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Readme for summary files

The 1-min daily ASCII files *OCEANUS_2010_proc_name_1min_all.txt* (name='trh', 'scs',
'son', …) are the composite files for the entire project written at 1min resolution.
Most quantities given are subject to future modification based on accounting for other sources of
data and revised calibrations.

Details:
* name='trh' refers to slow mean data T/RH
* name='scs' refers to ship data system
* name='son' refers to sonic measurement on the bow tower
* name= 'gpsnav' refers to the PSD navigation data from GPS units.
* name= 'licor' refers to the Licor-7500 unit.
* name= 'pco' refers to LDEO Piccaro sensor.
* name= 'pby' refers to the University of Hawaii Piccaro sensor.

The data columns are not labeled so they can be directly acquired with a MATLAB 'load'
statement.

The columns for files *WHOTS2009_proc_trh_1min_all.txt* are as follow:
```
jdy=x(:,1);              % Day-Of-Year at beginning of time average
Rhvais=x(:,8);           % Relative Humidity, %
Tvais=x(:,7);            % air temperature, degC
qvais=x(:,7);            % specific humidity, g/kg
```

The columns for files *WHOTS2009_proc_scs_1min_all.txt* are as follow:
```
jdy=x(:,1);      %Day-Of-Year at beginning of time average
tam=x(:,2);      %air temperature, degC
bpm=x(:,3);      %barometric pressure, mb
rhm=x(:,4);      %Relative Humidity, %
condm=x(:,5);    %thermosalinograph conductivity, Siemens/m?
tssm=x(:,6);     %salinity, psu
tsgm=x(:,7);     %thermosalinograph temperature, degC
tsg2m=x(:,8);    %bow thermosalinograph temperature, degC
solarm=x(:,9);   %solar flux, w/m^2
imum=x(:,10);    %imet true wind speed, m/s
imdm=x(:,11);    %imet true wind dir, deg
lrgm=x(:,12);    %heading, deg
```

The columns for files *WHOTS2009_proc_son_1min_all.txt* are as follows:
```
jdy=x(:,1);      % Day-Of-Year at beginning of time average
U=x(:,2);        % Relative u wind component (+boward) , m/s
V=x(:,3);        % Relative v wind component (+portward) , m/s
W=x(:,4);        % Relative w wind component (+up) , m/s
Tsonic=x(:,5);   % sonic temperature, C
dir =x(:,6)      % Relative wind direction (from),clockwise rel ship's bow,
deg
```

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The columns for files *WHOTS2009_proc_ gpsnav_1min_all.txt* are as follow:
```
jdy=x(:,1);              %Day-Of-Year at beginning of time average
gpslat1i=x(:,2);         %decimal latitude, deg
gpslon1i=x(:,3);         %decimal longitude, deg
gpsspeedi=x(:,4);        %GPS SOG, m/s
gpsheadi=x(:,5);         %GPS COG, deg
```

The columns for files *WHOTS2009_proc_ licor_1min_all.txt* are as follow:
```
jdy=x(:,1);              %Day-Of-Year at beginning of time average
Licor_H2O_mi=x(:,2);  %Specific humidity, g/kg
Licor_CO2_ai=x(:,3);  %CO2 mole fraction, umol/mol
Licor_Tempi=x(:,4);   %Licor box temperature, degC
Licor_Pressi=x(:,5);  %Licor box pressure, hPa
Licor_agci=x(:,6);    %Licor AGC value, %
```

The columns for files *WHOTS2009_proc_ pby_1min_all.txt* are as follow:
```
jdy=x(:,1);              %Day-Of-Year at beginning of time average
pby_H2Oi=x(:,2);         %Specific humidity, g/kg
pby_pCO2i=x(:,3);        %CO2, ppm
pby_CH4i=x(:,4);         %CH4, ppm
pby_tempi=x(:,5);        %PBY temperature, degC
```

The columns for files *WHOTS2009_proc_ pco_1min_all.txt* are as follow:
```
jdy=x(:,1);              %Day-Of-Year at beginning of time average
pby_H2Oi=x(:,2);         %Specific humidity, g/kg
pby_pCO2i=x(:,3);        %CO2, ppm
pby_CH4i=x(:,4);         %CH4, ppm
```

A second set of programs reads the daily 1-min text files; time matches the various data sources, averages them to 5 or 30 minutes, computes fluxes, and writes new daily flux files. The 5-min and 30-min daily flux files have been combined and rewritten as a single file to form the file *OCEANUS_2010_PSD_flux_5min_all.txt* and *OCEANUS_2010_PSD_flux_30min_all.txt*.

The column assignment for those files is as follow:
```
jdy;        %Day-Of-Year at beginning of time average
s1;         %psd true wind speed, m/s
dir1;       %psd true wind direction, deg
ts;         %psd seasnake T, degC
ts_tsg;     %ship theromsalinograph T, C  bow
sal_tsg;    %ship theromsalinograph salinity, psu  bow
ta;         %psd air T, degC
qs;         %psd air specific humidity at sea surface, g/kg
qa;         %psd air specific humidit, g/kg
psp;        %psd solar flux, w/m^2
pir;        %psd IR flux, w/m^2
org;        %psd optical raingage precip rate, mm/hr
shp_spd;    %ship sog from gps, m/s
shp_hed;    %ship heading from gyrocompass, deg
relsp;      %rel wind speed, m/s
reldir;     %rel wind direction, deg
lat;        %decimal latitude, deg
lon;        %decimal longtude, deg
```

```
zt;        %Depth of SST sensor, m
sig_sp;    %standard deviation of ship speed, m/s
taub;      %wind stress, coare 3.0, N/m^2
hsb;       %sensible heat flux, coare 3.0, w/m^2
hlb;       %latent heat flux, coare 3.0, w/m^2
rf;        %rain heat flux, w/m^2
ta_im;     %IMET air temp, degC
qa_im;     %IMET air specific humidity, g/kg
s_shp;     %IMET true wind speed, m/s
dir_shp;   %IMET true wind direction, deg
psp_im;    %IMET solar flux, w/m^2
pir_im;    %IMET IR flux, w/m^2
pressm;    %BP, mb
rh_psd;    %RH, %
```