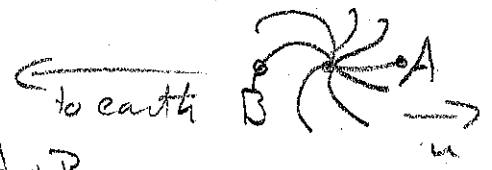


# Examples of Spacetime Diagrams

Back to the Moving Galaxy and 2 supernovae

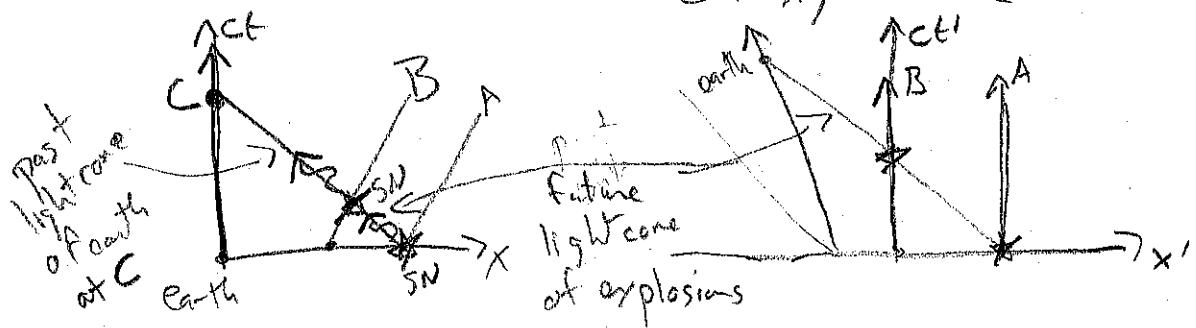
Recall the problem: Galaxy moves away from us at constant speed.



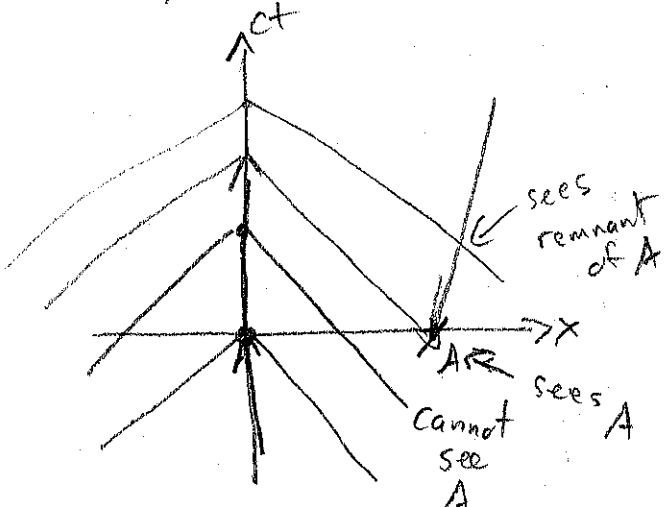
Explosions occur at spacetime points A+B  
Light from them reaches earth at the same time

Earth's frame

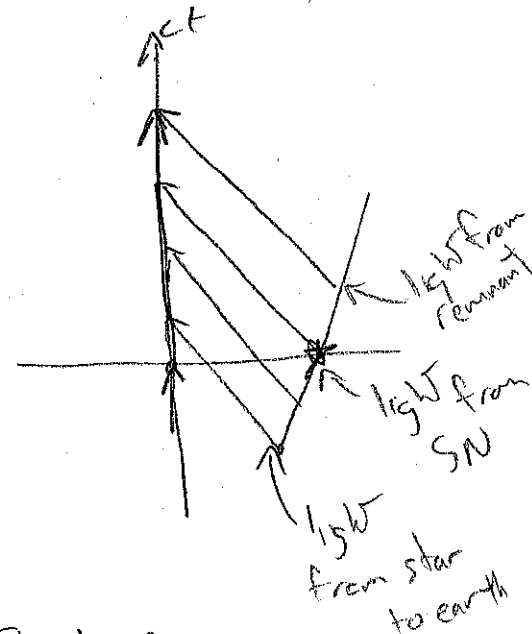
Galaxy's frame



One more point. Earth's worldline + explosions are spacelike separated at some points, then lightlike + timelike separated



Earth's past lightcones



Star's future lightcones

Just looking at the star/SN from A.

Hopefully this gives you a picture of the problem.