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Erratum
Unified Rotation Curve of the Galaxy — Decomposition into de Vaucouleurs Bulge, Disk, Dark Halo, and the 9-kpc Rotation Dip —

Yoshiaki SOFUE[1,2], Mareki HONMA[3], and Toshihiro OMODAKA[1]
1. Department of Physics, Meisei University, Hino, 191-8506 Tokyo
2. Institute of Astronomy, University of Tokyo, Mitaka, 181-0015 Tokyo,
3. Mizusawa VERA observatory, National Astronomical observatory of Japan, Graduate University for Advanced Study, Mitaka, Tokyo 181-8588
Email:sofue@ioa.s.u-tokyo.ac.jp

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Abstract

Table 3. (corrected lines only)

Component	Parameter	Value	Uncertainty
Dark halo	Mass in $r = 10$kpc sphere	$M_{\rm h}(10{\rm kpc}) = 1.5\times10^{10}M_\odot$	~ 10 %
(Spherical, isothermal)	Mass in $r = 20$ kpc sphere	$M_{\rm h}(20{\rm kpc}) = 7.1\times10^{10}M_\odot$	
	Core radius	$h = R_{\rm h} = 12$ kpc	
	Central SMD in $\|z\| < 10$ kpc	$\Sigma_{\rm hc} = 4.4\times10^2 M_\odot{\rm pc}^{-2}$	
	Central volume density	$\rho_{\rm hc} = 5.1\times10^{-3}M_\odot{\rm pc}^{-3}$	
Total Galactic mass	Mass in $r = 20$ kpc sphere	$M_{\rm total}(20{\rm kpc}) = 1.54\times10^{11}M_\odot$	~ 20 %

Table 4. (corrected lines only)

	Components	Local values
Surface Mass Density	Dark halo (isoth, $\|z\| < 10$ kpc)	$3.2\times10^2 M_\odot{\rm pc}^{-2}$
	Total (bulge + disk + halo)	$4.2\times10^2 M_\odot{\rm pc}^{-2}$
Volume Mass Density	Dark halo	$3.5\times10^{-3}\ M_\odot{\rm pc}^{-3}$
	Total	$0.2\sim0.3 M_\odot{\rm pc}^{-3}$
Total Mass in Solar Sphere	Dark halo in sphere $r = R_0$	$8.7\times10^9 M_\odot$
	Total mass in sphere $r = R_0$	$7.3\times10^{10}M_\odot$

In the article [PASJ 61, 229 (2009)], equation (13) for the isothermal halo should be read as

$$V_{\rm h}(r) = V_\infty\left[1-\left(\frac{h}{r}\right)\tan^{-1}\left(\frac{r}{h}\right)\right]^{1/2}. \qquad (13)$$

Accordingly, the core radius h should be taken as $h = 12$ kpc instead of 5.5 kpc in order to fit the observed data. The rotation curve for the dark halo componet in figure 3 is redrawn as in the figure here, and the rows related to dark-halo in tables 3 and 4 are revised as in the new tables.

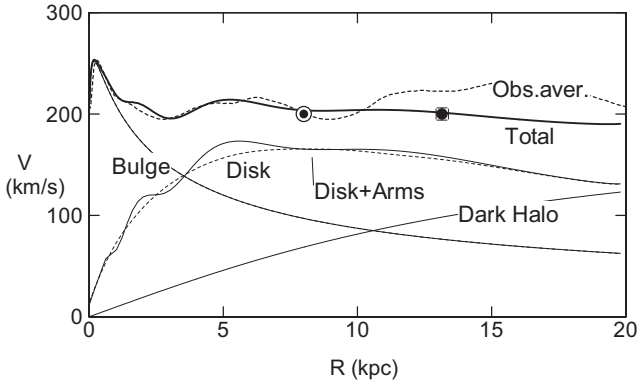
300
200
100
0
V
(km/s)
0
5
10
15
20
R (kpc)
Obs.aver.
Total
Bulge
Disk
Disk+Arms
Dark Halo

Fig. 3.