April 1, 2005: Version planning for TIEGCM

Table 1:

TIEGCM1.7	TIEGCM1.8	TIEGCM2.0
Latest version currently available	**Targeted for release by April 15.**	**Lower bottom boundary to ~80 km**
Runs on MPI Linux cluster “lightning’ (problems on some HAO linux systems)	Gravity and plasma pressure driven currents (Astrid)	Parallel Dynamo (field-line integ)
DYNAMO=0/1 (no “old” dynamo)	High-latitude dynamo options (Astrid) Also height-integrated currents.	Magnetosphere coupling
Improved disk file user-spec	New EUV parameterization (Liying)	In-source documentation
Rewritten timing module	Timed SEE data option (Liying)	Improved user-guide documentation
“blob” fix cover-up	Updated chemical reaction rates	Improved user communication
Results are close to TIEGCM1.6	Name and document hardwired constants	Series of runs for TIMED comparisons
	Remove “blob” fix	Model Description (LaTex, latex2html)
	Argon and Helium	Remove confusing historic features in the histories (e.g., tuv lbc storage)
	Fix Weimer high-latitude convection(?)	Parallel Netcdf
	Fix fields.F for pgf90 compilers	

Additional Topics for discussion:

- New TGCM website being developed at http://www.haotest.ucar.edu/TGCM_Web/index.html
- Use of CVS, and procedure for making version releases.
- $TGCMDATA location at hao (is currently /toshi/ftp/pub/tgcm/data)
- Improvements to configuration script and job submission method.

- Netcdf convention compliance for histories.

Post-processors:
- New calchts routine in proclat.F, to calculate geopotential height with varying gravity

Procedure for version releases:
1. Each developer builds files with modifications to the current version (e.g., mods to tiegcm1.7)
2. When the developer is ready, the mod files are merged into the CVS working directory (e.g., to ~foster/tgcm/tiegcm)
3. When all merged mods are working, the new source is made available at /home/tgcm/dev (this is considered a pre-release, and will be accompanied by a CVS tag.). Developers and scientists then test and tune the new code (e.g., /home/tgcm/dev/tiegcm1.8). This tuning period will vary in length, and will involve exchange of results, campaign runs, and production (full-year) runs.
4. Mods to dev/tiegcm1.8 are again merged into the CVS working directory, and after another (hopefully short) testing period, the final new version is put on $TGCMROOT (e.g., /home/tgcm/tiegcm1.8). This code is frozen, and a CVS tag is made. At this point a release announcement is sent to the tgcm-group email list.
5. Documentation of changes made from previous to current version will be stored in a doc/ subdirectory for each model, e.g., /home/tgcm/tiegcm1.8/doc.