1. Year: year
2. month: month: 1:12 = January - December
3. DoY: day of year; January 1 = 1 (unit: nominalDay)
4. Hour\_(EST=GMT-5): hour of day in EST; (EST=GMT-5)
5. seq\_day.90: sequential day starting in 1990, 1 = Jan. 1 1990 (unit: nominalDay)
6. seq\_time.90: sequential time in fractional days; 1.5 is 12 noon January 1 1990 (unit: nominalDay)
7. obs.NEE\_e6mol/m2/s: observerd NEE (FCO2 + storage) in micromoles CO2/m2/s (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
8. obs.FCO2\_e-6mol/m2/s: observed FCO2 (CO2 eddy covariance flux) in micromoleCO2/m2/s (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
9. fco2.corr\_e-6mol/m2/s: observed FCO2 + storage correction (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
10. ustar\_cm/s: observed u\* (u\* = sqrt(-1 \* <u'w'>) in cm/s (unit: centimetersPerSecond / missing value: NA)
11. nee\_e-6mol/m2/s: net ecosystem exchange filled by model in micromole CO2 /m2/s (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
12. Resp.e\_e-6mol/m2/s: ecosystem respiration filled and derived (see below) e-6mol/m2/s (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
13. gee\_e-6mol/m2/s: gross ecosystem exchange derived and filled (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
14. C.flag1: 1 when NEE is filled (nee.obs is NA)

1: NEE is filled

1. C.flag2: 1 when estimated NEE = observed FCO2 + ‘storage adjustment’

1: estimated NEE = observed FCO2 + ‘storage adjustment’

1. obs\_Ta\_@27m\_C: observed air temperature at 27 m (top of tower) (unit: celsius / missing value: NA)
2. Ta@27m.filled\_C: filled air temperature with missing points replaced by available data (unit: celsius / missing value: NA)
3. TA1.flag1: 1when Tair interpolated from adjacent profile heights
4. 1: Tair interpolated from adjacent profile heights
5. TA1.flag2: 1when Tair filled from sonic temperature
6. 1: Tair filled from sonic temperature
7. TA1.flag3: 1when Tair filled from Fisher Meterological Station data
8. 1: Tair filled from Fisher Meterological Station data
9. Ta1.flag4: 1when Tair from daily mean at Shaler Met Station and mean 24-hour cycle
10. 1: Tair from daily mean at Shaler Met Station and mean 24-hour cycle
11. Ta@2.5m\_C: observed air temperature at 2.5m above ground (unit: celsius / missing value: NA)
12. Ta@2.5m.filled\_C: filled air temperature at 2.5 m above ground (unit: celsius / missing value: NA)
13. Ta5.flag1: 1when Tair interpolated from adjacent profile heights
14. 1: Tair interpolated from adjacent profile heights
15. Ta5.flag2: 1when Tair filled from sonic temperature
16. 1: Tair filled from sonic temperature
17. Ta5.flag3: 1when Tair filled from Fisher Meterological Station data
18. 1: Tair filled from Fisher Meterological Station data
19. Ta5.flag4: 1when Tair from daily mean at Shaler Met Station and mean 24-hour cycle
20. 1: Tair from daily mean at Shaler Met Station and mean 24-hour cycle
21. PAR@28m\_e-6mol/m2/s: observed photosynthetically active radiation (PPFD) at 28m (above the canopy) (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
22. PAR@28m.filled\_e-6mol/m2/s: filled photosynthetically active radiation (PPFD) (unit: micromolePerMeterSquaredPerSecond / missing value: NA)
23. P.flag1: 1when missing nighttime points set to 0
24. 1: missing nighttime points set to 0
25. P.flag2: 1when filled from SUNY-ASRC data
26. 1: filled from SUNY-ASRC data
27. P.flag3: 1when estimated from global radiation at Fisher Met Station
28. 1: estimated from global radiation at Fisher Met Station
29. P.flag4: 1when filled with hourly mean in a 30 day window
30. 1: filled with hourly mean in a 30 day window