Linear relation CIELAB (L^*, a^*, b^*) and *adapted (a)* CIELAB ($C^*_{ab,a}$, L^*)

Television Luminous System: TLS00a

$$l^*_{lab^*} = (L^* - L^*_N) / (L^*_W - L^*_N)$$

$$a^*_a = a^*$$

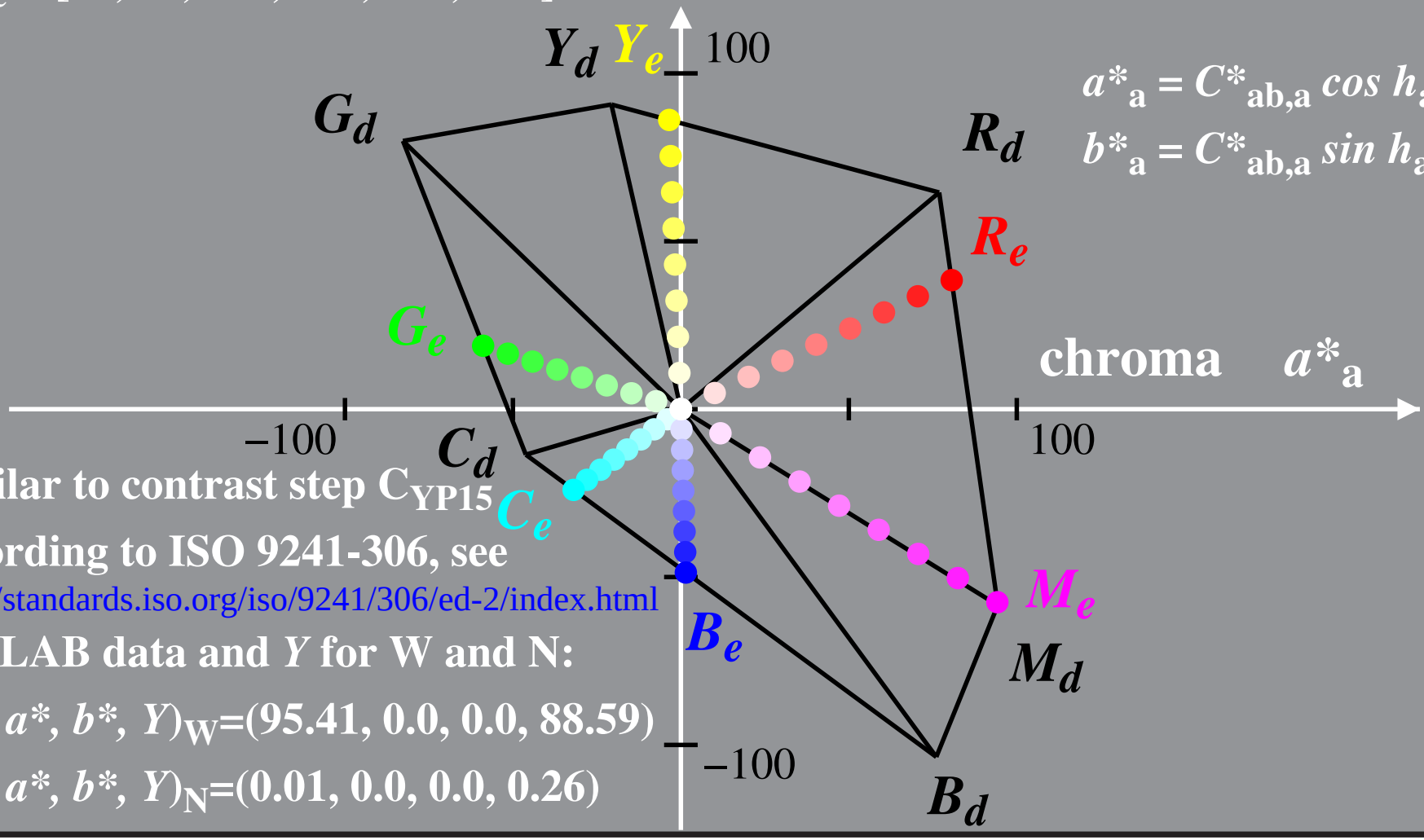
$$b^*_a = b^*$$

$$C^*_{ab,a} = [a^{*2}_a + b^{*2}_a]^{1/2}$$

CIELAB hue angles *RYGCBM:*

$h_{ab,d}$ = [40, 102, 136, 196, 306, 328]

$h_{ab,e}$ = [26, 92, 162, 217, 272, 329]



$$a^*_a = C^*_{ab,a} \cos h_{ab}$$

$$b^*_a = C^*_{ab,a} \sin h_{ab}$$

Similar to contrast step C_{YP15} according to ISO 9241-306, see
http://standards.iso.org/iso/9241/306/ed-2/index.html

CIELAB data and *Y* for W and N:

$(L^*, a^*, b^*, Y)_W$=(95.41, 0.0, 0.0, 88.59)

$(L^*, a^*, b^*, Y)_N$=(0.01, 0.0, 0.0, 0.26)