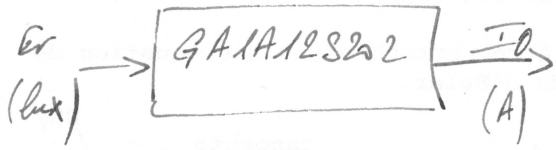
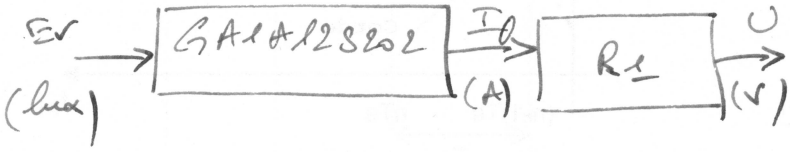
Simulation d'une chaîne de mesure de la luminosité contenant un GA1A12S202 (ADA1384)

• Modèle du capteur



$$\boxed{I_0(A) = 10^{-5} \log(Ev)} \quad (1)$$

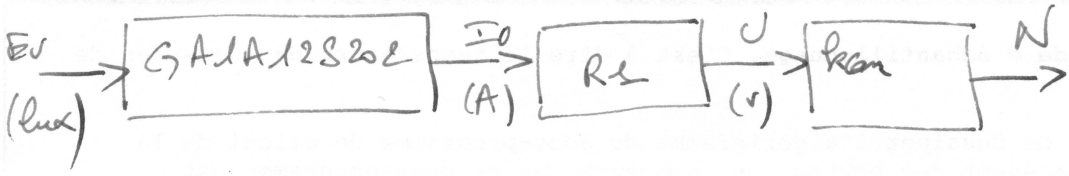
• Capteur + conditionneur



on pose $a = 10^{-5}$

$$\boxed{U = R_1 \, a \log(Ev)} \quad (2)$$

• Capteur + conditionneur + CAN

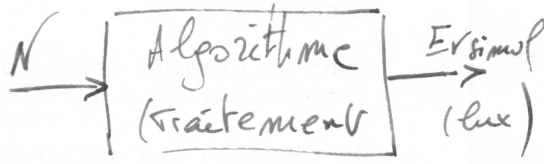


$$N = k_{CAN} . R_1 . a \log(Ev)$$

on pose $k_\phi = k_{CAN} . R_1 . a$

$$\boxed{N = k_\phi \log(Ev)} \quad (3)$$

• Algorithme de traitement



On veut $Ev_{simul} = Ev$

D'après (3) $\log(Ev) = \dfrac{N}{k_\phi}$

$$\Rightarrow \boxed{Ev_{simul} = 10^{N/k_\phi}}$$