

Parallel Glossary for Relativity Physics

| <i>Spatiocosm: 3D Space + 1D Time</i> | <i>Temporocosm: 1D Space + 3D Time</i> |
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| spacetime (spatiocosm) is a four-dimensional continuum with three dimensions of space and one dimension of scalar time (3+1). | timespace (temporocosm) is a four-dimensional continuum with one dimension of scalar space (stance) and three dimensions of time (1+3). |
| world line of a body is the 4D path the body traces in spacetime. | world line of a body is the 4D path the body traces in timespace. |
| proper length (or travel length) is the length of a body measured by a rigid rod moving with it. | proper time (or travel time) is the time of a body measured by a clock moving with it; the time interval between two events occurring at the same place; or the time interval measured by a single clock at one place. |
| speed of light is the speed of light in a vacuum, which equals 299 792 458 m/s. Symbolized by c . | pace of light is the pace of light in a vacuum, which equals 3.335 641 ns/m. Symbolized by $1/c$. |
| minimum speed is the hypothesized minimum speed greater than zero. Symbolized by $1/k$. | minimum pace is the hypothesized minimum absolute pace greater than zero. Symbolized by k . |
| modal speed is the maximum (“free flow”) speed of the mode of observation, independent of any object motion. It serves as a general conversion between space and time. Symbolized by c . | modal pace is the minimum (“free flow”) pace of the mode of observation, independent of any object motion. It serves as a general conversion between time and space. Symbolized by κ . |
| synchronize means to calibrate clocks for space-time. From Greek <i>syn</i> + <i>chron</i> + <i>ize</i> (“to occur at the same time”). | synmacronize means to calibrate measuring rods for 3D time + 1D space. From <i>syn</i> + <i>macron</i> + <i>ize</i> (“to occur at the same length”). |
| reference frame (or frame) is an abstract coordinate system and set of reference points in space-time that uniquely fix the coordinate system and standardize measurements. rest frame of a body is the reference frame in which the body is not moving as the time increases, which is the time conversion pace. | reference timeframe (or timeframe) is an abstract coordinate system and set of reference points in time-space that uniquely fix the coordinate system and standardize measurements. freeflow timeframe of a body is the reference timeframe in which the body is not moving as the stance increases, which is the stance conversion speed. |
| Galilean space-time is a context in which the measurement of time is the same for all observers (i.e., absolute time), and the measurement of space is relative to the motion of each observer. The Galilean space-time transformation of space is: $r' = r - vt$. | Galilean time-space is a context in which the measurement of space is the same for all observers (i.e., absolute stance), and the measurement of time is relative to the motion of each observer. The Galilean time-space transformation of time is: $t' = t - ur$. |
| Lorentz transformation is the set of equations that relate space and time coordinates of reference frames moving at a constant velocity relative to each other. | Lorentz transformation is the set of equations that relate space and time coordinates of reference timeframes moving at a constant lenticity relative to each other. |
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