**SSUSI GDAS**

**Software Release 8.2.0**

**Release Notes**

SSUSI GDAS release 8.2.0 contains:

* New calibration algorithm based on JSON file to determine which calibration table to use based on a specified date. The new calibration table also contain mirror contamination corrections, which require to updated on a regular basis. With the new approach, only the JSON file and the calibration table need to be updated.
* New SAA Model where the fitting coefficients are loaded based on a specified year. This is caused by the fact that the SAA region is changing shape and drifting direction faster than previously thought. By using the appropriate fitting coefficients for the specified year, we are assured that the SAA model generates the correct shape and geographic position of the SAA region. Notice that the mentioned coefficients have to be updated on a yearly basis, however the algorithm is capable of picking up the most appropriate file for the given year, thus no software updates are required.
* New AACGM version 2 introduced. This version of the library, which used to make coordinate transformation to and from geo-magnetic coordinates is used throughout the software, is not backward compatible with version 1, and neither are its fitting coefficients, which require updates every 5 years. This version comes with coefficients good through 2020.
* Files use compressed netCDF 4 format.