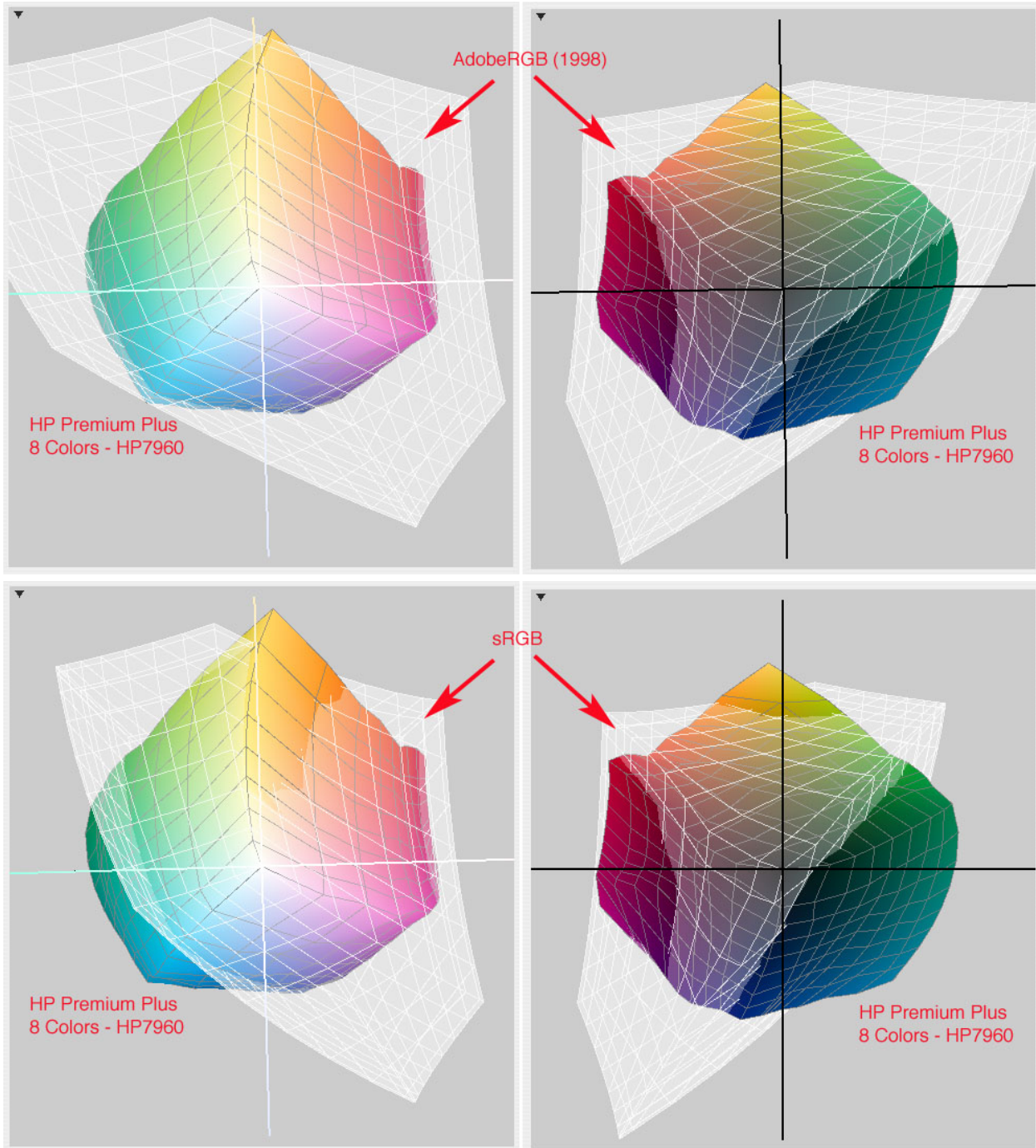


## AdobeRGB vs sRGB

The advantage of using AdobeRGB vs sRGB is realized when the files are printed on ink-jet printers. Color gamuts are three dimensional and CMYK color spaces fit better inside of AdobeRGB than sRGB. Here is a comparison of how an 8-color HP Premium Plus ink-jet gamut fits inside sRGB and ADOBE RGB. The views are from the white and black points of the L axis. The parts hanging out are colors the printer can reproduce which fall outside of the working space.

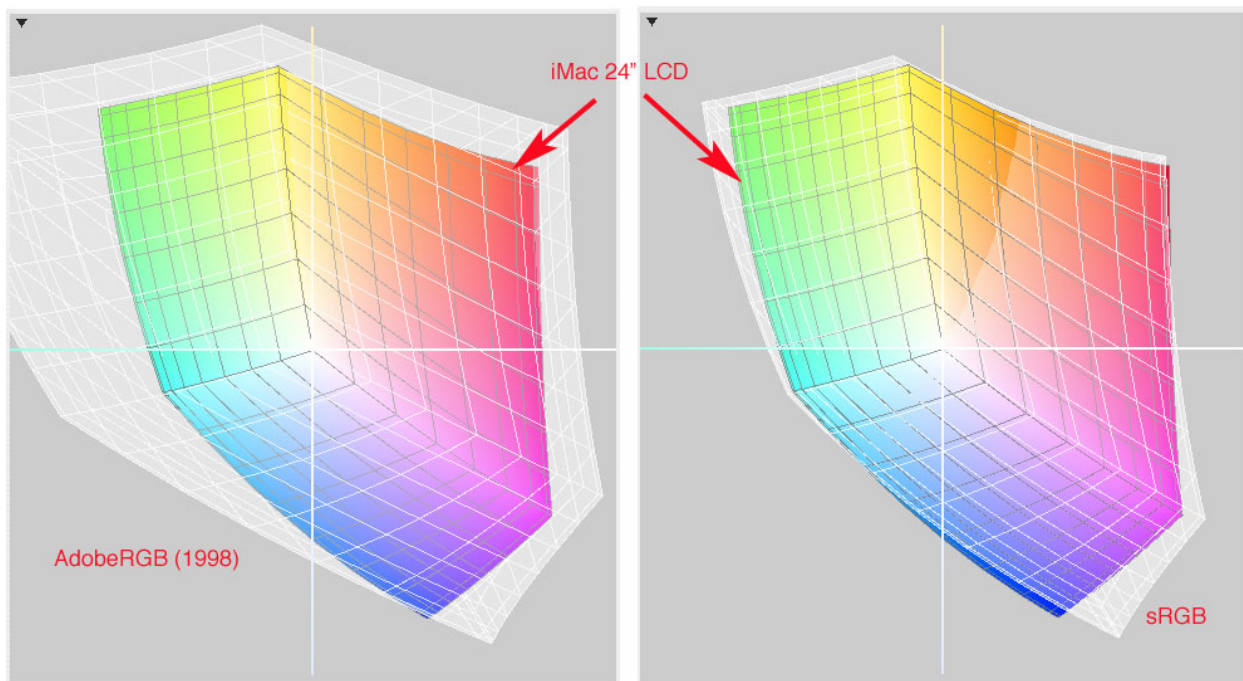


## AdobeRGB vs sRGB

Photographic printers such as Noritsu used at Costco and commercial labs are usually calibrated to reproduce sRGB, so if printing there use sRGB for your printing files. For custom labs check whether AdobeRGB or sRGB can be submitted.

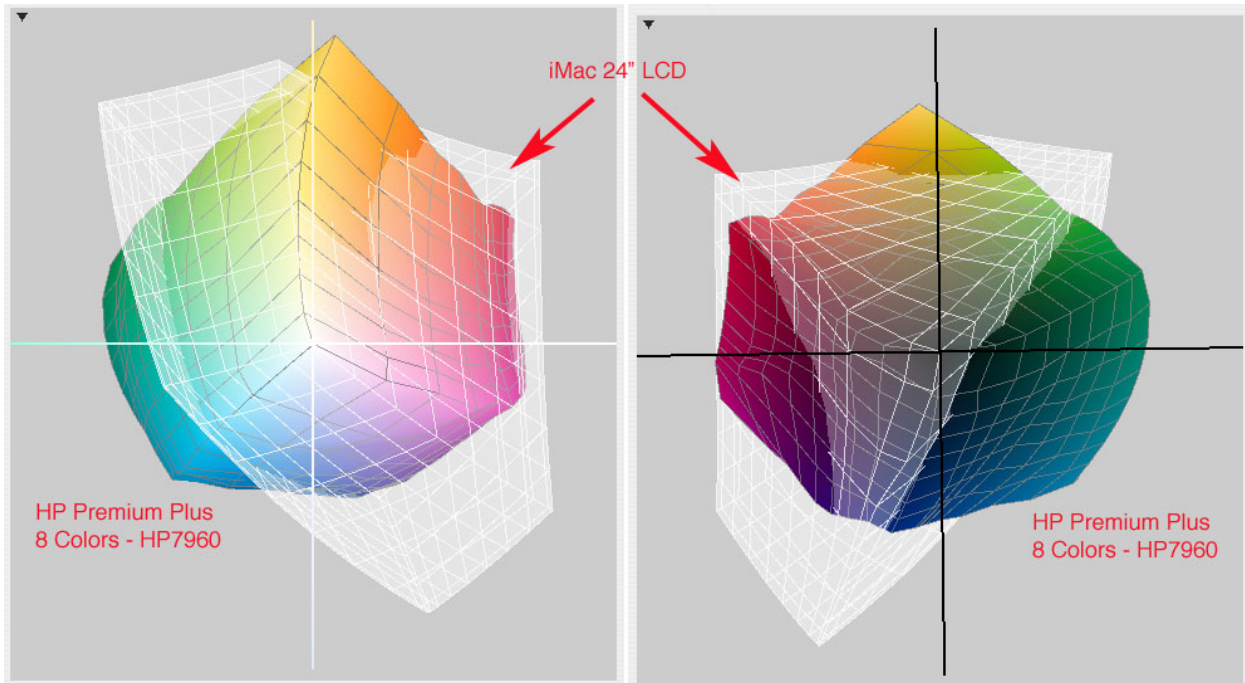
Shooting in RAW captures the file using the camera's native colorspace. I open the RAW file in DPP using AdobeRGB as the working space and make global corrections for exposure, contrast, saturation. etc. then convert to TIFF for local adjustments via masked dupe layer and retouching in Photoshop. That TIFF then becomes the Edited Master copy which is stored uncropped and unsharpened.

Most consumer grade monitors display a gamut about equal to sRGB, so regardless of working in a larger space such as AdobeRGB or ProPhotoRGB in the editing program you are actually viewing only the portion of it your monitor and display. It's a bit of a Catch 22... For example here is how the profile of my iMac 24" LCD compares with both AdobeRGB and sRGB (top view along L axis from white).



## AdobeRGB vs sRGB

Here's how my monitor compares with the printer gamut.. Is it any surprise the colors shift when printing?



Since my monitor is more or less the same size as sRGB if I convert my edited master file to sRGB, crop and then sharpen and save for web viewing it will look about the same on an unmanaged browser. But because neither the working space or the monitor accurately depict the colors my HP printer can actually print the only way to really tell how the file will print is to print it.

But while editing the file for printing I can check it against the printer gamut in Photoshop using soft proofing. Soft proofing applies the printer profile to the screen image simulating to the extent possible how the color will shift during the conversion from RGB to CcMmYKkk. The out of gamut warning will gray out colors which exceed the printer gamut and will shift.



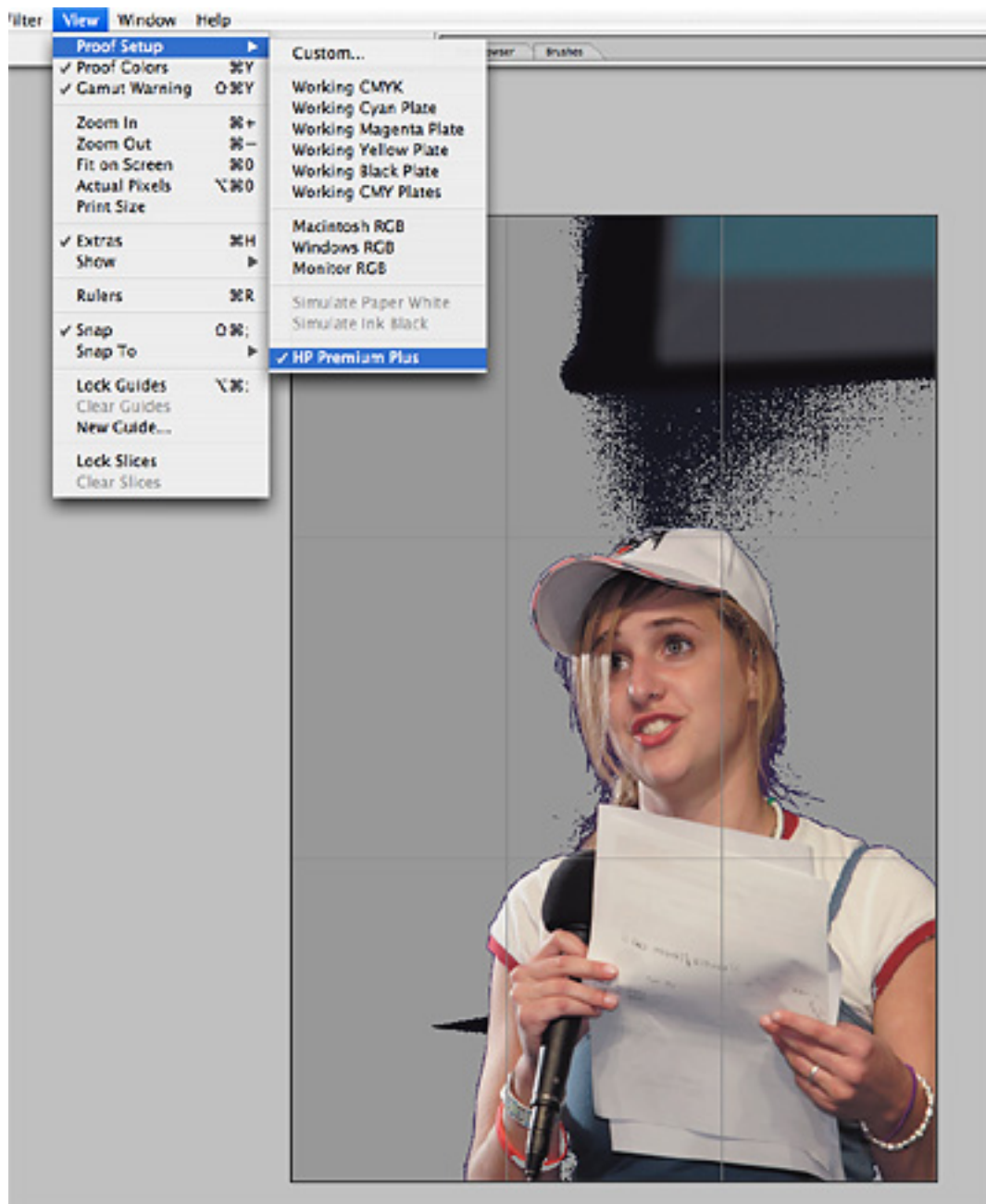
## AdobeRGB vs sRGB

For example in this photo there are many colors outside the gamut the printer can reproduce accurately.



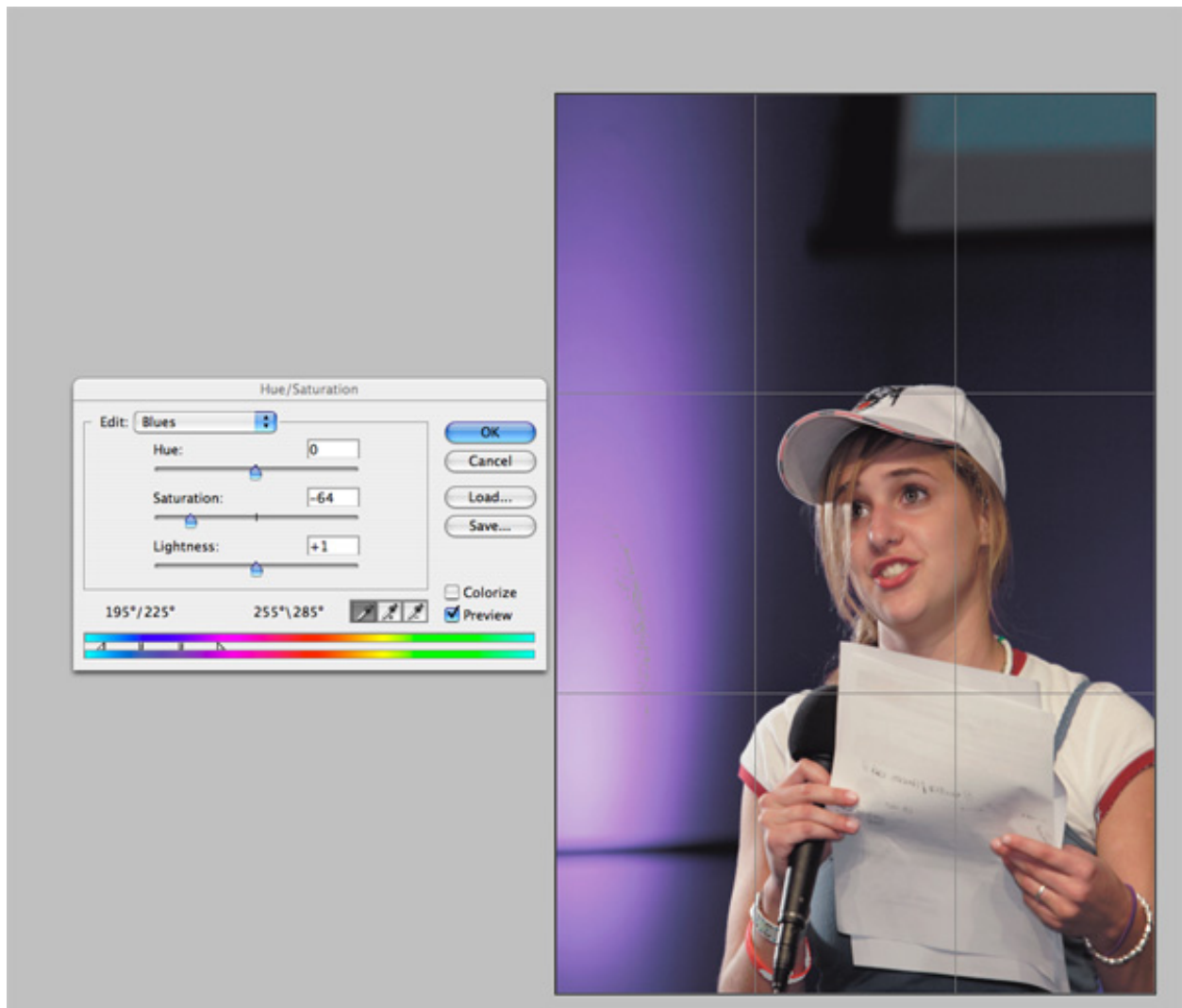
## Adobe RGB vs sRGB

When the printer profile is applied the out of gamut colors are grayed out:



## AdobeRGB vs sRGB

If I want to get a more accurate idea of how the file will look when printing I will open Hue /Saturation and reduce saturation in affected colors until the OGW disappear. Here I had to reduce saturation in Blues and Magentas.



## AdobeRGB vs sRGB

Using the OGW to adjust a file for printing is a bit like flying a plane in the clouds using instruments... You can't actually see where you are through the wind screen, so you need to trust the instruments which are telling when a color is more saturated than the printer can reproduce. Printer gamuts are the smallest and limited by the physical characteristics of the ink pigments or dyes. For example a bright maximum red which is a primary in RGB is made up of yellow + magenta on the print and will not be as saturated. The same holds true for blues and purples as my example above illustrates. FWIW - that photo was taken with two 580ex flashes gelled with 3/4 CTO to match the stage lighting.

So to recap:

- 1) Capture RAW, edit Adobe RGB and save an uncropped and unsharpened Master Edit File. Be aware that what you see when editing is only what the gamut of your monitor can display.
- 2) For web use or For prints on commercial sRGB printers open Master Edit file, convert to sRGB, crop, sharpen save.
- 3) For ink jet prints use AdobeRGB working space and printer profile to soft proof, eliminating the OGW to best visualize on screen how the print will look. Crop for print size / printer resolution and then sharpen. Save as JPG level 10 for printing.