EC-Earth postprocessing scripts

The postprocessing tools on CCA, have been adapted so that we can all use common software.
The general idea is that you will *not* need to copy the tools in your area, but you can use directly those from a common user home (ccjh).

Instructions (for CCA):

In order to do posprocessing on CCA you will need only one file:

```
~ccjh/ecearth3/post/conf/conf_users.txt
```

which you can copy from my home ~ccjh .
Please place it in your home exactly in the same directory as in mine.

Then you can edit it and decide three users:

- USER0 (that should be me, ccjh) - leave as it is - it is where the original scripts are
- USERme (that should be your user id, it is used to point to your storage area)
- USERexp (this is the user whose experiments you wish to analyse, in general use your own userid).

After that you will need the postprocessing tools themselves, maybe you could just link my folder

```
ln -s ~ccjh/ecearth3/post/script ~/ecearth3/post/script
```

In this folder you will find the following tools (which you already know). The new thing is that now they work if you simply use mine, and by having edited the conf_users.sh file above, they will know what to do. It is also possible to analyse somebody else's experiments.

The following tools all prepare a job and launch it (so nothing runs in your shell directly). The idea is that we do not need anymore to edit job scripts, but we can directly use these to launch the job:

```
hc.sh [-a account] [-u user] exp year1 year2 [user]

Run hiresclim postprocessing of experiment exp in years year1 to year2 for a specific user (option
al)
Options are:
-a account    : specify a different special project for accounting (default: spnltune)
-u user       : analyse experiment of a different user (e.g. ccjh)
```

Example: ./hc.sh -u cccy pat0 1990 1992
Of course if you specify another user, the postprocessed output will be stored in your scratch area, so after this for the purpose of the other tools this becomes also your experiment.

```
autopost.sh [-a account] [-u user] exp [user]
Run hiresclim autopostprocessing of experiment exp for a specific user (optional)
Determines automatically which years need to be postprocessed
Options are:
-a account    : specify a different special project for accounting (default: spnltune)
-u user       : analyse experiment of a different user (default: yourself)
```

This is the fully automatic version of hc.sh. It determines alone which years to run.

```
ecm.sh [-a account] [-u user]exp year1 year2 [user]

Compute global averages (EC-mean) for experiment exp in years from year1 to year2 of user (optiona
l)
Options are:
-a account    : specify a different special project for accounting (default: spnltune)
-u user       : analyse experiment of a different user (default: yourself)
```

will run EC-mean for an experiment. If you have postprocessed the exp yourself, no need to specify the user. If you know that it has been postprocessed by somebody else, you can specify that user.

```
ts.sh [-a account] [-u user] exp [user]

Compute timeseries for experiment exp of user (optional)
Options are:
-a account    : specify a different special project for accounting (default: spnltune)
-u user       : analyse experiment of a different user (default: yourself)
```

will run timeseries analysis (for alla available years) of experiment exp

---

```
amwg.sh [-u user] [-a account] [-r resolution] exp year1 year2 [user]

 Do AMWG analysis of experiment exp in years year1 to year2 for a specific user (optional) and res
olution,
   where resolution is N128, N256 etc. (N128=default)
 Options are:
 -a account    : specify a different special project for accounting (default: spnltune)
 -u user       : analyse experiment of a different user (default: yourself)
 -r resolution : resolution (default: N128)
```

runs AMWG analysis. Same options as the others. By default it assumes N128 resolution, specify if otherwise. In that case you need to specify also the user. Eg. ./amwg.sh x001 1990 1995 ccjh N256

```
postall.sh [-u user] [-a account] [-r resolution] exp year1 year2 [user]

Do AMWG analysis of experiment exp in years year1 to year2 for a specific user (optional) and reso
lution,
where resolution is N128, N256 etc. (N128=default)
Options are:
-a account    : specify a different special project for accounting (default: spnltune)
-u user       : analyse experiment of a different user (default: yourself)
-u resolution : resolution (default: N128)
```

runs all the analyses above (EC-mean, timeseries and AMWG). Same options.

All diagnostic tools (ecm, ts, amwg) prepare a tar file and send it automatically to sansone for publishing it on the web. Logs are stored in $SCRATCH/log. The jobs which have been submitted are in $SCRATCH/tmp, if wish to check them. Please, if you choose a new experiment name, check that this does not already exist on sansone to avoid overlaps.

For some of these we have also the command-line equivalents, with the same syntax. These run directly in your shell, no job is submitted. For example sometimes it could be faster to run EC-mean directly in the shell. They are:

```
EC-mean.sh exp year1 year2 [user]
timeseries.sh exp [user]
amwg_modobs.sh exp year1 year2 [user] [resolution]
```

In theory you could also run master_hiresclim.sh directly, but please be advised that this one spawns several threads, so that is really not a good idea.

To summarize, first hc.sh and then postall.sh by itself could be enough to do a full analysis of any experiment.
I will work and reimplement also the nice ‘autopostproc’ feature which Paolo had developed, so that we can launch the hiresclim postprocessing directly from our jobs. For now, let’s use hc.sh.

The structure of all these is such that it should be very easy to move the entire thing also to Marconi.