

CORRIGENDUM

JERRY M. STRAKA

School of Meteorology, University of Oklahoma, Norman, Oklahoma

MATTHEW S. GILMORE

Department of Atmospheric Sciences, University of Illinois at Urbana-Champaign, Urbana, Illinois, and Cooperative Institute for Mesoscale Meteorological Studies, University of Oklahoma, Norman, Oklahoma

KATHARINE M. KANAK AND ERIK N. RASMUSSEN

Cooperative Institute for Mesoscale Meteorological Studies, University of Oklahoma, Norman, Oklahoma

Three equations contain errors in Straka et al. (2005), although they were programmed correctly for the work presented. Equation (10) should have read

$$\frac{dq}{dt} = \int_0^\infty \frac{1}{\rho_o} \frac{2\pi D f(S_x - 1)}{\left(\frac{L_s^2}{KR_v T^2} + \frac{1}{\rho_o q_{is} \varphi_v}\right)} n(D) dD; \quad (10)$$

Corresponding author address: Jerry M. Straka, School of Meteorology, University of Oklahoma, 120 David L. Boren Blvd., Norman, OK 73072.
E-mail jstraka@ou.edu

that is, there was an incorrect factor of N_t in the numerator. Equation (11) should have read

$$\frac{dq}{dt} = \frac{1}{\rho_o} \frac{2\pi D_n N_t f(S_x - 1)}{\left(\frac{L_s^2}{KR_v T^2} + \frac{1}{\rho_o q_{is} \varphi_v}\right)} \frac{\Gamma(1 + \nu)}{\Gamma(\nu)}; \quad (11)$$

that is, the gamma terms were omitted. Equation (13) should have read

$$\frac{dq_x}{dt} = \int_0^\infty \frac{\pi E_{x,y} q_y D_x^2 a D_x^b}{4} n(D) dD; \quad (13)$$

that is, there was an incorrect factor of N_x in the numerator. In addition, Tables 2 and 3 have been updated

TABLE 2. Results from vapor diffusion growth of an ice sphere from 0 to 300 s. In columns A–F, the top values are the 300-s values and the bottom values are the errors relative to scheme F. Relative differences (RD; percent) are based on $100 \times |(\text{true} - \text{predicted}) / \text{true}|$, where true values are from scheme F and predicted values are from the other schemes.

Scheme	Initial values for all schemes	Final values and errors relative to scheme F			
		A: one moment, predict q , constant n_o	B: one moment, predict q , constant D_n	E: two moment, predict q , predict D_n	F: two-moment, predict q , predict N_t
q ($\times 10^{-3}$)	1.00	3.13	39.86	2.67	4.97
q RD against F (%)	—	17.14	49.42	86.14	—
N_t ($\times 10^7 \text{ m}^{-3}$)	1.00	1.77	3.99	7.84	1.00
N_t RD against F (%)	—	27.56	249.94	683.87	—
D_n ($\times 10^{-6} \text{ m}$)	13.06	15.79	13.06	11.21	18.11
D_n RD against F (%)	—	12.81	27.90	38.08	—
n_o [$\times 10^{20} \text{ m}^{-(\beta+\nu)}$]	44.91	44.91	179.04	555.76	16.84
n_o RD against F (%)	—	166.78	963.44	3201.06	—

TABLE 3. As in Table 2, but for continuous collection growth.

Scheme	Initial values for all schemes	Final values and errors relative to scheme F			
		A: one moment, predict q , constant n_o	B: one moment, predict q , constant D_n	E: two moment, predict q , predict D_n	F: two moment, predict q , predict N_t
q ($\times 10^{-3}$)	4.00	8.16	8.34	8.00	8.13
q RD against F (%)	—	2.10	4.23	1.62	—
N_t (m^{-3})	1000.00	1429.46	2085.17	1332.67	1000.0
N_t RD against F (%)	—	42.95	108.52	33.27	—
D_n ($\times 10^{-6}$ m)	520.93	586.82	520.93	599.66	656.38
D_n RD against F (%)	—	10.60	20.63	8.64	—
n_o [$\times 10^{13}$ $m^{-(\beta+\nu)}$]	7.07	7.07	14.75	6.18	3.54
n_o RD against F (%)	—	100.04	317.14	74.78	—

after eliminating a computer coding error in which some of the input values correctly presented in the paper were incorrectly coded in the simple model. With the correction to the code, scheme E is the second best for collection growth instead of scheme A (but not for diffusion growth).

REFERENCES

Straka, J. M., M. S. Gilmore, K. M. Kanak, and E. N. Rasmussen, 2005: A comparison of the conservation of number concentration for the continuous collection and vapor diffusion growth equations using one- and two-moment schemes. *J. Appl. Meteor.*, **44**, 1844–1849.