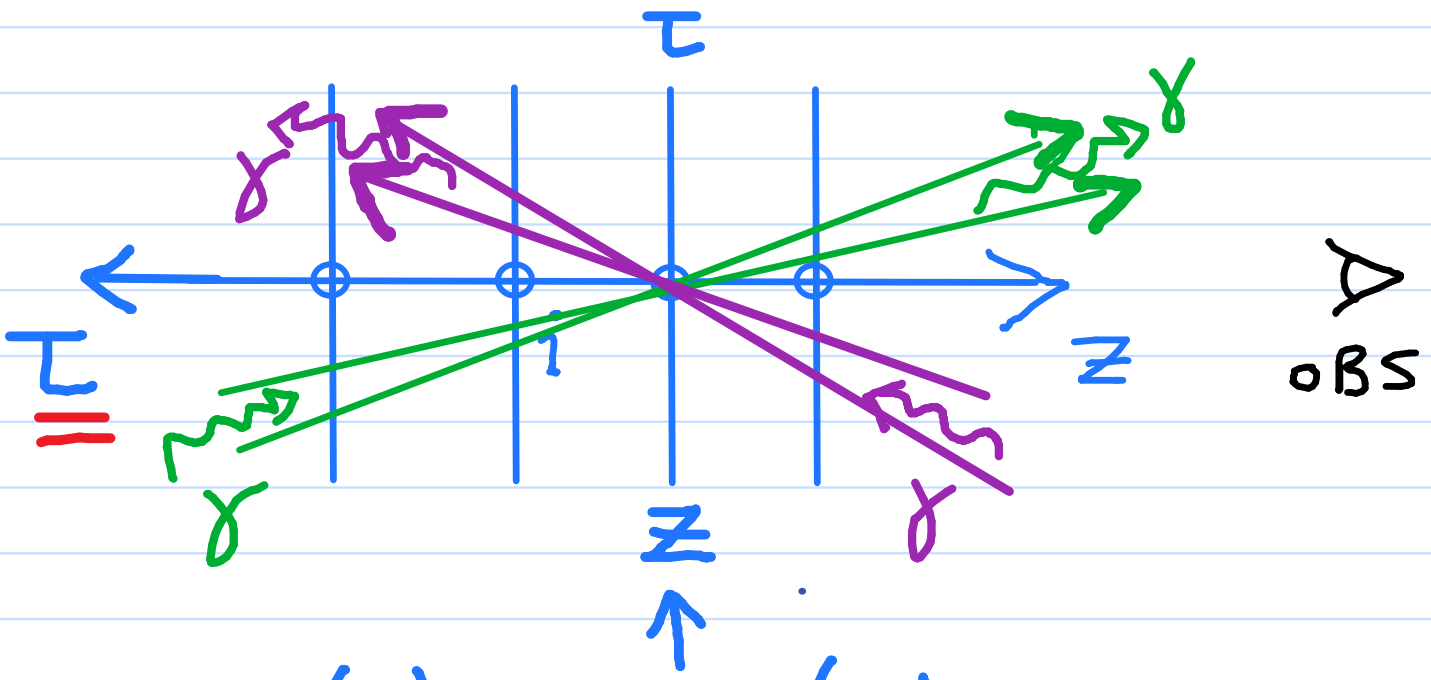
THERMAL EQUILIBRIUM: $T_{KIN}(\tau)$

F_{TOT} = TOTAL ENERGY FLUX

$(erg/s/cm^2)$

-NET AREA POWER DENSITY IN +ve z DIRECTION

1D FLUX-CONSTANT MODEL:



$$F_{TOT}(\tau) = F_{TOT}(z) = CONST.$$

$$\therefore \frac{dF_{TOT}(\tau)}{d\tau} = \frac{dF_{TOT}(z)}{dz} = 0$$

IN GENERAL:

$$F_{TOT}(\tau) = \mathcal{F}_{RAD}(\tau) + F_{CONVEC}(\tau) + F_{CONDUCT}(\tau) + F_{MECH}(\tau) + F_{ACOUSTIC}(\tau) + F_{MHD}(\tau)$$

B, A STARS:

$$F_{TOT}(\tau) \approx \mathcal{F}_{RAD}(\tau) = C$$

$$= \mathcal{F}_{RAD}(0) \equiv \sigma T_{eff}^4$$

FGKM STARS:

$$F_{TOT}(\tau) \approx \mathcal{F}_{RAD}(\tau) + F_{CONVEC}(\tau)$$