



The blue lines of  $x = ct$  represent the Space, the red slices of  $t = ct$  represent the time.

- Aristotle's group preserves space and time means that any element of this group maps a blue line into a blue line and a red slice into a red slice.
- Galilei's group preserve time means that Galilei's group map a red slice into a red slice. But it doesn't preserve the space anymore since it doesn't map a blue line into a blue line (necessarily).

This is what we mean when we say that for Aristotle there is an absolute space and an absolute time, and for Galilei time remains absolute but not space.