

Below are the parameter names for the headers in the files. The files are comma-separated, ascii files. See Jefferson A., D. Hageman, H. Morrow, F. Mei, and T. Watson (2017), Seven years of aerosol scattering hygroscopic growth measurements from SGP: factors influencing water uptake, *J. Geophys. Res. Atmos.*, 122, doi:[10.1002/2017JD026804](https://doi.org/10.1002/2017JD026804) on how to calculate the RH-dependent aerosol scattering coefficient or *fRH* parameter from the data. Data headers for SGP09\_15\_fRH\_fits.csv and sgp09\_15sigma.csv are similar with the chi-square value replace with the sigma goodness of fit parameter, where sigma is 1 standard deviation of the residuals from the fit line.

File name: SGP09\_15\_fRH\_fits.csv

row	
DateTimeUTC	
Gamma fit parameters	
BsG0	Sub 10um scattering coefficient at 550 nm Mm <sup>-1</sup>
DryNeph RH0	Sub 10um Dry Neph relative humidity, percent
wetneph RH max0	Sub 10um Wet Neph maximum relative humidity, percent
wetneph RH min0	Sub 10um Wet Neph minimum relative humidity, percent
chisq BsG0	Sub 10um Chi-square goodness of fit for gamma fit
A BsG0	Sub 10um “a” fit parameter for gamma fit
gamma BsG0	Sub 10um “gamma” fit parameter for gamma fit
BsG1	Sub 1 um scattering coefficient at 550 nm Mm <sup>-1</sup>
DryNephRH1	Sub 1 um Dry Neph relative humidity, percent
WetNeph RH max1	Sub 1 um Wet Neph maximum relative humidity, percent
WetNeph RH min1	Sub 1 um Wet Neph minimum relative humidity, percent
chisqBsG1	Sub 1 um Chi-square goodness of fit for gamma fit
A BsG1	Sub 1 um “a” fit parameter for gamma fit
gamma BsG1	Sub 1 um “gamma” fit parameter for gamma fit
Kappa fit parameters	
BsG0	Sub 10um scattering coefficient at 550 nm Mm <sup>-1</sup>
DryNeph RH0	Sub 10um Dry Neph relative humidity, percent
WetNeph RH max0	Sub 10um Wet Neph maximum relative humidity, percent
DryNeph RHmin0	Sub 10um Wet Neph minimum relative humidity, percent
chisq BsG0	Sub 10um Chi-square goodness of fit for kappa fit
RsG BsG0	Sub 10um r <sup>2</sup> goodness of fit for kappa fit
B BsG0	Sub 10um “b” fit parameter for kappa fit
kappa BsG0	Sub 10um “kappa” fit parameter for kappa fit
BsG1	Sub 1 um scattering coefficient at 550 nm Mm <sup>-1</sup>
DryNeph RH1	Sub 1 um Dry Neph relative humidity, percent
WetNephRHmax1	Sub 1 um Wet Neph maximum relative humidity, percent
WetNeph RHmin1	Sub 1 um Wet Neph minimum relative humidity, percent
chisqBsG1	Sub 1 um Chi-square goodness of fit for kappa fit
RsG BsG1	Sub 1 um r <sup>2</sup> goodness of fit for kappa fit
B BsG1	Sub 1 um “b” fit parameter for kappa fit
kappa BsG1	Sub 1 um “kappa” fit parameter for kappa fit

File name: SGP11\_14merge acsm intensive.csv

row	
DateTimeUTC	
ammonium	Mass $\text{NH}_4^+$ ion $\text{ugm}^3$
chloride	Mass $\text{Cl}^-$ ion $\text{ugm}^3$
nitrate	Mass $\text{NO}_3^-$ ion $\text{ugm}^3$
sulfate	Mass $\text{SO}_4^{2-}$ ion $\text{ugm}^3$
total_organics	Mass organic carbon ions $\text{ugm}^3$
Total_Mass	Total aerosol mass $\text{ugm}^3$
BsG0	Sub 10um scattering coefficient at 550 nm $\text{Mm}^{-1}$
BsG1	Sub 1 um scattering coefficient at 550 nm $\text{Mm}^{-1}$
DryNeph RH0	Sub 10um Dry Neph relative humidity, percent
WetNeph RHmax0	Sub 10um Wet Neph maximum relative humidity, percent
WetNeph RHmax1	Sub 1 um Wet Neph maximum relative humidity, percent
WetNeph RHmin0	Sub 10um Wet Neph minimum relative humidity, percent
WetNeph RHmin1	Sub 1 um Wet Neph minimum relative humidity, percent
ChisqBsG0	Sub 10 um Chi-square goodness of fit for gamma fit
ChisqBsG1	Sub 1 um Chi-square goodness of fit for gamma fit
A BsG0	Sub 10 um "a" fit parameter for gamma fit
A BsG1	Sub 1 um "a" fit parameter for gamma fit
gammaBsG0	Sub 10 um "gamma" fit parameter for gamma fit
gammaBsG1	Sub 1 um "gamma" fit parameter for gamma fit
BsG0	Sub 10um scattering coefficient at 550 nm $\text{Mm}^{-1}$
BaG0	Sub 10 um absorption coefficient at 550 nm $\text{Mm}^{-1}$
BeG0	Sub 10um extinction coefficient at 550 nm $\text{Mm}^{-1}$
SSAG0	Sub 10um single scatter albedo 550 nm
BfrG0	Sub 10um backscatter fraction 550 nm
AngSBR0	Sub 10um scattering Angstrom exponent 450/700 nm pair
AngABG0	Sub 10um absorption Angstrom exponent 461/653 nm pair
BsG1	Sub 1 um scattering coefficient at 550 nm $\text{Mm}^{-1}$
BaG1	Sub 1 um absorption coefficient at 550 nm $\text{Mm}^{-1}$
BeG1	Sub 1 um extinction coefficient at 550 nm $\text{Mm}^{-1}$
SSAG1	Sub 1 um single scatter albedo 550 nm
BfrG1	Sub 1 um backscatter fraction 550 nm
AngSBR1	Sub 1 um scattering Angstrom exponent 450/700 nm pair
AngABG1	Sub 1 um absorption Angstrom exponent 461/653 nm pair
winddirection	
Season	

