```
% read OK mesonet wind data files (for 5-minute intervals)

% download files from:
% http://home.chpc.utah.edu/~u0652833/windclassfiles_meso1/
% http://home.chpc.utah.edu/~u0652833/windclassfiles_meso2/

% each file contains data for one year for one variable at 3 stations

% see sgp05okmX1.a1.pdf for metadata

% array sizes:
% 3x105120 (or 3x105408 for a leap year)

% station IDs:
% group 1: 92 44 52
% group 2: 29 108 50

clear all

group1 = [92 44 52];

% construct file name for each file

for year = 97:111

    clear a* b*

yy = mod(year, 100);

yyS = num2str(yy,'%02i');

fn = ['groupone_wspd' yyS '.mat'];

load (fn)

disp(' ')
disp(['year = ' yyS])

% whos

% Name                Size                    Bytes  Class     Attributes
%
%   groupone_wspd97      3x105120            2522880  double

% get variable list

s = who;

if mod(year,4) == 0

    wspd_day_avg = zeros(366,3);

else

    wspd_day_avg = zeros(365,3);
```

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end

for i = 1:3 % loop over 3 stations

disp(' ')
disp(['Station ' num2str(group1(i))])

% wspd = groupone_wspd97(i,:);

bb = [ s{3} '(i,:)' ];
wspd =  eval(bb);


% find and count missing data (NaN)

miss = isnan(wspd);
total_missing = sum(miss);
disp(['Total missing = ' num2str(total_missing)])

% mean daily wind speed versus day of year (plot) -------------------------

nd = length(wspd) / 288;

wspd_day = reshape(wspd,288,nd);

% to skip missing data, must deal with each average separately

for j = 1:365
    mday = isnan(wspd_day(:,j));
    wspd_day_avg(j,i) = mean(wspd_day(~mday,j));
end

total_days_missing = sum(isnan(wspd_day_avg(:,i)));
disp(['Days missing = ' num2str(total_days_missing)])

end

% clear variable with name s{1}

aa = ['clear ' s{3}];

eval(aa)

zz = ['save wspd_day_avg_groupone_' yyS '.mat' ' wspd_day_avg'];

eval(zz)

%save wspd_day_avg_groupone_97 wspd_day_avg

end
```