

Large Filter Consortium Definitions for Sloan Filters 50% blue/red points

The table below summarizes the bandpass cut-on and cut-off limits (in nm) for each of the 4 collaborative projects, along with an estimate of the originally proposed filter set by Fukugita et al. (1996, PASP 111, 174)

In addition, the rightmost column offers a compromise set of bandpass limits to consider. The purchase price for these filters will be minimized if some, or all, of us agree to common parameters. For the “g” and “i” filters, the compromise looks pretty good. The “r” filter runs into the question – how much transmission is too much for the [OI] 557.7 line, and so, we may have a problem with the blue cut-on point there. Everyone seems to have a different idea about the “z” filter, in part because of our different red sensitivities, and also because of how we see our instruments being used in the presence of variable emission and transparency in this part of the sky spectrum.

	WIYN	DES	LSST	PS	Fukugita	Compromise Set
g	402/550	400/550	402/552	402/552	410/551	401/551
r	560/710	560/710	552/691	552/691	556/695	560/700
i	700/820	700/850	690/819	691/818	690/814	695/825
z	830/980	830/1000	818/922	818/922	841/982	825/980
y	950/1060	---	948/1060	948/1060	---	949/1060
y-alt				970/1028		

Note that my Fukugita values differ from those extracted by the PS people. I used the algorithm: adopt $\lambda(\text{eff } 1)$ in Table 2b; use FWHM centered on $\lambda(\text{eff } 1)$ to calculate blue/red edges. PS folks tried to read the figures to estimate the 50% points, and they get slightly different values. Both methods are approximate.