

24.10: Thinking about the material

Reflect and research

1. How did Michelson and Morley demonstrate that the ether does not exist?
2. Why is 1905 the “year of physics”?
3. Give an example of a device that you use that is affected by relativistic effects.
4. How do you resolve the twin paradox? Can you show it on a space-time diagram?
5. What did Lorentz do and when?
6. Apart from the space-time interval, s , what else is Lorentz invariant?
7. What is Cherenkov radiation?

To try at home

1. Build a particle accelerator.
2. Look up a video illustrating the barn paradox, and other relativistic effects.

To try in the lab

1. Propose an experiment to measure the speed of light.
2. Propose an experiment to test relativistic effects with electro magnetism.

This page titled [24.10: Thinking about the material](#) is shared under a [CC BY-SA 4.0](#) license and was authored, remixed, and/or curated by [Ryan D. Martin, Emma Neary, Joshua Rinaldo, and Olivia Woodman](#) via [source content](#) that was edited to the style and standards of the LibreTexts platform.