

NYU Physics I

2017-12-05

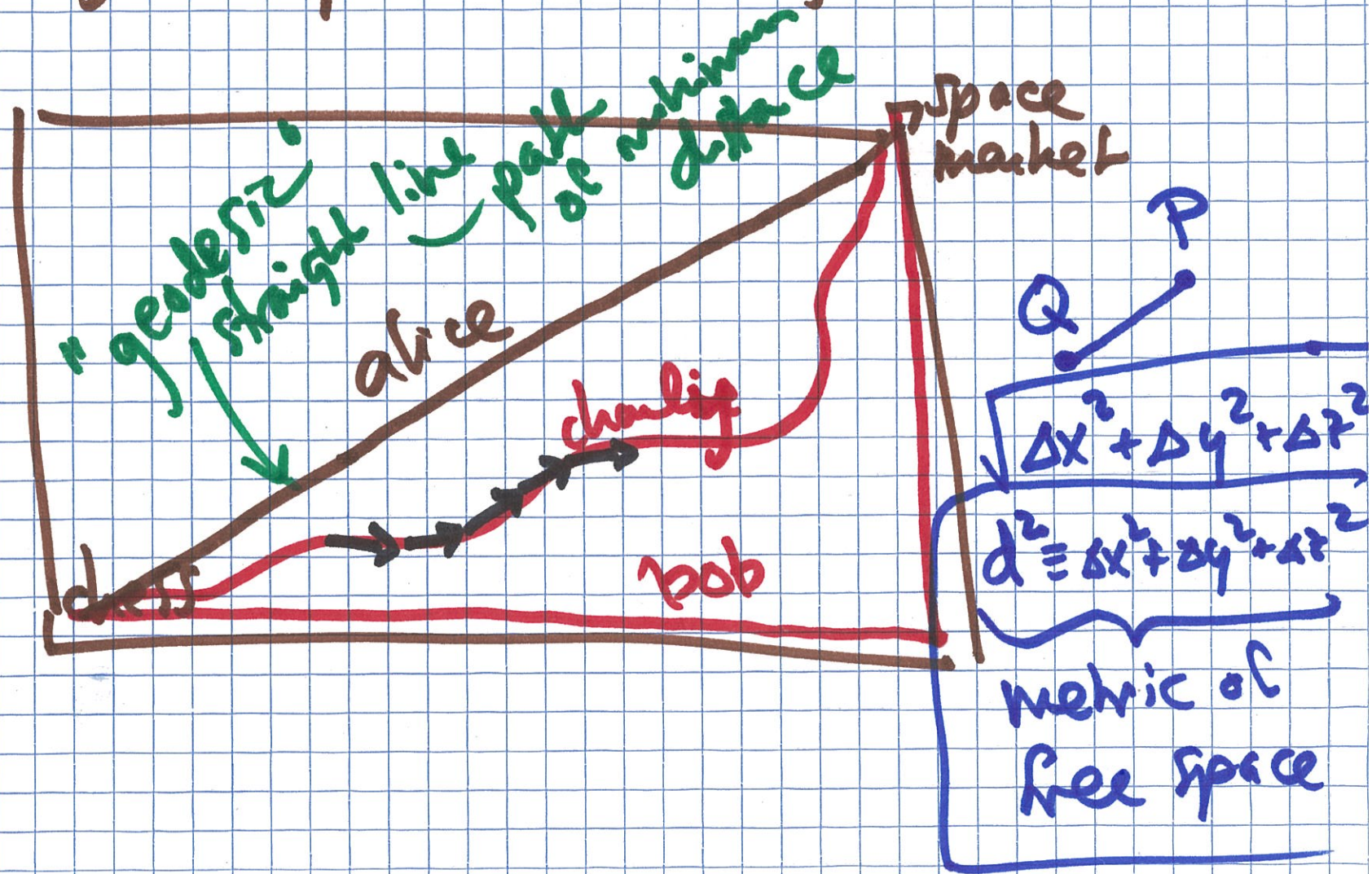
Agenda — twin paradox.

— reading — Chs 4, 5

— questions.

— term exam 6

Washington Square Park paradox.





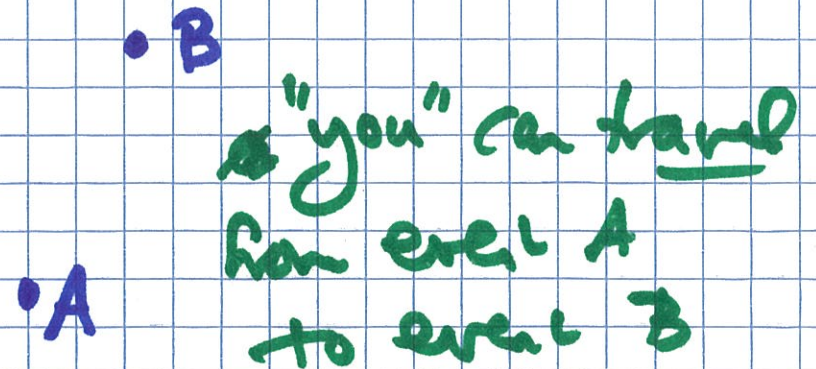
geodesic in SR & GR:
the path between
events with maximal
proper time.

$$\Delta S^2 = c^2 \Delta t^2 - \Delta x^2 - \Delta y^2 - \Delta z^2$$

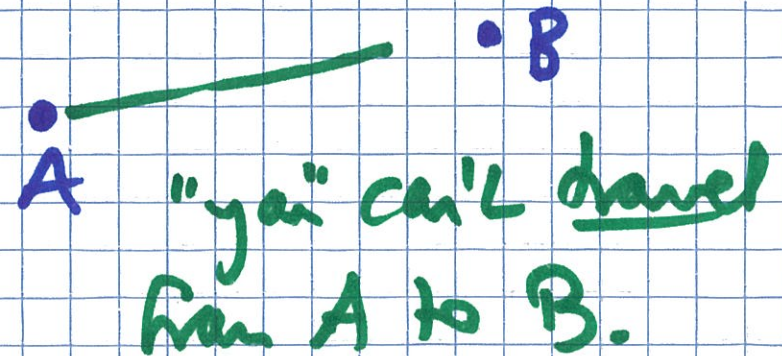
metric of ^{empty} space-time

time-like
null light like
space-like

time-like separation:
events are ordered
(A is before B)



space-like separation:
events are in different
order in different
frames!



When you change frames, ΔS^2 remains
invariant