Table 1: **Compilation of Fitting Functions**: Note that we define $\nu = \delta_c/\sigma$.

Reference	Fitting Function $f(\sigma)$	Mass Range	Redshift Range	Cosmology	Halo Def. (b and/or Δ_h)
Press and Schechter (1974)	$f_{\rm PS}(\sigma) = \sqrt{\frac{2}{\pi}}\nu \exp\left[-nu^2/2\right]$	–	–	–	–
Sheth et al. (2001)	$f_{\rm SMT}(\sigma) = A\sqrt{\frac{2a}{\pi}}\left[1+\left(\nu^2/a\right)^p\right]\nu\exp\left[-a\nu^2/2\right]$, $A = 0.3222$, $a = 0.707$, $p = 0.3$.	$0.5 < \nu^2 < 10$	0 – 2	ΛCDM, OCDM, SCDM	$b = 0.2$
Jenkins et al. (2001)	$f_{\rm J}(\sigma) = 0.315\exp\left[-\lvert\ln\sigma^{-1}+0.61\rvert^{3.8}\right]$	$-1.2 < \ln\sigma^{-1} < 1.05$	0 – 5	τCDM, ΛCDM	$b = 0.2$, 0.164, $\Delta_h = 200$, 32
Reed et al. (2003)	$f_{\rm R03}(\sigma) = f_{SMT}(\sigma)\exp\left[\frac{-0.7}{\sigma\cosh(2\sigma)^5}\right]$	$-1.7 < \ln\sigma^{-1} < 0.9$	0 – 15	$\Omega_M = 0.3$, $\Omega_\Lambda = 0.7$	$b = 0.2$, $\Delta_h = \Delta_{\rm vir}$
Warren et al. (2006)	$f_{\rm W}(\sigma) = 0.7234\left(\sigma^{-1.625}+0.2538\right)\exp\left[-1.1982\sigma^{-2}\right]$	$10^{10}{\rm M}_\odot < M < 10^{15}{\rm M}_\odot$	0	ΛCDM: WMAP1	$b = 0.2$
Reed et al. (2007)	$f_{\rm R07}(\sigma) = \nu\exp\left[-\frac{ca\nu^2}{2}-\frac{0.03(\nu)^{0.6}}{(n_{\rm eff}+3)^2}\right] \times A\sqrt{\frac{2a}{\pi}}\left[1+\left(\nu^2 a\right)^{-p}+0.6G_1(\sigma)+0.4G_2(\sigma)\right]$ $n_{\rm eff} = 6\frac{d\log\sigma^{-1}}{d\log M}-3$, $G_1(\sigma) = \exp\left[-(\ln\sigma^{-1}-0.4)^2/0.72\right]$, $G_2(\sigma) = \exp\left[-(\ln\sigma^{-1}-0.75)^2/0.08\right]$	$-1.7 < \ln\sigma^{-1} < 0.9$	0 – 30	ΛCDM: WMAP1	$b = 0.2$
Peacock (2007)	$f_{\rm P}(\sigma) = \frac{\nu\exp(-c\nu^2)}{(1+a\nu^b)^2}\left[ba\nu^{b-1}+2c\nu(1+a\nu^b)\right]$, $a = 1.529$, $b = 0.704$, $c = 0.412$	$10^{10}{\rm M}_\odot < M < 10^{15}{\rm M}_\odot$	0	ΛCDM: WMAP1	$b = 0.2$
Tinker et al. (2008)	$f_{\rm T}(\sigma,z) = A\left(\left(\frac{b}{\sigma}\right)^a+1\right)\exp\left[-c\sigma^{-2}\right]$, $A = 0.186\,(1+z)^{-0.14}$, $a = 1.47\,(1+z)^{-0.06}$, $b = 2.57\,(1+z)^{-\alpha}$, $c = 1.19$, $\alpha = \exp\left[-\left(\frac{0.75}{\log_{10}(\Delta_{\rm h}/75)}\right)^{1.2}\right]$	$-0.6 < \log_{10}\sigma^{-1} < 0.4$	0 – 2.5	ΛCDM: WMAP1, WMAP3+	$\Delta_h = 200$, 300, 400, 600, 800, 1200, 1600, 2400
Crocce et al. (2010)	$f_{\rm Cr}(\sigma) = A\left(\sigma^{-a}+b\right)\exp\left[-c\sigma^{-2}\right]$, $A = 0.58\,(1+z)^{-0.13}$, $a = 1.37\,(1+z)^{-0.15}$, $b = 0.3\,(1+z)^{-0.084}$, $c = 1.036\,(1+z)^{-0.024}$	$10^{10.5}{\rm M}_\odot < M < 10^{15.5}{\rm M}_\odot$	0 – 2	(Ω_M, Ω_Λ, n, h, σ_8) = (0.25, 0.75, 0.95, 0.7, 0.8)	$b = 0.2$, 0.164
Courtin et al. (2010)	$f_{\rm Co}(\sigma) = f_{\rm ST}(\sigma)$, $A = 0.348$, $a = 0.695$, $p = 0.1$	$-0.8 < \ln\sigma^{-1} < 0.7$	0	ΛCDM: WMAP5	$b = 0.2$
Bhattacharya et al. (2011)	$f_{\rm B}(\sigma,z) = A\sqrt{\frac{2}{\pi}}\exp\left[-a\nu^2/2\right]\left[1+\left(a\nu^2\right)^{-p}\right]\left(\nu^2\sqrt{a}\right)^q$, $A = 0.333\,(1+z)^{-0.11}$, $a = 0.788\,(1+z)^{-0.01}$, $p = 0.807$, $q = 1.795$	$10^{11.8}{\rm M}_\odot < M < 10^{15.5}{\rm M}_\odot$	0 – 2	wCDM+	$b = 0.2$
Angulo et al. (2012)	$f_{\rm A}(\sigma) = A\left[\left(\frac{b}{\sigma}\right)^a+1\right]\exp\left[-c\sigma^{-2}\right]$, $(A,a,b,c) = (0.201, 1.7, 2.08, 1.172)$ or $(A,a,b,c)_{\rm SUB} = (0.265, 1.9, 1.675, 1.4)$	$10^8{\rm M}_\odot < M < 10^{16}{\rm M}_\odot$	0	ΛCDM: WMAP1	$b = 0.2$
Watson et al. (2012)	$f_{\rm W_{FOF}}(\sigma,z) = f_{\rm T}(\sigma,z)$, $A = 0.282$, $a = 2.163$, $b = 1.406$, $c = 1.21$	$-0.55 < \ln\sigma^{-1} < 1.31$	0 – 30	ΛCDM: WMAP5	$b = 0.2$

Table 1: continued...

Ref.	Fitting Function $f(\sigma)$	Mass Range	Redshift Range	Cosmology	Halo Def. (b and/or Δ_h)
Watson et al. (2012)	$f_{\rm WSO}(\sigma,z)=\Gamma(\Delta,\sigma,z)f_{\rm T}(\sigma,z)$, $(A,a,b,c)_{z=0}=$ $(0.194,2.267,1.805,1.287)$, $(A,a,b,c)_{z>6}=$ $(0.563,0.874,3.810,1.453)$, $(A,a,b,c)_{0<z<6}=$ $\Omega_M(z)\times(1.907(1+z)^{-3.216}+0.074,$ $3.136(1+z)^{-3.058}+2.349,$ $5.907\times(1+z)^{-3.599}+2.344,\ 1.318)$, $\Gamma(\Delta,\sigma,z)=$ $C(\Delta)\left(\frac{\Delta}{178}\right)^{d(z)}\exp\left[p\left(1-\frac{\Delta}{178}\right)\sigma^{-q}\right]$, $C(\Delta)=\exp\left[0.023\left(\frac{\Delta}{178}-1\right)\right]$, $d(z)=-0.456\Omega_M(z)-0.139$, $p=0.072$, $q=2.130$.	$-0.55<\ln\sigma^{-1}<1.05$ $(z=0)$, $-0.06<\ln\sigma^{-1}<1.024$ $(z>0)$	0 – 30	ΛCDM: WMAP5	$\Delta_h=178$, (100–1600)
Behroozi et al. (2013)	$n_{\rm B}(>M)=$ $f(a)\left(M/10^{11.5}M_\odot\right)^{g(a)}+n_{\rm T}(>M)$, $f(a)=\frac{0.144}{1+\exp[14.79(a-0.213)]}$, $g(a)=0.5(1+\exp(6.5a))^{-1}$, $a=1/(1+z)$	$-0.6<\log_{10}\sigma^{-1}<0.4$	0 – 8	$(\Omega_M,\ \Omega_\Lambda,\ n,$ $h,\ \sigma_8)=$ $(0.27,\ 0.73,$ $0.95,\ 0.7,$ $0.82)$	$\Delta_h=200$

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