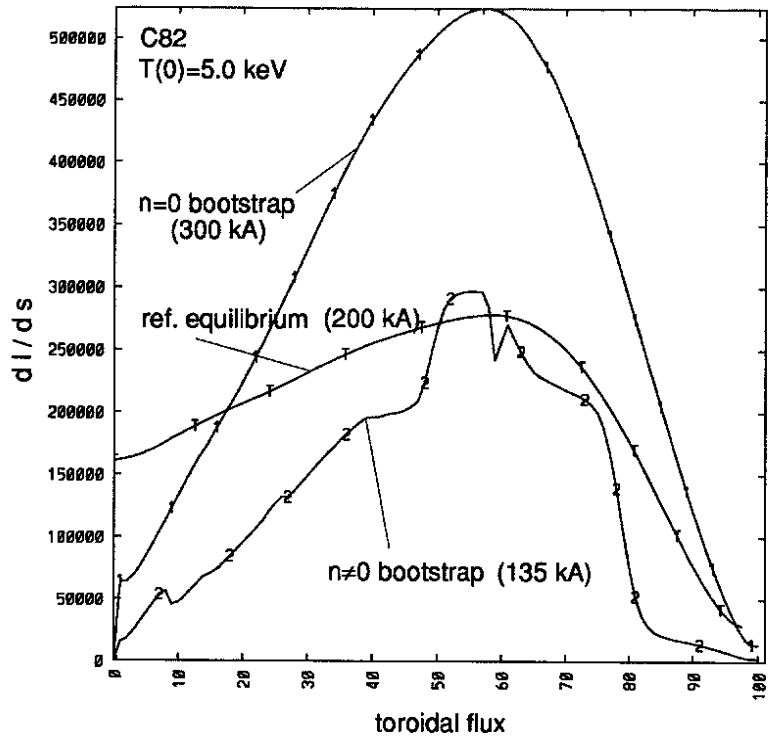
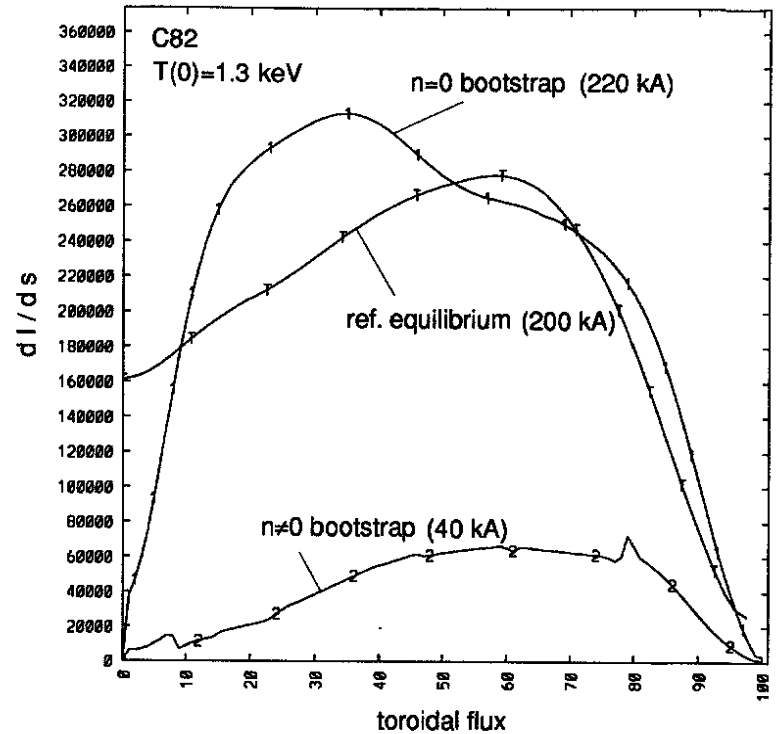
Progress Report on Bootstrap Current

Lee Berry, Steve Hirshman, Chuck Kessel, Long-poe Ku, Zhihong Lin, Don Monticello, Harry Mynick, Allan Reiman, Don Spong, Roscoe White, and Mike Zarnstorff

- **Outline**
  - **Results for C82 Configuration**
    - **Comparison of NIFS and Tolliver codes**
    - **Comparison of NIFS and Monte-Carlo codes**
  - **QOS Results**
  - **Future Plans**


C82
T(0)=5.0 keV
n=0 bootstrap
(300 kA)
ref. equilibrium (200 kA)
n≠0 bootstrap (135 kA)
d I / d s
toroidal flux


C82
T(0)=1.3 keV
n=0 bootstrap (220 kA)
ref. equilibrium (200 kA)
n≠0 bootstrap (40 kA)
d I / d s
toroidal flux

- **C82 Configuration**

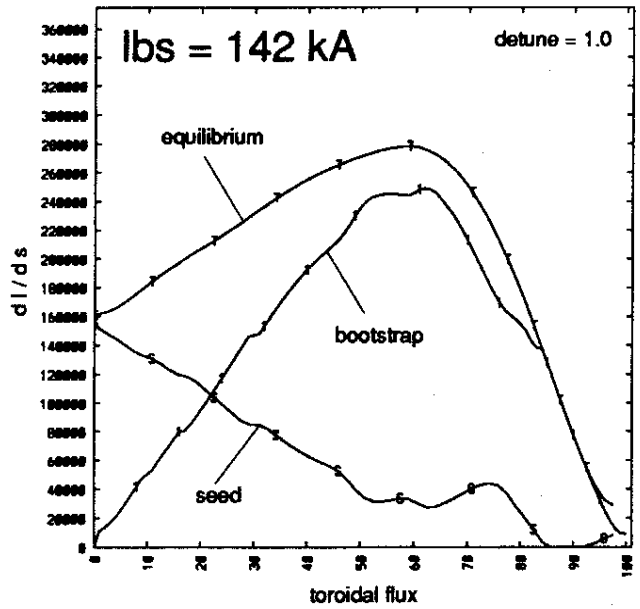
$T(0) = 5KEV$

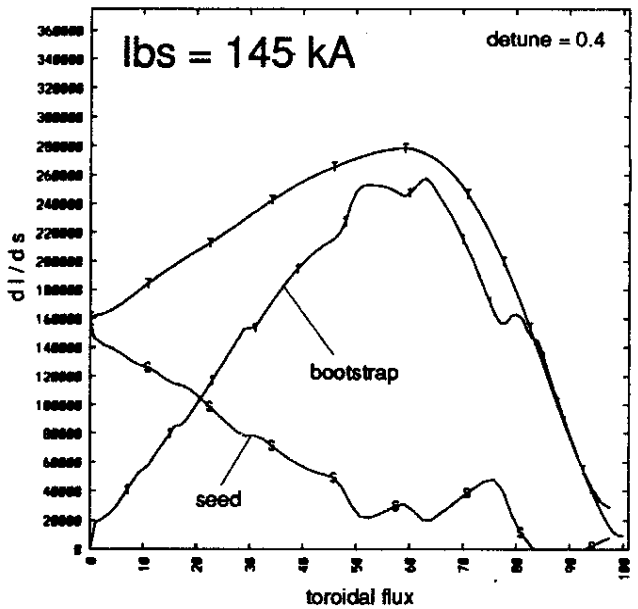
toroidal modes	NIFS Code	Tolliver
n=0	304 KA	290KA
all n	135 KA	162KA
n=0 & n=3, m=1	142 KA	

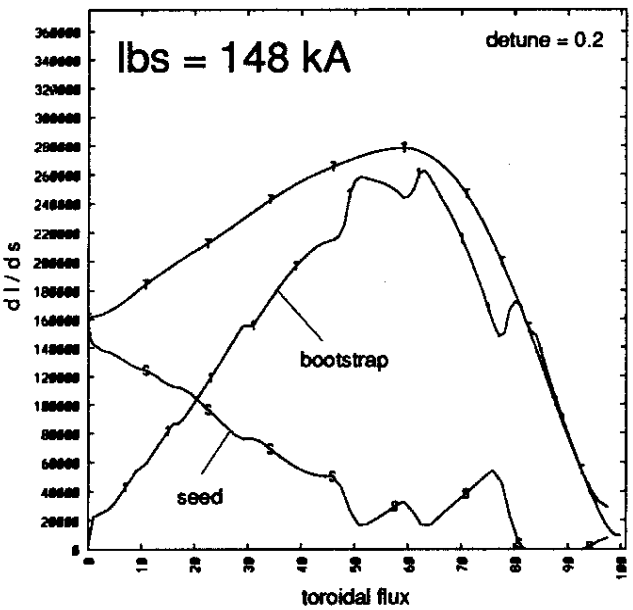
$T(0) = 20KEV$

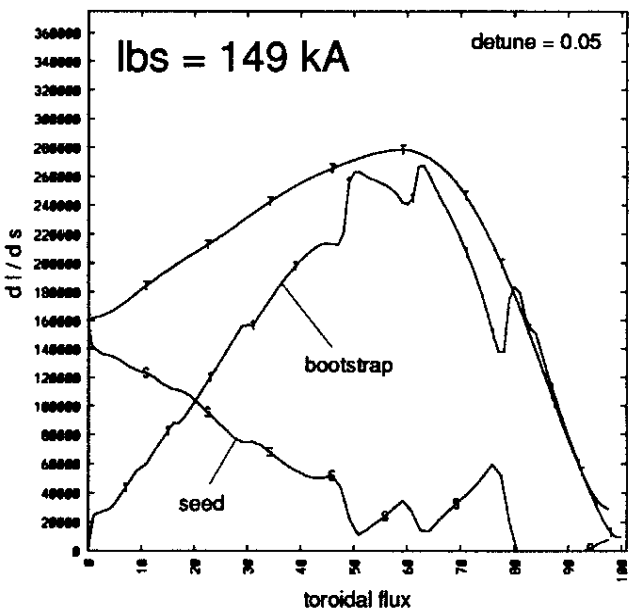
toroidal modes	NIFS Code
n=0	282 KA
all n	134 KA

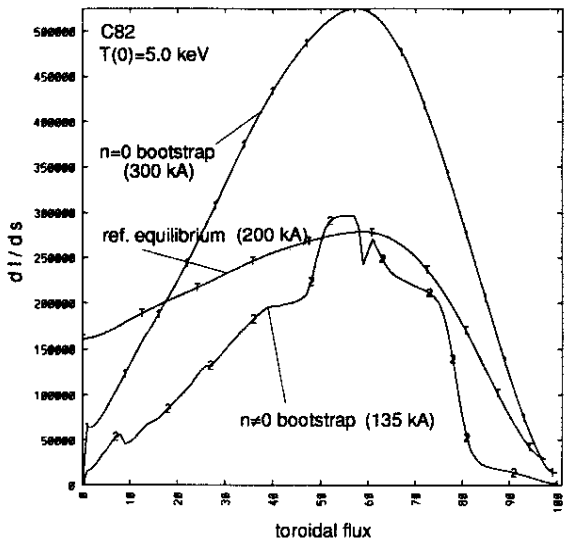
C82, n=0 & n=3,m=1 detuning term variation





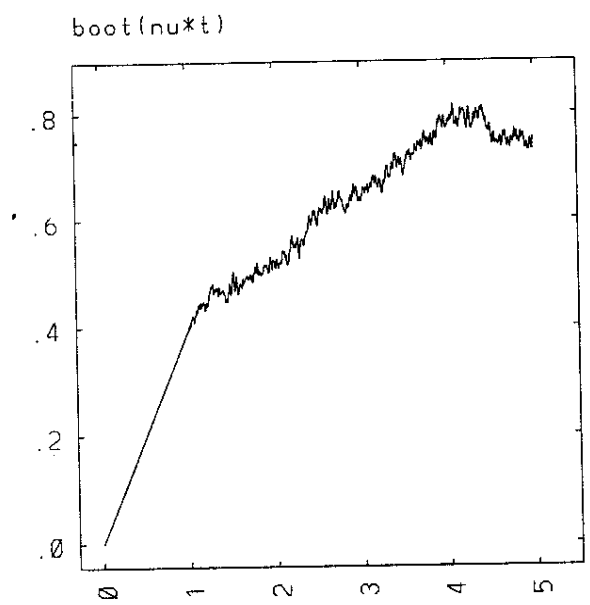


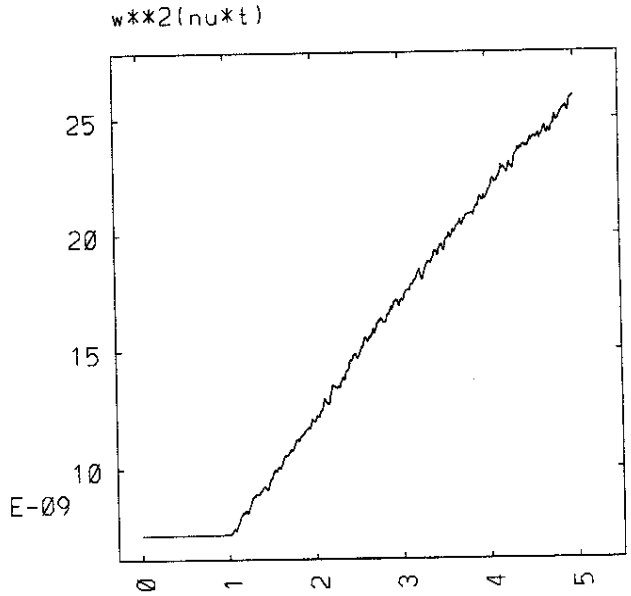


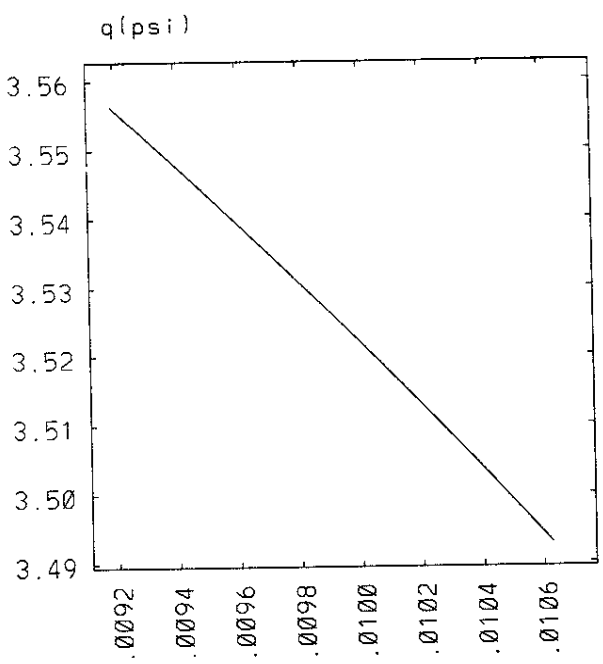


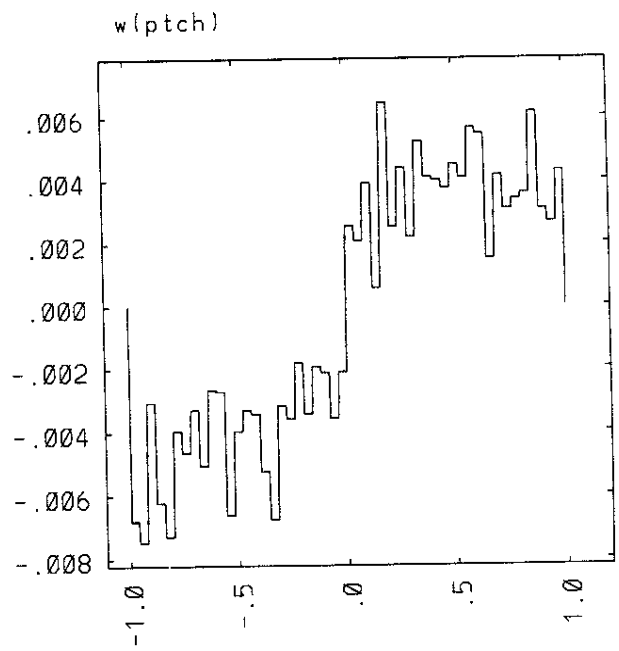
C82

n=0


boot(nu*t)
.8
.6
.4
.2
.0
0
1
2
3
4
5

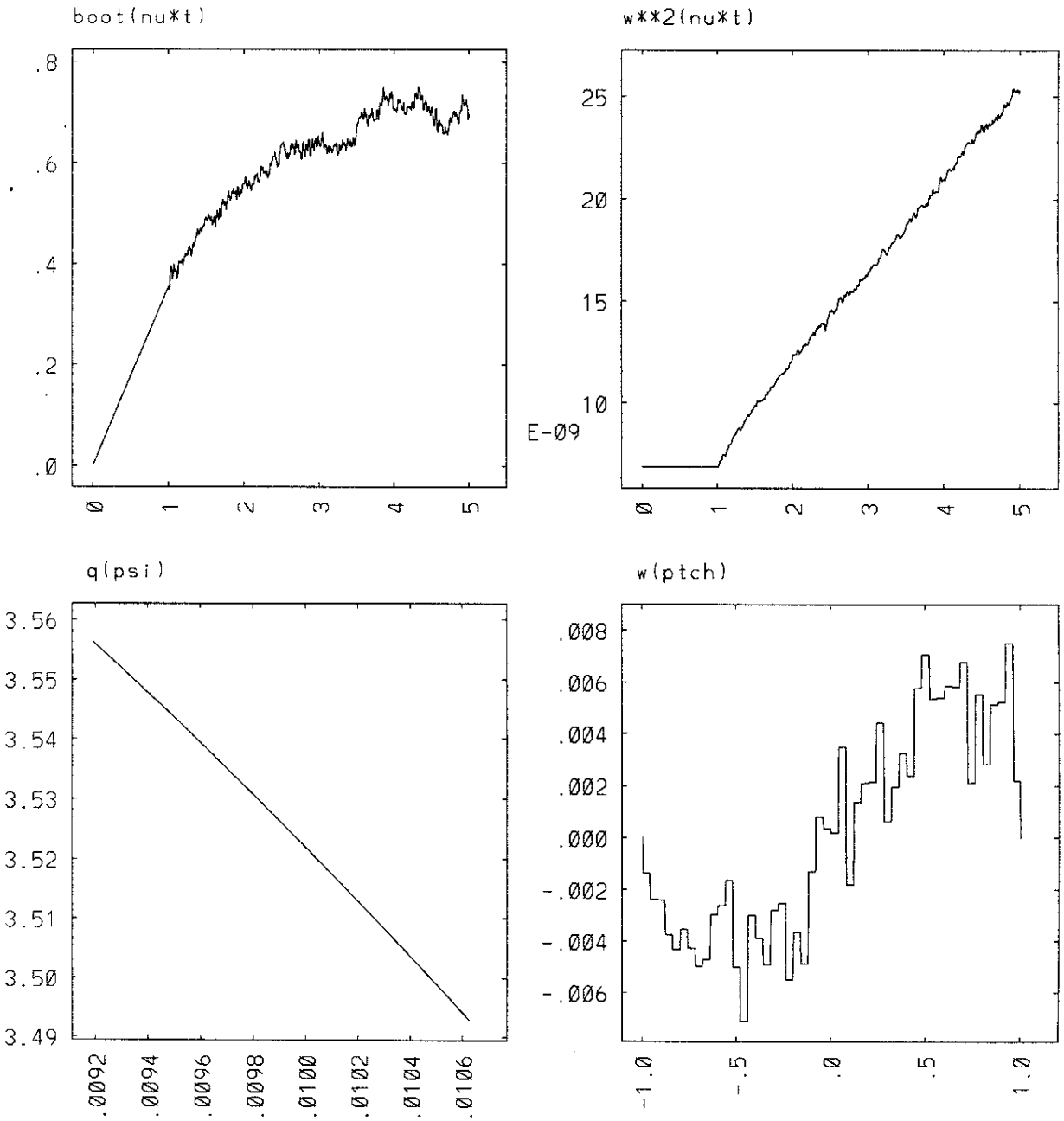

w**2(nu*t)
25
20
15
10
E-09
0
1
2
3
4
5


q(psi)
3.56
3.55
3.54
3.53
3.52
3.51
3.50
3.49
.0092
.0094
.0096
.0098
.0100
.0102
.0104
.0106


w(ptch)
.006
.004
.002
.000
-.002
-.004
-.006
-.008
-1.0
-.5
.0
.5
1.0

C82

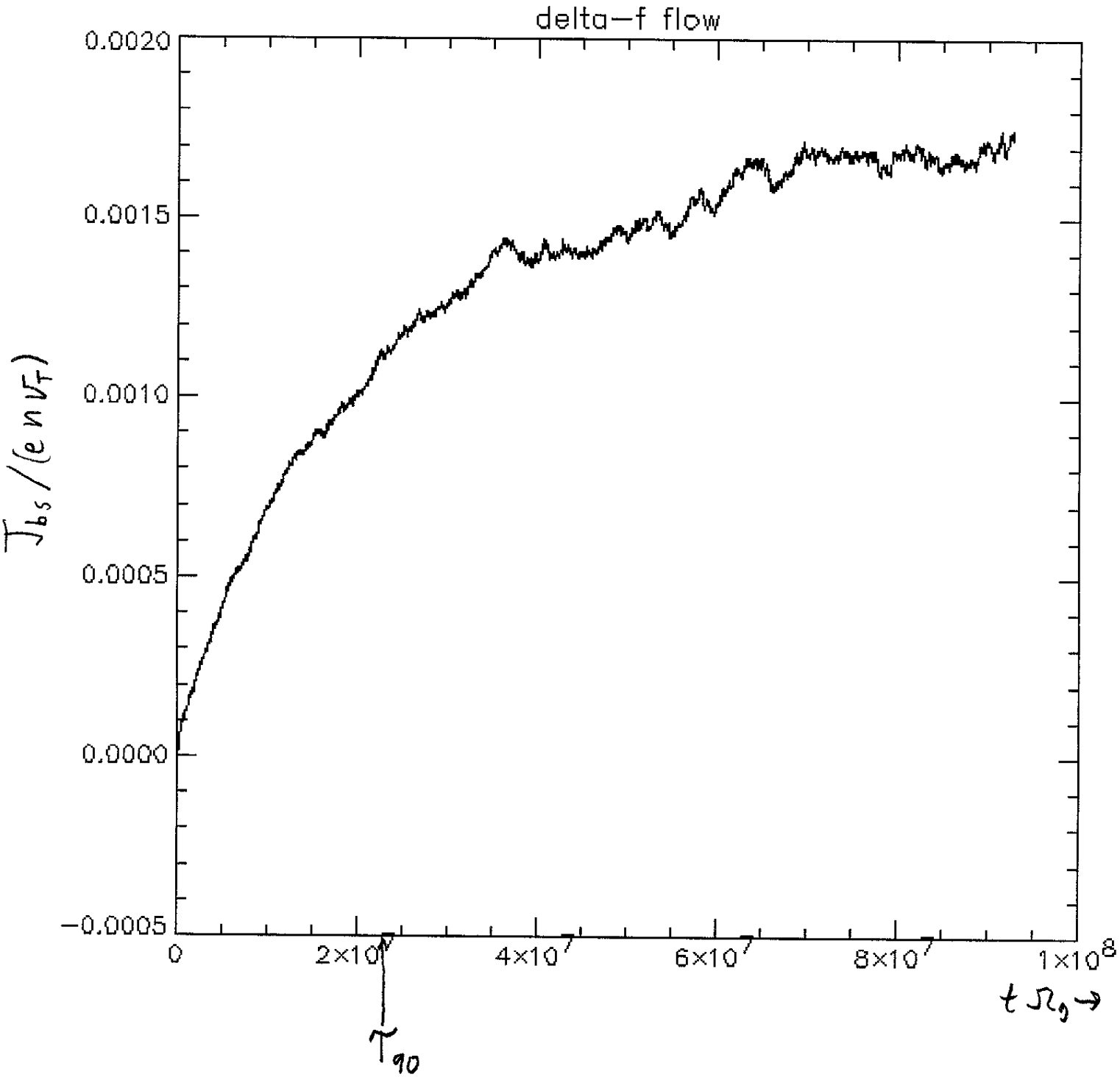
n=0 x 1/3


boot(nu*t)
.8
.6
.4
.2
.0
0
1
2
3
4
5
w**2(nu*t)
25
20
15
10
E-09
0
1
2
3
4
5
q(psi)
3.56
3.55
3.54
3.53
3.52
3.51
3.50
3.49
.0092
.0094
.0096
.0098
.0100
.0102
.0104
.0106
w(ptch)
.008
.006
.004
.002
.000
-.002
-.004
-.006
-1.0
-.5
.0
.5
1.0

H. Mynick
4/14/99

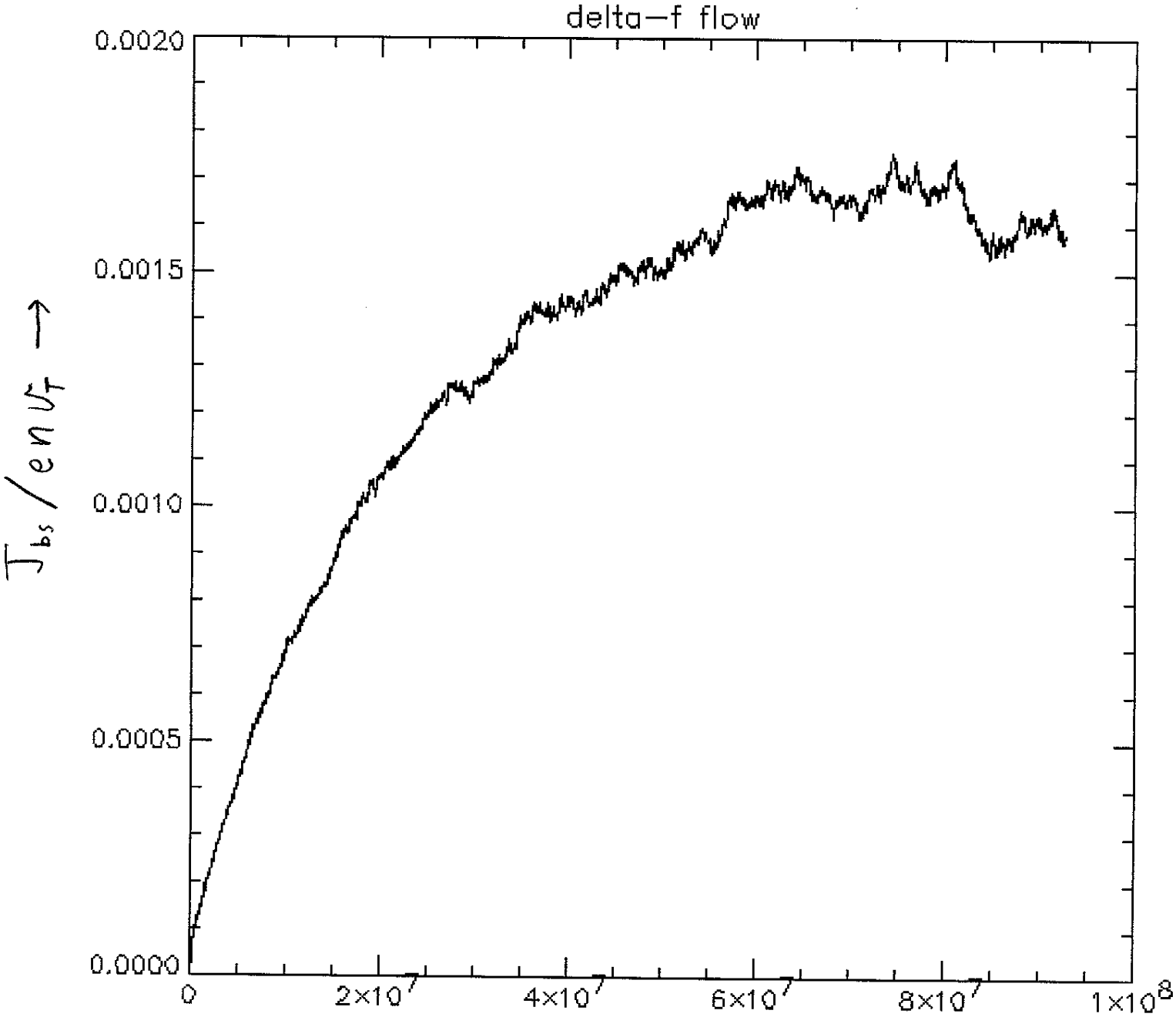
-Symmetric ;

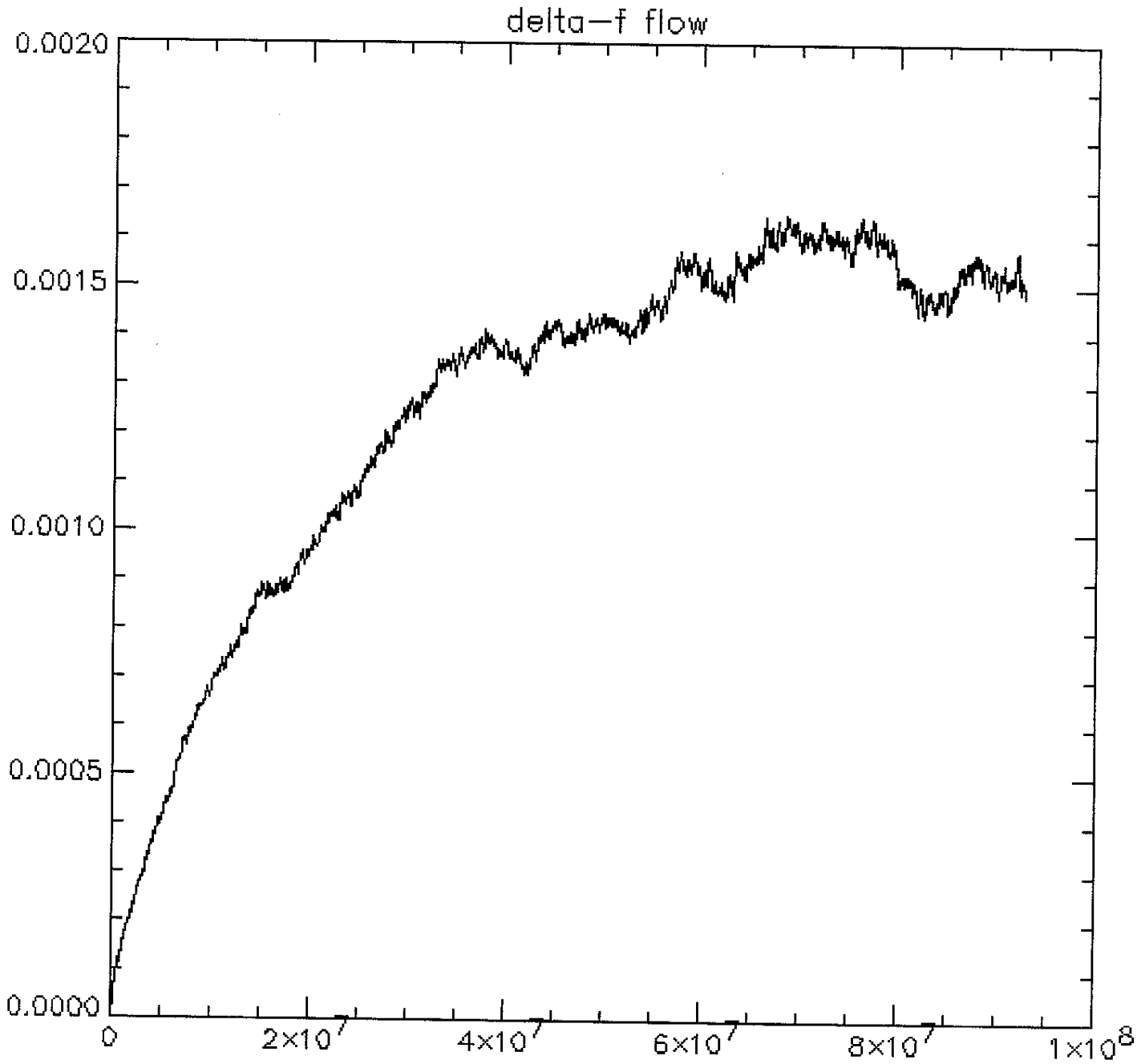
$T(0) = 5$ keV, $s = .26$, $\nu_* = .2$
$N_p = 20e3$, $T' = 0$



(9b2) (nharm=4)

symmetric + $(m,\tilde{n}) = (1,-1)$



$$\frac{B_{1,3}}{B_{10}} \simeq \frac{.072}{.21}$$

Result for (1,-1) MULT. by 5