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, bulk 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 wave spectra (including directional moments).
    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

For each data format, 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

And there is a live map with any telemetry less than 3 hours old at
http://swiftserver.apl.washington.edu/map/

There is a GitHub repository with Matlab (and some python) codes for working with the data at
https://github.com/jthomson-apluw/SWIFT-codes

In particular, there is a function to read the binary “short burst data” (sbd) files into a standard Matlab structure:

https://github.com/jthomson-apluw/SWIFT-codes/blob/master/GeneralTools/readSWIFT_SBD.m

and another function to combine multiple binary sbd files into a single Matlab structure:

https://github.com/jthomson-apluw/SWIFT-codes/blob/master/GeneralTools/compileSWIFT_SBDservertelemetry.m

The optimal use of the codes is a function to request telemetry in Matlab using

https://github.com/jthomson-apluw/SWIFT-codes/blob/master/GeneralTools/pullSWIFTtelemetry.m

(which calls the other codes above for a specified list of buoys and times)

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