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Physics, Mechanics, Mathematics

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IN THE NAME OF GOD

Investigation has been made into 3 issues each studied separately under the following titles:

Topics

1- **Stable Dynamics (5th dimension)**
2- **Dynamics Trigonometry**
3- **Angular Speed**

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Stable Dynamics

Abstract

Dynamics features movement and stable means. Continuous
Stable dynamics thus means continuous movement or motion. That is a moving object which enjoys continuous movement. For example, the electron continuous revolution round the nucleus, the revolution of the moon round the earth and that of the earth round the sun. In this formula, the continuous movement of the moving object round the origin of coordinates in space is studied.

Regarding the importance of masses movement in space, the necessity is felt that in order to design and optimize dynamic systems (dynamic mechanics) and all relevant subsets, a reasonable relation should be presented (Some scientists believe that a charged particle is the 5th dimension in which case a particle enjoying continuous movement can be named the 5th dimension.

Key words: stable dynamics, materials

Introduction

In dynamic mechanics literature, the issue of movement relevant to a moving object is discussed and proved.
As an example, the throwing of a particle in space, a moving object range, force driving apogee, mass and acceleration of the moving object are discussed and have documented and compiled formulas.
In this formula, a moving object continuous movement is studied, and as detailed in the abstract, the formula of the moving object continuous movement, that is, the same stable dynamics, has been established.
The formula in question is initially proved in plane xoy and is then extended to planes xoz and yoz.
In the end, we have 3 images of the moving object in the above mentioned planes to obtain the moving object general formula in space.

$m.V_A.(\overline{OH}_A) = m.V_B(\overline{OH}_B) = m.V_C.(\overline{OH}_C) = m.V_D(\overline{OH}_D)$

m= moving mass

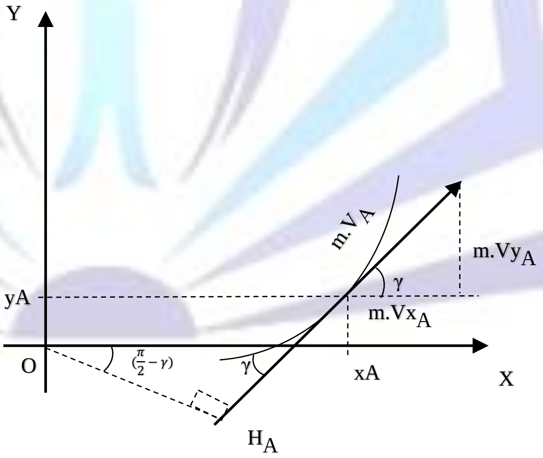
at point (A) oxyz (moving speed in space $=V_A$

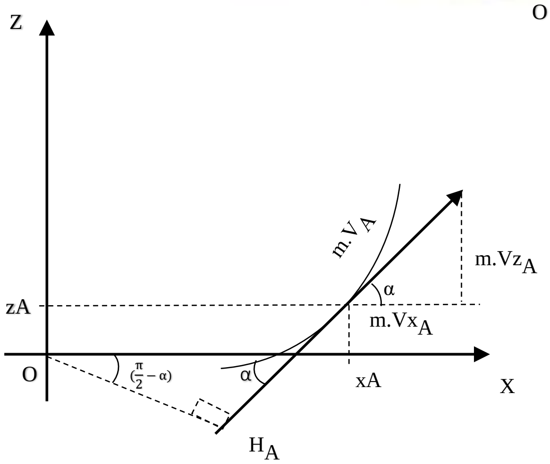
$(\overline{OH})$ A=A. Vertical distance from point to velocity vector V_A at point

Given a moving object with mass m and velocity V_A so that the moving object continuously moves round the origin of coordinates , the following relation can be written :

$A\begin{cases} m.Vx_A \\ m.Vy_A \end{cases}$

$V_{(x)}$ A : Velocity image on the x axis
$V_{(y)}$ A : Velocity image on the y axis





$\tan\gamma = \frac{Vy}{Vx}$

$\tan\alpha = \frac{Vz}{Vx}$

$\tan\beta = \frac{Vz}{Vy}$

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Using momentum m.v (x , y) A, we will calculate the momentum relative to point (O):

$m.V_{(x,y)\,A}.\overline{OH}_{(x,y)\,A} = m.V_{x_A}.y_A + m.Vy_A.x_A$

Both sides of the relation is divided by m to give:
If the moving object moves from point A to point B , C , D or any other point in its orbit relation
1) $V_{(x,y)A}\,.\,\overline{OH}_{(x,y)A} = V_{x_A}.y_A + Vy_A.x_A$
Will thus apply at points B,C,D , …

Relation (1) can thus be written as :
2) $V_{(x,y)B}.\,\overline{OH}_{(x,y)B} = V_{x_B}.y_B + Vy_B.x_B$
And it can be concluded that all the relations at points A , B , C , D , … are equal .
3)) $Vx_A.y_A + Vy_A.X_A = Vx_B.y_B + Vy_B.X_B = Vx_C.y_C + Vy_C.X_C = Vx_D.y_D + Vy_D.x_D$

Regarding the above mentioned relations 2 points are significant.
1. The movement of a moving object round point O in an orbit depends on its velocity and distance from the origin of coordinates at the point in question (A,B,C,D, …)
2. The movement of a moving object round point O does not depend on its mass (m) .
Formulas (1) to (3) apply to plane (x,y) , and the above mentioned formulas in planes xoz and yoz will equal ….
At point A and in plane xoz.

4) $V_{(x,z)A}\,.\,\overline{OH}_{(x,z)A} = Vx_A.z_A + Vz_A.x_A$

5) $V_{(x,z)B}\,.\,\overline{OH}_{(x,z)B} = Vx_B.z_B + Vz_B.x_B$

6) $Vx_A.z_A + Vz_A.x_A = Vx_B.z_B + Vz_B.x_B = Vx_C.z_C + Vz_C.x_C = Vx_D.x_D + Vz_D.x_D$

and in plane yoz

7) $V_{(y,z)A}\,.\,\overline{OH}_{(y,z)A} = Vy_A.z_A + Vz_A.y_A$

8) $V_{(y,z)B}\,.\,\overline{OH}_{(y,z)B} = Vy_B.z_B + Vz_B.y_B$

9) $Vy_A.z_A + Vz_A.y_A = Vy_B.z_B + Vz_B.y_B = Vy_C.z_C + Vz_C.y_C = Vy_D.z_D + Vz_D.y_D$

If moving object m is continuously moving at velocity V round point O , formula (10) will apply.

10) $m.\overline{OH}_A.V_A \Rightarrow V_A=\sqrt{V_{xA}{}^2 + V_{yA}{}^2 + VzA^2} \Rightarrow \overline{OH}_A = \sqrt{(\overline{OH}x_A)^2 + (\overline{OH}y_A)^2 + (\overline{OH}z_A)^2}$

$\Rightarrow \overline{OH}x_A=\overline{OH}(x,y)_A.\mathrm{Cos}\,(\frac{\pi}{2}-\gamma) \Rightarrow \overline{OH}y_A=\overline{OH}(x,y)_A.\mathrm{Sin}(\frac{\pi}{2}-\gamma) \Rightarrow \overline{OH}z_A=\overline{OH}(x,z)_A.\mathrm{Sin}\,(\frac{\pi}{2}-\alpha)$

$m.\overline{OH}_A.V_A=m.\overline{OH}_B.V_B=m.\overline{OH}_C.V_C=m.\overline{OH}_D.V_D=\ldots\ldots\ldots= m.\overline{OH}_{ʒ}.V_{ʒ}$

V_A = Velocity of the moving object in space

$\overline{OH}$= Vertical distance from point O to the vector of velocity V