HydroColor
A Water Quality App

Use the iPhone camera to collect above water measurements of remote sensing reflectance!

Using three images collected by the user, HydroColor can calculate the remote sensing reflectance in the red, green, and blue (RGB) color channels of the camera.

Using the the reflectance in the red channel, HydroColor also provides an estimate of water turbidity between 0 and 80 NTU. More reflectance products will be added to HydroColor as research continues. A chlorophyll product will be added in v2.0.

HydroColor is available on the Apple App Store.

HydroColor
Supporting Website

Free gray cards for use with HydroColor!

(If there are none available here, they can be purchased in photography shops or online for a few dollars. Look for 18% reflectance.)

References


Conclusions/Significance

In coastal oceanography and limnology, it is often difficult to collect data on large spatial and temporal scales. Scientists are limited by the number of instruments and people they can deploy in the field. HydroColor is a unique solution to this problem. HydroColor can put a water quality sensor in the hands of millions of people. It will allow people to conduct measurements of water quality using a method that is consistent with other users around the globe. Using images collected by citizen scientists, a global database of coastal optical measurements (including lakes and rivers) can be rapidly created and updated regularly. We are currently looking for an organization or website to act as a repository for the crowdsourced data.

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