Is Motion One Of The Three Eternal Properties of Atoms? I.E. Are The Three Properties Shape, Size, and MOTION?

Post by “Martin” of April 15, 2026 at 11:03 AM

In a Newtonian universe with absolute space and time and when there is a point in time where there is no motion of that atom in the chosen frame of reference, yes, this would be the case at all other points in time, the atom would never move and would have never moved in the past.
In an Einsteinian universe with only one atom, there would be no references to measure space and time. Therefore, statements like "the atom moves" or "the atom does not move" would have no meaning.

The case of two atoms in an infinite void:
In a Newtonian universe with absolute space and time and when there is a point in time where there is no motion of both atoms and there is a distance between them, both atoms would accelerate from that point in time toward each other, collide, move with decreasing speed back to their points of rest, simultaneously come to rest there and accelerate again toward each other, repeating that cycle all over again into eternity and would have done so in all eternity of the past. (This is the simplest example of an eternal, pulsating universe. Until the discovery of the accelerated expansion, eternal pulsation between big bang and maximum extension was a credible scenario for our universe.)
In an Einsteinian universe, the two atoms would behave similar to the two atoms in a Newtonian universe. The distance between resting points would provide a reference for measuring space in the direction along which the atoms move. The period for one pulsation would provide a reference for measuring time.

There is a caveat: The physics of a universe might depend on what is in it. So, the laws which we know for our universe of maybe 10^89 particles might not apply in a universe with considerably less particles.