README for yasha's plot_BOM_wind_arrows

Data from coastal stations are downloaded daily started in January 2017 and saved into two files:
BOM_obs_archived.mat (for WA stations)
SA_BOM_obs_archived.mat (for SA stations)

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To plot wind arrows including loading the data use these functions:
plot_date_BOM_wind.m
SA_plot_date_BOM_wind.m

**** these require the other functions contained within this directory**

for example:

help plot_date_BOMwind(sites,date,numdays,ymax)

% plot wind arrow plots for recent bom obs for WA
% data stored in matlab structurein BOM_obs_archived.mat
% USAGE:
% plot_date_BOMwind(sites,date,numdays,ymax)
% site = station number (can be vector)
% date in string format (starting)
% numdays= number of days to plot (best under 10)
% ymax= ymax in m/s
% example: plot_date_BOM_wind([7:10],'2018-01-27',6,20) plots sites 7 to 10 (Cape Leeuwin to Cape Naturaliste)

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This functions call the function **WindArrows4.m** which can be used to plot arrows for any time,u,v data

function WindArrows4(u,v,wtime,begintime,numdays,interval,xtickhrs,ymax)

help **WindArrows4.m**
%plot seabreeze-like plot of wind arrows
%
% yasha hetzel 2016
%
%
% usage:
%
% WindArrows4(u,v,wtime,begintime,numdays,interval,xtickhrs,ymax)
%
% inputs:
%

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% -wind speed east/north components u,v in m/s
% -wind time in matlab datenum format
% -begintime = matlab string e.g. 'yyyy-mm-dd HH:MM'
% -numdays = number of days to plot,
% -interval = spacing between arrows (in hours)
% (interval of 1 recommended for up to 10 days, 3 recommended for 1 month time
period; looks bad longer than this)
% -xtickhrs = xtick spacing (in hours)
% -ymax = y axis upper limit,
%
% NOTE: color of arrows is determined by jet colormap with max color equal to ymax
%       be careful of setting numdays compared to start time to get desired
%       end date (may need to set to start of following day)
% required: arrows.m, cart2polCOMPASS.m
%
% example:
% WindArrows4(u,v,wtime,'2009-6-1 00:00',7,1,12,20)
% this interpolates to hourly data using interp1, plots for 7 days, with
% ylim of 20 m/s, and 12 hour spacing between tick marks
%
% after loading  saved bom station data:
% si=20; when=datenum(2018,7,1);
WindArrows4(archive(si).u,archive(si).v,archive(si).mtime_UTC,when,30,3,5*24,15);
title(archive(si).name(1)); set(gcf,'color','w')
```