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| IN THE NAME OF GOD |
| PLATO AND SPECIAL RELATIVITY |
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| There are some old odd puzzles invented by the philosopher Zeno. These puzzles somehow claim that motion is impossible and confirm Parmenides's statement about the world that says all that are seen is nothing but illusion and the reality is unique and not changing. Another view is for Heraclitus that says the world is nothing but motion and change and nothing is constant. This view is in contrast with the view of Parmenides. Plato (or Socrates) tried to establish a theory that gather these two view together in one. He has a famous sentence in Timeous dialogue that is: there are two arenas, the one that never seen but exist and the one that we see but we can't say that exist. Plato believed that the world that we see is illusion (shade of the real world) and the reality is different from what we see.  We can see such procedure in the world of physics also track of Plato's thought is reveal in Einstein's special relativity.  In newton's point of view the world's feature was no further from what we sense. All things that we sense were real. Burden, colors, velocities, length, volume, sounds, time, also objects like trees, humans, buildings etc. but velocity's was not as clear as the other's. There was a struggle that weather velocity is relative or constant. If the velocity is relative to the observer, then you cannot say that is real feature on an object. Because different observers impute different velocities to that object and you cannot judge which of those velocities is the real velocity of the object. If velocity is relative, then this is not real. Consequently the path of motion is not real because that is also related to the observer. Because you can't judge which pass has passed by the object (or no pass).  Many efforts done to avoid this non-realistic results of newton's mechanic (whether they know it or not). Later when Maxwell four electromagnetic equations discovered, the one consequent of those equations was odd in physicist's point of view. The electromagnetic wave velocity based on Maxwell equations was constant and equal to 298,000,000,000 m/s (C). The question was that the velocity related to what? And another question was that the electromagnetic wave (including light) for traveling needs a medium. They assumed there is a medium, and they called it Ether. It seemed that all problems were solved. The old struggle about the relativity of the velocity and the new found problem of the electromagnetic wave's velocity were solved by the notion Ether. That velocity(C) was relative to the Ether, and all velocities were constant related to the Ether and consequently real. But there was a problem. They could never detect the Ether. Finally the shocking experiment of Michelson-Morley revealed that the velocity of light in constant and equal to (C) related to all observers. Then there was no Ether. No one could found out what it means till Einstein suggests supposing that experiment result as an axiom. Another axiom he suggested was the equivalency of all inertial systems. These two axioms were principles of his famous theory, the special relativity. This theory was so successful in predicting and complying with observations, so it was hard to deny it. But there were some consequences that the theory implied that was clearly anti-realistic. Consequence of the constancy of light's velocity is that the time is relative. Also length and volume and burden and color and of course velocity and path of motion. All characteristic of our subjective comprehension of the world was relative and not real. For example the length of an object related to different observer is different. Then the effort to avoid relativity of velocity and falling into the vortex of idealism resulted versus and led to the relativity of all our sensual comprehension of the world. In special relativity all that we see is nothing but illusion and the reality is the laws of nature. It is so near to Plato's point of view that the world that we see is nothing but the shade and reality is comprehensive through mathematics. |