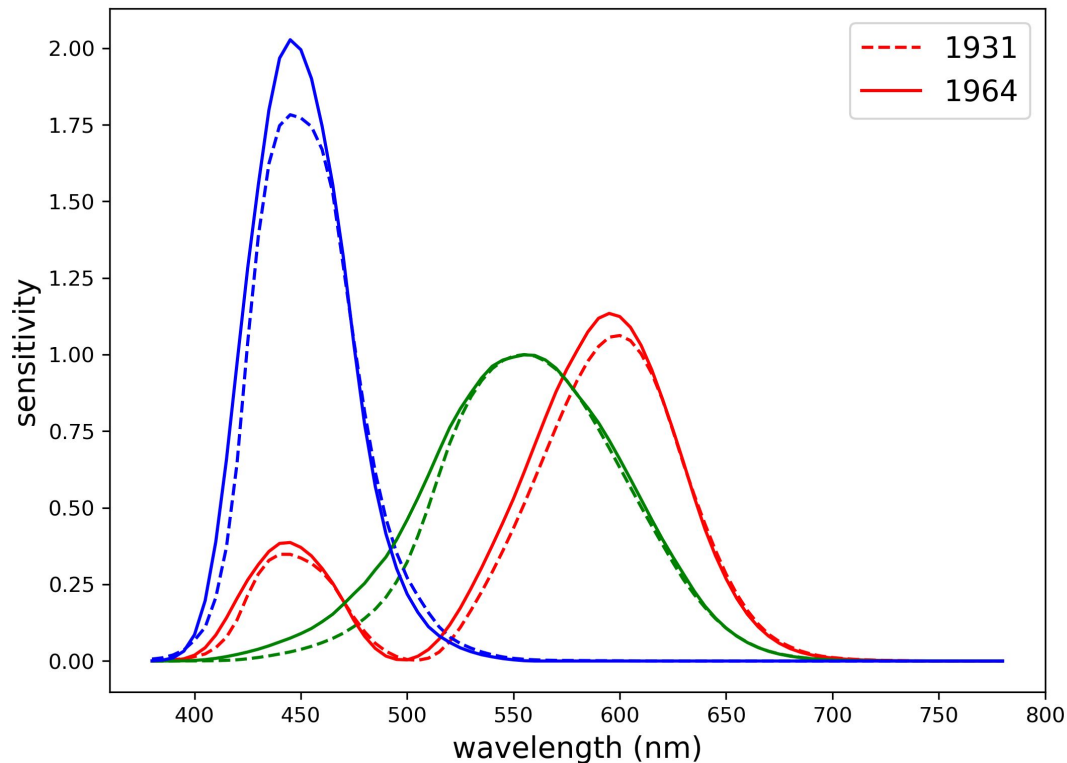


Activity 6 - CIE Standard Human Observer

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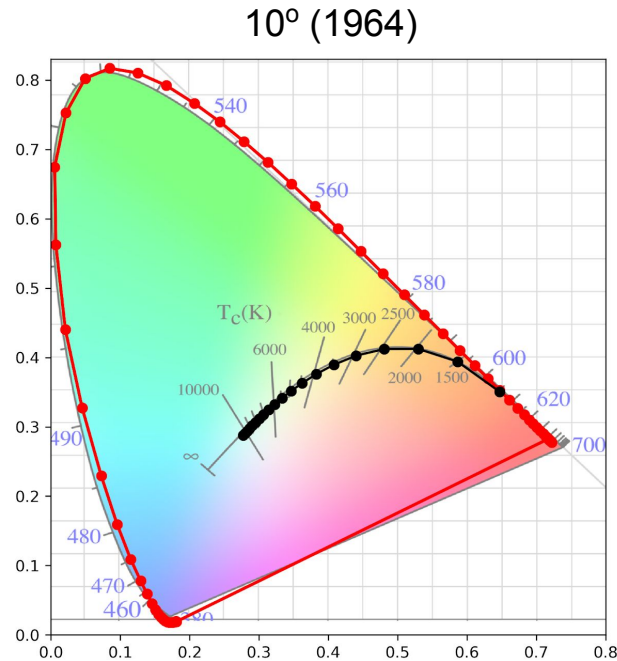
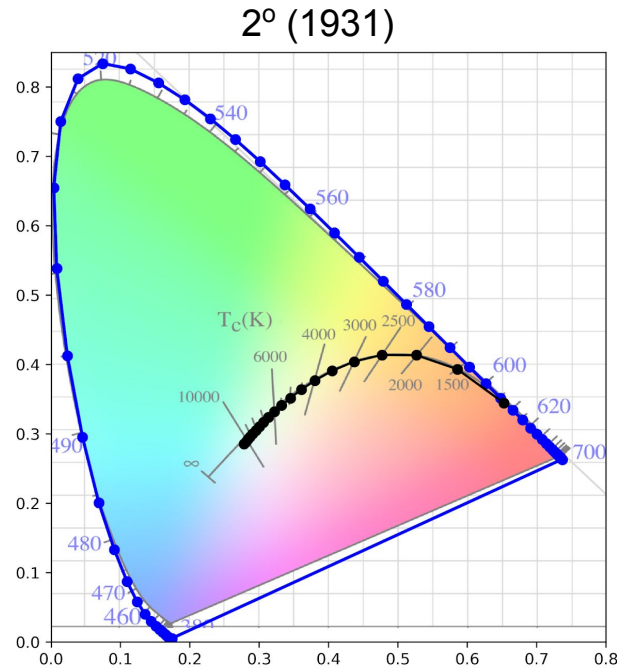
Color Matching Functions



This figure shows the xyz plot converted from rgb for both the 1931 and 1964 CIE Standard Human Observer. The former considered 2° visual range of subjects, while the latter considered the corrected 10° visual range.

Acknowledgements: Jom Macalintal and Reinier Ramos shared their reference for the data to me.

CIExy Chromaticity Diagram



$$X = \int P(\lambda) \bar{x}(\lambda) d\lambda$$

$$Y = \int P(\lambda) \bar{y}(\lambda) d\lambda$$

$$Z = \int P(\lambda) \bar{z}(\lambda) d\lambda$$

The corrected xyz values for the 10° visual range fit closer to the chromaticity diagram. The calculate xy values for the blackbodies fit very well in both. The radiation intensity plot of the blackbodies were obtained from the previous activity (activity 2). This was set as the light spectrum P in the above equations. I also converted the integral to a discrete summation.