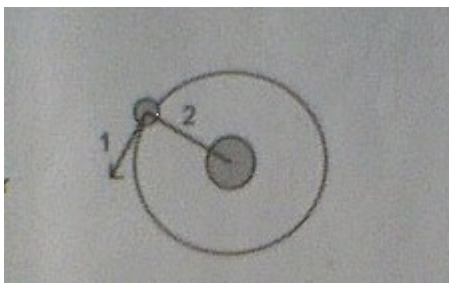


## LOOPHOLE by Emory Taylor

There is a loophole in Newton's laws of Motion that allows the electron, as a particle, to be in uniform curvature motion in a stable, non-radiating orbit without violating the classical electromagnetic principle. The following are excerpts from The Loophole Hypothesis by Emory Taylor.

The centripetal force changes the direction of the satellite's tangential velocity (i.e. its state of motion relative to the parent body) at a constant rate. The satellite undergoes centripetal acceleration in relation to the tangent (straight line path the satellite would travel were there no unbalanced force acting upon it) and with respect to the inward direction (which is along the perpendicular, away from the tangent and toward the parent body, and which is the same direction in which the unbalanced force acts).



This diagram depicts 1 tangent 2 perpendicular, and that the change in motion must be expressed a) in relation to the tangent, b) with respect to the perpendicular.

Taylor's 1st UCM law: the change in the satellite's state of motion relative to the parent body (the change from tangential motion to orbital motion) is expressed in relation to the tangent (straight line path the satellite would travel were there no unbalanced force acting upon it) and with respect to a direction which is the same as the direction in which the unbalanced force acts.

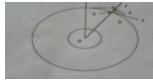
It is apparent: for uniform curvature motion, the satellite's tangential speed and inward (along the perpendicular, away from the tangent and toward the parent body) acceleration are such that the satellite travels a curved (orbital) path that matches the curvature of the parent body.

A new reference: "curvature of the parent body."

Until this point we have been using the two reference points of 1) "in relation to the tangent (straight line path the satellite would travel were there no unbalanced force acting upon the satellite)," and 2) "with respect to the inward direction (which is along the perpendicular, away from the tangent and toward the parent body)."

### UCM Coordinate System

We can use the two references to depict a UCM Coordinate System. Since, during unit time, the satellite moves some distance tangentially, and some distance away from the tangent and toward the parent body, and since the direction of the satellite's tangential velocity continually changes at a constant rate, and since the satellite's movement away from the tangent is toward the parent body, the origin of the coordinate system is always located at the position of the satellite, and, since one axis, say the x axis, is the perpendicular (while the other axis, the y axis, is the tangent), an extension of the x axis (the perpendicular) would pass through the center of the parent body. My drawing is not perfect, but you will understand it.



This diagram depicts 1 as x axis or perpendicular, 2 as y axis or tangent, 3 as origin or satellite, 4 inward movement along the perpendicular and toward the parent body, 5 as orbital path, 6 as center of parent body.

Once a satellite is in uniform curvature motion about a parent body, we can see that, in relation to the tangent (straight line path the satellite would travel were there no unbalanced force acting upon the satellite), and with respect to the inward direction (which is along the perpendicular, away from the tangent and toward the parent body), the satellite is in motion relative to the parent body.

The satellite's tangential speed and inward acceleration are such that the satellite travels an orbital path that matches the curvature of the parent body. The satellite remains parallel to the curvature of the parent body because there is no change in the perpendicular distance between the satellite and parent body; thus, we have entered the loophole, because we only need to make reference to the tangent when there is a change in the satellite's state of motion relative to the parent body, and since, in relation to the curvature of the parent body, once the satellite is in uniform curvature motion about the parent body, there is no change along the perpendicular between the satellite and parent body, we need not make reference to the tangent.

Instead, we can state that once a satellite is in uniform curvature motion about a parent body, the satellite, in relation to the curvature of the parent body (not the tangent as no reference need be made to the tangent), and with respect to the inward direction, which is along the perpendicular and toward the parent body (not away from the tangent as no reference need be made to the tangent), the satellite is at rest relative to the parent body --- nature's perfect trap, the loophole, which provides for a stable atom because the electron is trapped in two states (at rest and in motion) at one and the same time.

Clearly there are two perspectives: one from within the satellite-parent body system where the satellite is at rest relative to the parent body (the UCM Coordinate System), and one from outside looking in at the the satellite-parent body system where the satellite is in motion relative to the parent body.

Taylor's 3ed UCM law:

For the (uniform curvature motion of a) satellite-parent body system, given the UCM Coordinate System (from within the satellite-parent body system) motion takes place in only one direction: the perpendicular direction, this being either inward along the perpendicular and toward the parent body, or outward along the perpendicular and away from the parent body.

For uniform curvature motion, given the UCM Coordinate System (from within the satellite-parent body system) the satellite never travels a curved path because motion takes place in only one direction, the perpendicular direction.

The old complaint that a planetary model of the atom dictates the atom radiate electromagnetic energy because the electron, as a particle, travels a curved path is not a valid complaint, because (for uniform curvature motion, given the UCM Coordinate System...from within the satellite-parent body system) motion takes place only in the perpendicular direction, so the electron never travels a curved path. In order for the atom to radiate energy, a complete oscillation of the electron must occur.

You can read the entire Loophole Hypothesis (six pages with four diagrams) at [Loophole](#)