Erratum: Acoustic dispersion in a two-dimensional dipole system [Phys. Rev. B 78, 045304 (2008)]

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In the published version of our paper, some of the entries in Table II are erroneous. The errors originate in a mislabeling of the Γ_D classical coupling values therein: they are too high by a factor of 2. Consequently, the assignment of the Γ_D values to the sound speed values entered in columns 3, 4, and 5 are changed. The sound speed values themselves as measured in $a\omega_D$ units by the molecular dynamics simulations or calculated from the equation of state or from the quasilocalized charge approximation remain unchanged. On the other hand, the sound speeds converted into thermal units (in columns 6, 7, and 8), are reduced by a factor of $\sqrt{2}$ via the formula $a\omega_D=\sqrt{2\Gamma_D/\beta m}$.

To set the record straight, the amended table below—which displays slightly more accurate up-to-date entries in columns 2, 3, and 4—replaces the original Table II. Furthermore, in the first paragraph of Sec. V, $\Gamma_D=100$ on line 14 should read $\Gamma_D=50$ and $\Gamma_D=20$ on line 15 should read $\Gamma_D=10$. Three lines below Eq. (44), $\Gamma_D=60$ should read $\Gamma_D=30$.

The other changes this rescaling of Γ_D entails relate to comparisons with the EHB liquid. The comparisons now to be made are between the entries in column 5 of Table IV of the paper and the column 3 entries in the amended Table II below. As a result, the comparisons of the QLCA sound speeds on lines 11 and 12 of the second paragraph of Sec. V show smaller differences between EHB and point-dipole sound speeds: 7.6% at $\Gamma_D=20$ is replaced by 5.6% at $\Gamma_D=10$; 6.2% at $\Gamma_D=100$ is replaced by 5.5% at $\Gamma_D=50$.

TABLE II. Two-dimensional point dipole liquid: QLCA (s_{QLCA}), MD (s_{MD}), and thermodynamic (s_{comp}) sound speeds as functions of the classical coupling parameter Γ_D. Columns 3–5 are in units of $a\omega_D$; columns 6–8 are in units of $1/\sqrt{\beta m}$.

Γ_D	$J(\Gamma_D)$	s_{QLCA} $(a\omega_D)$	s_{MD} $(a\omega_D)$	s_{comp} $(a\omega_D)$	s_{MD} $(1/\sqrt{\beta m})$	s_{comp} $(1/\sqrt{\beta m})$	s_{QLCA} $(1/\sqrt{\beta m})$
10	0.8847	1.351	1.312	1.282	5.867	5.733	6.042
20	0.8504	1.324	1.276	1.257	8.070	7.950	8.374
30	0.8370	1.314	1.246	1.247	9.652	9.659	10.18
40	0.8295	1.308	1.258	1.242	11.25	11.11	11.70
50	0.8245	1.304	1.251	1.238	12.51	12.38	13.04

These are merely technical corrections. In no way do they alter the findings and conclusions of the paper. Indeed, they are further strengthened.

