

Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_00%_00

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

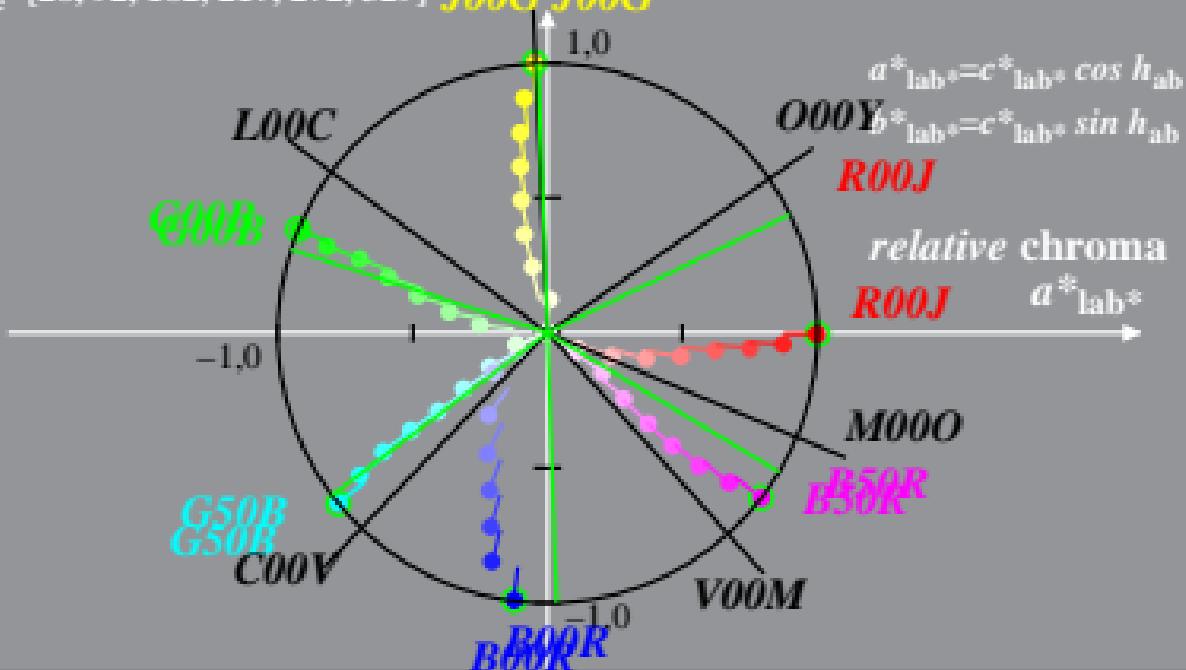
CIELAB hue angles:

$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,ex} = [26, 92, 162, 217, 272, 329] \quad b^*_{lab*} \quad M = \text{Maximum colour}$$

$$h_{ab,e} = [26, 92, 162, 217, 272, 329] \quad J00G \quad J00G$$



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_00%_01

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

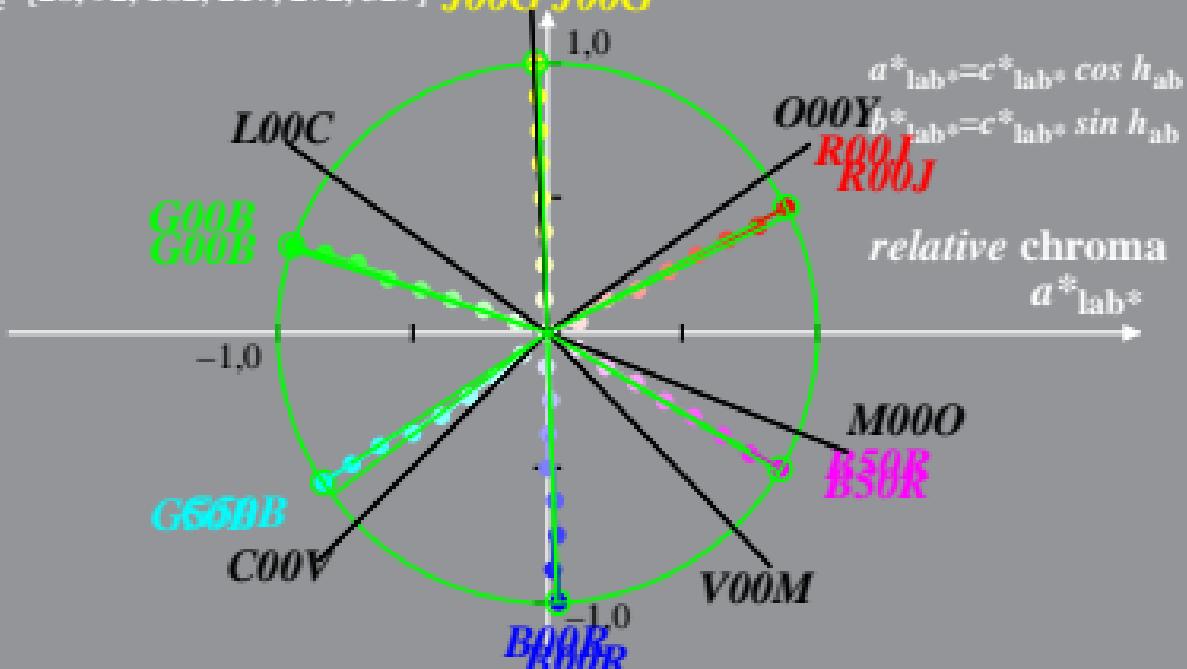
CIELAB hue angles:

$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,ex} = [26, 92, 162, 217, 272, 329] \quad b^*_{lab*} \quad M = \text{Maximum colour}$$

$$h_{ab,e} = [26, 92, 162, 217, 272, 329] \quad Y00L \quad J00G \quad J00G$$



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , I^*_{lab*})

System: HE89_FRS09_92_D65_25%_O0

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

CIELAB hue angles:

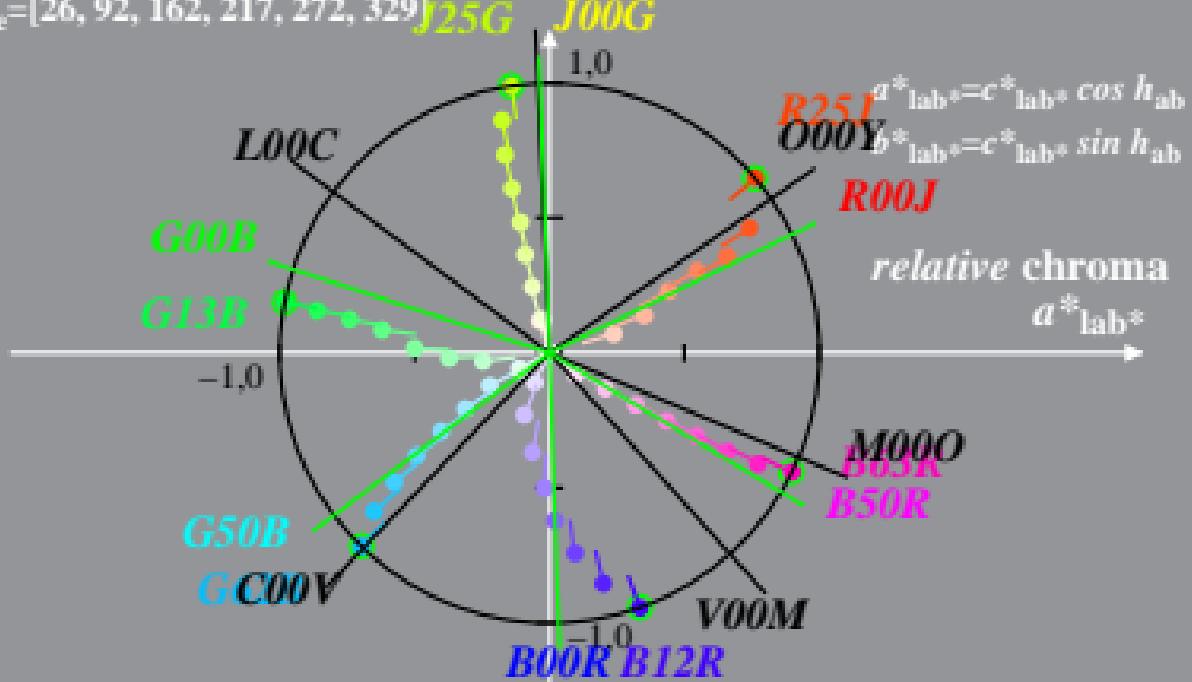
$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,ex} = [42, 109, 175, 230, 286, 343] \text{ Y00L}$$

$$h_{ab,e} = [26, 92, 162, 217, 272, 329] \text{ J25G J00G}$$

M =Maximum colour



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_25%_01

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

CIELAB hue angles:

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

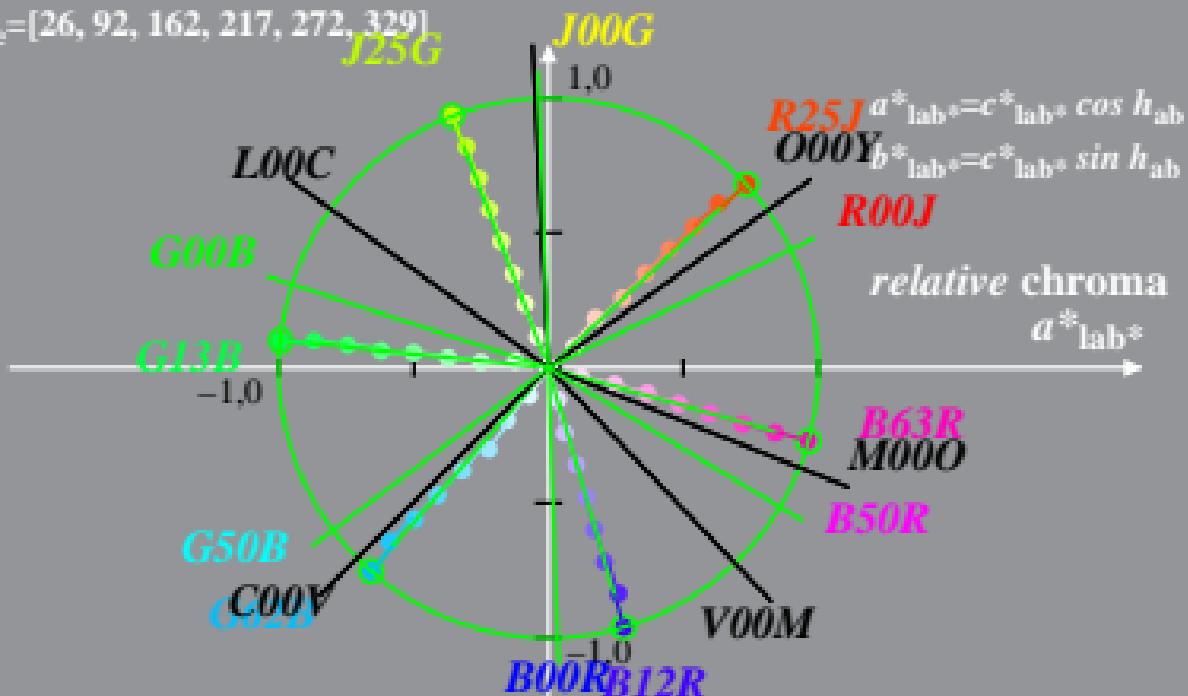
$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$b^*_{lab*}$$

M =Maximum colour

$$h_{ab,ex} = [42, 109, 175, 230, 286, 343]$$

$J00L$
 $J25G$



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_50%_O0

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

CIELAB hue angles:

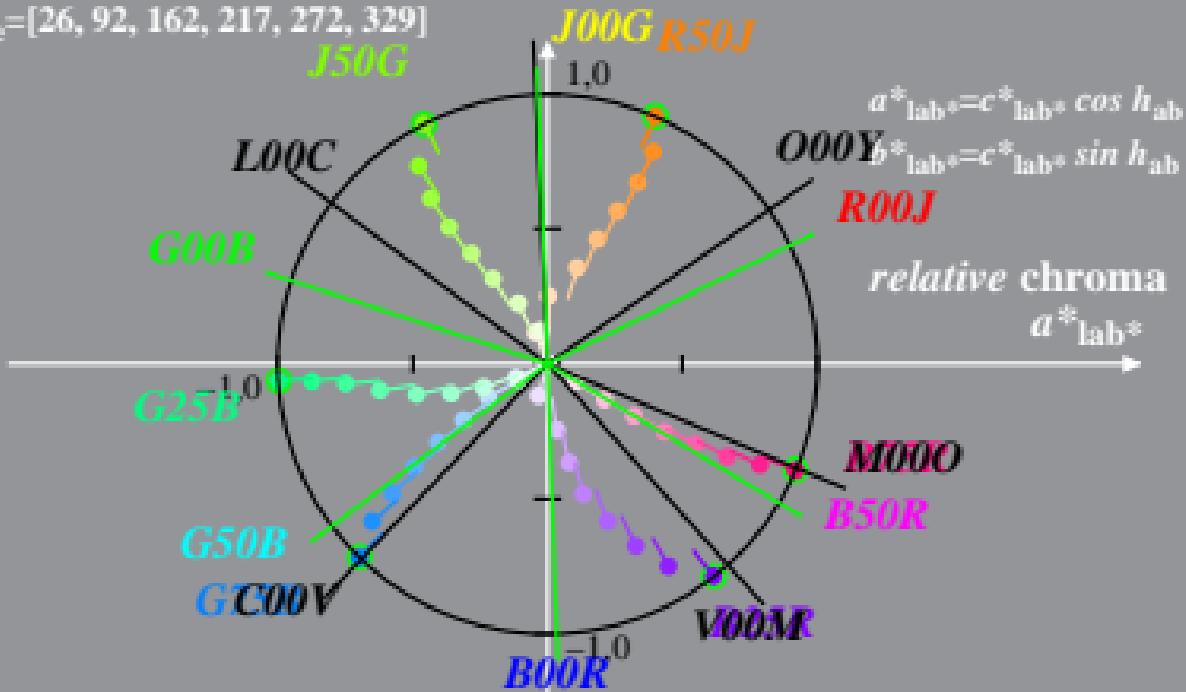
$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$b^*_{lab*}$$

M =Maximum colour
 $Y00L$

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



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_50%_01

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

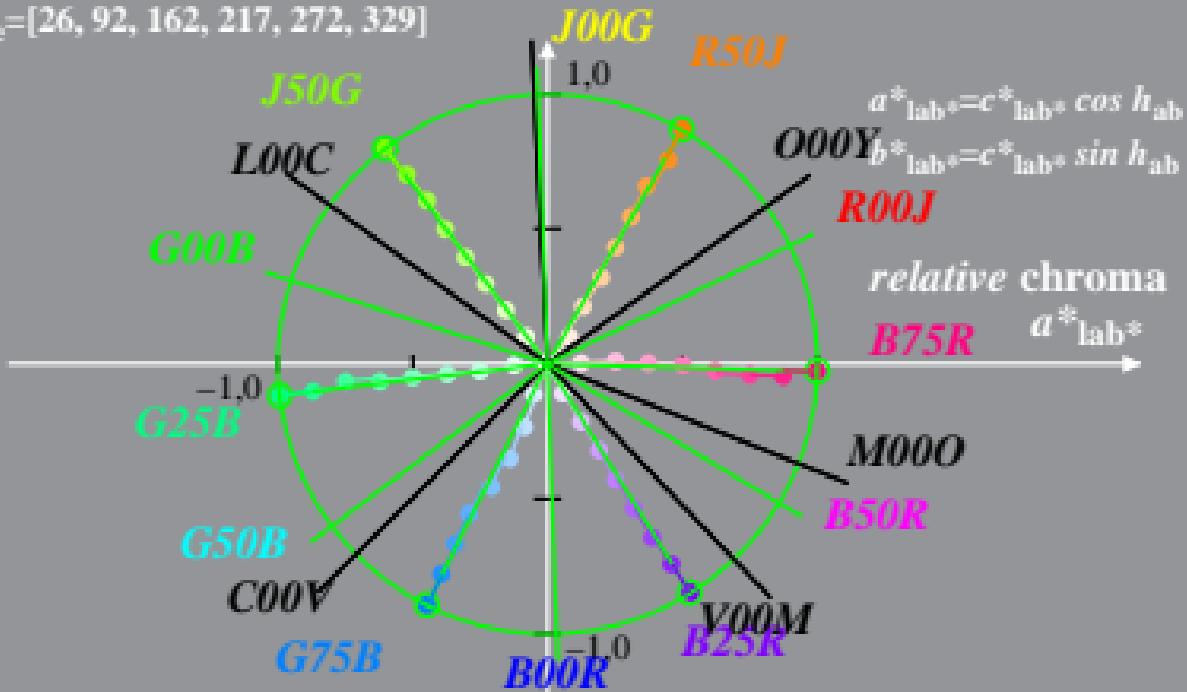
CIELAB hue angles:

$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,ex} = [59, 127, 189, 244, 300, 357] \quad b^*_{lab*} \quad M = \text{Maximum colour}$$

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



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_75%_O0

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

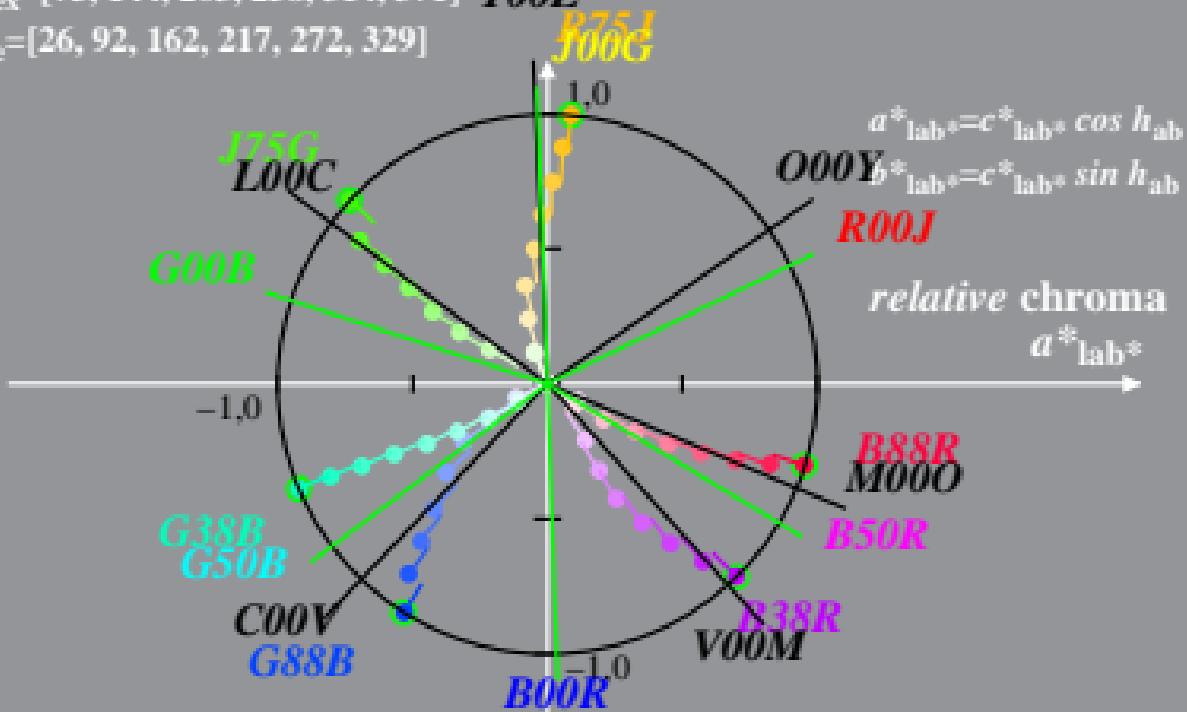
CIELAB hue angles:

$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,ex} = [75, 144, 203, 258, 314, 371] \quad b^*_{lab*} \quad M = \text{Maximum colour}$$

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



Adapted (a) CIELAB ($C^*_{ab,a}$, L^*) and relative CIELAB (c^*_{lab*} , l^*_{lab*})

System: HE89_FRS09_92_D65_75%_01

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

CIELAB hue angles:

$$h_{ab,d} = [35, 92, 143, 224, 313, 338]$$

$$c^*_{lab*} = C^*_{ab,a} / C^*_{ab,a,M}$$

$$h_{ab,ex} = [75, 144, 203, 258, 314, 371] \text{ Y00L}$$

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

b^*_{lab*} M=Maximum colour

