







Memorandum





$1/e^{m/n} \approx 1/e^{m/n} + 1/e^{m/n}$



$$\text{Mean source} / K = \text{Tree} + \text{Env} + B_s * e^{-T} * B$$





$$T_B = T_{cal} * \frac{(Mean\_source - Mean\_atm)}{(Mean\_load - Mean\_atm)}$$

$$I_{cal} = (I_{load} - I_{emi}) \frac{e^{\tau}}{B_s}$$

$$T_{sys} = \frac{T_{cal} * Mean_{atm}}{Mean_{load} - Mean_{atm}}$$



$$T_{emi} = \frac{(T_{load} + T_{rec}) * Mean_{atm}}{Mean_{load}} - T_{rec}$$

$$T_{sky} = \frac{T_{emi} - (1. - F_{eff}) * T_{cab}}{F_{eff}}$$







$$T_{sky} = \frac{T_{sky_s} + T_{sky_i} * Gain_i}{(1. + Gain_i)}$$



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$$T_{cal} = \frac{(T_{load} * (1. + Gain_i) - T_{emi_s} - Gain_i * T_{emi_i})}{B_s * e^{-Tau_s * Air\_mass}}$$











A pixelated, black and white graphic of the text "I am a girl" in a stylized, blocky font. The letters are composed of various shades of gray and black pixels, giving it a digital, low-resolution appearance. The text is arranged in a single line, with the "I" being significantly larger and more prominent than the other characters. The overall style is reminiscent of early computer graphics or digital art from the late 20th century.

1990





$$T_{rec} = \frac{T_{load} * Mean_{atm} - T_{emi} * Mean_{load}}{Mean_{load} - Mean_{atm}}$$

$$T_{rec} = \frac{T_{load} * Mean_{cold} - T_{cold} * Mean_{load}}{Mean_{load} - Mean_{cold}}$$







$$I_{sky} = I_{atm} * (1 - e^{-I_{atm} * Air\_mass})$$

$$I_{sky_i} = I_{atm_i} * (1 - e^{-I_{atm_i} * Air\_mass})$$









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$$1 + \text{Gain}_i * e(T_{\text{av}_s} - T_{\text{av}_i}) * \text{Air\_mass}$$

es (I am i-I am) * Air mass / Green



$$I_{load} I_{load} / I_{rec} = I_{rec} + C_{eff} * I_{load} + (1 - C_{eff}) * I_{em}$$

$$T_{cal} = C_{eff} * \frac{(T_{load} - T_{emi}) * (1. + Gain_i)}{B_s * e^{-\tau_{a-s} * Air\_mass}}$$

$$T_{emi} = \frac{(T_{load} + T_{rec}) * Mean_{atm} * C_{eff}}{Mean_{load} - (1 - C_{eff}) * Mean_{atm}} - T_{rec}$$

$$T_{rec} = \frac{C_{eff} * Mean\_atm * T_{load} - (Mean\_load - (1 - C_{eff}) * Mean\_atm) * T_{emi}}{Mean\_load - Mean\_atm}$$

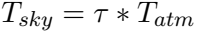


Moderna Inc. vs. Pfizer Inc.

$$T_{emi} = \frac{\eta * (T_{rec} + T_{load}) * Mean\_atm}{Mean\_load} - T_{rec}$$

$$T_{rec} = \frac{Mean\_cold * T_{load} - Mean\_load * T_{cold}}{Mean\_load - \eta * Mean\_cold}$$

$$T_B = e^{\tau} \frac{\eta}{B_s} (T_{load} + T_{rec}) \frac{Mean\_sou - Mean\_atm}{Mean\_load}$$





$$I_{ema} = I_{ef} * I_{om} + (1 - I_{ef}) * I_{ob}$$

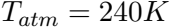
$$\pi = (\pi_{mi} (1 - \pi_{cab}) * \pi_{cab}) / (\pi_{ei} * \pi_{ab})$$

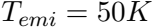
$$I_{\text{cell}} = (I_{\text{load}} + I_{\text{diode}}) / (1 - \pi) * B_s$$

$$T_{cal} = C_{eff} \frac{(T_{load} - T_{emi}) * (1 + Gain_i) * T_{atm} * F_{eff}}{B_s * (F_{eff} * (T_{atm} - T_{cab}) + T_{cab} - T_{emi})}$$

$$T_{cal} = C_{eff} \frac{F_{eff} * (1 + Gain_i) * T_{atm}}{B_s * (1 - F_{eff} * \frac{T_{cab} - T_{atm}}{T_{cab} - T_{emi}})}$$

[illegible]







$$T_{cal} = \frac{240 * (1 + Gain_i) * F_{eff}}{B_s * (1 - 0.2 * F_{eff})}$$

$$I_{em} = (1 - F_{ref}) * I_{cab} + F_{ref} * C_{te} * M_{water} * Air_{mass}$$

$$\frac{\partial T_{cal}}{\partial T_{rec}} = \frac{\partial T_{cal}}{\partial T_{emi}} \frac{\partial T_{emi}}{\partial T_{rec}} + \frac{\partial T_{cal}}{\partial T_{au}} \frac{\partial T_{au}}{\partial T_{rec}}$$

$$\frac{\partial T_{cal}}{\partial T_{emi}} = \frac{T_{cal}}{T_{emi} - T_{load}}$$

$$\frac{\partial T_{emi}}{\partial T_{rec}} = -1 + \frac{T_{emi} + T_{rec}}{T_{load} + T_{rec}}$$

$$\frac{\partial T_{cal}}{\partial T_{emi}} = \frac{T_{cal}}{T_{load} + T_{rec}}$$

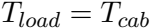
$$\frac{\partial T_{cal}}{\partial T_{av}} = Air\_mass * T_{cal}$$

$$\frac{\partial T_{ar}}{\partial T_{rec}} = \frac{\partial T_{ar}}{\partial T_{emi}} \frac{\partial T_{emi}}{\partial T_{rec}}$$

$$\frac{\partial T_{av}}{\partial T_{rec}} = \frac{1}{Air_{mass} * T_{atm} * F_{eff}} \frac{\partial T_{emi}}{\partial T_{rec}}$$

$$\frac{\partial T_{cal}}{\partial T_{au}} \frac{\partial T_{au}}{\partial T_{rec}} = \frac{T_{cal}}{T_{atm} * F_{eff}} \frac{T_{emi} - T_{load}}{T_{load} + T_{rec}}$$

$$\frac{1}{T_{cal}} \frac{\partial T_{cal}}{\partial T_{rec}} = \frac{T_{atm} * F_{eff} - T_{load} + T_{emi}}{F_{eff} * T_{atm} * (T_{load} + T_{rec})}$$



$$\frac{1}{T_{cal}} \frac{\partial T_{cal}}{\partial T_{rec}} = \frac{F_{eff} - 1}{F_{eff}} \frac{1}{T_{load} + T_{rec}}$$







$$\frac{1}{T_{cal}} \frac{\partial T_{cal}}{\partial T_{cab}} = \frac{(T_{atm} - T_{emi})}{(T_{cab} - T_{emi}) * (T_{cab} - T_{emi} - F_{eff} * (T_{cab} - T_{atm}))}$$





$$\frac{1}{T_{cal}} \frac{\partial T_{cal}}{\partial F_{eff}} = \frac{1}{F_{eff}} + \frac{1}{\frac{T_{cab} - T_{emi}}{T_{cab} - T_{atm}} - F_{eff}}$$

$$\frac{\partial T_{cal}}{\partial C_{eff}} = \frac{T_{cal}}{C_{eff}} - \frac{T_{cal}}{T_{load} - T_{emi}} \frac{\partial T_{emi}}{\partial C_{eff}}$$

$$\frac{\partial T_{emi}}{\partial C_{eff}} = \frac{(T_{emi} + T_{rec})^2}{T_{load} + T_{rec}}$$

$$\frac{1}{T_{cal}} \frac{\partial T_{cal}}{\partial C_{eff}} = \frac{1}{C_{eff}} - \frac{(T_{emi} + T_{rec})^2}{C_{eff}^2 * (T_{load} + T_{rec}) * (T_{load} - T_{emi})}$$

$$\frac{\partial T_{cal}}{\partial \eta} = \frac{T_{cal}}{\eta} + \frac{\partial T_{av}}{\partial \eta} \frac{\partial T_{cal}}{\partial T_{av}} + \frac{\partial T_{rec}}{\partial \eta} \frac{\partial T_{cal}}{\partial T_{rec}}$$

$$\frac{\partial T_{av}}{\partial \eta} = \frac{1}{T_{atm} * F_{eff}} \frac{\partial T_{emi}}{\partial \eta}$$

$$\frac{\partial T_{emi}}{\partial \eta} = - \frac{T_{emi} + T_{rec}}{\eta^2} + \frac{\partial T_{rec}}{\partial \eta} \frac{T_{emi} - T_{load}}{T_{load} + T_{rec}}$$

$$\frac{1}{T_{cal}} \frac{\partial T_{cal}}{\partial \eta} = \frac{\eta * T_{atm} * F_{eff} - T_{emi} - T_{rec}}{\eta^2}$$

$$\frac{\partial T_{rec}}{\partial \eta} = T_{rec} \frac{T_{rec} - T_{cold}}{T_{load} - \eta * T_{cold} + (1 - \eta) * T_{rec}}$$



