

SWIFT and microSWIFT telemetry data are publicly available via an API that uses http queries to a database that is updated hourly. This can be automated with wget or similar scripting, but it does require knowing the SWIFT IDs or microSWIFT IDs (or searching the full list of IDs).

Note that data accessed via this API have not been through quality control. All telemetry is available, regardless of buoy status.

Three data formats are available:

- 1) JSON text with positions, timestamps, significant wave heights.
 - a. Example:
http://swiftserver.apl.washington.edu/kml?action=kml&buoy_name=SWIFT+16&start=2020-09-28T00%3A00%3A00&end=2020-10-02T00%3A00%3A00&format=json
- 2) KML files with positions and timestamps.
 - a. Example: http://swiftserver.apl.washington.edu/kml?action=kml&buoy_name=SWIFT+16&start=2020-09-28T00%3A00%3A00&end=2020-10-02T00%3A00%3A00&format=kml
- 3) Binary files with positions, timestamps, and all sensor payloads.
 - a. Example: http://swiftserver.apl.washington.edu/services/buoy?action=get_data&buoy_name=SWIFT+16&start=2020-09-28T00%3A00%3A00&end=2020-10-01T00%3A00%3A00&format=zip

The *end* parameter can be left empty and all data up to present time (UTC) will be returned.

There is a simple user interface for generating the http queries at <http://faculty.washington.edu/jmt3rd/SWIFTdata/DynamicDataLinks.html>

There is a live map with active telemetry at <http://swiftserver.apl.washington.edu/map/>

There is a dashboard with simple data display at: <https://swiftdashboard.apl.uw.edu>

There is a GitHub repository with **Matlab** (and some python) codes at <https://github.com/jthomson-apluw/SWIFT-codes>

This includes a universal function to read the binary “short burst data” (sbd) files into a standard Matlab structure: [readSWIFT_SBD.m](#)

The optimal use of the codes is a function to request telemetry directly in Matlab using [pullSWIFTtelemetry.m](#) (which compiles SBD files for specified list of buoys and times)

There is **Python** package for microSWIFT (only) telemetry: <https://github.com/SASlabgroup/microSWIFTtelemetry>

Contact Jim Thomson jthomson@apl.washington.edu with questions.