Trust thermodynamics!

Why?

Compare the energetic assumptions:

Theoretical Physics uses:

Special Relativity (1905)

- mass points without volume
- uniform and straight movement in empty space (complete separability)
- rigid bodies consisting of mass points
- no potential energy ($E_{pot} = 0$)
- Inertial systems as rigid bodies
- construction of space from inertial systems: What the observer is seeing is (sometimes) real
- Primacy of geometry over matter
- **relative and symmetrical time**
- reversibility of all processes
- Absolute constancy of *c* …

Applied Sciences use:

Thermodynamics (1850, 1865)

- 1th law (principle of energy conservation)
- **absolute time**
- 2th law (irreversibility of all processes, arrow of time)