

# Recommendations for Processing Software for DRARS Operators

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# Background

1. At present, the DRARS network is mainly dependent on DRARS station operators who receive, process, and transmit data to regional nodes.
2. This means that DRARS station operators must have functional and up-to-date versions of the relevant processing software, including AAPP (required), CSPP (for SNPP), and FY3PP (for FY-3).
3. The station operators must also have the computer hardware, technical expertise, and networking to make it possible for them to run the current versions of AAPP, CSPP, and FY3PP.

# Observations and Questions

1. AAPP is required to create sounder BUFR products that will be distributed on RARS. Do we know what version(s) of AAPP are being used by all the station operators?
2. Some of the stations operators report that they are receiving Metop, or SNPP, or FY-3, but not processing it. Why?
3. CSPP requires a Linux system with sufficient CPU, RAM, and hard drive resources, and a CentOS 6 host platform. Is this feasible for all of the station operators who receive SNPP?
4. All of the software packages require Linux host platforms and technical expertise to install, operate, and maintain. How many of the station operators have the necessary Linux expertise?
5. Some station operators may have processing systems/software that were originally provided by vendors (Kongsberg, SeaSpace). Do they have the means or technical support to update the software from their vendor?

# Recommendation #1



Survey the DRARS operators to find out:

1. What version of AAPP they are using
2. What version (if any) of CSPP they are using
3. What version (if any) of FY3PP they are using
4. What computer hardware (CPUs, RAM, Hard drive)
5. What kind of network connection and bandwidth
6. What operating system
7. Do they have expertise to upgrade/install AAPP, CSPP, or FY3PP
8. Do they have the hardware to install CSPP or FY3PP
9. Do they use their own processing system, or a system that was purchased from a vendor (e.g., SeaSpace, Kongsberg)

# Recommendation #2



Based on the output from the DRARS operator survey, some or all of the following items could be pursued by the software providers:

1. Provide minimum recommended specifications for computer hardware and network in order to run AAPP, CSPP, and FY3PP.
2. Create detailed instructions on how to install and run processing software stacks for NOAA ATOVS, Metop ATOVS, IASI, CrIS/ATMS, VASS. This would include best practices for TLEs, calibration lookup table updates, etc.
3. Create automated installation and verification scripts for AAPP and OPS-LRS.
4. Provide an automated light-weight processing system for AAPP, CSPP, or FY3PP.

# Recommendation #3



Investigate ways to make it possible for DRARS operators to contribute sounder data to the network without needing to run local processing.

1. Provide a mechanism where station operators can notify a regional coordinating node that Level 0 data is available
2. Provide a mechanism to allow push or pull of the Level 0 data (perhaps in compressed format) to the regional node
3. Regional node can process the data to Level 1 and BUFR and distribute it normally via GTS/WIS/Rebroadcast/Internet
4. Provide the regional or global data back to the station operator (if they want it).