

**Table II:** Differences of Compressibility Factors ( $PV/RT$  of Argon -  $PV/RT$  of Xenon); Reduction with Kihara Molecular Parameters

$T_K^*$	$d_K^*$							
	0.098	0.147	0.196	0.2445	0.293	0.318	0.342	0.391
1.17	0.0068	0.0100	0.0095	0.0076	0.0069	0.0077	0.0078	0.0087
1.215	0.0063	0.0088	0.0087	0.0071	0.0060	0.0062	0.0060	0.0062
1.26	0.0043	0.0054	0.0051	0.0033	0.0017	0.0015	0.0009	0.0004
1.30	0.0045	0.0054	0.0057	0.0046	0.0035	0.0033	0.0029	0.0025
1.39	0.0030	0.0028	0.0034	0.0031	0.0026	0.0026	0.0023	0.0019
1.475	0.0027	0.0023	0.0035	0.0041	0.0043	0.0043	0.0043	0.0042
1.56	0.0010	-0.0003	0.0005	0.0008	0.0005	0.0000	-0.0004	-0.0015
	0.440	0.489	0.538	0.562	0.587	0.611	0.636	
1.17	0.0091	0.0091	0.0098	0.0121	0.0119	0.0164	0.0165	
1.215	0.0064	0.0067	0.0078	0.0104	0.0102	0.0148	0.0144	
1.26	-0.0001	-0.0004	0.0003	0.0026	0.0022	0.0063	0.0055	
1.30	0.0024	0.0025	0.0036	0.0062	0.0058	0.0100	0.0089	
1.39	0.0015	0.0013	0.0020	0.0046	0.0036	0.0074	0.0057	
1.475	0.0039	0.0040	0.0050	0.0077	0.0066	0.0105	0.0085	
1.56	-0.0024	-0.0026	-0.0020	0.0006	-0.0006	0.0032	0.0014	

**Table III:** Differences of Compressibility Factors ( $PV/RT$  of Argon -  $PV/RT$  of Xenon); Reduction with Lennard-Jones Molecular Parameters

$T_{LJ}^*$	$d_{LJ}^*$						
	0.100	0.150	0.200	0.250	0.300	0.325	0.350
1.35	-0.0013	0.0000	0.0046	0.0064	0.0116	0.0149	0.0186
1.40	-0.0010	0.0004	0.0033	0.0074	0.0130	0.0167	0.0211
1.45	-0.0005	0.0009	0.0039	0.0083	0.0145	0.0185	0.0234
1.50	-0.0003	0.0013	0.0046	0.0093	0.0160	0.0205	0.0258
1.60	0.0003	0.0024	0.0060	0.0113	0.0188	0.0240	0.0301
1.70	0.0010	0.0037	0.0076	0.0135	0.0218	0.0274	0.0340
1.80	0.0017	0.0046	0.0090	0.0155	0.0246	0.0306	0.0376
	0.400	0.450	0.500	0.550	0.600	0.650	
1.35	0.0298	0.0484	0.0798	0.1307	0.2075	0.3187	
1.40	0.0338	0.0541	0.0869	0.1387	0.2152	0.3247	
1.45	0.0374	0.0590	0.0929	0.1452	0.2216	0.3296	
1.50	0.0407	0.0633	0.0981	0.1509	0.2270	0.3335	
1.60	0.0467	0.0709	0.1071	0.1603	0.2357	0.3392	
1.70	0.0518	0.0773	0.1144	0.1680	0.2424	0.3433	
1.80	0.0562	0.0826	0.1204	0.1739	0.2473	0.3463	

**Table IV:** Values of the Scale Factors for the Isotherms

	Levelt L-J	Present work	Ideal
Temperature	1.881	1.927	1.931
Density	0.582	0.631	0.633

standard molar volume of the gas as calculated from Levelt's data.<sup>3</sup> Numerical values of the scale factors are shown in Table IV.

The fact that the Lennard-Jones potential does not

provide an adequate description of the molecular field of the rare gases seems by now well established.<sup>5,8</sup> The Kihara potential, on the other hand, gives much more satisfactory results in the calculation of both equilibrium and transport properties of the rare gases.<sup>5,9</sup> Both the nature of the potential and the assumption of pairwise additivity are determining factors in satis-

(8) T. Kihara, *Rev. Mod. Phys.*, **25**, 831 (1955); W. B. Brown and J. S. Rowlinson, *Mol. Phys.*, **3**, 35 (1960); R. Munn, *J. Chem. Phys.*, **40**, 1439 (1964).

(9) A. E. Sherwood and J. M. Prausnitz, *ibid.*, **41**, 413 (1964); J. A. Barker, W. Fock, and F. Smith, *Phys. Fluids*, **7**, 897 (1964).