Table 1: Fourier Transforms of Occultation Parameters

Quantity	f_L	f_1	f_2	f_3	f_4	β
ν	$\bar{\nu}(z)$	0	0	0	0	0
α	$\bar{\nu}(z)r\sqrt{2\pi\delta}$	$\dfrac{9-b}{8}$	$\dfrac{345+46b-7b^2}{128}$	$\dfrac{9555+5455b+452b^2-75b^3}{1024}$	$\dfrac{1371195}{32768}+\dfrac{386421}{8192}b+\dfrac{251153}{16384}b^2+\dfrac{6741}{8192}b^3-\dfrac{5509}{32768}b^4$	$1/2$
θ	$-\bar{\nu}(z)\sqrt{\dfrac{2\pi}{\delta}}$	$\dfrac{-3+3b}{8}$	$\dfrac{-15+14b+b^2}{128}$	$\dfrac{-105+27b+69b^2+9b^3}{1024}$	$-\dfrac{4725}{32768}-\dfrac{1059}{8192}b+\dfrac{72353}{16384}b^2+\dfrac{3764}{8192}b^3+\dfrac{491}{32768}b^4$	$-1/2$
$\dfrac{d\theta}{dr}$	$\dfrac{\bar{\nu}(z)}{r}\sqrt{\dfrac{2\pi}{\delta^3}}$	$\dfrac{1+15b}{8}$	$\dfrac{9-34b+25b^2}{128}$	$\dfrac{75-81b+b^2+5b^3}{1024}$	$\dfrac{3675}{32768}-\dfrac{339}{8192}b-\dfrac{10555}{16384}b^2-\dfrac{67}{8192}b^3+\dfrac{59}{32768}b^4$	$-3/2$
p	$\bar{\nu}(r)g(r)\mu m_{amu}\dfrac{L}{\nu_{STP}}r\delta$	0	0	0	0	1