90^\circ \quad v_{\text{transl}} = v_{\text{climb}} \cdot$$

$$\text{For } \varepsilon^\circ = 0^\circ \quad v_{\text{transl}} = 0 \text{ m/s} \cdot$$

$$\text{For } \varepsilon^\circ = 45^\circ \text{ average } v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ$$

$$\text{average } v_{\text{transl}} = 0,70710678118654752440084436210485 v_{\text{climb}} \cdot$$

$$\text{For } \varepsilon^\circ = 10^\circ \text{ minimal } v_{\text{transl}} = 0,17364817766693034885171662676931 v_{\text{climb}} \cdot$$

$$\text{For } \varepsilon^\circ = 30^\circ \quad v_{\text{transl}} = 0,5 v_{\text{climb}} \cdot$$

$$\text{For } \varepsilon^\circ = 80^\circ \text{ maximal } v_{\text{transl}} = 0,98480775301220805936674302458952 v_{\text{climb}} \cdot$$

At each revolution, the center of gravity moves on:

For $r = 0,5\text{m}$ shift the center of gravity

$$v_{\text{rot circle}}/c = 0,004352677280065730626445053141891$$

$$v_{\text{rot circle}} = 1304899,820671659786067842283081 \text{ m/s} = 1304,8998 \text{ km/s}$$

$$v_{\text{climb}} = v_{\text{rot circl}} (\cos \varphi) / (2 \pi) = 1806,9270797656411706493114000838 \text{ m/s}$$

$$v_{\text{climb}} = \text{average } v_{\text{transl UFO}} / \sin 45^\circ = 910 / 0,70710678118654752440084436210485 \text{ m/s} = 1286,934341 \text{ m/s}$$

$$\varphi^\circ = 89,5014928^\circ, \cos 89,5014928^\circ = 0,008700482212408174946104980883774$$

$$(\cos \varphi) / (2 \pi) = 0,0013847247513878707105418162046161$$

$$\cos 89,5014928^\circ = 0,008700482212408174946104980883774$$

$$\text{Whell of bicycle } r_c = 0,5\text{m} * 1,7453292519943294883140751983588\text{e-}8 = 1,5207211500780928877615655880281\text{e-}10 \text{ m}$$

$$\text{Whell (car) } r_c = r \cos \varphi^\circ = 8,726 \text{ e-}8\text{m} = 0,08 \mu\text{m}$$

$$\text{Whell (aeroplane) } r_c = r \cos \varphi^\circ = 8,7267\text{e-}7\text{m} = 0,87 \mu\text{m}$$

$$\text{Earth } r_c = r \cos \varphi^\circ = 11,19 \text{ m}, \text{ see you Table 6 in this article.}$$

$$\text{The centers of gravity rises every second } f \quad r_c = f * r \quad \cos \varphi = \omega r \quad \cos \varphi / 2\pi = v_{\text{rot}} (\cos \varphi) / (2 \pi) = v_{\text{climb}}$$

$$v_{\text{rot circl}} = 0,6324555320336758663997787088865 \quad v_{\text{rot real ball}}, \quad v_{\text{rot}} / c, \quad v_{\text{rot}} \text{ (as a surface feet speed per seconde)}, \quad v_{\text{climb}}, \quad v_{\text{transl}} = v_{\text{climb}} \sin \varepsilon^\circ$$

$$v_{\text{transl}} = v_{\text{climb}} \sin \varepsilon, \text{ average } v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 0,70710678118654752440084436210485 v_{\text{climb}}$$

$$v_{\text{rot}} = \omega r \quad \omega = v/r = 2\pi f, \quad \text{Neutron star } r_{\text{min}} = 10 \text{ km}, r_{\text{max}} = 15 \text{ km}$$

$$v_{\text{rot circl}} = 0,6324555320336758663997787088865 \quad v_{\text{rot real ball}} = 0,4^{0,5} v_{\text{rot real ball}} = (2/5)^{0,5} v_{\text{rot real ball}}$$

Table 2 Calculation v_{rot}

T	f	$V_{rot\ real\ ball} = 2 \pi r f$ $V_{rot\ real\ ball\ min} =$ 62831,853071795864769252867 66559 m*f $V_{rot\ real\ ball\ max} =$ 94247,779607693797153879301 498385 m*f	$V_{rot\ circl} = 0,6324555320336758663997787088865$ $V_{rot\ real\ ball}$ $V_{rot\ circl\ mim} =$ 39738,353063184404937734202681247 m*f $V_{rot\ circl\ mim} / c =$ $V_{rot\ circl\ max} =$ 59607,529594776607406601304021871 m*f $V_{rot\ circl\ max} / c =$	
0,001s	1000 Hz	$V_{rot\ real\ ball\ min} =$ 62831853,071795864769252867665 59 m/s = 62831,8531 km/s $V_{rot\ real\ ball\ max} =$ 94247779,607693797153879301 49838 m/s = 94247,7796 km/s	$V_{rot\ circl} = 0,6324555320336758663997787088865$ $V_{rot\ real\ ball}$ $V_{rot\ circl\ mim} = 39738353,06318440493773420268124$ m/s $V_{rot\ circl\ mim} / c = 0,13255287784185819957396727665924$ $V_{rot\ circl\ max} = 59607529,59477660740660130402187$ m/s $V_{rot\ circl\ max} / c = 0,1988293167627872993609509149889$	
0,001557708 s	f = 641,968841400 3137943696764 7338269 Hz	$V_{rot\ real\ ball\ min} =$ 40336091,919535538604958610 770171 m/s = 40336,0919 km/s $V_{rot\ real\ ball\ max} =$ 60504137,87930330790743791 6155253 m/s = 60504,1379 km/s	$V_{rot\ circl} = 0,6324555320336758663997787088865$ $V_{rot\ real\ ball}$ $V_{rot\ circl\ mim} = 25510784,475129103103877108342022$ m/s 39738,353063184404937734202681247 m*f $V_{rot\ circl\ mim} / c = 0,085094817412415035150340934667616$ $V_{rot\ circl\ max} = 38266176,71269365465581566251304$ m/s 59607,529594776607406601304021871 m*f $V_{rot\ circl\ max} / c = 0,12764222611862255272551140200145$	
0,0015578065 s	f = 641,9282497537 402751882213869 3092 Hz	$V_{rot\ real\ ball\ min} =$ 40333541,471162088981688590 762452 m/s = 40333,5415 km/s $V_{rot\ real\ ball\ max} =$ 60500312,20674313347253288 6143675 m/s = 60500,3122 km/s	$V_{rot\ circl} = 0,6324555320336758663997787088865$ $V_{rot\ real\ ball}$ $V_{rot\ circl\ mim} = 25509171,429946148599157984435961$ m/s 39738,353063184404937734202681247 m*f $V_{rot\ circl\ mim} / c = 0,085089436872845375580322252256129$ $V_{rot\ circl\ max} = 38263757,144919222898736976653948$ m/s 59607,529594776607406601304021871 m*f $V_{rot\ circl\ max} / c = 0,12763415530926806337048337838422$	
0,01s	100Hz	$V_{rot\ real\ ball\ min} =$ 6283185,3071795864769252867	$V_{rot\ circl} = 0,6324555320336758663997787088865$ $V_{rot\ real\ ball}$ $V_{rot\ circl\ mim} = 3973835,306318440493773420268124$ m/s	

		66559 m/s = 6283,1853 km/s V_{rot real ball max} = 9424777,9607693797153879301 49838 m/s = 9424,77796 km/s	39738,353063184404937734202681247 m*f V_{rot circl mim} /c = 0,013255287784185819957396727665924 V_{rot circl max} =5960752,959477660740660130402187 m/s 59607,529594776607406601304021871 m*f V_{rot circl max} /c =0,01988293167627872993609509149889	
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Table 3 Extreme values for neutron stars

Neutron star $r_{\min} = 10\text{km}$, $r_{\max} = 15\text{km}$,	V_{rot real ball min} = 62831,85307179586476925286766559 *f V_{rot real ball max} = 94247,779607693797153879301498385 *f	V_{rot circl} = 0,6324555320336758663997787088865 V_{rot real ball} V_{rot circl mim} /c V_{rot circl max} /c	V_{climb} = v_{rot} (cosφ)/(2 π) v_{transl} = v_{climb} sin 45°
T = 0,01s $r_{\min} = 10\text{km}$ f = 100Hz $r_{\max} = 15\text{km}$	V_{rot real ball min} = 6283185,307179586476925286766559 m/s = 6283,1853 km/s V_{rot real ball max} = 9424777,960769379715387930149838 m/s = 9424,77796 km/s	V_{rot circl mim} =3973835,306318440493773420268124 m/s V_{rot circl mim} /c = 0,013255287784185819957396727665924 V_{rot circl max} =5960752,959477660740660130402187 m/s V_{rot circl max} /c =0,01988293167627872993609509149889	V_{climb} =16,5557 km/s v_{transl} = 11,707 km/s V_{climb} = 28,5411 km/s v_{transl} = 20,182 km/s
T = 0,001s $r_{\min} = 10\text{km}$ f = 1000 Hz $r_{\max} = 15\text{km}$	V_{rot real ball min} = 62831853,07179586476925286766559 m/s = 62831,8531 km/s V_{rot real ball max} = 94247779,60769379715387930149838 m/s =94247,7796 km/s	V_{rot circl mim} =39738353,06318440493773420268124 m/s V_{rot circl mim} /c = 0,13255287784185819957396727665924 V_{rot circl max} =59607529,59477660740660130402187 m/s V_{rot circl max} /c = 0,1988293167627872993609509149889	V_{climb} =1603,422 km/s v_{transl} =1133,791 km/s V_{climb} = 3431,081 km/s v_{transl} = 2426,141 km/s

Table 4 Calculation of extreme velocities

Fast-spining body	ϕ°	$\cos = \frac{r_c}{r}$	V_{rot} /c, V_{rot}(Surface feet speed per seconde), v_{climb} , v_{transl} = v_{climb} sin ε° For ε° = 45°, sin 45° =0,70710678118654752440084436210485
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			$V_{rot\ circl} = 0,63245553203367586639977870888654$ $V_{rot\ real\ ball}$
Neutron star T = 0,01s f = 100Hz if $r_{min} = 10km$, if $r_{max} = 15km$,		$V_{rot\ real\ ball\ min} =$ 6283185,307179586476925286 766559 m/s = 6283,1853 km/s $V_{rot\ real\ ball\ max} =$ 9424777,960769379715387930 149838 m/s = 9424,77796 km/s	$V_{rot\ circl\ mim} = 3973835,306318440493773420268124$ m/s $V_{rot\ circl\ mim} / c = 0,013255287784185819957396727665924$ $V_{rot\ circl\ max} = 5960752,959477660740660130402187$ m/s $V_{rot\ circl\ max} / c = 0,01988293167627872993609509149889$
Neutron star T = 0,01s f = 100Hz if $r_{min} = 10km$,	88,5°	0,026176948307873152610611 685554113 ($\cos\phi$)/(2 π) = =0,00416619071825903750912 89210347223	$V_{rot\ circl\ mim} / c = 0,013255287784185819957396727665924$ $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 16555,75576907394593683145206195$ m/s = 16,5557 km/s $V_{transl} = v_{climb} \sin \varepsilon^\circ = 16,5557 * \sin 45^\circ = 11,707$ km/s
Neutron star T = 0,01s f = 100Hz if $r_{max} = 15km$	88,276°	0,030084936125369204818494 256092281 ($\cos\phi$)/(2 π) = =0,00478816629695644195366 90026585691	$V_{rot\ circl\ max} / c = 0,01988293167627872993609509149889$ $V_{rot\ circl\ max} = 5960752,959477660740660130402187$ m/s $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 28541,076425054303129252336458349 = 28,5411$ km/s $V_{transl} = v_{climb} \sin \varepsilon^\circ = 28,5411 * \sin 45^\circ = 20,182$ km/s
Neutron star T = 0,001s f = 1000Hz if $r_{min} = 10km$,	75,3139°	0,253523277221852020522635 11241255 ($\cos\phi$)/(2 π) = =0,04034948275871466336624 4713765043	$V_{rot\ circl\ mim} / c = 0,13255287784185819957396727665924$ $V_{rot\ circl\ mim} = 39738353,06318440493773420268124$ m/s $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1603421,99178267517677875257418$ m/s = 1603,422 km/s $V_{transl} = v_{climb} \sin \varepsilon^\circ = 1603,422 * \sin 45^\circ = 1133,791$ km/s
Neutron star T = 0,001s f = 1000Hz if $r_{max} = 15km$,	68,79735°	0,361667690813356360640756 53636272 ($\cos\phi$)/(2 π) = =0,05756120074957692910051 7270459969	$V_{rot\ circl\ max} / c = 0,1988293167627872993609509149889$ $V_{rot\ circl\ max} = 59607529,59477660740660130402187$ m/s $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 3431080,97719128423917370897567$ m/s = 3431,081 km/s $V_{transl} = v_{climb} \sin \varepsilon^\circ = 3431,081 * \sin 45^\circ = 2426,141$ km/s

Table 5 Summary values for neutron stars and UFO

Fast-spinning body	ϕ°	$\cos = \frac{r_c}{r}$	$V_{rot}/c, V_{rot} \dots$ (Surface feet speed per seconde), v_{climb} , $v_{transl} = v_{climb} \sin \epsilon^\circ$ For $\epsilon^\circ = 45^\circ$, $\sin 45^\circ = 0,70710678118654752440084436210485$ $V_{rot\ circled} = 0,63245553203367586639977870888654$ $v_{rot\ real\ ball}$
	89°	0,017452406437283512819418 978516316 $(\cos\phi)/(2\pi) =$ =0,00277763675334248530714 35936608051	0.008727975640433114855122820917221639967376342934278782564200... $V_{rot}/c = 0,00872797564043311485512282091722163996737634$ $V_{rot} = 2616581,2706095676870135843746012$ m/s = 2616,58 km/s $V_{climb} = v_{rot} (\cos\phi)/(2\pi) = 7267,9123053527145610210251190232$ m/s $V_{climb} = 7,2679$ km/s average $v_{transl} = v_{climb} \sin 45^\circ = 5,139$ km/s
For ideal circle, radius $r = 20m$, the estimate revolutions per second is 46500 rps for ideal circle.	$\phi^\circ = 89,647,$ for ideal circle	$\cos \phi^\circ =$ =0,00616097328292273672097587883 82913 $\cos \phi) / (2\pi) =$ 9,805493522342557447282298947388 2e-4 $r_c = 20m * \cos \phi^\circ = 0,019611m =$ 19,61 mm $f = 911,3 / r_c = 46468,8492$ Hz =46,469 kHz for ideal circle	0.003100075109296064888955362029486243072980381862864176346654... 0,003100075109296064888955362029486243072980 $v_{rot}/c = 0,003100075109296064888955362029486243072980$ $v_{rot} = 929379,13700048594278742503495378$ m/s = 929,379 km/s $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 911,302$ m/s for ideal circle
CNN's Larry King covered the news story in the days following the incident, and according to Steve Allen, a private pilot who witnessed the UFO, the object was travelling at a high rate of speed which supposedly reached 3,000 feet in the air. 3000 ft/s (910 m/s)	$\phi^\circ =$ 89,5014928° cos 89,501493° =0,008700478 72188179202 04929786587 $(\cos\phi) / (2\pi) =$ 0,001384724 7513878707	cos 89,501493° =0,00870047872188179202049297 8658747 $(\cos\phi) / (2\pi) =$ 0,001384724751387870710541816 2046161 For $r = 20m$, $2\pi r f = 2287972,8238659571865$	0.004352677280065730626445053141891053941816774602478425046573... $V_{rot\ circled}/c = 0,004352677280065730626445053141891$ $V_{rot\ circled} = 1304899,820671659786067842283081$ m/s = 1304,8998 km/s $V_{climb} = v_{rot\ circled} (\cos\phi) / (2\pi) = 1806,9270797656411706493114000838$ m/s $v_{climb} = \text{average } v_{transl\ UFO} / \sin 45^\circ$ evaluation = $910 / 0,70710678118654752440084436210485$ m/s = 1286,934341 m/s

<p>velocity .</p> <p>For radius UFO $r = 20m$, the estimate revolutions per second is 18 207 rps</p> <p>for real UFO</p>	<p>1054181620 46161</p> <p>for real UFO</p>	<p>m/s</p> <p>$f =$ 2287972,8238659571865047/2 $\pi r =$ =18207,1092289094743268919 59 Hz = 18,2071 kHz</p> <p>for real UFO</p>	<p>For $r = 20m$ $2\pi r f = 2287972,8238659571865047$ m/s</p> <p>$f = 2287972,8238659571865047/2\pi r = 18207,109228909474326891959189485$ Hz = 18,2071 kHz</p> <p>Frequency of rotation UFO (for $r = 20m$) must therefore be 18.2 kHz, which is very difficult for the technical realization !</p> <p>for real UFO</p>
<p>ideal circle</p>	<p>89°</p>	<p>0,017452406437283512819418 978516316 ($\cos\phi$)/(2 π) = =0,00277763675334248530714 35936608051</p>	<p>0.008727975640433114855122820917221639967376342934278782564200...</p> <p>$v_{rot}/c = 0,00872797564043311485512282091722163996737634$</p> <p>$v_{rot} = 2616581,2706095676870135843746012$ m/s = 2616,58 km/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 7267,9123053527145610210251190232$ m/s</p> <p>$v_{climb} = 7,2679$ km/s</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 5,139$ km/s</p>
<p>Neutron star $T = 0,01s$ $f = 100Hz$ if $r_{min} = 10km$,</p> <p>if $r_{max} = 15km$,</p>		<p>v_{rot} real ball min = 6283185,307179586476925286 766559 m/s = 6283,1853 km/s</p> <p>v_{rot} real ball max = 9424777,960769379715387930 149838 m/s = 9424,77796 km/s</p>	<p>v_{rot} circl mim = 3973835,306318440493773420268124 m/s</p> <p>v_{rot} circl mim /c = 0,013255287784185819957396727665924</p> <p>v_{rot} circl max = 5960752,959477660740660130402187 m/s</p> <p>v_{rot} circl max /c = 0,01988293167627872993609509149889</p>
<p>Neutron star $T = 0,01s$ $f = 100Hz$ if $r_{min} = 10km$,</p>	<p>88,5°</p>	<p>0,026176948307873152610611 685554113 ($\cos\phi$)/(2 π) = =0,00416619071825903750912 89210347223</p>	<p>v_{rot} circl mim /c = 0,013255287784185819957396727665924</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 16555,75576907394593683145206195$ m/s = 16,5557 km/s</p> <p>average $v_{transl} = v_{climb} \sin \varepsilon^\circ = 16,5557 * \sin 45^\circ = 11,707$ km/s</p>
<p>Neutron star $T = 0,01s$ $f = 100Hz$ if $r_{max} = 15km$</p>	<p>88,276°</p>	<p>0,030084936125369204818494 256092281 ($\cos\phi$)/(2 π) = =0,00478816629695644195366 90026585691</p>	<p>v_{rot} circl max /c = 0,01988293167627872993609509149889</p> <p>v_{rot} circl max = 5960752,959477660740660130402187 m/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 28541,076425054303129252336458349$ = 28,5411 km/s</p> <p>average $v_{transl} = v_{climb} \sin \varepsilon^\circ = 28,5411 * \sin 45^\circ = 20,182$ km/s</p>

	88°	0,034899496702500971645995 181625333 (cosφ)/(2 π) = =0,03489949670250097164599 5181625333	0.017463933237681592327144152660111110344490850835546791955029... v _{rot} /c = 0,01746393323768159232714415266011111034449085 v _{rot} =5235555,4716724627851084856462686 m/s = 5235,555 km/s v _{climb} = v _{rot} (cosφ)/(2 π) = 29080,512826926810132624625022137 v _{climb} =29,0805 km/s average v _{transl} = v _{climb} sin 45° =20,563 km/s
	87°	0,052335956242943832722118 629609078 (cosφ)/(2 π) = =0,00832952613750565012082 12572246279	0.026215883170382501294797482593212593293946245879689283725651... v _{rot} /c = 0,0262158831703825012947974825932125932939 v _{rot} =7859324,0542898028633555199187677 m/s = 7859,324 km/s v _{climb} = v _{rot} (cosφ)/(2 π) =65464,445133333788080522294679504 m/s v _{climb} =65,4644 km/s average v _{transl} = v _{climb} sin 45° =46,290km/s
	86°	0,069756473744125300775958 835194143 (cosφ)/(2 π) = =0,01110208760903755340662 5303034432	0.034991892902415155481444102185912156157984547716105394726321... v _{rot} /c = 0,03499189290241515548144410218591215615798 v _{rot} =10490305,5832877935982343 m/s = 10490,305583 km/s v _{climb} = v _{rot} (cosφ)/(2 π) =116464,29163123687749909943954997 m/s v _{climb} =116,4643 km/s average v _{transl} = v _{climb} sin 45° =82,353 km/s
	85°	0,087155742747658173558064 270837474 (cosφ)/(2 π) = =0,01387126727713540624010 0330023427	0.043800116133369449162243192210722769426360805129544737054659... v _{rot} /c = 0,04380011613336944916224319221072276942636 v _{rot} = 13130944,476308282986454927386402 m/s = 13130,94 km/s v _{climb} = v _{rot} (cosφ)/(2 π) = 182142,84043209699937457117013179 m/s v _{climb} =182,1428 km/s average v _{transl} = v _{climb} sin 45° = 128,794 km/s
	84°	0,104528463267653471399834 1548025 (cosφ)/(2 π) = =0,01663622162284666021377 9183752024	0.052648822689310354155112108480039421972918532818959442949836... v _{rot} /c = 0,052648822689310354155112108480 v _{rot} = 15783719,964834521397011572266782 m/s = 15783,72 km/s v _{climb} = v _{rot} (cosφ)/(2 π) = 262581,46336793659223664313126767 m/s v _{climb} =262,5815 km/s average v _{transl} = v _{climb} sin 45° =185,673 km/s
	83°	0,121869343405147481112893	0.061546429419037647937207344430091477007293160179421032989100...

		91923153 $(\cos\phi)/(2\pi) =$ $=0,01939610841429289749526$ 5636178703	$v_{rot}/c = 0,061546429419037647937207344430091477$ $v_{rot} = 18451155,356656808469634019442322 \text{ m/s} = 18451,1554 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 357880,60966667659085697677318286 \text{ m/s}$ $v_{climb} = 357,8801 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 253,059 \text{ km/s}$
	82°	0,139173100960065444112496 66330111 $(\cos\phi)/(2\pi) =$ $=0,02215008696322181987671$ 6065270417	0.070501532377454639860328775364899457683965648939309596758992... $v_{rot}/c = 0,070501532377454639860328775364899$ $v_{rot} = 21135827,684203710267232740254503 \text{ m/s} = 21135,8277 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 468160,42124478343051766323233437 \text{ m/s}$ $v_{climb} = 468,1604 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 331,039 \text{ km/s}$
	81°	0,156434465040230869010105 31946717 $(\cos\phi)/(2\pi) =$ $=0,02489731838108903435484$ 1502930117	0.079522940598973804892724421154906775310115207065009741007176... $v_{rot}/c = 0,07952294059897380489272442115491$ $v_{rot} = 23840377,829554349246402280534385 \text{ m/s} = 23840,4 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 593561,47714787099719017703866065 \text{ m/s}$ $v_{climb} = 593,5615 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 419,711 \text{ km/s}$
	80°	0,173648177666930348851716 62676931 $(\cos\phi)/(2\pi) =$ $=0,02763696583459163024882$ 2422362346	0.088619711790676205327338629151343180429432664295312521755495... $v_{rot}/c = 0,088619711790676205327338629151343$ $v_{rot} = 26567521,224978401077195542231529 \text{ m/s} = 26567,52 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 734245,6764045160471513309559811 \text{ m/s}$ $v_{climb} = 734,2457 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 519,19 \text{ km/s}$
	79°	0,190808995376544812405140 48795839 $(\cos\phi)/(2\pi) =$ $=0,03036819480057570985313$ 6802396938	0.097801190307943836001438986564057051864042361089181828754607... $v_{rot}/c = 0,097801190307943836001438986564057$ $v_{rot} = 29320059,237744259520820285319051 \text{ m/s} = 29320,1 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 890397,27049623703270774917444291 \text{ m/s}$ $v_{climb} = 890,3973 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 629,606 \text{ km/s}$
	78°	0,207911690817759337101742	0.107077047815431524891573511759277128251736618733142730990486...

		28440513 (cosφ)/(2 π) = =0,03309017332024022532211 9919992631	$v_{rot}/c = 0,107077047815431524891573511759277$ $v_{rot} = 32100891,359971747177933006577923 \text{ m/s} = 32100,9 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1062224,0588356670713883098365441 \text{ m/s}$ $v_{climb} = 1062,2241 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 751,1059 \text{ km/s}$
	77°	0,224951054343864998051107 2083428 (cosφ)/(2 π) = =0,03580207225255968883501 2971259894	0.116457327084702694566820976533792415862359393619564735642381... $v_{rot}/c = 0,11645732708470269456682097653$ $v_{rot} = 34913028,338832995003410505800788 \text{ m/s} = 34913,028 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1249958,7631425628566313942052927 \text{ m/s}$ $v_{climb} = 1249,9588 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 883,854 \text{ km/s}$
	76°	0,241921895599667722560442 37410035 (cosφ)/(2 π) = =0,03850306552684856102902 332888899	0.125952489438069937853005346598758863645937973547879337155578... $v_{rot}/c = 0,12595248943806993785300534659875886$ $v_{rot} = 37759606,399858025444859715543756 \text{ m/s} = 37759,6 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1453860,5994817438412625883286501 \text{ m/s}$ $v_{climb} = 1453,8606 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 1028,035 \text{ km/s}$
Neutron star T = 0,001s f = 1000Hz if $r_{min} = 10\text{km}$,	75,3139°	0,253523277221852020522635 11241255 (cosφ)/(2 π) = =0,04034948275871466336624 4713765043	$v_{rot} \text{ circl mim} /c = 0,13255287784185819957396727665924$ $v_{rot} \text{ circl mim} = 39738353,06318440493773420268124 \text{ m/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1603421,99178267517677875257418 \text{ m/s} = 1603,422 \text{ km/s}$ average $v_{transl} = v_{climb} \sin \epsilon^\circ = 1603,422 * \sin 45^\circ = 1133,791 \text{ km/s}$
	75°	0,258819045102520762348898 83762405 (cosφ)/(2 π) = =0,04119233039439038414103 3556846236	0.135573466417955067974877154676437407574635323374335527425142... $v_{rot}/c = 0,1355734664179550679748771546764374$ $v_{rot} = 40643902,737019205161745504448364 \text{ m/s} = 40643,9 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1674217,0700607627288041337014832 \text{ m/s}$ $v_{climb} = 1674,2171 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 1183,850 \text{ km/s}$
	74°	0,275637355816999185649971 5746113 (cosφ)/(2 π) = =0,04386904767905501118641	0.145331716344645600366723958716478652875612833791316124522891... $v_{rot}/c = 0,1453317163446456003667239587$ $v_{rot} = 43569352,46832007967282587699096 \text{ m/s} = 43569,4 \text{ km/s}$

		8070235537	$V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 1911346,0007782867139710264828404 \text{ m/s}$ $V_{climb} = 1911,3460 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 1351,526 \text{ km/s}$
	73°	0,29237170472273672809746869537714 $(\cos\phi)/(2 \pi) =$ $=0,04653240202682759073917595903321$	$0.155239286525448971273996291386331459527282777439583192240504...$ $v_{rot}/c = 0,15523928652544897127399629138633$ $v_{rot} = 46539567,285630626651802739677493 \text{ m/s} = 46539,57 \text{ km/s}$ $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 2165597,8550895576071908397319786 \text{ m/s}$ $V_{climb} = 2165,5979 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 1531,309 \text{ km/s}$
	72°	0,30901699437494742410229341718282 $(\cos\phi)/(2 \pi) =$ $=24373580,049181582154173298367374393707347$	$0.165308881998387903439479120026767317714472488380888307453906...$ $v_{rot}/c = 0,16530888199838790343947912$ $v_{rot} = 49558356,063528661609588099632272 \text{ m/s} = 49558,4 \text{ km/s}$ $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 2437358,3601642072962811913981365 \text{ m/s}$ $V_{climb} = 2437,358 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 1723,47 \text{ km/s}$
	71°	0,32556815445715666871400893579472 $(\cos\phi)/(2 \pi) =$ $=0,05181578109516216042074419853012$	$0.175553941838060411400905071631795321859383125932811547829616...$ $v_{rot}/c = 0,17555394183806041140090507163$ $v_{rot} = 52629747,735221168686368554848924 \text{ m/s} = 52629,75 \text{ km/s}$ $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 2727051,4877418265600993462429554 \text{ m/s}$ $V_{climb} = 2727,051 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 1928,316 \text{ km/s}$
fi = $\pi/2.57142857 = 70^\circ$	70°	0,34202014332566873304409961468226 $(\cos\phi)/(2 \pi) =$ $=0,054434196447278693555149967932637$	$0.185988723815849022300232841377413792364386228762834947312944...$ $0,185988723815849022300232841377$ $v_{rot}/c = 0,185988723815849022300232841377$ $v_{rot} = 55758016,673036517752283617488735 \text{ m/s} = 55758,0167 \text{ km/s}$ $V_{climb} = v_{rot} (\cos\phi)/(2 \pi) = 3035142,8330907105752273290514717 \text{ m/s}$ $V_{climb} = 3035,1428 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 2146,17 \text{ km/s}$
	69°	0,35836794954530027348413778941347	$0.196628401694940002866400053496715023486129018637067431889057...$ 0,19662840169494000286640005349671502348

		$(\cos\phi)/(2\pi) =$ =0,05703603061584148399652 4125304145	$v_{rot}/c = \mathbf{0,19662840169494000286640005349671502348}$ $v_{rot} = \mathbf{58947711,856737429621845117648897}$ m/s = 58947,7119 km/s $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = \mathbf{3362143,4981946780860871259822083}$ m/s $v_{climb} = \mathbf{3362,1435}$ km/s average $v_{transl} = v_{climb} \sin 45^\circ = \mathbf{2377,3945}$ km/s
Neutron star T = 0,001s f = 1000Hz if $r_{max} = 15\text{km}$,	68,79735°	0,361667690813356360640756 53636272 $(\cos\phi)/(2\pi) =$ =0,05756120074957692910051 7270459969	$v_{rot\ circ\ max}/c = \mathbf{0,1988293167627872993609509149889}$ $v_{rot\ circ\ max} = \mathbf{59607529,59477660740660130402187}$ m/s $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = \mathbf{3431080,97719128423917370897567}$ m/s = 3431,081 km/s average $v_{transl} = v_{climb} \sin \varepsilon^\circ = \mathbf{3431,081} * \sin 45^\circ = \mathbf{2426,141}$ km/s
	68°	0,374606593415912035414963 7745012 $(\cos\phi)/(2\pi) =$ =0,05962049105695825397267 5499032576	0.207489168225684948345812096464790187553290447685019956277866... 0,20748916822568494834581209646479018755 $v_{rot}/c = \mathbf{0,20748916822568494834581209646479018755}$ $v_{rot} = \mathbf{62203687,750753589398194042405076}$ m/s = 62203,6878 km/s $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = \mathbf{3708614,4092536280648771502316964}$ m/s $v_{climb} = \mathbf{3708,6144}$ km/s average $v_{transl} = v_{climb} \sin \varepsilon^\circ = \mathbf{2622,3864}$ km/s

Table 6. Summary values for spinning bodies

Fast-spining body shift the center of gravity r_c	ϕ°	$\cos = \frac{r_c}{r}$	$v_{rot}/c, v_{rot} \dots$ (as a surface feet speed per seconde), v_{climb} , $v_{transl} = v_{climb} \sin \varepsilon^\circ$ $v_{rot\ circ} = \mathbf{0,63245553203367586639977870888654}$ $v_{rot\ real\ ball}$
Ideal rotational circle Ring	89,9999999°	1,745329251994329576037594 6128047e-9 $(\cos\phi)/(2\pi) =$ =2,777777777777777636751194545 85e-10	9.761385225306725890874493380900799198121733067437675948... × 10⁻¹⁰ $v_{rot}/c = \mathbf{9,761385225306725890874493380900799198121733067437675948e-10}$ $v_{rot} = \mathbf{0,29263896701795871587575041401647}$ m/s $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = \mathbf{8,1288601949432976590883019143158e-11} = \mathbf{81,288}$ pm/s

			<p>average $v_{transl} = v_{climb} \sin 45^\circ$ average $v_{transl} = 0,70710678118654752440084436210485 v_{climb}$ average $v_{transl} = 57,479 \text{ pm/s}$</p>
<p>Whell (bicycle) 1,52 e-10 m = 15,2 nm</p>	89,9999990°	<p>1,745329251994329488314075 1983588e-8 $(\cos\varphi)/(2\pi) =$ =2,77777777777777763675119 45431892e-9</p>	<p>9.7613808317299049249180305404146324619440633075069197168... × 10⁻⁹ $v_{rot}/c = 9,761380831729904924918030540414632461944063307506919717e-9$ $V_{rot} = 2,9263883530183925895474818242298 \text{ m/s}$ $V_{climb} = v_{rot} (\cos\varphi)/(2\pi) = 8,1288565361622012249333433125122e-9 \text{ m/s} = 8,1288 \text{ nm/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 5,7479 \text{ nm/s}$</p>
<p>Whell (car) 8,726 e-8m = 0,08 μm</p>	89,999990°	<p>1,745329251994320715962133 7555219e-7 $(\cos\varphi)/(2\pi) =$ =2,77777777777776367511945 43190663e-8</p>	<p>9.7613368966122347484031474668391648636828855964938683827... × 10⁻⁸ 9,7613368966122347484031474668391648636828855964938683827e-8 $V_{rot} = 29,263751816014737280967911540201 \text{ m/s} = 105,34950 \text{ km/hod}$ $V_{climb} = v_{rot} (\cos\varphi)/(2\pi) = 8,1288199488929413083773297194773e-7 \text{ m/s} = 0,81288 \mu\text{m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 0,57479 \mu\text{m/s}$</p>
<p>Whell (aeroplane) 8,7267e-7m=0,87 μm</p>	89,99990°	<p>1,745329251993443480767989 6054328e-6 $(\cos\varphi)/(2\pi) =$ 2,777777777776367511945432 1194272e-7</p>	<p>9.7608976104847890620349116752508576980295402590013294089... × 10⁻⁷ 9,7608976104847890620349116752508576980295402590013294089e-7 $v_{rot}/c = 9,7608976104847890620349116752508576980295402590013294089e-7$ $V_{rot} = 292,62 \text{ m/s} = 1053,45 \text{ km/hod}$ (X-15 ... 7274 km/h) $V_{climb} = v_{rot} (\cos\varphi)/(2\pi) = 8,128333333292066134547234678673e-5 \text{ m/s} = 8,13 \mu\text{m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 5,7476 \mu\text{m/s}$</p>
<p>Earth ellipsoid Equatorial radius (m) 6,378,136.6 r = 6378136,6 m $r_c = r \cos \varphi^n =$ = 11,189834512772133613 470204759754 m $r_c = r \cos \varphi^n = 11,19 \text{ m}$</p>	89,9998995°	<p>1,754404964103800099463251 5019754e-6 $(\cos\varphi)/(2\pi) =$ = 2,79222222220789841643832 9958426e-7</p>	<p>9,8119569088313304220127204635308e-7 $v_{rot \text{ circl}} / c = 9,8119569088313304220127204635308e-7$ $v_{rot \text{ circl}} = 0,63245553203367586639977870888654 v_{rot \text{ real ball}}$ $v_{rot \text{ real Earth}} = 465,1 \text{ m/s}$ $v_{rot \text{ circl}} = 294,15506794886264546253707750288 \text{ m/s}$ $v_{rot \text{ circl}} / c = 9,8119569088313304220127204635308e-7$ $\varphi = 89,9998995^\circ$ $v_{climb} = v_{rot \text{ circl}} (\cos\varphi)/(2\pi) = 8,2134631750568068915736381456455e-5 \text{ m/s}$ $v_{climb} = 82,13 \mu\text{m/s} \dots \text{for Earth } 90^\circ - 23,5^\circ = 66,5^\circ = \varepsilon^\circ$</p>

delta =5,2e-7° 89,99990°- 5,2e-7° = =89,9998995°			average $v_{\text{transl}} = v_{\text{climb}} \sin 66,5^\circ = 7,5322391502770724600123489947654e-5$ m/s 86164,09205s* 7,5322391502770724600123489947654e-5 m/s = 6,49m /sidereal day 86636,55535s* 7,5322391502770724600123489947654e-5 m/s =6,52567 m/ solar day bobbing the earth ?
Ideal rotational circle Ring	89,99973°	4,712388980367248827061315 7913787e-6 $(\cos\varphi)/(2\pi) =$ =7,49999999997224173762196 69997286e-7	2.6352184060155569617592175981283547210616639026595398148... $\times 10^{-6}$ 2,635218406015556961759217598e-6 $v/c = 2,635218406015556961759217598e-6$ $V_{\text{rot}} = 790,01860330624580780480784786128$ m/s $v_{\text{climb}} = v_{\text{rot}} (\cos\varphi)/(2\pi) = 0,0005925139524774914014861956918711$ m/s = 0,6 mm/s average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 0,419$ mm/s
	89,99965°	6,108652381942162146557295 4208824e-6 $(\cos\varphi)/(2\pi) =$ =9,7222222216175707466050 572589e-7	3.4158872970758352174178187128029451318728665406035564385... $\times 10^{-6}$ 3,41588729707583521741781871280294e-6 $v/c = 3,41588729707583521741781871280294e-6$ $V_{\text{rot}} = 1024,0572490413408522326522849093$ m/s = 1,024 km/s $v_{\text{climb}} = v_{\text{rot}} (\cos\varphi)/(2\pi) = 9,9561121433955607351425226362662e-4$ m/s = 1 mm/s average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 0,7$ mm/s
	89,99962°	6,632251157529830524054490 2314347e-6 $(\cos\varphi)/(2\pi) =$ =1,0555555554781714488032 42998124e-6	3.7086220454978589198666567767957543341452713169765480001... $\times 10^{-6}$ 3,7086220454978589198666567767e-6 $v/c = 3,7086220454978589198666567767e-6$ $V_{\text{rot}} = 1111,8169188127909593240500673293$ m/s = 1,1118 km/s $v_{\text{climb}} = v_{\text{rot}} (\cos\varphi)/(2\pi) = 0,0011735845254048978722619425582462$ m/s =1,2 mm/s average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 0,83$ mm/s
	89,999°	1,745329251905719961354910 5685129e-5 $(\cos\varphi)/(2\pi) =$ =2,7777777763675119454533 84209593e-6	9.7565112494485723874039284755076672239420265097234762857... $\times 10^{-6}$ 9,7565112494485723874039284755076672239420265097234762857e-6 $v_{\text{rot}} = 2924,9284889768386606107519565284$ m/s= 2,92492848897683866 km/s $v_{\text{climb}} = v_{\text{rot}} (\cos\varphi)/(2\pi) = 0,0081248013578565036084746857711894$ m/s = 8,12 mm/s average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 5,74$ mm/s
	89,993490770 812547128466 198039896°	1,136074808435855958343986 6031333e-4 $(\cos\varphi)/(2\pi) =$ =1,80811921484744550186230	0.000056803740910557168763834837156865468959667862894610684386... 0,000056803740910557168763834837156 $v_{\text{rot}}/c = 0,000056803740910557168763834837156$ $v_{\text{rot}} = 17029,333111171091773230867290259$ m/s = 17,029 km/s

		84570103e-5	$v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 0,30791064414346280821312874528876 \text{ m/s} = 0,3 \text{ m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 0,2177257 \text{ m/s}$
	89,99°	1,745329243133368033406726 8304459e-4	
$f\dot{i} = \pi/2.00021982 = 89,990109187099245921880726089396^\circ$	89,990109187099245921880726089396°	0,000172627249959502966309 0642578526 $(\cos\phi) / (2\pi) =$ $=2,7474480143415086009137593338148e-5$	0.000086313626694525180932082216331553815936524555367552768417... 0,00008631362669452518093208221633 $v_{rot} = 25876,174305646119134523658592727 \text{ m/s} = 25,876 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 0,7109344371480219508707619867285 \text{ m/s} = 0,71 \text{ m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 0,503 \text{ m/s}$
$f\dot{i} = \pi/2.0005 = 89,977505^\circ$	89,977505°	3,926118051496627900381389 5333483e-4 $(\cos\phi) / (2\pi) =$ $=6,2486109505800881478796802459618e-5$	0.000198144050724876985568508305538126217760311746639807139790... 0,000198144050724876985568508305538 $v_{rot}/c = 0,000198144050724876985568508305538$ $v_{rot} = 59402,092004887553251213632149364 \text{ m/s} = 59,4 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 3,7118056258910626829553518525213 \text{ m/s} = 3,71 \text{ m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 2,625 \text{ m/s}$
$f\dot{i} = \pi/2.0010 = 89,955022^\circ$	89,955022°	7,850141103348687162626247 6088787e-4 $(\cos\phi) / (2\pi) =$ $=1,2493887605668087670179554316626e-4$	0.000392453329037002152296678192401277332308823590163054030495... 0,000392453329037002152296678192401277 $v_{rot}/c = 0,000392453329037002152296678192401277$ $v_{rot} = 117654,54816228564818831150041468 \text{ m/s} = 117,654 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 14,699627010352597413371053434747 \text{ m/s} = 14,7 \text{ m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 10,394 \text{ m/s}$
	89,9°	0,001745328365898308835778 20272085 $(\cos\phi) / (2\pi) =$ $=2,7777763675121602276585852336932e-4$	0.000934145490600104723459435805348369896155665977256115672053... 0,000934145490600104723459435805348369896155665977256115672053 $v_{rot} = 280049,77275662129010331452327416 \text{ m/s} = 280,05 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 77,791564049049341778880429184767 \text{ m/s} = 77,79 \text{ m/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 55,007 \text{ m/s}$
For ideal circle, radius r= 20m, the estimate revolutions per second is 46500 rps	$\phi^\circ = 89,647$, for ideal circle	$\cos \phi^\circ =$ $=0,0061609732829227367209758788382913$ $\cos \phi) / (2\pi) =$ $9,8054935223425574472822989473882e-4$	0.003100075109296064888955362029486243072980381862864176346654... 0,003100075109296064888955362029486243072980 $v_{rot}/c = 0,003100075109296064888955362029486243072980$ $v_{rot} = 929379,13700048594278742503495378 \text{ m/s} = 929,379 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 911,302 \text{ m/s}$

for ideal circle.		$r_c = 20m \cdot \cos \varphi = 0,019611m = 19,61 \text{ mm}$ $f = 911,3 / r_c = 46468,8492 \text{ Hz} = 46,469 \text{ kHz}$ for ideal circle	for ideal circle
<p>CNN's Larry King covered the news story in the days following the incident, and according to Steve Allen, a private pilot who witnessed the UFO, the object was travelling at a high rate of speed which supposedly reached 3,000 feet in the air. 3000 ft/s (910 m/s) velocity .</p> <p>For radius UFO $r = 20m$, the estimate revolutions per second is 18 207 rps for real UFO</p>	$\varphi = 89,5014928^\circ$ cos $89,501493^\circ = 0,00870047872188179202049297721881792020492978658747$ $(\cos\varphi) / (2\pi) = 0,0013847247513878707105418162046161$ For $r = 20m$, $2\pi r f = 2287972,8238659571865 \text{ m/s}$ $f = 2287972,8238659571865047 / 2\pi = 18207,109228909474326891959 \text{ Hz} = 18,2071 \text{ kHz}$ for real UFO	$\cos 89,501493^\circ = 0,008700478721881792020492978658747$ $(\cos\varphi) / (2\pi) = 0,0013847247513878707105418162046161$ For $r = 20m$, $2\pi r f = 2287972,8238659571865 \text{ m/s}$ $f = 2287972,8238659571865047 / 2\pi = 18207,109228909474326891959 \text{ Hz} = 18,2071 \text{ kHz}$ for real UFO	0.004352677280065730626445053141891053941816774602478425046573... $v_{\text{rot circle}}/c = 0,004352677280065730626445053141891$ $v_{\text{rot circle}} = 1304899,820671659786067842283081 \text{ m/s} = 1304,8998 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot circle}} (\cos\varphi) / (2\pi) = 1806,9270797656411706493114000838 \text{ m/s}$ $v_{\text{climb}} = \text{average } v_{\text{transl UFO}} / \sin 45^\circ \text{ evaluation} = 910 / 0,70710678118654752440084436210485 \text{ m/s} = 1286,934341 \text{ m/s}$ For $r = 20m$ $2\pi r f = 2287972,8238659571865047 \text{ m/s}$ $f = 2287972,8238659571865047 / 2\pi = 18207,109228909474326891959189485 \text{ Hz} = 18,2071 \text{ kHz}$ Frequency of rotation UFO (for $r = 20m$) must therefore be 18.2 kHz, which is very difficult for the technical realization ! for real UFO
	89°	0,017452406437283512819418978516316 $(\cos\varphi) / (2\pi) = 0,0027776367533424853071435936608051$	0.008727975640433114855122820917221639967376342934278782564200... $v_{\text{rot}}/c = 0,00872797564043311485512282091722163996737634$ $v_{\text{rot}} = 2616581,2706095676870135843746012 \text{ m/s} = 2616,58 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\varphi) / (2\pi) = 7267,9123053527145610210251190232 \text{ m/s}$ $v_{\text{climb}} = 7,2679 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 5,139 \text{ km/s}$
Neutron star T = 0,01s	88,5°	0,026176948307873152610611	$v_{\text{rot circle}} / c = 0,013255287784185819957396727665924$

f = 100Hz r_{min} = 10km,		685554113 (cosφ)/(2 π) = =0,00416619071825903750912 89210347223	v_{climb} = v_{rot} (cosφ)/(2 π) =16555,75576907394593683145206195 m/s = 16,5557 km/s average v_{transl} = v_{climb} sin ε°=16,5557* sin 45° =11,707 km/s
Neutron star T = 0,01s f = 100Hz r_{max} = 15km	88,276°	0,030084936125369204818494 256092281 (cosφ)/(2 π) = =0,00478816629695644195366 90026585691	v_{rot} circl max /c =0,01988293167627872993609509149889 v_{rot} circl max =5960752,959477660740660130402187 m/s v_{climb} = v_{rot} (cosφ)/(2 π) =28541,076425054303129252336458349 = 28,5411 km/s average v_{transl} = v_{climb} sin ε°= 28,5411 * sin 45° =20,182 km/s
	88°	0,034899496702500971645995 181625333 (cosφ)/(2 π) = =0,03489949670250097164599 5181625333	0.017463933237681592327144152660111110344490850835546791955029... v_{rot}/c = 0,01746393323768159232714415266011111034449085 v_{rot} =5235555,4716724627851084856462686 m/s = 5235,555 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 29080,512826926810132624625022137 v_{climb} =29,0805 km/s average v_{transl} = v_{climb} sin 45° =20,563 km/s
	87°	0,052335956242943832722118 629609078 (cosφ)/(2 π) = =0,00832952613750565012082 12572246279	0.026215883170382501294797482593212593293946245879689283725651... v_{rot}/c = 0,0262158831703825012947974825932125932939 v_{rot} =7859324,0542898028633555199187677 m/s = 7859,324 km/s v_{climb} = v_{rot} (cosφ)/(2 π) =65464,445133333788080522294679504 m/s v_{climb} =65,4644 km/s average v_{transl} = v_{climb} sin 45° =46,290km/s
	86°	0,069756473744125300775958 835194143 (cosφ)/(2 π) = =0,01110208760903755340662 5303034432	0.034991892902415155481444102185912156157984547716105394726321... v_{rot}/c = 0,03499189290241515548144410218591215615798 v_{rot} =10490305,5832877935982343 m/s = 10490,305583 km/s v_{climb} = v_{rot} (cosφ)/(2 π) =116464,29163123687749909943954997 m/s v_{climb} =116,4643 km/s average v_{transl} = v_{climb} sin 45° =82,353 km/s
	85°	0,087155742747658173558064 270837474 (cosφ)/(2 π) = =0,01387126727713540624010 0330023427	0.043800116133369449162243192210722769426360805129544737054659... v_{rot}/c = 0,04380011613336944916224319221072276942636 v_{rot} = 13130944,476308282986454927386402 m/s = 13130,94 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 182142,84043209699937457117013179 m/s

			$V_{\text{climb}} = 182,1428 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 128,794 \text{ km/s}$
	84°	0,104528463267653471399834 1548025 $(\cos\phi)/(2\pi) =$ $=0,01663622162284666021377$ 9183752024	0.052648822689310354155112108480039421972918532818959442949836... $v_{\text{rot}}/c = 0,052648822689310354155112108480$ $v_{\text{rot}} = 15783719,964834521397011572266782 \text{ m/s} = 15783,72 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 262581,46336793659223664313126767 \text{ m/s}$ $v_{\text{climb}} = 262,5815 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 185,673 \text{ km/s}$
	83°	0,121869343405147481112893 91923153 $(\cos\phi)/(2\pi) =$ $=0,01939610841429289749526$ 5636178703	0.061546429419037647937207344430091477007293160179421032989100... $v_{\text{rot}}/c = 0,061546429419037647937207344430091477$ $v_{\text{rot}} = 18451155,356656808469634019442322 \text{ m/s} = 18451,1554 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 357880,60966667659085697677318286 \text{ m/s}$ $v_{\text{climb}} = 357,8801 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 253,059 \text{ km/s}$
	82°	0,139173100960065444112496 66330111 $(\cos\phi)/(2\pi) =$ $=0,02215008696322181987671$ 6065270417	0.070501532377454639860328775364899457683965648939309596758992... $v_{\text{rot}}/c = 0,070501532377454639860328775364899$ $v_{\text{rot}} = 21135827,684203710267232740254503 \text{ m/s} = 21135,8277 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 468160,42124478343051766323233437 \text{ m/s}$ $v_{\text{climb}} = 468,1604 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 331,039 \text{ km/s}$
	81°	0,156434465040230869010105 31946717 $(\cos\phi)/(2\pi) =$ $=0,02489731838108903435484$ 1502930117	0.079522940598973804892724421154906775310115207065009741007176... $v_{\text{rot}}/c = 0,07952294059897380489272442115491$ $v_{\text{rot}} = 23840377,829554349246402280534385 \text{ m/s} = 23840,4 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 593561,47714787099719017703866065 \text{ m/s}$ $v_{\text{climb}} = 593,5615 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 419,711 \text{ km/s}$
	80°	0,173648177666930348851716 62676931 $(\cos\phi)/(2\pi) =$ $=0,02763696583459163024882$	0.088619711790676205327338629151343180429432664295312521755495... $v_{\text{rot}}/c = 0,088619711790676205327338629151343$ $v_{\text{rot}} = 26567521,224978401077195542231529 \text{ m/s} = 26567,52 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 734245,6764045160471513309559811 \text{ m/s}$

		2422362346	$v_{\text{climb}} = 734,2457 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 519,19 \text{ km/s}$
	79°	0,190808995376544812405140 48795839 ($\cos\phi$)/(2 π) = =0,03036819480057570985313 6802396938	0.097801190307943836001438986564057051864042361089181828754607... $v_{\text{rot}}/c = 0,097801190307943836001438986564057$ $v_{\text{rot}} = 29320059,237744259520820285319051 \text{ m/s} = 29320,1 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2 \pi) = 890397,27049623703270774917444291 \text{ m/s}$ $v_{\text{climb}} = 890,3973 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 629,606 \text{ km/s}$
	78°	0,207911690817759337101742 28440513 ($\cos\phi$)/(2 π) = =0,03309017332024022532211 9919992631	0.107077047815431524891573511759277128251736618733142730990486... $v_{\text{rot}}/c = 0,107077047815431524891573511759277$ $v_{\text{rot}} = 32100891,359971747177933006577923 \text{ m/s} = 32100,9 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2 \pi) = 1062224,0588356670713883098365441 \text{ m/s}$ $v_{\text{climb}} = 1062,2241 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 751,1059 \text{ km/s}$
	77°	0,224951054343864998051107 2083428 ($\cos\phi$)/(2 π) = =0,03580207225255968883501 2971259894	0.116457327084702694566820976533792415862359393619564735642381... $v_{\text{rot}}/c = 0,11645732708470269456682097653$ $v_{\text{rot}} = 34913028,338832995003410505800788 \text{ m/s} = 34913,028 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2 \pi) = 1249958,7631425628566313942052927 \text{ m/s}$ $v_{\text{climb}} = 1249,9588 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 883,854 \text{ km/s}$
	76°	0,241921895599667722560442 37410035 ($\cos\phi$)/(2 π) = =0,03850306552684856102902 332888899	0.125952489438069937853005346598758863645937973547879337155578... $v_{\text{rot}}/c = 0,12595248943806993785300534659875886$ $v_{\text{rot}} = 37759606,399858025444859715543756 \text{ m/s} = 37759,6 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2 \pi) = 1453860,5994817438412625883286501 \text{ m/s}$ $v_{\text{climb}} = 1453,8606 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 1028,035 \text{ km/s}$
Neutron star T = 0,001s f = 1000Hz $r_{\text{min}} = 10\text{km}$,	75,3139°	0,253523277221852020522635 11241255 ($\cos\phi$)/(2 π) = =0,04034948275871466336624 4713765043	$v_{\text{rot}} \text{ circl mim } /c = 0,13255287784185819957396727665924$ $v_{\text{rot}} \text{ circl mim } = 39738353,06318440493773420268124 \text{ m/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2 \pi) = 1603421,99178267517677875257418 \text{ m/s} = 1603,422 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin \epsilon^\circ = 1603,422 * \sin 45^\circ = 1133,791 \text{ km/s}$

	75°	0,258819045102520762348898 83762405 (cosφ)/(2 π) = =0,04119233039439038414103 3556846236	0.135573466417955067974877154676437407574635323374335527425142... v_{rot}/c = 0,1355734664179550679748771546764374 v_{rot} = 40643902,737019205161745504448364 m/s = 40643,9 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 1674217,0700607627288041337014832 m/s v_{climb} = 1674,2171 km/s average v_{transl} = v_{climb} sin 45° = 1183,850 km/s
	74°	0,275637355816999185649971 5746113 (cosφ)/(2 π) = =0,04386904767905501118641 8070235537	0.145331716344645600366723958716478652875612833791316124522891... v_{rot}/c = 0,1453317163446456003667239587 v_{rot} = 43569352,46832007967282587699096 m/s = 43569,4 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 1911346,0007782867139710264828404 m/s v_{climb} = 1911,3460 km/s average v_{transl} = v_{climb} sin 45° = 1351,526 km/s
	73°	0,292371704722736728097468 69537714 (cosφ)/(2 π) = =0,04653240202682759073917 595903321	0.155239286525448971273996291386331459527282777439583192240504... v_{rot}/c = 0,15523928652544897127399629138633 v_{rot} = 46539567,285630626651802739677493m/s = 46539,57km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 2165597,8550895576071908397319786 m/s v_{climb} = 2165,5979 km/s average v_{transl} = v_{climb} sin 45° = 1531,309 km/s
	72°	0,309016994374947424102293 41718282 (cosφ)/(2 π) = =24373580,0491815821541732 98367374393707347	0.165308881998387903439479120026767317714472488380888307453906... v_{rot}/c = 0,16530888199838790343947912 v_{rot} = 49558356,063528661609588099632272 m/s = 49558,4 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 2437358,3601642072962811913981365 m/s v_{climb} = 2437,358 km/s average v_{transl} = v_{climb} sin 45° = 1723,47 km/s
	71°	0,325568154457156668714008 93579472 (cosφ)/(2 π) = =0,05181578109516216042074 419853012	0.175553941838060411400905071631795321859383125932811547829616... v_{rot}/c = 0,17555394183806041140090507163 v_{rot} = 52629747,735221168686368554848924 m/s = 52629,75 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 2727051,4877418265600993462429554 m/s v_{climb} = 2727,051 km/s average v_{transl} = v_{climb} sin 45° = 1928,316 km/s
fí = π/2.57142857 = 70°	70°	0,342020143325668733044099	

		<p>61468226</p> <p>$(\cos\phi)/(2\pi) =$ $=0,05443419644727869355514$ 9967932637</p>	<p>0.185988723815849022300232841377413792364386228762834947312944... 0,185988723815849022300232841377</p> <p>$v_{rot}/c = 0,185988723815849022300232841377$</p> <p>$v_{rot} = 55758016,673036517752283617488735$ m/s = 55758,0167 km/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 3035142,8330907105752273290514717$ m/s</p> <p>$v_{climb} = 3035,1428$ km/s</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 2146,17$ km/s</p>
	69°	<p>0,358367949545300273484137 78941347</p> <p>$(\cos\phi)/(2\pi) =$ $=0,05703603061584148399652$ 4125304145</p>	<p>0.196628401694940002866400053496715023486129018637067431889057... 0,19662840169494000286640005349671502348</p> <p>$v_{rot}/c = 0,19662840169494000286640005349671502348$</p> <p>$v_{rot} = 58947711,856737429621845117648897$ m/s = 58947,7119 km/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 3362143,4981946780860871259822083$ m/s</p> <p>$v_{climb} = 3362,1435$ km/s</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 2377,3945$ km/s</p>
<p>Neutron star T = 0,001s</p> <p>f = 1000Hz</p> <p>$r_{max} = 15$km,</p>	68,79735°	<p>0,361667690813356360640756 53636272</p> <p>$(\cos\phi)/(2\pi) =$ $=0,05756120074957692910051$ 7270459969</p>	<p>$v_{rot} \text{ circl max } /c = 0,1988293167627872993609509149889$</p> <p>$v_{rot} \text{ circl max } = 59607529,59477660740660130402187$ m/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 3431080,97719128423917370897567$ m/s = 3431,081 km/s</p> <p>average $v_{transl} = v_{climb} \sin \varepsilon^\circ = 3431,081 \cdot \sin 45^\circ = 2426,141$ km/s</p>
	68°	<p>0,374606593415912035414963 7745012</p> <p>$(\cos\phi)/(2\pi) =$ $=0,05962049105695825397267$ 5499032576</p>	<p>0.207489168225684948345812096464790187553290447685019956277866... 0,20748916822568494834581209646479018755</p> <p>$v_{rot}/c = 0,20748916822568494834581209646479018755$</p> <p>$v_{rot} = 62203687,750753589398194042405076$ m/s = 62203,6878 km/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 3708614,4092536280648771502316964$ m/s</p> <p>$v_{climb} = 3708,6144$ km/s</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 2622,3864$ km/s</p>
	67°	<p>0,390731128489273755062084 58888909</p> <p>$(\cos\phi)/(2\pi) =$ $=0,06218679051894240884617$ 8710373583</p>	<p>0.218588360161304046262455466832795250429697582641401147406284... 0,2185883601613040462624554668327952504297</p> <p>$v_{rot}/c = 0,2185883601613040462624554668327952504297$</p> <p>$v_{rot} = 65531141,782946616514367237517103$ m/s = 65531,1418 km/s</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 4075171,3865232153936722749349765$ m/s</p>

			V_{climb} =4075,1714 km/s average v_{transl} = v_{climb} sin 45° =2881,581 km/s
	66°	0,4067366430758002077539859903415 (cosφ)/(2 π) = =0,064734147282117527129433089629846	0.229944593319214769283095123057183521523081091270580895879991... 0,2299445933192147692830951230571835215231 v_{rot}/c =0,2299445933192147692830951230571835215231 v_{rot} =68935654,834977774313281984789071 m/s = 68935,6548 km/s v_{climb} = v_{rot} (cosφ)/(2 π) =4462490,8330766684572208976359625 m/s v_{climb} =4462,4908 km/s average v_{transl} = v_{climb} sin 45° =3155,458 km/s
fí = π/2.76923076923 = 65°	65°	0,42261826174069943618697848964773 (cosφ)/(2 π) = =0,067261785396936746611194276241963	0.241577919126684096973848691726649936311538644581330743459550... 0,241577919126684096973848691 v_{rot}/c =0,241577919126684096973848691 v_{rot} = 72423238,173513838821300460794972 m/s v_{climb} = v_{rot} (cosφ)/(2 π) = 4871316,3037781250609652002206478 m/s v_{climb} = 4871,316 km/s average v_{transl} = v_{climb} sin 45° =3444,54 km/s
fí = π/ 2.8125 = 64°	64°	0,43837114678907741745273454065827 (cosφ)/(2 π) = =0,069768934920344513122850071727462	0.2535100032041404810619179228232 0.253510003204140481061917922823240953562766969137556959069307... 0,2535100032041404810619179228232 v_{rot}/c = 0,2535100032041404810619179228232 v_{rot} =76000386,988157150594854824277361 m/s = 76000,387 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 5302466,053697734181244169499053 m/s v_{climb} =5302,466 km/s average v_{transl} = v_{climb} sin 45° =3749,41 km/s
180/ 2,81690140845 = 63,9° 63,90000000001°	63,9°	0,43993916985591514083304576528102 (cosφ)/(2 π) = =0,070018493542313850183913679461913	0.254720530502096569804559171822028443558904964570508421300898... 0,254720530502096569804559171822 v_{rot}/c = 0,254720530502096569804559171822 v_{rot} = 76363293,942287504815077373726962 m/s = 76363,294 km/s v_{climb} = v_{rot} (cosφ)/(2 π) = 5346842,8037678720104498302946058 m/s v_{climb} = 5346,8428 km/s

			average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 3780,789 \text{ km/s}$
$\phi = \pi/3 = 60$ stupňov	60°	0,5 $(\cos\phi)/(2\pi) =$ =0,07957747154594766788444 1881686257	0.304728158522405804988532559989798534395286045112822783532734... $v_{\text{rot}}/c = 0,30472815852240580498853255998979853439528$ $v_{\text{rot}} = 91355203,665245684350980837972135 \text{ m/s} = 91355,204 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 7269816,120 \text{ m/s}$ $v_{\text{climb}} = 7269,816 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 5140,536 \text{ km/s}$
	59°	0,515038074910054210081631 93639814 $(\cos\phi)/(2\pi) =$ =0,08197085550246900476007109600 5015	0.318551835664780456174193289801635673880790343754972419379154... $v_{\text{rot}}/c = 0,31855183566478045617419328980163567$ $v_{\text{rot}} = 95499437,814356596986822682516548 \text{ m/s} = 95499,4378 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 7828170,6176476490036263375754919 \text{ m/s}$ $v_{\text{climb}} = 7828,1706 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 5535,35 \text{ km/s}$
	58°	0,529919264233204954046781 15181609 $(\cos\phi)/(2\pi) =$ =0,08433927034233478188574327909 3773	0.332852260246659094685012496781253640967548895621120049768867... $v_{\text{rot}}/c = 0,332852260246659094685012496781253640967$ $v_{\text{rot}} = 99786597,250201616283674632170693 \text{ m/s} = 99786,59725 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 8415928,8020264346749535117691155 \text{ m/s}$ $v_{\text{climb}} = 8415,9288 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 5950,96 \text{ km/s}$
	57°	0,544639035015027082224083 69208157 $(\cos\phi)/(2\pi) =$ =0,08668199462344142641037710791 7454	0.347670443615053024906944129218651334488014236004770095297750... $v_{\text{rot}}/c = 0,347670443615053024906944129218651334488$ $v_{\text{rot}} = 104228976,86530715213718800176693 \text{ m/s} = 104228,9769 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 9034775,6122453553799141044896179 \text{ m/s}$ $v_{\text{climb}} = 9034,7756 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 6388,551 \text{ km/s}$
	56°	0,559192903470746830160428 13998599	0.363052015987941542976649443075091058011519245215177091963385... $v_{\text{rot}}/c = 0,3630520159879415429766494430750910580115$

		$(\cos\phi)/(2\pi) =$ =0,08899831472927843354563490820 4638	$v_{rot}/c = 0,3630520159879415429766494430750910580115$ $v_{rot} = 108840256,25488029352928237314379 \text{ m/s} = 108840,2563 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 9686599,3813871519841958331379241 \text{ m/s}$ $v_{climb} = 9686,5994 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 6849,460 \text{ km/s}$
	55°	0,573576436351046096108031 91282616 $(\cos\phi)/(2\pi) =$ =0,09128752508630286862404550849 3706	0.379047978240177071958459592216686240078807782195906368778044... 0,3790479782401770719584595922166862400788 $v_{rot}/c = 0,3790479782401770719584595922166862400788$ $v_{rot} = 113635725,09655319875766947504411 \text{ m/s} = 113635,7251 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 10373524,105451816599426702963116 \text{ m/s}$ $v_{climb} = 10373,5241 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 7335,189 \text{ km/s}$
	54°	0,587785252292473129168705 95463907 $(\cos\phi)/(2\pi) =$ =0,09354892837886390332129190661 5298	0.395715611750978600029725609456302308682079065376417368690490... 0,3957156117509786000297256094563023086821 $v_{rot}/c = 0,3957156117509786000297256094563023086821$ $v_{rot} = 118632555,91579955840831031352436 \text{ m/s} = 118632,5559 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 11097948,476768700147212056262624 \text{ m/s}$ $v_{climb} = 11097,9485 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 7847,435 \text{ km/s}$
	53°	0,601815023152048279917977 00044149 $(\cos\phi)/(2\pi) =$ =0,09578183576161191794690970665 5076	0.413119588304284127254042024818710764709544094771888524174559... 0,41311958830428412725404202481871076471 $v_{rot}/c = 0,41311958830428412725404202481871076471$ $v_{rot} = 123850136,82568939043987404905549 \text{ m/s} = 123850,1368 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 11862593,464491345202163081817685 \text{ m/s}$ $v_{climb} = 11862,5935 \text{ km/s}$ average $v_{transl} = v_{climb} \sin 45^\circ = 8388,120 \text{ km/s}$
	52°	0,615661475325658279668811 09284366 $(\cos\phi)/(2\pi) =$ =0,09798556706932746793318540217	0.431333335712503600432023485890084642865573418727826266874255... 0,43133333571250360043202348589008464286 $v_{rot}/c = 0,43133333571250360043202348589008464287$

		6855	$v_{rot} = 129310480,93059063570736618274869 \text{ m/s} = 129310,4809 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 12670560,801991379304817026233654 \text{ m/s}$ $v_{climb} = 12670,5608 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 8959,439 \text{ km/s}$
	51°	0,629320391049837452705902 45827997 $(\cos\phi) / (2\pi) =$ $=0,10015945102410619858640314656$ 053	0.450440733884034951042720585336522598434182084472832960300761... 0,450440733884034951042720585336522598434 $v_{rot}/c = 0,450440733884034951042720585336522598434$ $v_{rot} = 135038734,79441872493100686728508 \text{ m/s} = 135038,7348 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 13525405,543998847911020546773589 \text{ m/s}$ $v_{climb} = 13525,4055 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 9563,906 \text{ km/s}$
	50°	0,642787609686539326322643 40990726 $(\cos\phi) / (2\pi) =$ $=0,10230282543983659756836$ 144428118	0.470538242982286784213163470243639059508461902585435700422035... 0,47053824298228678421316347024363905950846190 $v = 141063816,44666100550017987269996 \text{ m/s} = 141063,816 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 14431226,98982 \text{ m/s}$ $v_{climb} = 14431,227 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 10204,418 \text{ km/s}$
	49°	0,656059028990507284782495 96402342 $(\cos\phi) / (2\pi) =$ $=0,10441503742390829920393342651$ 164	0.491737604014022502909715177407920663244906940262248117011060... 0,491737604014022502909715177407920663244906940 $v_{rot}/c = 0,491737604014022502909715177407920663244906940$ $v_{rot} = 147419224,99839447261461566511475 \text{ m/s} = 147419,2250 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 15392783,895210916737681967718408 \text{ m/s}$ $v_{climb} = 15392,7839 \text{ km/s}$ $\text{average } v_{transl} = v_{climb} \sin 45^\circ = 10884,342 \text{ km/s}$
	48°	0,669130606358858213826273 33068678 $(\cos\phi) / (2\pi) =$ $=0,10649544357608949831118640842$ 987	0.514169308786758038063079998523898222904356994379319410544104... 0,514169308786758038063079998523898222904357 $v_{rot}/c = 0,514169308786758038063079998523898222904357$ $v_{rot} = 154144080,90934319008218831180785 \text{ m/s} = 154144,0809 \text{ km/s}$ $v_{climb} = v_{rot} (\cos\phi) / (2\pi) = 16415642,271069132105538295478463 \text{ m/s}$

			V_{climb} =16415,6423 km/s average v_{transl} = v_{climb} sin 45° =11607,612 km/s
	47°	0,681998360062498500442225 78471113 (cosφ)/(2 π) = =0,10854341018451289356723930589 27	0.537987120650597373732519087630134274136576692766403561879564... 0,5379871206505973737325190876301342741365767 v_{rot}/c = 0,5379871206505973737325190876301342741365767 v_{rot} = 161284481,27218514583961653181252 m/s = 161284,4813 km/s V_{climb} = v_{rot} (cosφ)/(2 π) =17506367,607123180207801390353896 m/s V_{climb} =17506,3676 km/s average v_{transl} = v_{climb} sin 45° =12378,871 km/s
	46°	0,694658370458997286656406 29942269 (cosφ)/(2 π) = =0,11055831341871046119295020672 757	0.563374056350870713618120737276089953294418249855650027444279... 0,5633740563508707136181207372760899532944182 v_{rot}/c = 0,5633740563508707136181207372760899532944182 v_{rot} = 168895293,12685804167579048916874 m/s = 168895,2931 km/s V_{climb} = v_{rot} (cosφ)/(2 π) =18672778,752464146156624333259705 m/s V_{climb} =18672,77875 km/s average v_{transl} = v_{climb} sin 45° =13203,648 km/s
	45°	0,707106781186547524400844 36210485 (cosφ)/(2 π) = =0,11253953951963825869439989887 584	0.590550441005343139857616745859240142449175429864725911211494... 0,5905504410053431398576167458592401424491754 v_{rot}/c = 0,5905504410053431398576167458592401424491754 v_{rot} = 177042568,28197581103135269426303 m/s = 177042,5683 km/s V_{climb} = v_{rot} (cosφ)/(2 π) =19924289,109827671679449851512959 m/s V_{climb} =19924,2891 km/s average v_{transl} = v_{climb} sin 45° =14088,600 km/s
	44°	0,719339800338651139356054 67445671 (cosφ)/(2 π) = =0,11448648498663337526514009114 531	0.619784972786121310316708342165077452921601743297711116326678... 0,6197849727861213103167083421650774529216017 v_{rot}/c = 0,6197849727861213103167083421650774529216017 v_{rot} = 185806860,42301441590602675236675 m/s = 185806,8604 km/s V_{climb} = v_{rot} (cosφ)/(2 π) =21272374,336232923004972166035402 m/s V_{climb} =21272,3743 km/s average v_{transl} = v_{climb} sin 45° =15041,84 km/s

	43°	<p>0,731353701619170483287543 60827562</p> <p>$(\cos\phi)/(2\pi) =$ =0,11639855676124607995102115602 631</p>	<p>0.651410273235464532154914358266781752178405001571186583900534... 0,6514102732354645321549143582667817521784050</p> <p>$v_{rot}/c = 0,6514102732354645321549143582667817521784050$</p> <p>$v_{rot} = 195287886,97971152486654181224406 \text{ m/s} = 195287,8870 \text{ km/s}$</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 22731228,197391761216247022547971 \text{ m/s}$ $v_{climb} = 22731,2282 \text{ km/s}$</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 16073,406 \text{ km/s}$</p>
	42°	<p>0,743144825477394235014697 04897426</p> <p>$(\cos\phi)/(2\pi) =$ =0,11827517240789117052444638128 938</p>	<p>0.685845329136720827536274917044548895376948283201177384115602... 0,6858453291367208275362749170445488953769483</p> <p>$v_{rot}/c = 0,6858453291367208275362749170445488953769483$</p> <p>$v_{rot} = 205611257,02971655494689394154437 \text{ m/s} = 205611,2570 \text{ km/s}$</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 24318706,874192950950445221869163 \text{ m/s}$ $v_{climb} = 24318,7069 \text{ km/s}$</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 17195,923 \text{ km/s}$</p>
	41°	<p>0,754709580222771997942984 21956102</p> <p>$(\cos\phi)/(2\pi) =$ =0,12011576029126349491717672038 87</p>	<p>0.723628905896127114622943945099559347167951654003695060918427... 0,72362890589612711462294394509955934716795165</p> <p>$v_{rot}/c = 0,72362890589612711462294394509955934716795165$</p> <p>$v_{rot} = 216938488,37845064037326010849745 \text{ m/s} = 216938,4884 \text{ km/s}$</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 26057731,46801502859807768072853 \text{ m/s}$ $v_{climb} = 26057,7315 \text{ km/s}$</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 18425,599 \text{ km/s}$</p>
	40°	<p>0,766044443118978035202392 65055542</p> <p>$(\cos\phi)/(2\pi) =$ =0,12191975975046360272519 486150119</p>	<p>0.765471182644718647941843491555499291792214259709542355577987... $v_{rot}/c = 0,76547118264471864794184349155549929179$</p> <p>$v = 229482487,37322714418492190138458 \text{ m/s} = 229482,487 \text{ km/s}$</p> <p>$v_{climb} = v_{rot} (\cos\phi)/(2\pi) = 27978449,727482650 \text{ m/s}$ $v_{climb} = 27978,4497 \text{ km/s}$</p> <p>average $v_{transl} = v_{climb} \sin 45^\circ = 19783,752 \text{ km/s}$</p>
	39°	<p>0,777145961456970879979937 7436724</p>	<p>0.812337240247962577500438231077154664761882437709082223948385... $v_{rot}/c = 0,81233724024796257750043823107715466476$</p> <p>$v_{rot} = 243532577,97887323060087187337175 \text{ m/s} = 243532,577 \text{ km/s}$</p>

		$(\cos\phi)/(2\pi) =$ =0,12368662126978048642538 717137345	$v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 30121721,7393 \text{ m/s}$ $v_{\text{climb}} = 30121,722 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 21299,274 \text{ km/s}$
	38°	0,788010753606721956693977 78783585 $(\cos\phi)/(2\pi) =$ =0,12541580664607939022665 934953968	0.865589873165299252596244857083262245043548736323475707999352... 0,8655898731652992525962448570832622 $v_{\text{rot}}/c = 0,8655898731652992525962448570832622$ $v_{\text{rot}} = 259497315,69613330324139112727477 \text{ m/s} = 259497,316 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 32545065,170522876799874203488266 \text{ m/s}$ $v_{\text{climb}} = 32545,065 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 23012,836 \text{ km/s}$
	37°	0,798635510047292846284000 80406894 $(\cos\phi)/(2\pi) =$ =0,12710678915274369860738 762826401	0.927252176787297809060361720101420332427917437377393303373237... 0,927252176787297809060361720 $v_{\text{rot}}/c = 0,927252176787297809060361720$ $v_{\text{rot}} = 277983209,26491455335622051040791 \text{ m/s} = 277983,209 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 35333553,168038522770352834960169 \text{ m/s}$ $v_{\text{climb}} = 35333,55 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 24984,593 \text{ km/s}$
	36°	0,809016994374947424102293 41718282 $(\cos\phi)/(2\pi) =$ =0,12875905370012096625181 62753936	1.000539256342261797177587246863717366813671224737318366317102... $v_{\text{rot}}/c = 1,0005392563422617971775872468637$ $v_{\text{rot}} = 299954122,98433875345536634324651 \text{ m/s} = 299954,123 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 38621809,029211864455641499894486 \text{ m/s}$ $v_{\text{climb}} = 38621,809 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 27309,743 \text{ km/s}$
	35°	0,819152044288991789684488 38591684 $(\cos\phi)/(2\pi) =$ =0,13037209699242421597040 718095714	1.091092423269137244471728663728448923118127020887074303695945... $v_{\text{rot}}/c = 1,091092423269137244471728663728448923118$ $v_{\text{rot}} = 327101279,47703105005952644760807 \text{ m/s} = 327101,279 \text{ km/s}$ $v_{\text{climb}} = v_{\text{rot}} (\cos\phi)/(2\pi) = 42644879,734326 \text{ m/s}$ $v_{\text{climb}} = 42644,8797 \text{ km/s}$ average $v_{\text{transl}} = v_{\text{climb}} \sin 45^\circ = 30154,4834 \text{ km/s}$

	32,123°	0,846908536072527033724612 6886004 (cosφ) / (2 π) = =0,13478967986266342820631 84886597	v_{rot}/c = 1,89550406058 v_{rot} = 568257821,47025910564 m/s = 568257,8215 km/s v_{climb} = v_{rot} (cosφ) / (2 π) = 76595289,835430773270630504574016 m/s v_{climb} = 76595,2898 km/s average v_{transl} = v_{climb} sin 45° = 54161,0488 km/s
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The proposed views

In short, when four protons fuse to become one helium nucleus, two of which must be converted into neutrons, and each such transition depends on the penetration of the two electrons from the Universe, to the interior of the star .

Penetration 10^{38} to 10^{58} of high energy electrons from the Universe to the interior of the star, transferred huge amounts of energy from the Universe into a small space of the star.(Also at the beginning of ignition stars in the nebulae too ... there where stars are born).

This huge cosmic energy is responsible for thermonuclear fusion.

Currently prevailing opinion that the star itself is the source of the nuclear fusion powering the star.

In fact, without a high-energy electrons from other stars of the Universe, single star can not be able to a nuclear fusion, because without a high-energy electrons from other stars, her stellar protons cannot be transform into her neutrons.

The idea that inside the star, the mass converted to energy and energy into mass, without regard to high-energy electrons from the surrounding Universe, so finally falls. It is unsustainable.

Neutronization, i.e. injection of free electrons to protons to form neutrons and neutrinos, as a consequence of the Pauli principle can therefore simply replace with the above considerations. Although the inverse beta-decay is common to both considerations, the qualitative difference is obvious.

The free electrons in the stars are replaced by high-energy electrons from the Universe and neutrinos are replaced by waves which spread in the opposite direction to the movement of high-energy electrons from the Universe, i.e.

by kinetic energy (of wave = of neutrinos) = $E_w = mc^2 [\ln | 1 + v / c | - (v / c) / (1 + v / c)]$ against direction of motion of electron (from the interior of the star, to the Universe), where v is velocity of electron.

Moreover, formation of a supernova is only possible, if the increase the number of penetrating high-energy electrons from the Universe.

At the end of life star :

1. high-energy electrons from the Universe are penetrating into the star,
2. by waves (= by electron neutrinos) propagated from inside of star to her surface , the star expands, more and more. More and more active are mutual repellent protons of star. In combination with neutrino waves, star more and more expands.

Gradually grows, its radius will expand about 100 times ($R_{RG} = 100 R_S \dots$ Arcturus) and due to conservation of angular momentum

($L = I \cdot \omega = \text{const}$) decreases rotation of the magnified star from $\omega_s = 2,8 \cdot 10^{-6}$ Hz on $\omega_{RG} = 10^{-8}$ Hz. This creates a Red Giant.

This makes that the high-energy electrons from the Universe easily penetrate into the interior of stars (electrons have a small radius of force reach $r_e = 2,840401487397554751560630135382e-24$ m in direction of motion from the Universe) and in particular the impact of 10^6 times more (since the volume of Red Giant is a $100^3 = 10^6$ times greater).

Therefore into the interior of Red Giant can easily penetrate slower electrons from the universe too. Total number all electrons from the Universe is approximately 10^7 times more than in the middle of life stars. As a result, inside the Red Giant arises approximately 10^7 times more neutrons per second.

After some time, almost all protons inside the Red Giant will turn into neutrons (repulsive force of protons is replaced without force, or a weak attractive force of neutrons respectively).

After the conversion of protons into neutrons, leads to of neutrons concentration and a very dense neutron star with a radius of $R_{ns} = 10\ 000$ km, and due to conservation of angular momentum,

neutron star spinning at $\omega_{ns} = 1 \text{ Hz to } 716 \text{ Hz}$.^[17]

Together with this reduction of the Red Giant in neutron star, arises emission neutrino waves in the opposite direction of movement of electrons from the Universe.

This creates a shock wave which ejects the remnants of star into Universe - thus creating a circular cloud of gas that is growing with time after the supernova explosion.

The remaining protons, which did not create with electrons from the Universe neutrons, create hydrogen atoms - electron capture (K-capture).

And either because some electrons from the Universe have a lower speed of $0,003 c - 0,6c$ or because they are located in areas distant from the center of the star where the pressure is significantly lower. These hydrogen atoms are entrained by the neutrino waves propagating from inside of the star out into Universe.^[16]

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