

**Naming conventions and formats of underway ship data files logged by the Scientific Computer System and submitted by the Office of Marine and Aviation Operations to the National Oceanographic Data Center
as part of the NOAA Shipboard Sensor Data Acquisition project (version 2)**

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Introduction

The Scientific Computer System (SCS) of the NOAA Office of Marine and Aviation Operations (OMAO) logs data from various sensors aboard several NOAA vessels. As part of the NOAA Shipboard Sensor Data Acquisition (NSSDAC) project of the National Oceanographic Data Center (NODC), OMAO submits to NODC a standard suite of underway oceanographic and meteorological data collected during each cruise of a NOAA vessel with SCS. NODC holds the data in their archive and creates products from them. This document describes the naming conventions and formats of these data files.

In this document, italicized, boldfaced type indicates variable information (e.g., *name of the ship's captain*) and ellipses indicate that a sequence will continue indefinitely (e.g., ***P1, P2, ...***).

File naming conventions

Each data submission to NODC consists of multiple ASCII/text files collected during one or more cruises, and each cruise consists of one or more events (which are delineated by when the SCS is turned "on" and then "off"). For each event, OMAO generates six primary files:

File name	Description
NODC_XXX.HDR	The header file contains information about the event, the associated cruise for the event, and the instruments that recorded data in the navigation and observation files for the event.
NODC_NAV1_XXX.ELG	The first navigation file contains data from the primary navigational instruments.
NODC_NAV2_XXX.ELG	The second navigation file contains data from secondary navigational instruments.
NODC_OBS_XXX.ELG	The observation (aka, sensor data) file contains data from oceanographic and meteorological instruments.
ANNOTATIONS_XXX.ELG	The annotations file contains comments recorded by SCS operators during the event.
BUTTON_ACTIVITY_XXX.TXT	The button activity file contains a record of the SCS buttons pushed during the event.

where **XXX** is the three-digit event number (001, 002, 003, ...). For a particular event, these six files have the same event number and are in the same file directory.

Caveats

- Variations in the file format, names, and directory structure in a data submission often occur. These variations are dependent on the configuration of each vessel's SCS.

- OMAO often generates and submits to NODC other SCS files during an event. Since their format and availability varies considerably with each data submission, this document does not describe their formats and naming conventions. For completeness, NODC archives these files with the rest of the standard data submission.

Header file format

Each row of a header file is left justified.

Row of file	Number of rows	Description
<i>cruise_parameter = value</i>	one or more	Contains general information, where the <i>cruise_parameter</i> can include Ship Name, Cruise ID, Captain, Chief Scientist, SCS Administrator, Cruise Start Date, Cruise Stop Date, and other similar information.
Data Start Date= <i>MM/DD/YYYY-hh:mm:ss</i>	one	The timestamp at the beginning of the event, where <i>MM</i> is the numeric month, <i>DD</i> is the day, <i>YYYY</i> is the year, <i>hh</i> is the hour, <i>mm</i> is the minute, and <i>ss</i> is the second.
Data Stop Date= <i>MM/DD/YYYY-hh:mm:ss</i>	one	The timestamp at the end of the event.
<i>instrument instrument_parameter = value</i>	one or more	Information about each instrument that SCS recorded in the navigation and observation files during the event. The <i>instrument_parameter</i> can include Manufacturer, Model, Calibration Date, Units, and other similar information.

Navigation and observation files format

Each row of a navigation or observation file is left justified. These files can be joined together with their common timestamp.

Row of file	Number of rows	Description
Date,Time, <i>P1,P2,...</i> ,	one	Contains a parameter name (or code) for each comma-separated column of data recorded in the rows below. For data that adhere to the specification of the National Marine Electronics Association (NMEA), SCS uses only one name (or code) to represent an entire NMEA data message.
<i>MM/DD/YYYY, hh:mm:ss, V1,V2,...</i> ,	zero or more	<i>MM/DD/YYYY, hh:mm:ss</i> is the timestamp and <i>V1,V2,...</i> are the comma-separated data that correspond to parameters names <i>P1,P2,...</i> . NMEA data messages start with \$.

Annotations file format

Each row of an annotations file is left justified.

Row of file	Number of rows	Description
Date,Time,Button,Annotation,	one	Description of what type of information SCS recorded in each comma-separated column in the rows below.
<i>MM/DD/YYYY, hh:mm:ss, Annotate, Note,</i>	zero or more	<i>MM/DD/YYYY, hh:mm:ss</i> is the timestamp and <i>Note</i> is a comment recorded by an SCS operator.

Button activity file format

Each row of a button activity file is left justified.

Row of file	Number of rows	Description
<i>MM/DD/YYYY, hh:mm:ss, Note</i>	one or more	<i>MM/DD/YYYY, hh:mm:ss</i> is the timestamp and <i>Note</i> describes which SCS button was pushed.