

Conservation Laws

Physics

What must balance in any particle interaction.

Quantities conserved in particle interactions.

Always conserved

Charge, without exception

Baryon number: +1 per baryon

Lepton number, per family

Energy, relativistically

Momentum, relativistically

Sometimes conserved

Strangeness — not in weak interactions

Parity — violated by the weak force

Isospin — approximate only

Charge conjugation — violated in weak decays

Strangeness violation is the signature of a weak interaction. It is how weak decays are identified experimentally.