TABLE 5

ASYMMETRY COMPARISON BETWEEN MODEL C AND OBSERVATIONS

Ion	Line (Å)	$v(\tau_{\max}[\mathrm{HIF}])/1100$ km s^{-1}	$v(\tau_{\max}[\mathrm{HIF+LIF}])/2200$ km s^{-1}
S XVI	4.729	0.47 (B)	0.47 (B)
S XV	5.039	0.55 (R)	0.55 (R)
Si XIII	5.681	0.62 (R)	0.62 (R)
Si XIV	6.182	0.55 (R)	0.55 (R)
Si XIII	6.648	0.62 (R)	0.62 (R)
Mg XII	7.106	0.55 (R)	0.55 (R)
Mg XI	7.473	0.74 (R)	0.74 (R)
Fe XXIII	8.303	0.47 (B)	0.47 (B)
Mg XII	8.421	0.55 (R)	0.55 (R)
Mg XI	9.169	0.74 (R)	0.37 (B)[a]
Ne X	9.708	0.74 (R)	0.74 (R)
Ne X	10.240	0.74 (R)	0.37 (B)[a]
Ne IX	11.547	0.74 (R)	0.37 (B)[a]
Fe XXII	11.770	0.47 (B)	0.47 (B)
Ne X	12.134	0.74 (R)	0.37 (B)[a]
Fe XXI	12.284	0.47 (B)	0.47 (B)
Fe XVIII	14.373	0.55 (R)	0.55 (R)
Fe XVIII	14.534	0.55 (R)	0.55 (R)
O VIII	14.832	0.74 (R)	0.37 (B)[a]
Fe XVII	15.015	0.62 (R)	0.62 (R)
O VIII	15.188	0.74 (R)	0.37 (B)[a]
O VIII	16.006	0.74 (R)	0.37 (B)[a]
O VII	17.200	0.82 (R)	0.41 (B)[a]
O VII	17.396	0.82 (R)	0.41 (B)[a]
O VII	17.768	0.82 (R)	0.41 (B)[a]
O VII	18.627	0.82 (R)	0.41 (B)[a]
O VIII	18.969	0.74 (R)	0.37 (B)[a]

[a]With the addition of the LIF, we mark those line whose symmetry change.

a red appearance to the composed profile. This effect is illustrated by the fourth column of Table 5.

The composite model reproduces the asymmetry of the lines. The present uncertainties in the computation of $v(\tau_{\max})$ are of the order of 60 km s^{-1} (or $\Delta v(\tau_{\max})/v_\infty = 0.055$ with $v_\infty = 1100$ km s^{-1}). So the lines classified as pure red with $v(\tau_{\max})/v_\infty \gtrsim 0.55$ and pure blue with $v(\tau_{\max})/v_\infty \lesssim 0.45$ are more reliable than those with $0.45 \lesssim v(\tau_{\max})/v_\infty \lesssim 0.55$.

It is interesting to analyze why the O VII and O VIII lines are blue, while the lines Mg XI λ7.473 and Fe XVII λ15.015 remain red. The optical depths of Mg XI λ7.473, and Fe XVII λ15.015 are below 10^{-4} at velocities greater than 1100 km s^{-1}, so the LIF component does not contribute to their broadening. Another interesting example is the difference in classification between the lines Mg XI λ7.473 and Mg XI λ9.169. The reason is that while for Mg XI λ7.473 the oscillator strength is $\sim 5 \times 10^{-2}$, the f-value for the line Mg XI λ9.169 is almost one order of magnitude larger ($\sim 7 \times 10^{-1}$), which causes the optical depth of the latter to be significant up to velocities beyond $\sim$1600 km s^{-1}.

Figure 13 compares the modeled velocities of the lines from the two-outflow model with observations. Robust regression using the M estimator gives a slope of 0.63 ± 0.22 (solid line in the figure), and the residual standard error (rms) is 16.6 for 25 degrees of freedom (dof).

A comparison between the predicted trough profiles and those observed in NGC 3783 is shown in Figure 14. Here we plot the theoretical spectrum given by the outflows HIF and LIF in the 18.5–19.3 Å. We have used a power law as continuum, with a spectral