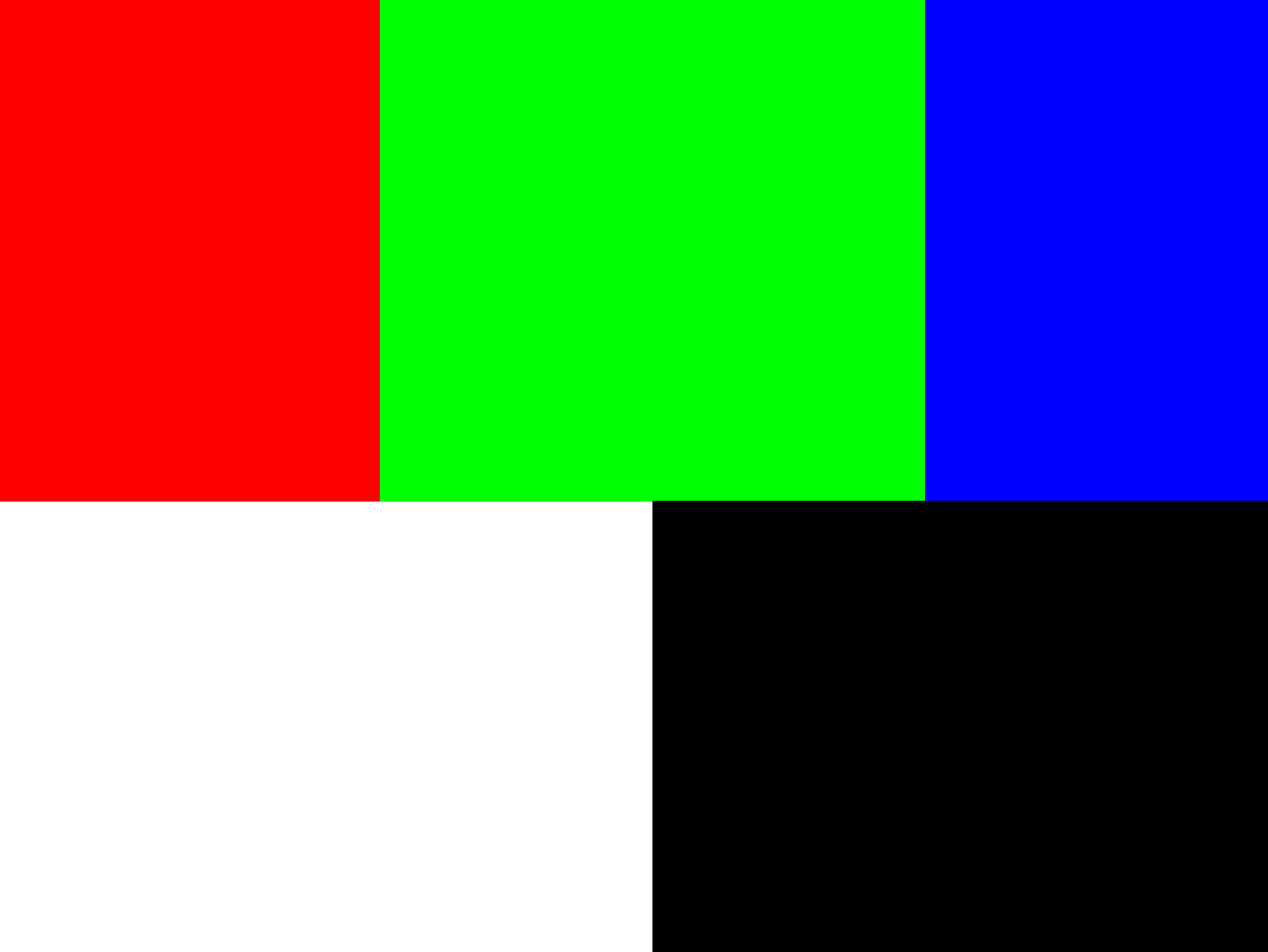
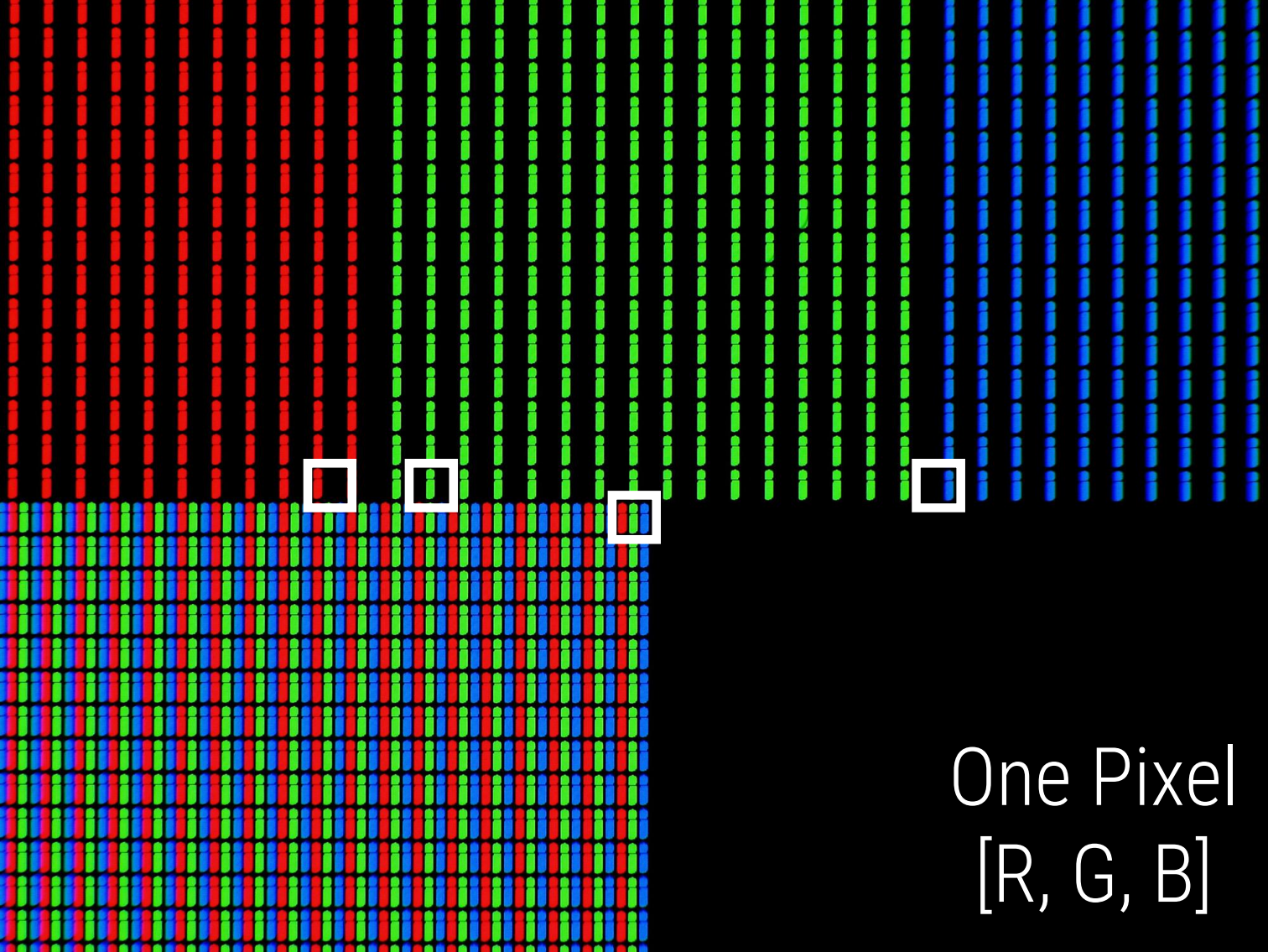


Gamma Correction with vcc-gamma

VCC Lab.

Apr. 25 2017



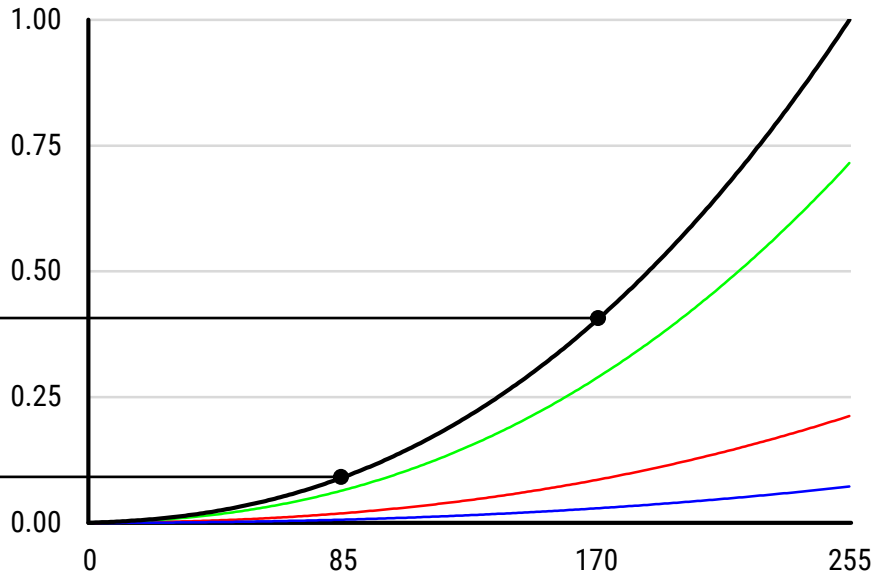
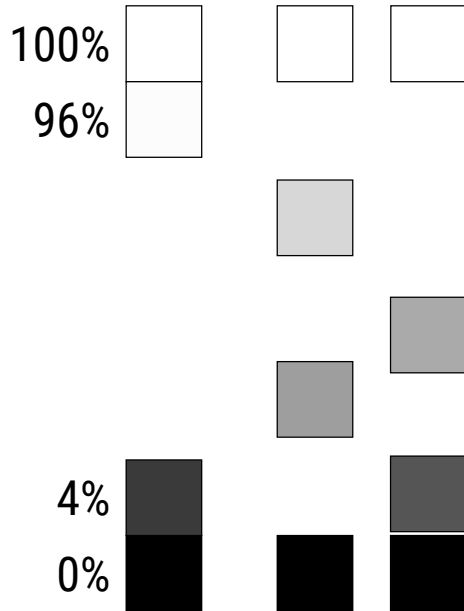


One Pixel
[R, G, B]

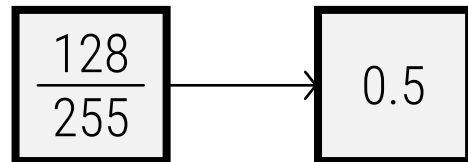
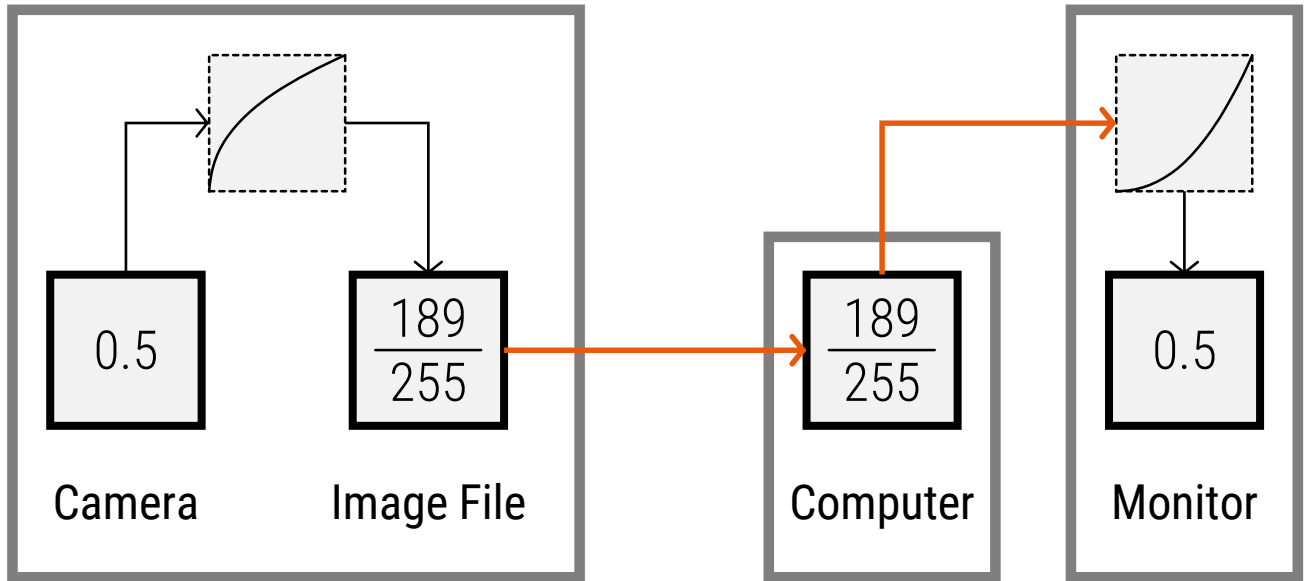
sRGB Color Profile



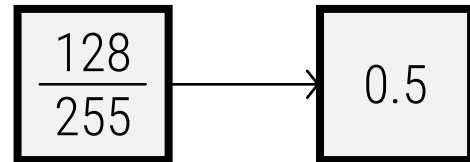
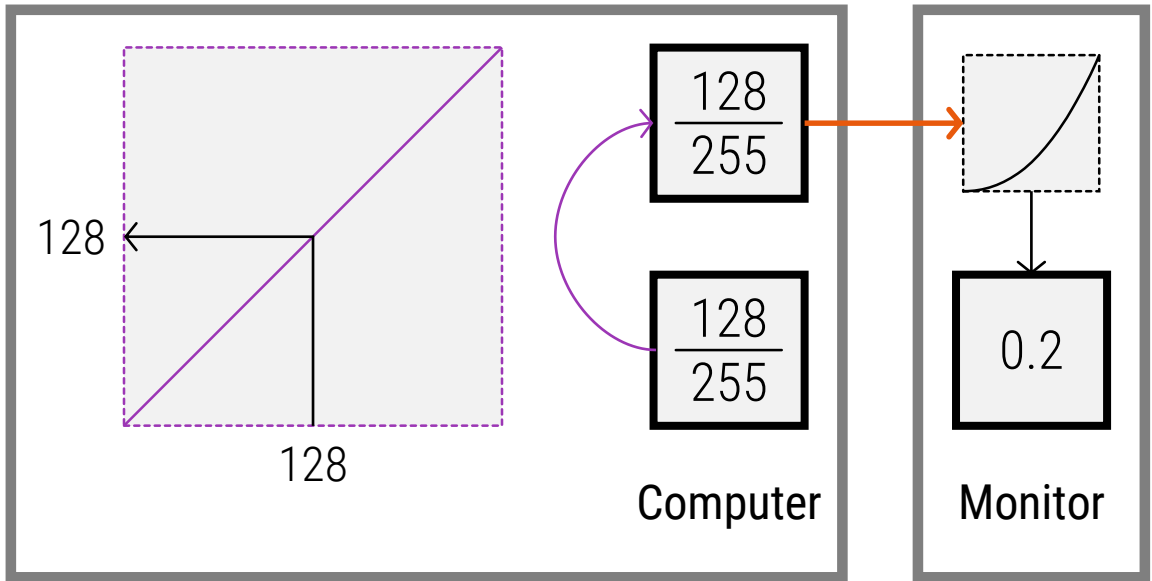
$$C_{Linear} = \begin{cases} \frac{C_{sRGB}}{12.92}, & C_{sRGB} \leq 0.04045 \\ \left(\frac{C_{sRGB} + 0.055}{1.055} \right)^{2.4}, & C_{sRGB} > 0.04045 \end{cases}$$



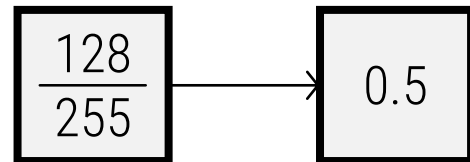
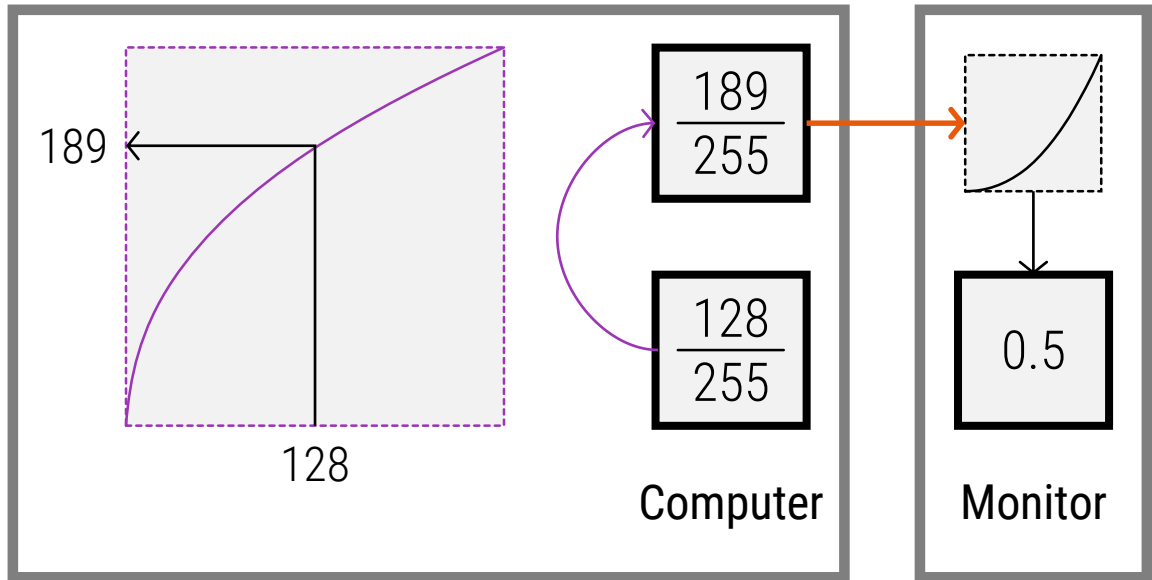
Camera \rightarrow Image File \rightarrow Monitor



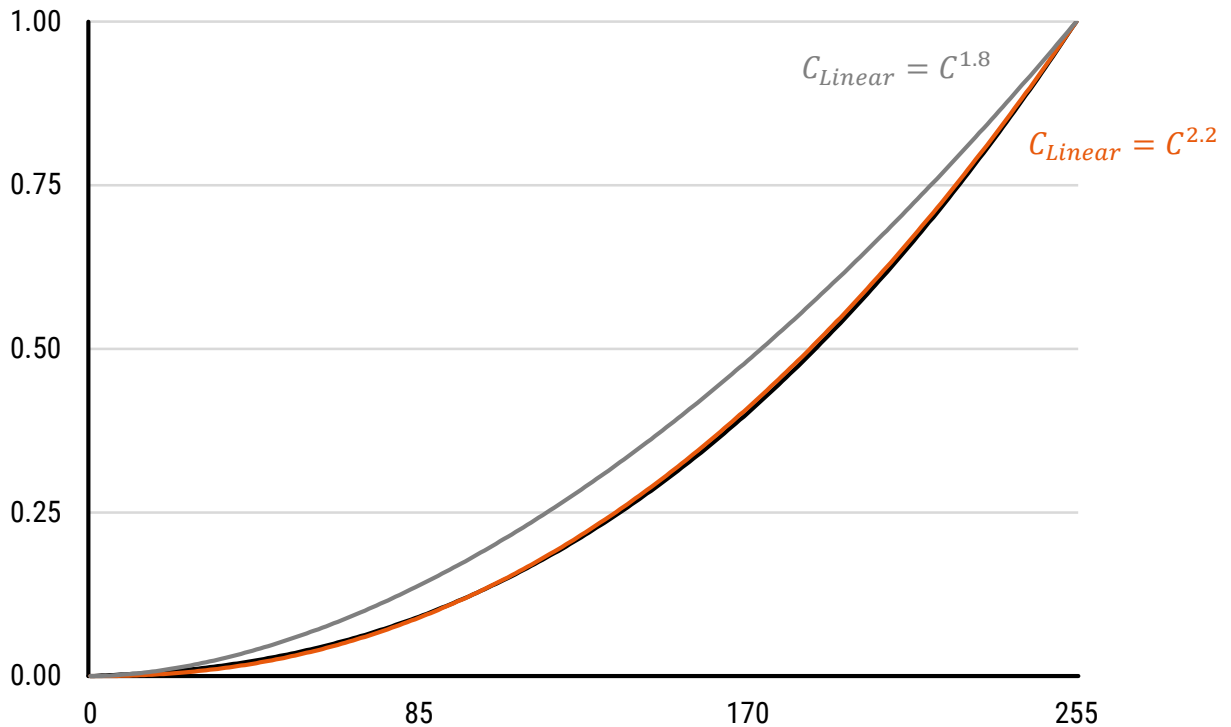
Gamma Table (Linear)



Gamma Table (Corrected)



sRGB, Gamma 2.2, Gamma 1.8



Calibration: Measuring Luminance



⋮

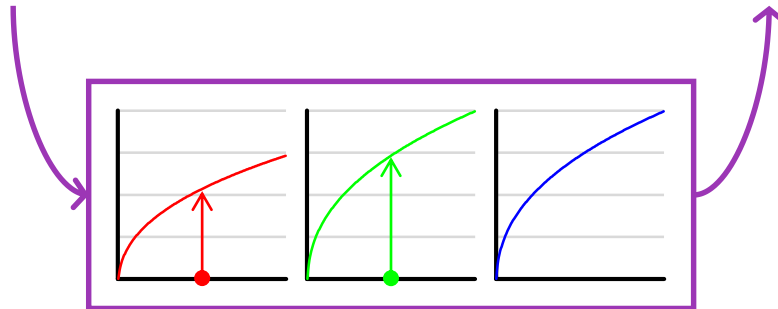
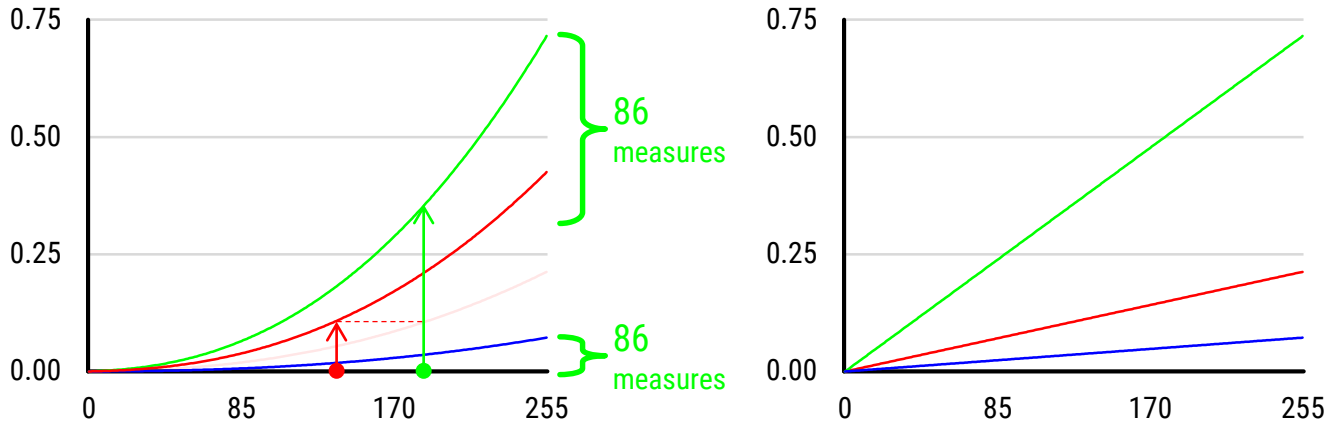


⋮

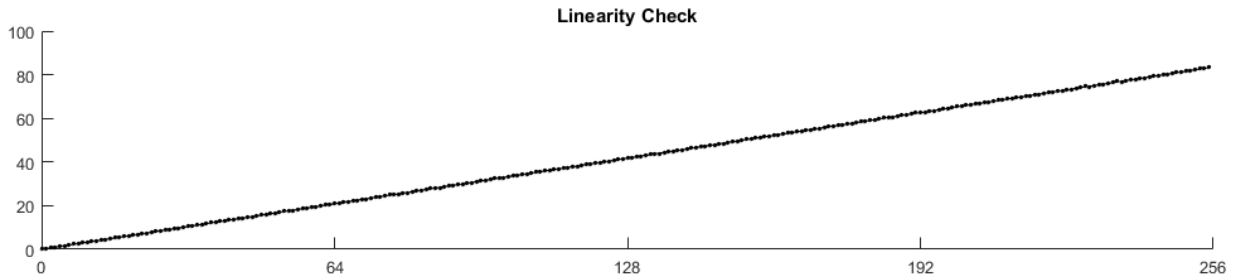
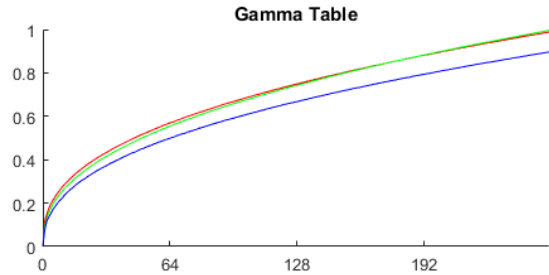
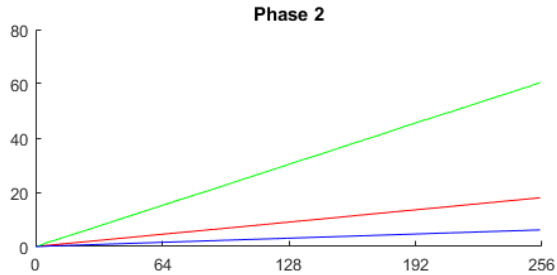
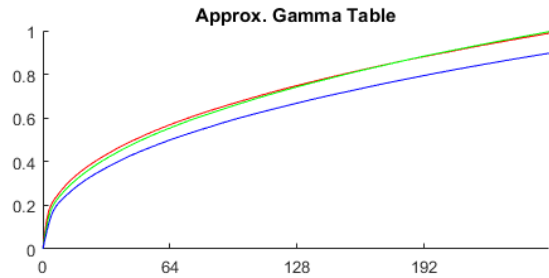
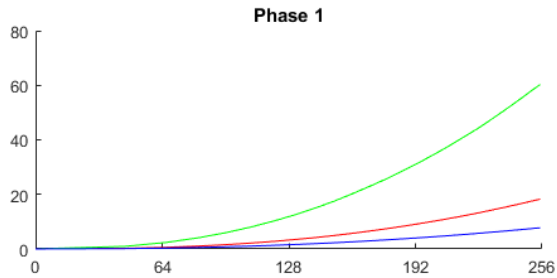


⋮

Calibration: Building Gamma Table



Two-phase Calibration



MATLAB Snippets

- <https://github.com/oakyoon/vcc-gamma>
- 'Set Path'
 - ApplyGammaTable;
 - ApplyGammaTable(TargetLum_Linear);
 - ApplyGammaTable(TargetLum_sRGB);
 - ResetGammaTable;

 - RunQuickTest;
 - RunFullCalibration;