

Working at HAO remotely (2007-2008) – see big green notebook DynIII 2007

Remote connection on Linux Laptop

\$ ssh -X -l zita gate.ucar.edu

Cryptocard Challenge:

PASS WORD

ENT

\$ type # on cryptocard

UCAR SSH Proxy > hao.ucar.edu

- zita@hao.ucar.edu's password:
- (hao)zita: tcsh
- (now I am logged on and can run)
- exit (when finished)

Connect via Firefox: <http://wireless.ucar.edu>

> +xhost savitri.hao.ucar.edu (Mausumi's computer has ps2epsi; mine doesn't)

> ssh -X savitri.hao.ucar.edu

> xclock (test)

If Cryptocard access is denied, then resynch (Help: 303-497-1247 or crypto@ucar.edu)

COMPUTER	DO on card	DISPLAYED on card
ssh ... cryptocard challenge	MENU	PIN
	(PIN) – ENT	contrast
	MENU	Resynch
	ENT	Ready
#####	Type ##### ENT	New #
Type new #		

File transfer: first navigate to destination (.) where I want to copy files / directory

Then type \$scp -P 2222 -r zita@ftp.hao.ucar.edu:/dir -t .

- scp = secure copy from dir to (.)
- dir = source anywhere at hao
- r = recursive: keeps source directory structure
- t will create same dir structure at destination
- . = destination: remember to type space-PERIOD after -t

Viewing graphics: EVINCE instead of GV

Complete run instructions:

Cd / home/zita/dynamo/2007/etas/ss/a1/i2peter

INITIALIZATION from t=0

\$ vi dynamo_ft_ieta.f

 tmax = 50, ieta = 2, eta0 = 0.05, etasurf = 1, irelax = 0, comment out butterflies

\$ rlogin sundog

pgf77 dynamo_ft_ieta.f -O3 -o dyn3.out

 (Letters O, not numbers 0 ... compiles dynamo_ft_ieta into executable dyn3.out)

dyn3.out > log3 &

 (Run executable, write output to log, & lets me do other things on this channel)

\$tail -f runtest.dat &

 (print end of output file – check for convergence)

\$more runtest.dat

 When run is finished, check output file page by page
 find cycle time, check Btor for SS oscillations (second column)

RESTART from Steady State with new parameters:

\$vi dynamo_ft_ieta.f

 irelax = 1, tmax = 14.5 (that's 50 years for this case)

 Turn butterflies on?

mkdir cont2p

 continuation run directory inside SS run directory

cd cont2p

 change directories

cp ../fieldsuper1.dat ./indat

 copy SS datafile to init file in cont directory

mv ../dynamo_ieta.f .

 don't keep multiple copies of code around – too big

run

 as above

When finished, that's t0. Then run 4 more times (from each endpoint)

Tmax = 5.4167/4 = 1.3542 each time

Find cycle time $T(\text{yr}) = \Delta t * 11/\pi$

Complete Plot instructions:

Files are in /home/zita/dynamo/2007/etas/codes/plot07

IDL

```
>.r pas          (r = compile)
>aspect
>.r pltl
>pltl, outfile = 'etas.eps'
>$gv &          (run ghostview in separate window)
```

```
$wc -l butterfly1.dat -> tgrid = lines/100
```

```
$vi cntourz.bw    btmult, tmax
```

IDL

```
>.r colornew
>.r cntourz.bw
>cntourz,outfile='fly2.eps'
>$gv &
```

```
$ vi pltbt, pltbp          xyouts: ieta, eta, time
```

```
$ cp getpc
```

```
$ vi getpc
```

```
$ chmod 755 getpc
```

```
$ getpc
```

```
$ chmod 755 getpc
```

```
$pwrite.out
```

```
$idl
```

IDL

```
> @plotem
```

```
>$gv &
```

Compiling paper:

```
$latex p10.tex
```

```
$dvi2pdf p10.dvi
```

```
$ acroread p10.pdf &
```

```
Remote: >$ghostview &
```