



**line element of light technology**  
(luminance  $L$ ) and color metrics  
with „color values“  $P, D, T$   
**luminance signal function  $F(L)$**   
**color signal functions  $F(P, D, T)$**   
**Taylor-derivations:**  
 $\Delta F(L) = \frac{dF}{dL} \Delta L$   
 $\Delta F(P, D, T) = \frac{dF}{dP} \Delta P + \frac{dF}{dD} \Delta D + \frac{dF}{dT} \Delta T$

**line element of Helmholtz**  
(1896) with „color values“  $P, D, T$   
three separate color signal functions  
 $F(P) = i \ln P$   
 $F(D) = j \ln D$   
 $F(T) = k \ln T$   
**Taylor-derivations:**  
 $\Delta F(P, D, T) = \frac{dF}{dP} \Delta P + \frac{dF}{dD} \Delta D + \frac{dF}{dT} \Delta T$   
 $\Delta F(P, D, T) = \frac{1}{P} \Delta P + \frac{1}{D} \Delta D + \frac{1}{T} \Delta T$