EMERALD Hints and Tricks
(in no particular order)

- You should change your password at the earliest opportunity. Go to **Menu | User | Change Password**.

- The first time you log into EMERALD you will likely be in DataSet 0, as shown in the web page header. There is no DataSet 0, and attempting to import data will fail. Go to **Menu | DataSets | DataSet 1:** or **Menu | DataSets | New DataSet** before attempting any data import or processing.

- EMERALD currently imports and exports sac files (a data requesting feature is currently in the works). These files are stored on the EMERALD server in your /home/youruserid/Import/DataSet# and /home/youruserid/Export/DataSet# directories. Example: for user jwest and DataSet #2, the files to import into EMERALD are in /home/jwest/Import/2/, and the files exported from EMERALD are in /home/jwest/Export/2/. You can log into the EMERALD server via ssh/sftp/scp using the same userid and password you use to log into EMERALD.

- There are two places to set the list of phases – this is currently slightly confusing. Under **Menu | Settings | Edit Phase List** you will find the master list of phases available for anything you do with EMERALD. You should rarely if ever need to change this list. Then under **Menu | DataSets | Phases for this DataSet** you can choose which phases get travel times calculated for this DataSet. Travel times for the selected phases are actually calculated under **Menu | Calculate | Travel Times (TauP).**

- EMERALD will notify you via e-mail or text message when calculations are complete. To set this up, enter your e-mail and/or text addresses in **Menu | User | User Settings**. Text addresses must be e-mail to text conversions, usually provided by your cell phone company. Example: to text to a Verizon number 480-965-5081, you would enter 4809655081@vtext.com. Then for each DataSet, go to **Menu | DataSets | Edit Current DataSet** and set checkboxes on which notification method(s) you prefer. Note that **log to internal** is currently not functioning.

- EMERALD lets you mark traces, events, and stations as "rejected". This does not actually remove the seismogram, but when data is exported or a new SubSet is created, only non-rejected traces will be used. You can always go back and review rejected traces, so for some work flows it may be better to choose a broad brush to reject data and then change the good traces to accept.

- SubSet 0: Raw Data is always the original data. Traces can be marked as rejected, but nothing can be deleted and no time series data can be changed in SubSet 0. Thus the original data always exists, and you can return to it for reprocessing.

- EMERALD always stores the last page you accessed, and will return you to that page when you log back in. This lets you seamlessly move between devices when editing/reviewing traces – you can move from your desktop machine at work to your smart phone or tablet, and then to your laptop at home, without losing your place in the work flow.

- You can review seismograms by Event or by Station, whichever works better for your work flow. It is sometimes useful to take advantage of your browser's **Open in New Tab** functionality to have multiple EMERALD windows open simultaneously. That way you can be editing by event, see a possibly bad station, and open that station in a new tab so you can reject all traces from a malfunctioning station.

- EMERALD will store a snapshot of the station metadata for your DataSet, and at specified intervals (or manually) will check for modified metadata and alert you to changes. This functionality is available under **Menu | DataSets | Metadata Updates for this DataSet**.

- The naming convention for events is chosen under **Menu | Calculate | Event Names**. Event names can be set to match the needs of your post-processing codes, and sac files can be exported using the event names as part of the file and directory naming convention. The most common event name formats are "YYYY.DDD.HH24.MI.SS" or "YYYYMMDD". Other formats are possible, using the formatting shown in http://www.postgresql.org/docs/8.4/interactive/functions-formatting.html#FUNCTIONS-FORMATTING-DATETIME-TABLE

- All data in EMERALD is stored and processed in a Relational DataBase Management System (RDBMS). One of the features of a RDBMS is the use of transactions, which give "all or nothing" processing results. If you are running a calculation, process, or automation batch and some portion of it fails, the entire process or batch will fail and all changes will be rolled back. Thus your data will never be left in a partially-processed state.

- Please consider joining the EMERALD discussion board at emerald.la.asu.edu. It is the appropriate forum for making comments, suggestions, feature requests, and bug reports.