

# Achromatisches Sehen mit relativer Leuchtdichte

## Mathematische Gleichungen mit Potenzfunktionen

$$F_{ab}(L_T, m) = b \tanh(x_r/a) = b \frac{L_T^m - L_T^{-m}}{L_T^m + L_T^{-m}} \quad \begin{array}{l} x_r = \log(L_T) \\ L_T = L/L_u \\ x_r \leq 0 \end{array} \quad [1]$$

$$\frac{dF_{ab}(L_T, m)}{dL_T} = \frac{4bm}{L_T [L_T^m + L_T^{-m}]^2} \quad \begin{array}{l} x_r = \ln L_T / \ln(10) \\ dx_r/dL_T = 1/(\ln(10) L_T) \\ m = 1/(\ln(10) a) \end{array} \quad [5]$$

$$\frac{dF_{ab}(L_T, m)}{dL} = \frac{4bm L_u}{L_T [L_T^m + L_T^{-m}]^2} \quad \begin{array}{l} dL_T = dL/L_u \\ dF_{ab}(L_T, m) = 1 \end{array} \quad [6]$$

$$\frac{L}{dL} = \frac{4bm L_u L}{L_T [L_T^m + L_T^{-m}]^2} \quad dL = \frac{L_T [L_T^m + L_T^{-m}]^2}{4bm L_u} \quad [7]$$