INERTIA AND CRITICAL IONIZATION VELOCITIES.

Comparing examples are:

*)A parachutist falling from an airplane will receive a constant speed if the force downward is eventually cancelled out by the friction force of the object air.

Before being cancelled the parachutist will experience a ``force`` downward. When there is a force equilibrium there is no awareness anymore of a falling ``force``.

*)A boat going through the object water can`t go faster and faster because of friction with the objects water (and air). Once it has a continuous velocity the only force that will be experienced is if it strikes a moving ridge or swell of the object water or a gust wind from the object air.

Any large object will experience normal acceleration till it is being cancelled through friction with the object it is passing through.

There is a friction when objects/atoms moves (and get accelerated) through other elements (like gasses).

If atoms move at high velocities they will experience **friction against other atoms**. This we call **critical ionization velocities**.

Now a fluidum object exists. See Ivo van der Rijt. Vortex of light**. Friction of an object against this fluidum** is what we call **inertia**.

Fast direction (trajectory) change of the object that moves through the fluidum will result in huge friction force.

One can go faster and faster against this fluidum object in the same direction. The higher the acceleration (force) the higher the counterforce (friction).

Movement against this fluidumobject will not result in ionization of the atoms as the fluidum object is to small. But highly ionized atoms will move different through a fluidum then non- ionized atoms.

The displacement of fluidum object (atom) relocates through the vortex (lowest resistance to motion) from point A to point B.

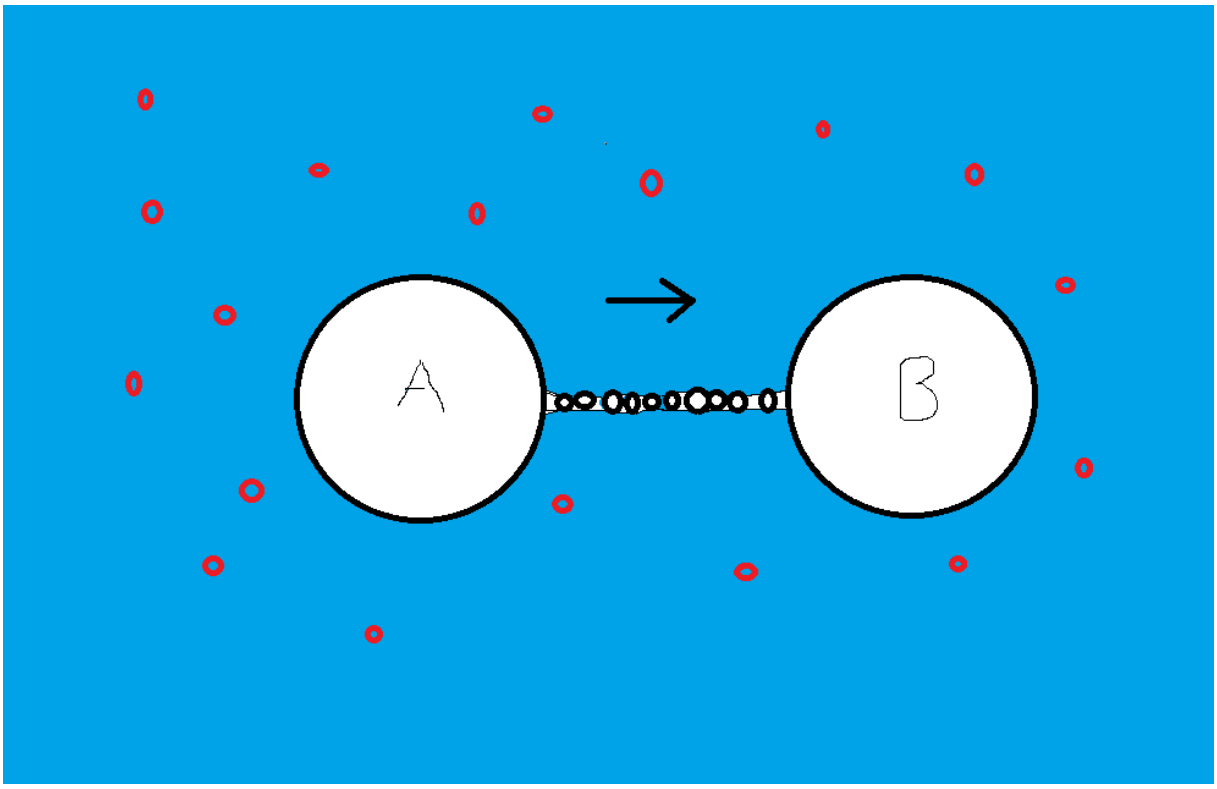

Figure 1.Relocation of an ``atom`` from point A to B.

The resistance the relocation gets from the ``static`` fluidum object (Red objects in blue) is a counterforce when accelerated or changed from direction. This we call inertia. Otherwise there is force equilibrium in place.

If the displacement relocates faster it will have a strong counterforce(especially in the direction of travel.)

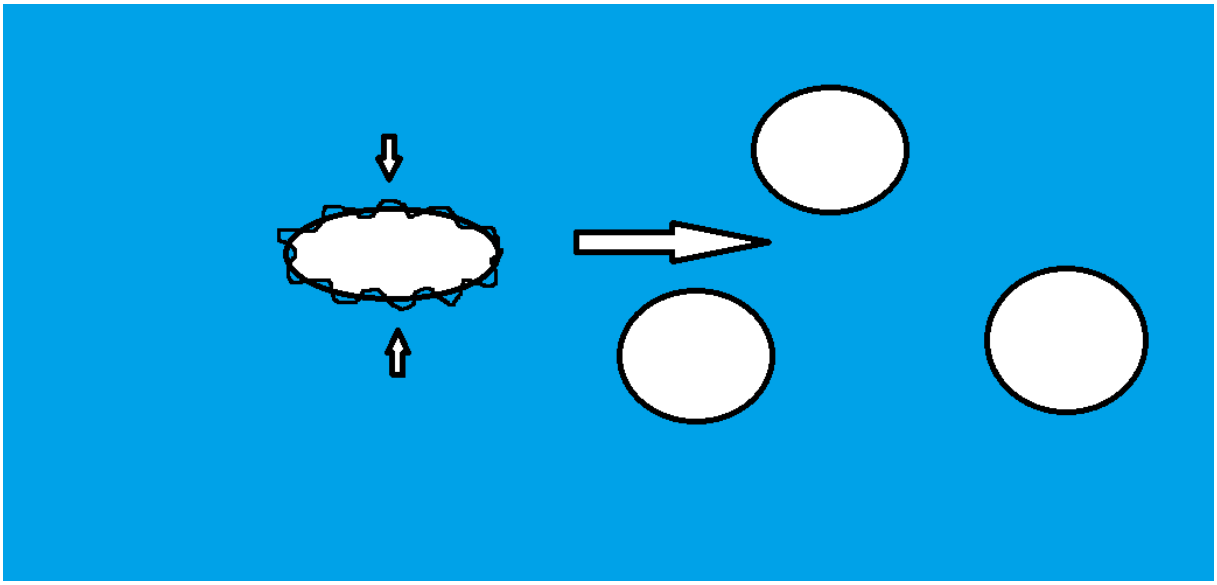

Figure 2. Critical ionization velocities. Ionization through high speed acceleration when passing against other atoms. Altering the atoms shape.

Cancellation of inertia in advanced spacecraft.

Now let us assume we are at rest but we have highly ionized atoms outside of our spaceship. These atoms are already waving to travel against high counterforce speeds from the fluidum. They will counter inertia.

Inertia is all about change of the dynamic of atoms (the displacements of fluidum object at a location). But once the atoms outside of an advanced spaceship are already at the dynamic of high speeds it will cancel inertia.

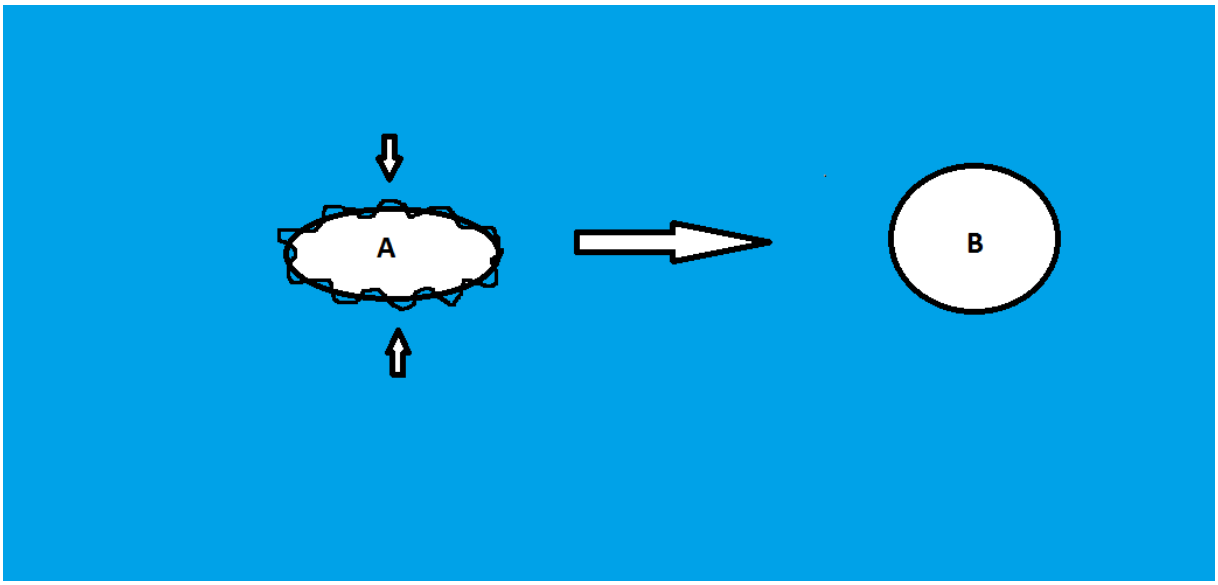

Figure 3. Atom moving from point A to point B when already waving.