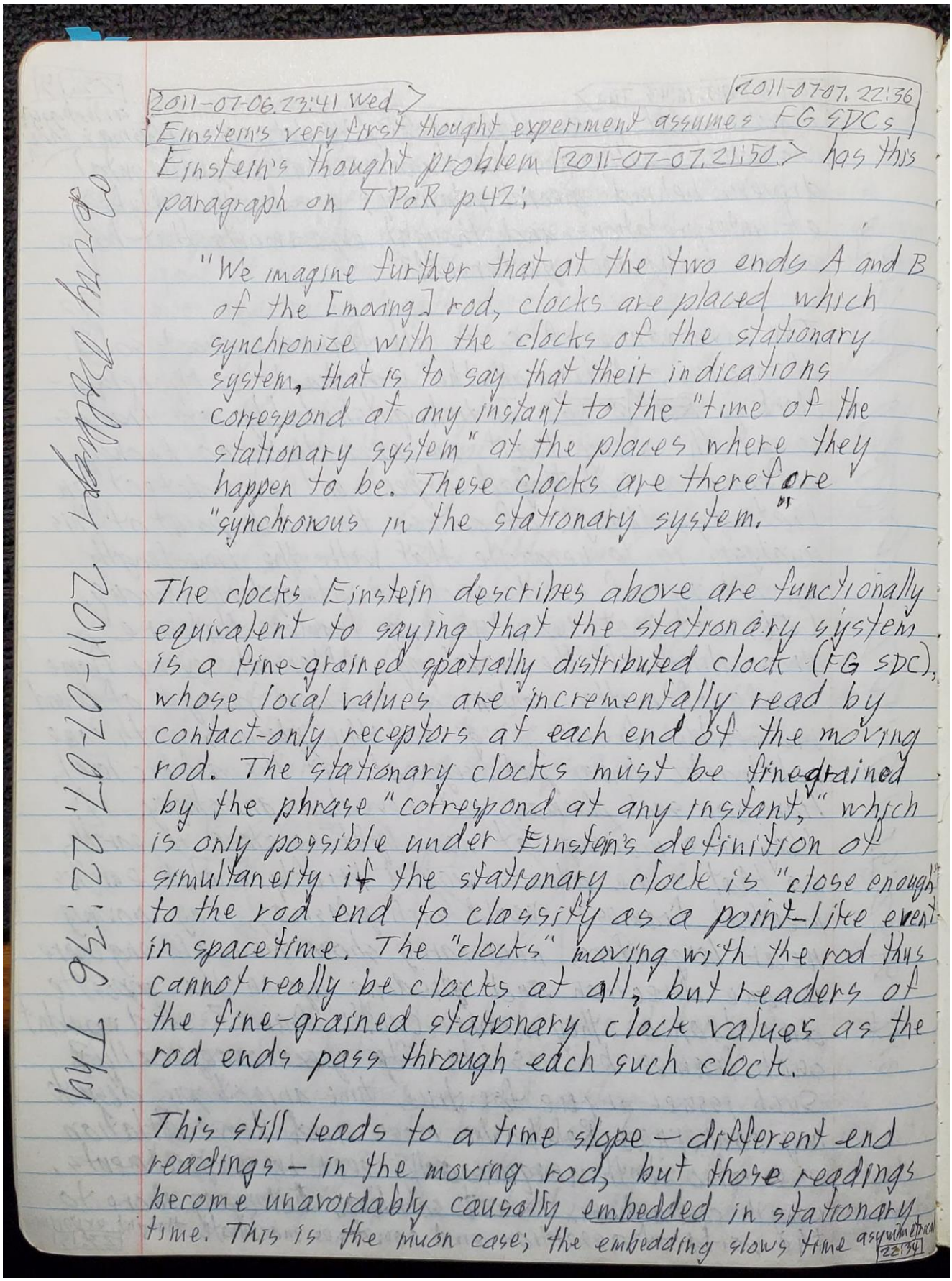

2011-07-06.23:41 Wed
2011-07-07.22:36
Einstein's very first thought experiment assumes FG SDCs
Einstein's thought problem 2011-07-07.21:50 has this paragraph on TPoR p.42:

"We imagine further that at the two ends A and B of the [moving] rod, clocks are placed which synchronize with the clocks of the stationary system, that is to say that their indications correspond at any instant to the "time of the stationary system" at the places where they happen to be. These clocks are therefore "synchronous in the stationary system."

The clocks Einstein describes above are functionally equivalent to saying that the stationary system is a fine-grained spatially distributed clock (FG SDC), whose local values are incrementally read by contact-only receptors at each end of the moving rod. The stationary clocks must be fine-grained by the phrase "correspond at any instant," which is only possible under Einstein's definition of simultaneity if the stationary clock is "close enough" to the rod end to classify as a point-like event in spacetime. The "clocks" moving with the rod thus cannot really be clocks at all, but readers of the fine-grained stationary clock values as the rod ends pass through each such clock.

This still leads to a time slope – different end readings – in the moving rod, but those readings become unavoidably causally embedded in stationary time. This is the muon case; the embedding slows time asymmetrical 22:34

2011-07-07.22:36 Thu

[2011-07-06.23:41 Wed] [2011-07-07.22:36]

Einstein's very first thought experiment assumes FG SDCs

Einstein's thought problem [2011-07-07.21:50> has this paragraph on TPoR p. 42:

> "We imagine further that at the two ends A and B of the [moving] rod, clocks are place which synchronize with the clocks of the stationary system, that is to say that their indications correspond at any instant to the "time of the stationary system" at the places whee they happen to be. These clocks are therefor "synchronous in the stationary system."

The clocks Einstein describes above are functionally equivalent to saying that the stationary system is a fine-grained spatially distributed clocks (FG SDC), whose local values are increasingly read by the contact-only receptors at each end of the moving rod. The stationary clocks must be fine-grained by the phrase "corresponds at any instant," which is possible only under Einstein's definition of simultaneity if the stationary clock is "close enough" to the rod end to classify as a point-like event in spacetime. The "clocks" moving with the rod thus cannot really be clocks at all, but readers of the fine-grained stationary clock values as the rod ends pass through each such clock.

This still leads to a time slow – different end readings – in the moving rod, but those readings become unavoidably causally embedded in the stationary time. This is the muon case; the embedding slows time asymmetrically.

[22:34]

Terry Bollinger 2011-07-07.22:36 Thu