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The Asymmetry is Our World

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Because the electromagnetic interaction is symmetric (transition probabilities "back and forth" are equal), it is not possible to observe an "arrow of time" (anything). But the asymmetry due to gravity (collapsing particles [1] or time acceleration - outer red shift and inner blue shift) enables us to distinguish our time (such as from periodic revolutions or stellar nucleosynthesis energy). Artifacts (instruments), that we are using, may look like (electromagnetic, chemical) "sources" (of energy, information and so on) but they are only conserving (or "lose" making - called from an unwanted direction) and transforming gravity. Converging waves (of electromagnetic field and quantum wave function collapse) ordinarily exist (and symmetrically in an occurrence within electromagnetic scope) but diverging waves "dominate" (from particle collapsing) and this difference is observed. This asymmetry is time itself and every (observable) "physical quantity" is (must be) convertible to time/frequency (by "fundamental physical phenomenon" and its constant with a conventional value [2]). And more, only asymmetry can be observed. In contrast to common belief (symmetry tendency), we cannot distinguish perfect mirror image/reality without mirror asymmetry (imperfections, touches, finite size). And also, for example, the translational symmetry in time and space is (relatively) not observable because the conservation of energy means no observable power - same as the conservation of momentum (no net force as in the third law of motion).

The "source" can be concentrated by means of a "randomly" distributed matter in space and time by bending and delaying "time". It causes that energy levels are inhomogeneously (unequally) occupied - low lying levels in "cold" matter (such as on the Earth) and high lying in "hot" matter (such as stellar plasma). But all these asymmetries must be derived from a time (acceleration). This is also the case of weak chirality asymmetry. Anisotropy of beta decay is a consequence of chirality stored in a nucleus. Its chiral anapole moment can be formed as a relativistic poloidal electron current shielding (partially "neutronizing") a toroidal proton current (created "classically" as orbiting [3]). Resulting chirality cannot be reversed without an energy of a few MeV per particle (nucleus must be disassembled into individual protons and electrons). But the asymmetry of nuclear chiralities on the Earth can be caused by the majority of nuclei coming from a one-hemisphere (or jet) of rotating stellar nucleosynthesis (with given chirality). Similarly as a "naturally" preferable chirality of some molecules it is not a fundamental law (parameter) but only a random inhomogeneity. The relative anisotropy of detected particle production (with symmetrical chiralities) in colliders such as "forward-backward" or "left-right" asymmetry can be also given by the same asymmetry in the chirality of nuclei (chiral cross section) in detectors (i.e. chirality is always relative (behaves as helicity) on a fundamental level).

[1] P.Křen: Collapsing Particles, 2008, http://wbabin.net/science/kren6.pdf
[2] P.Křen: Notes on Relativity, 2005, http://wbabin.net/science/kren.pdf
[3] P.Křen: The Source, the Field or the Metric?, 2006, http://wbabin.net/science/kren3.pdf