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Dust variations in the diffuse interstellar medium: constraints on Milky Way dust from *Planck*-HFI observations *(Corrigendum)*

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The paper "Dust variations in the diffuse interstellar medium: constraints on Milky Way dust from Planck-HFI observations" was published in A&A 577, A110 (2015). This corrigendum corrects Table 1 of the paper, which lists the elemental abundances and dust-to-gas mass ratios corresponding to the dust models presented in Sect. 2.1. The mistake in Table 1 was the inversion of the densities of aliphatic carbon (1.3 $\mathrm{g\,cm^{-3}}$) and aromatic carbon (1.6 $\mathrm{g\,cm^{-3}}$) in our calculations. For the dust models presented in Sect. 4.2, where we considered three different volume fractions of FeS in Fe inclusions: 30%, 50%, or 100%, the correct abundances are 19.3 ppm of Fe and 2.8 ppm of S, 16.5 ppm of Fe and 4.6 ppm of S, and 9.5 ppm of Fe and 9.5 ppm of S, respectively.

Since the dust spectral energy distribution is proportional to $(M_\mathrm{d}/M_\mathrm{H})/\rho$ (the quantity we keep constant from one model to the other), the results and conclusions of the paper are not changed by this correction.

Table 1. Dust model abundances and dust-to-gas mass ratios.

Small amorphous carbon grains ($a < 100$ nm)								
Mantle thickness (nm)	ρ (g/cm^3)	$M_\mathrm{d}/M_\mathrm{H}$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{aromatic}$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{aliphatic}$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{total}$			
0	1.3	0.14×10^{-2}	0	116.6	116.6			
5	1.6	0.17×10^{-2}	123.9	19.6	143.5			
7.5	1.6	0.17×10^{-2}	130.2	13.2	143.5			
10	1.6	0.17×10^{-2}	133.9	9.6	143.5			
20	1.6	0.17×10^{-2}	139.9	3.6	143.5			
30	1.6	0.17×10^{-2}	141.8	1.7	143.5			
Big amorphous carbon grains ($100 \lesssim a \lesssim 200$ nm)								
Mantle thickness (nm)	ρ (g/cm^3)	$M_\mathrm{d}/M_\mathrm{H}$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{aromatic}$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{aliphatic}$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{total}$			
0	1.30	0.52×10^{-3}	0	43.2	43.2			
5	1.48	0.59×10^{-3}	3.67	45.6	49.3			
7.5	1.51	0.60×10^{-3}	5.4	44.9	50.4			
10	1.53	0.61×10^{-3}	7.1	43.9	51.0			
20	1.57	0.63×10^{-3}	13.0	39.3	52.3			
30	1.59	0.63×10^{-3}	18.0	34.7	52.7			
Amorphous silicate grains ($100 \lesssim a \lesssim 200$ nm)								
Mantle thickness (nm)	ρ (g/cm^3)	$M_\mathrm{d}/M_\mathrm{H}$	$\left[\frac{\mathrm{Si}}{\mathrm{H}}\right]$	$\left[\frac{\mathrm{Mg}}{\mathrm{H}}\right]$	$\left[\frac{\mathrm{O}}{\mathrm{H}}\right]$	$\left[\frac{\mathrm{Fe}}{\mathrm{H}}\right]$	$\left[\frac{\mathrm{S}}{\mathrm{H}}\right]$	$\left[\frac{\mathrm{C}}{\mathrm{H}}\right]_\mathrm{mantle}$
0	2.95	0.68×10^{-2}	44.6	62.6	152.9	26.7	3.8	0
5	2.19	0.51×10^{-2}	32.1	45.1	110.1	19.3	2.8	12.8
7.5	2.04	0.47×10^{-2}	29.4	41.3	100.9	17.6	2.5	17.6
10	1.94	0.45×10^{-2}	27.6	38.7	94.5	16.5	2.4	22.1
15	1.82	0.42×10^{-2}	25.1	35.2	86.1	15.1	2.2	30.3
20	1.75	0.41×10^{-2}	23.5	33.0	80.5	14.1	2.0	38.2

Notes. The first column lists the aromatic-rich carbon mantle thickness, the second column the grain density averaged over the size distribution, and the other columns the elemental abundances (in ppm) of C, Si, Mg, O, Fe, and S within the grains. For the carbonaceous grains, we distinguish between carbon in aromatic-rich (mantle) and aliphatic-rich (core) forms. The carbons included in the silicates are those of the aromatic-rich mantles.