Update for the Week of December 19, 2014

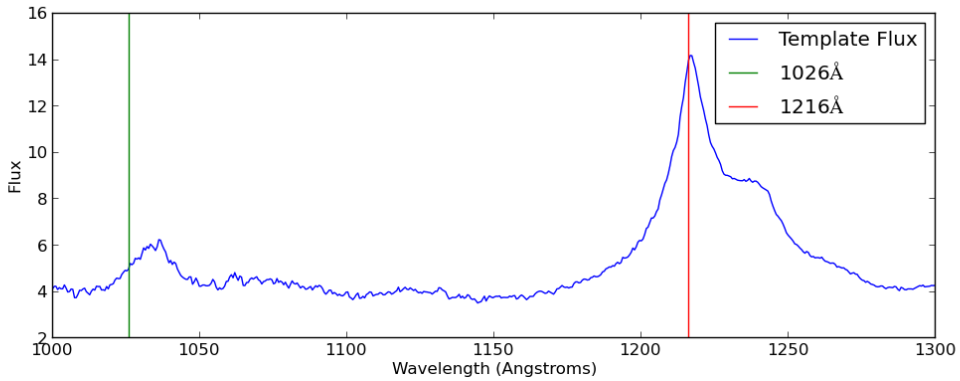

Figure 1: The above figure shows the quasar template from `LBQS.lis`. We also show the Lyα line and the Lyβ line. The emission line at ~ 1070Å does not appear to match up with the Lyβ line.

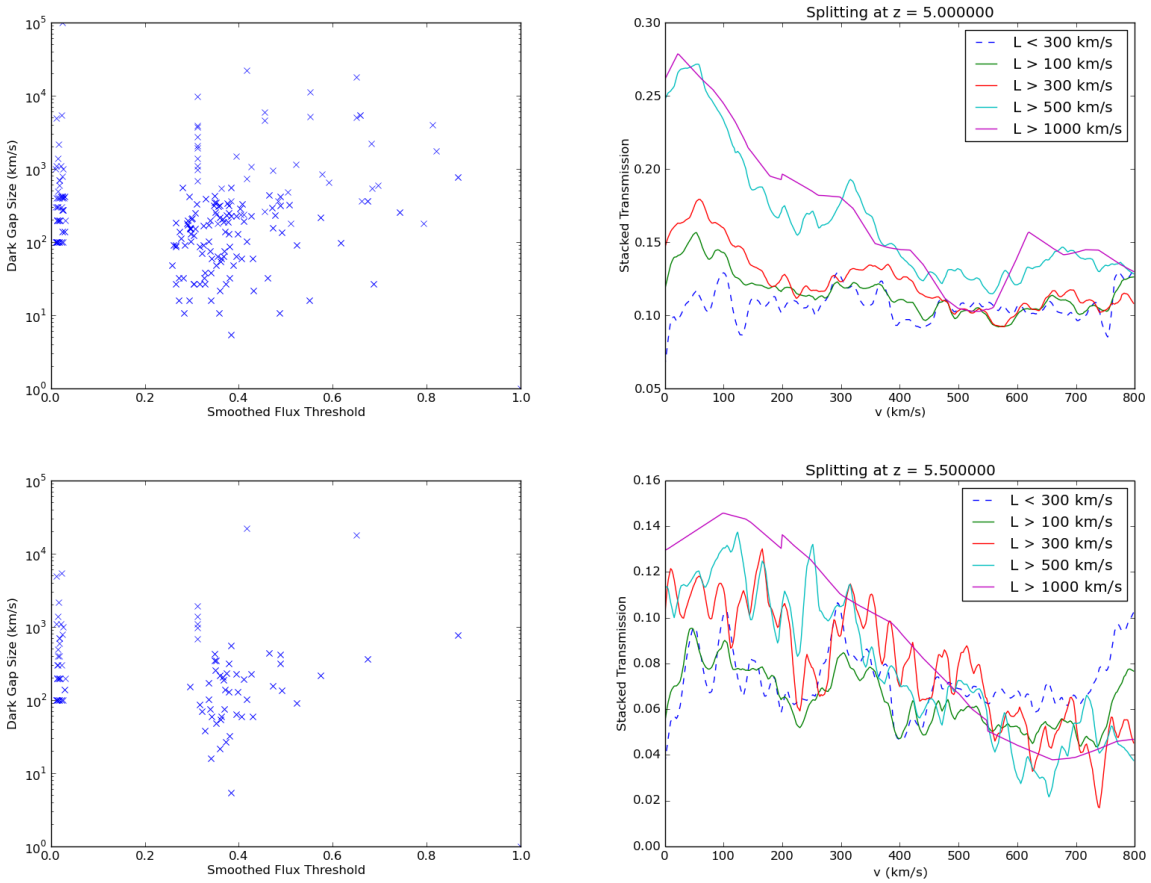

Figure 2: The left-hand plots here show a scatter plot of dark gap sizes along with the smoothed flux threshold below which a region can be identified as a dark gap. The right-hand plot shows the stacked transmission outside of dark gaps of varying lengths. The top row is for $z > 5$ and the bottom row is for $z > 5.5$. The point of these plots was to investigate why stacked transmission outside of large gaps appears to be larger than that outside of small gaps and I thought it might be a selection effect from noisy spectra having larger gaps and also larger thresholds for transmission to not count as saturated absorption.

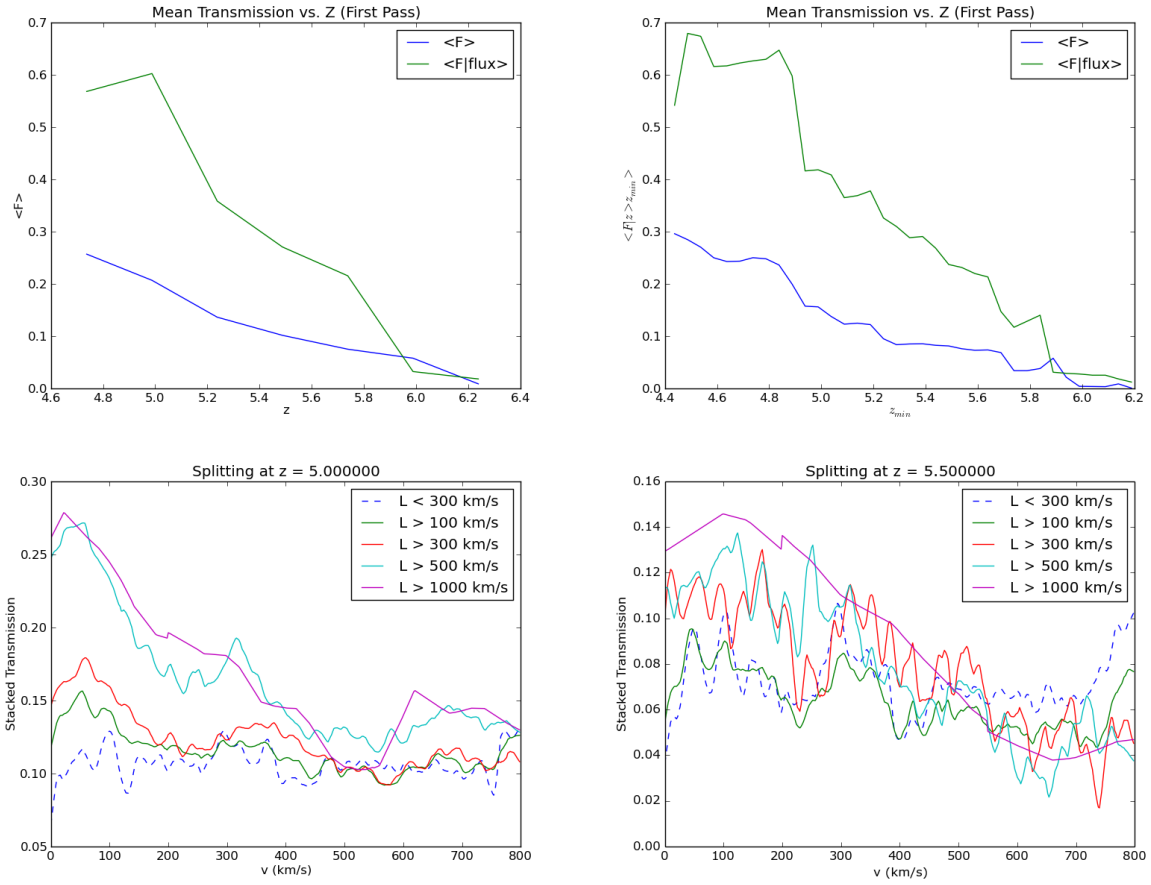

Figure 3: The top row shows two measures of the mean transmitted flux as a function of redshift. In the upper left-hand plot, we show $\langle F \rangle(z)$ (blue) and $\langle F|F > 0 \rangle(z)$ (green). In the upper right-hand plot we show $\langle F \rangle(z > z_{\rm min})$ (blue) and $\langle F|F > 0 \rangle(z > z_{\rm min})$. *To be precise*, we aren't actually plotting $\langle F|F > 0 \rangle$ but, instead, we are plotting the mean transmission in regions which are *not identified as dark gaps*. In other words: $\langle F|\tilde{F} > 2\tilde{\sigma}_N \rangle$. In the bottom panels we show the Lyα stacks for $z > 5$ (left) and $z > 5.5$ (right).

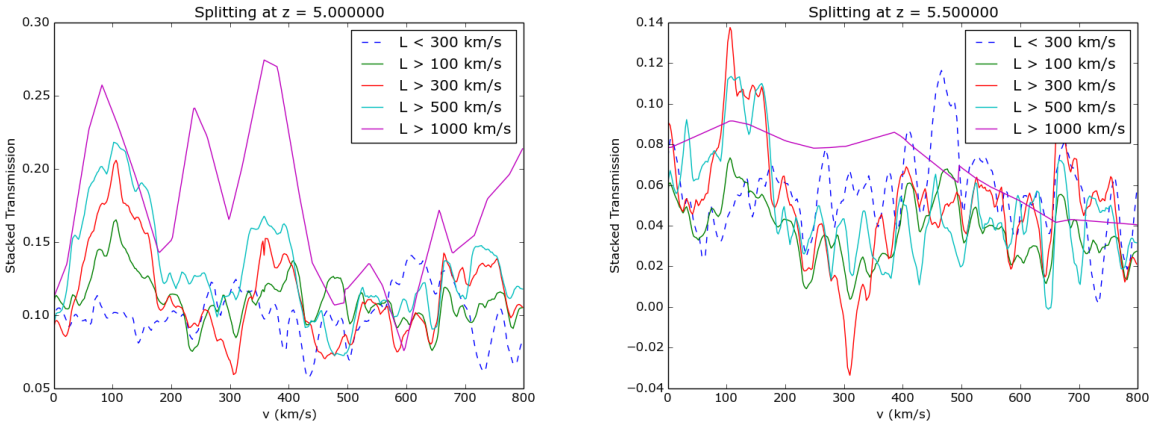

Figure 4: The above plots show the stacked Lyα transmission outside of dark gaps *in Ly*β of various sizes. The left-hand plot only includes dark gaps with $z_{\rm gap} > 5$ and the right-hand plot only includes dark gaps with $z_{\rm gap} > 5.5$.

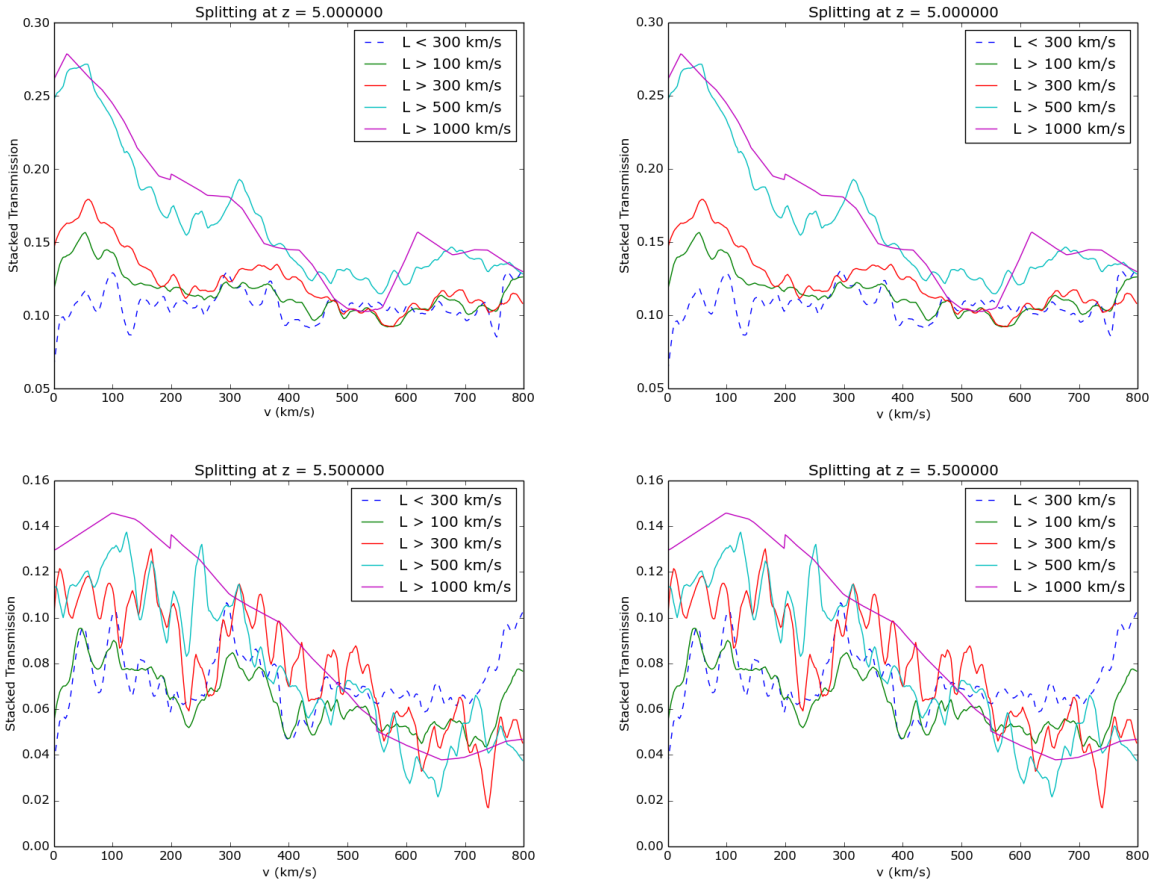

Figure 5: The panels in each row should *probably* be the same. This is a sanity check of the Lyβ stacking code.

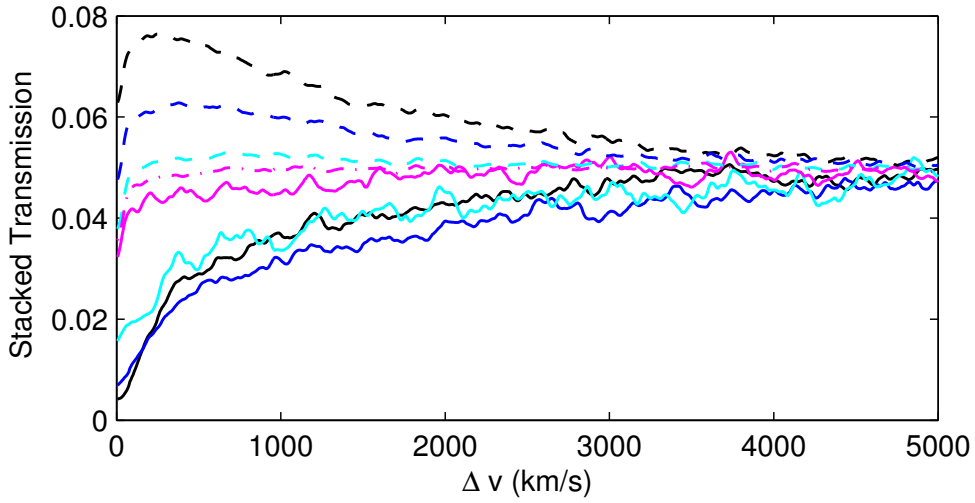

Figure 6: This figure is taken from our neutral islands paper and shows the expected stacked Lyα transmission outside of large (solid) and small (dashed) dark gaps *in* *Ly*β.

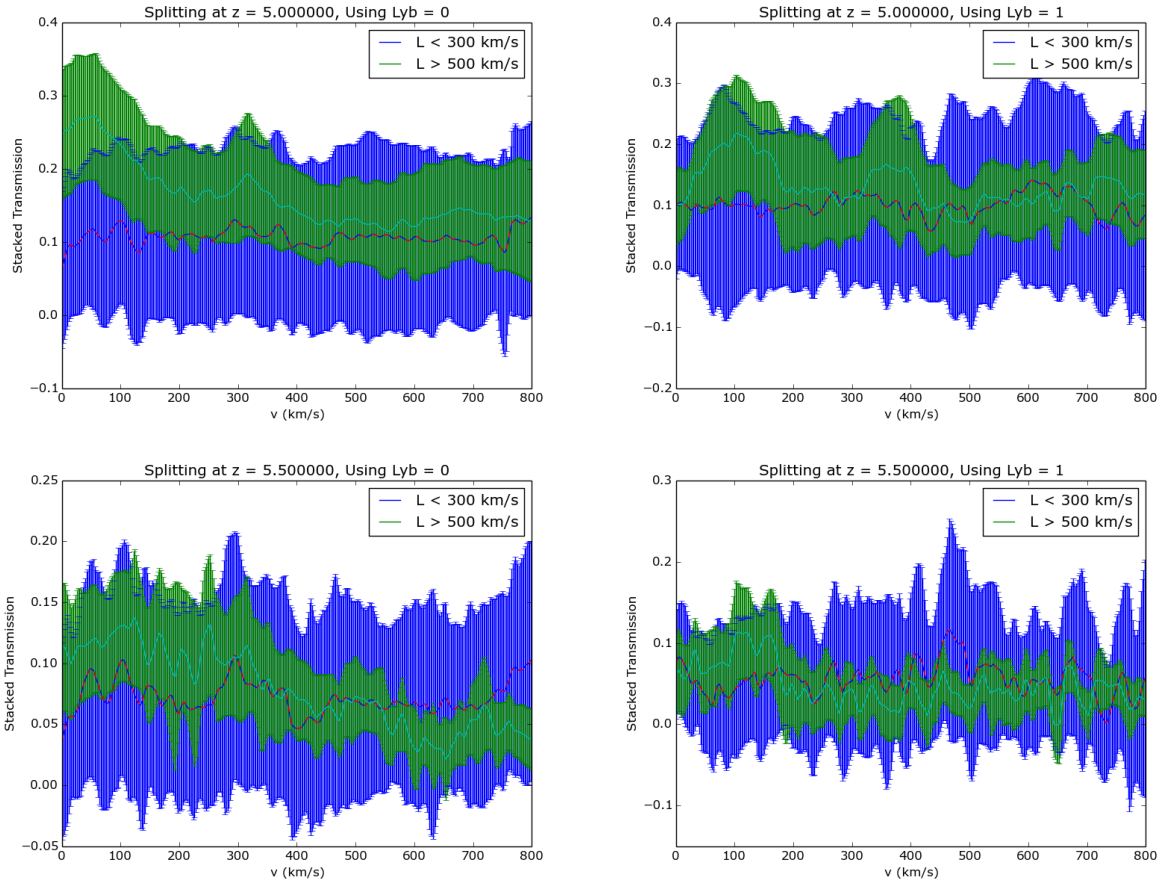

Figure 7: The above panels show the effect of determining stacking locations according to dark gaps in Lyβ spectra. The left-hand panels do *not* stack according to Lyβ dark gaps while the right-hand plots do. The top row only considers dark gaps with $z_{\rm gap} > 5$ while the bottom row only considers gaps with $z_{\rm gap} > 5.5$.

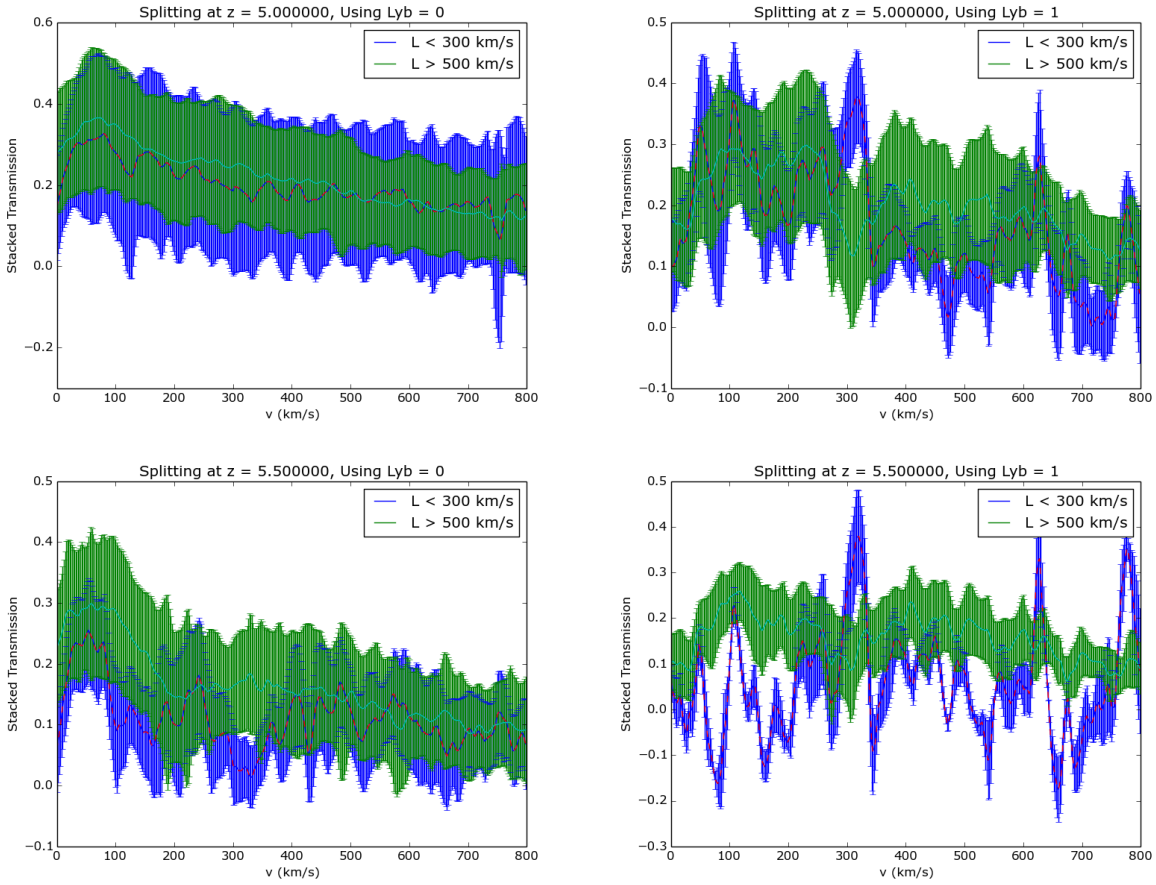

Figure 8: The above panels are identical to those in Fig. 7, except that we have use a power law to fit the quasar continua: $F(\lambda) = F(\lambda_R)\,(\lambda/\lambda_R)^{-1.56}$, where λ_R is redward of Ly$\alpha$and F_R is the average flux around this wavelength.