```
>> ncdisp('HRALBPH_2016-09-15.nc')
Source:
           /Users/hroarty/COOL/01_CODAR/MARACOOS_II/20170207_NC_Template/HRA
Format:
           netcdf4
Global Attributes:
           id                            = 'HRALBPH_2016-09-15'
           uuid                          = 'a66fd498-298e-41b5-8e84-b21d04a2f
           naming_authority              = 'Hudson River Environmental Condit
           ncei_template_version         = 'NCEI_NetCDF_TimeSeries_Orthogonal_
           sea_name                      = 'Hudson River'
           cdm_data_type                 = 'Station'
           featureType                   = 'timeSeries'
           Conventions                   = 'CF-1.6, ACDD-1.3'
           Metadata_Conventions          = 'Unidata Dataset Discovery v1.0'
           standard_name_vocabulary      = 'CF Standard Name Table v35'
           project                       = 'Hudson River Environmental Condit
           program                       = 'Hudson River Environmental Condit
           product_version               = '2.0'
           title                         = 'Hudson River Environmental Condit
           institution                   = 'Hudson River Environmental Condit
           references                    = 'http://www.HRECOS.org http://www.
           platform                      = 'In Situ Ocean-based Platforms > O
           instrument_vocabulary         = 'GCMD Earth Science Keywords. Vers
           platform_vocabulary           = 'GCMD Earth Science Keywords. Vers
           keywords_vocabulary           = 'GCMD Earth Science Keywords. Vers
           source                        = 'File generated from python script
           geospatial_lat_min            = 42.6196
           geospatial_lat_max            = 42.6196
           geospatial_lat_units          = 'degrees_north'
           geospatial_lon_min            = -73.7581
           geospatial_lon_max            = -73.7581
           geospatial_lon_units          = 'degrees_east'
           geospatial_vertical_positive = 'down'
           geospatial_vertical_units     = 'm'
           geospatial_bounds             = 'POINT (-73.7581 42.6196)'
           geospatial_bounds_crs         = 'EPSG:4326'
           publisher_name                = 'RPS ASA on behalf of HRECOS.'
           publisher_phone               = '(401) 789-6224'
           publisher_email               = 'devops@asascience.com'
           publisher_url                 = 'http://www.asascience.com/'
           publisher_type                = 'institution'
           publisher_institution         = 'RPS ASA'
           creator_name                  = 'HRECOS'
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            creator_url                 = 'http://www.hrecos.org/'
            creator_email               = 'gavin.lemley@dec.ny.gov'
            creator_type                = 'institution'
            creator_institution         = 'HRECOS'
            processing_level            = 'realtime'
            acknowledgment              = 'HRECOS is operated by a consortiu
            time_coverage_start         = '2016-09-15T04:00:00Z'
            time_coverage_end           = '2016-09-15T12:45:00Z'
            time_coverage_duration      = 'P31500S'
            time_coverage_resolution    = 'P900S'
            date_created                = '2016-09-15T13:38:00Z'
            date_issued                 = '2016-09-15T13:38:00Z'
            date_modified               = '2016-09-15T13:38:00Z'
            date_metadata_modified      = '2016-09-15T13:38:00Z'
            history                     = 'Created on 2016-09-15 with HRECOS_
            comment                     = 'Data retrieved using HRECOS databa
            contributor_name            = 'Gavin Lemley'
            summary                     = UNSUPPORTED DATATYPE
            contributor_role            = 'HRECOS Coordinator'
            license                     = 'HRECOS requests that attribution
            metadata_link               = 'http://www.hrecos.org/images/Data/
            keywords                    = 'Oceans > Ocean Chemistry > Chloro
            instrument                  = 'In Situ/Laboratory Instruments > C
Dimensions:
            name_strlen = 7
            time        = 36
Variables:
    lat
            Size:       1x1
            Dimensions:
            Datatype:   single
            Attributes:
                        units               = 'degrees_north'
                        standard_name       = 'latitude'
                        long_name           = 'station latitude'
                        axis                = 'Y'
                        valid_min           = -90
                        valid_max           = 90
                        comment             = 'Station Latitude'
                        _CoordinateAxisType = 'Lat'
    lon
            Size:       1x1
            Dimensions:
            Datatype:   single
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            Attributes:
                        units               = 'degrees_east'
                        standard_name       = 'longitude'
                        long_name           = 'station longitude'
                        axis                = 'X'
                        valid_min           = -180
                        valid_max           = 180
                        comment             = 'Station Longitude'
                        _CoordinateAxisType = 'Lon'
    station_id
            Size:       7x1
            Dimensions: name_strlen
            Datatype:   char
            Attributes:
                        cf_role    = 'timeseries_id'
                        short_name = 'HRALBPH'
                        long_name  = 'Port of Albany NY (Hydrological) '
    time
            Size:       36x1
            Dimensions: time
            Datatype:   double
            Attributes:
                        units               = 'seconds since 1970-01-01T00:00
                        standard_name       = 'time'
                        long_name           = 'time of measurement'
                        calendar            = 'gregorian'
                        comment             = 'Sample time'
                        _CoordinateAxisType = 'Time'
    crs
            Size:       1x1
            Dimensions:
            Datatype:   int32
            Attributes:
                        long_name          = 'http://www.opengis.net/def/crs/
                        grid_mapping_name  = 'latitude_longitude'
                        epsg_code          = 'EPSG:4326'
                        semi_major_axis    = 6378137
                        inverse_flattening = 298.2572
    HRALBPH
            Size:       1x1
            Dimensions:
            Datatype:   char
            Attributes:
                        ioos_code   = 'urn:ioos:station:hrecos:HRALBPH'
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                    short_name  = 'urn:ioos:station:hrecos:HRALBPH'
                    long_name   = 'Port of Albany NY (Hydrological) '
                    comment     = 'This variable describes the platform t
                    description = 'Port of Albany hydro (DEC)'
    z
           Size:       1x1
           Dimensions:
           Datatype:   double
           Attributes:
                    standard_name = 'depth'
                    long_name     = 'average depth of sensor'
                    comment       = 'Derived from mean value of depth var
                    axis          = 'Z'
                    positive      = 'down'
                    valid_min     = 0
                    valid_max     = 9
                    units         = 'm'
    OTT_Bubbler_Sensor
           Size:       1x1
           Dimensions:
           Datatype:   char
           Attributes:
                    serial_number = 'unknown'
                    sensor_type   = 'Nitrogen bubbler'
                    make_model    = 'OTT_Bubbler_Sensor'
                    long_name     = 'OTT_Bubbler_Sensor'
    YSI_6150_ROX
           Size:       1x1
           Dimensions:
           Datatype:   char
           Attributes:
                    serial_number = 'unknown'
                    sensor_type   = 'Optical'
                    make_model    = 'YSI 6150 ROX'
                    long_name     = 'YSI 6150 ROX'
    YSI_6025
           Size:       1x1
           Dimensions:
           Datatype:   char
           Attributes:
                    serial_number = 'unknown'
                    sensor_type   = 'Optical'
                    make_model    = 'YSI 6025'
                    long_name     = 'YSI 6025'
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    YSI_6589
           Size:       1x1
           Dimensions:
           Datatype:   char
           Attributes:
                       serial_number = 'unknown'
                       sensor_type   = 'Glass combination electrode'
                       make_model    = 'YSI 6589 Fast-response pH Sensor'
                       long_name     = 'YSI 6589 Fast-response pH Sensor'
    YSI_6560
           Size:       1x1
           Dimensions:
           Datatype:   char
           Attributes:
                       serial_number = 'unknown'
                       sensor_type   = 'Nickel electrode, thermistor'
                       make_model    = 'YSI 6560'
                       long_name     = 'YSI 6560'
    YSI_6136
           Size:       1x1
           Dimensions:
           Datatype:   char
           Attributes:
                       serial_number = 'unknown'
                       sensor_type   = 'Optical'
                       make_model    = 'YSI 6136'
                       long_name     = 'YSI 6136'
    mass_concentration_of_chlorophyll_in_sea_water
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                       _FillValue           = -999.9
                       coordinates          = 'time lat lon'
                       long_name            = 'mass_concentration_of_chloro
                       description          = 'Chlorophyll'
                       grid_mapping         = 'crs'
                       cell_methods         = 'time: point lat: point lon:
                       references           = 'http://www.hrecos.org/images
                       platform             = 'HRALBPH'
                       coverage_content_type = 'physicalMeasurement'
                       missing_value        = -999.9
                       comment              = 'Collected every 15 min with
                       instrument           = 'YSI_6025'
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                    valid_min             = 0
                    source                = 'Optical fluorescence sensor'
                    standard_name         = 'mass_concentration_of_chloro
                    units                 = 'ug/L'
                    valid_max             = 0.0001
    mass_concentration_of_oxygen_in_sea_water
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                    _FillValue            = -999.9
                    coordinates           = 'time lat lon'
                    long_name             = 'mass_concentration_of_oxygen
                    description           = 'Dissolved Oxygen'
                    grid_mapping          = 'crs'
                    cell_methods          = 'time: point lat: point lon:
                    references            = 'http://www.hrecos.org/images
                    platform              = 'HRALBPH'
                    coverage_content_type = 'physicalMeasurement'
                    missing_value         = -999.9
                    comment               = 'Calculated every 15 min with
                    instrument            = 'YSI_6150_ROX'
                    valid_min             = 0
                    source                = 'Calculated from air saturati
                    standard_name         = 'mass_concentration_of_oxygen
                    units                 = 'kg m-3'
                    valid_max             = 0.05
    fractional_saturation_of_oxygen_in_sea_water
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                    _FillValue            = -999.9
                    coordinates           = 'time lat lon'
                    long_name             = 'fractional_saturation_of_oxyg
                    description           = 'Dissolved Oxygen Percent'
                    grid_mapping          = 'crs'
                    cell_methods          = 'time: point lat: point lon:
                    references            = 'http://www.hrecos.org/images
                    platform              = 'HRALBPH'
                    coverage_content_type = 'physicalMeasurement'
                    missing_value         = -999.9
                    comment               = 'Collected every 15 min with
                    instrument            = 'YSI_6150_ROX'
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                    valid_min             = 0
                    source                = 'Optical probe with mechanica
                    standard_name         = 'fractional_saturation_of_oxyg
                    units                 = 'pct'
                    valid_max             = 500
    sea_water_ph_reported_on_total_scale
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                    _FillValue            = -999.9
                    coordinates           = 'time lat lon'
                    long_name             = 'sea_water_ph_reported_on_tota
                    description           = 'Acidity'
                    grid_mapping          = 'crs'
                    cell_methods          = 'time: point lat: point lon: p
                    references            = 'http://www.hrecos.org/images/
                    platform              = 'HRALBPH'
                    coverage_content_type = 'physicalMeasurement'
                    missing_value         = -999.9
                    comment               = 'Collected every 15 min with +
                    instrument            = 'YSI_6589'
                    valid_min             = 0
                    source                = 'Glass combination electrode'
                    standard_name         = 'sea_water_ph_reported_on_tota
                    units                 = 'pH'
                    valid_max             = 14
    sea_water_salinity
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                    _FillValue            = -999.9
                    coordinates           = 'time lat lon'
                    long_name             = 'sea_water_salinity'
                    description           = 'Salinity'
                    grid_mapping          = 'crs'
                    cell_methods          = 'time: point lat: point lon: p
                    references            = 'http://www.hrecos.org/images/
                    platform              = 'HRALBPH'
                    coverage_content_type = 'physicalMeasurement'
                    missing_value         = -999.9
                    comment               = 'Calculated every 15 minutes w
                    instrument            = 'YSI_6560'
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                        valid_min             = 0
                        source                = 'Calculated from conductivity
                        standard_name         = 'sea_water_salinity'
                        units                 = 'psu'
                        valid_max             = 70
    depth
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                        _FillValue            = -999.9
                        coordinates           = 'time lat lon'
                        long_name             = 'depth'
                        description           = 'Depth'
                        grid_mapping          = 'crs'
                        cell_methods          = 'time: point lat: point lon:
                        references            = 'http://www.hrecos.org/images
                        platform              = 'HRALBPH'
                        coverage_content_type = 'physicalMeasurement'
                        missing_value         = -999.9
                        comment               = 'Datum: NAVD88. Collected eve
                        instrument            = 'OTT_Bubbler_Sensor'
                        positive              = 'down'
                        valid_min             = -5
                        source                = ''
                        standard_name         = 'depth'
                        units                 = 'm'
                        valid_max             = 9
    water_surface_height_above_reference_datum
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                        _FillValue            = -999.9
                        coordinates           = 'time lat lon'
                        long_name             = 'water_surface_height_above_
                        description           = 'Water Elevation'
                        grid_mapping          = 'crs'
                        cell_methods          = 'time: point lat: point lon:
                        references            = 'http://www.hrecos.org/images
                        platform              = 'HRALBPH'
                        coverage_content_type = 'physicalMeasurement'
                        missing_value         = -999.9
                        comment               = 'Datum: NAVD88. Collected eve
```

```
                    instrument            = 'OTT_Bubbler_Sensor'
                    valid_min             = -5
                    source                = 'Nitrogen bubbler'
                    standard_name         = 'water_surface_height_above_
                    units                 = 'm'
                    valid_max             = 70
    sea_water_turbidity
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                    _FillValue            = -999.9
                    coordinates           = 'time lat lon'
                    long_name             = 'sea_water_turbidity'
                    description           = 'Turbidity'
                    grid_mapping          = 'crs'
                    cell_methods          = 'time: point lat: point lon:
                    references            = 'http://www.hrecos.org/images
                    platform              = 'HRALBPH'
                    coverage_content_type = 'physicalMeasurement'
                    missing_value         = -999.9
                    comment               = 'Collected every 15 min with
                    instrument            = 'YSI_6136'
                    valid_min             = 0
                    source                = UNSUPPORTED DATATYPE
                    standard_name         = 'sea_water_turbidity'
                    units                 = 'NTU'
                    valid_max             = 1000
    sea_water_electrical_conductivity
           Size:       36x1
           Dimensions: time
           Datatype:   single
           Attributes:
                    _FillValue            = -999.9
                    coordinates           = 'time lat lon'
                    long_name             = 'sea_water_electrical_conduct
                    description           = 'Specific Conductivity'
                    grid_mapping          = 'crs'
                    cell_methods          = 'time: point lat: point lon:
                    references            = 'http://www.hrecos.org/images
                    platform              = 'HRALBPH'
                    coverage_content_type = 'physicalMeasurement'
                    missing_value         = -999.9
                    comment               = 'Collected every 15 min with
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```
                        instrument            = 'YSI_6560'
                        valid_min             = 0
                        source                = 'Nickel electrode'
                        standard_name         = 'sea_water_electrical_conduct
                        units                 = 'S m-1'
                        valid_max             = 10
    sea_water_temperature
            Size:       36x1
            Dimensions: time
            Datatype:   single
            Attributes:
                        _FillValue            = -999.9
                        coordinates           = 'time lat lon'
                        long_name             = 'sea_water_temperature'
                        description           = 'Water Temp'
                        grid_mapping          = 'crs'
                        cell_methods          = 'time: point lat: point lon:
                        references            = 'http://www.hrecos.org/images
                        platform              = 'HRALBPH'
                        coverage_content_type = 'physicalMeasurement'
                        missing_value         = -999.9
                        comment               = 'Collected every 15 min from
                        instrument            = 'YSI_6560'
                        valid_min             = -5
                        source                = 'Thermistor'
                        standard_name         = 'sea_water_temperature'
                        units                 = 'degrees_C'
                        valid_max             = 45
>>
```