

## SCALAR MULTIGRAPH PACKAGES

ABTRAP\_D "D beam ion banana fractions" ()  
 +TRAPB0\_D "D beam full E dep banana frac."  
 +TRAPB\_D "D beam ions banana fraction"  
 [VS. TIME ONLY.]

ALPHA "MAGNETIC ALPHA COMPARISON" ()  
 +ALPC "MAG:ALPHA, CALCULATED"  
 [VS. TIME ONLY.]

APMHD "Psi of Equilibrium Points relative to machine axis" (Wb/rad)  
 +PSIO\_TR "Psi\_poloidal(axis) in simulation"  
 [VS. TIME ONLY.]

BHEAT "HEATING BY FAST IONS" (WATTS)  
 +BPTI "BEAM POWER TO IONS"  
 +BPTE "BEAM POWER TO ELECTRONS"  
 +BPTH "FAST ION POWER THERMALIZED"  
 [VS. TIME ONLY.]

BHEAT\_D "BEAM HEATING (D BEAMS)" (WATTS)  
 +BPTH\_D "D BEAM POWER THERMALIZED"  
 +BPTI\_D "D BEAM POWER TO IONS"  
 +BPTE\_D "D BEAM POWER TO ELECTRONS"  
 [VS. TIME ONLY.]

BMCPU "CPU TIME USE: BEAM CODE" (HOURS)  
 +CPMCFI "CPU: MONTE CARLO FAST ION CODE"  
 +CPBDEP "CPU: FAST ION DEPOSITION"  
 +CPBMCINI "CPU: FAST ION MC TABLE SETUP"  
 +CPXPGL "CPU: xplasma load"  
 +CPBORB "CPU: FAST ION ORBIT + COLLISIONS"  
 +CPBOUT "CPU: FAST ION OUTPUT RENORM"  
 [VS. TIME ONLY.]

BMPLL "CPU TIME (MPI RUN): BEAM CODE" (HOURS)  
 +CPBMAX "MAX THREAD CPU TIME: NUBEAM"  
 +CPBMIN "MIN THREAD CPU TIME: NUBEAM"  
 +CPBROOT "ROOT THREAD CPU TIME: NUBEAM"  
 +WC\_NUBEAM "WALL CLOCK TIME: NUBEAM"  
 [VS. TIME ONLY.]

BPHBA "FAST ION MOMENTUM BALANCE" (NT-M)  
 -BPHST "FI ROT. ANGULAR MOMENTUM GAIN"  
 +BPHCK "FI ROT. BALANCE CHECK"  
 +BIPHER "FI ORBIT TORQUE ERROR"  
 +BPHDP "FI ROT. DEPOSITION"  
 +BPHOH "FI ROT. FROM OH"  
 -BPHW0 "FI ROT. NEUTRAL ESCAPE"  
 -BPHTH "FI ROT. THERMALIZATION"

-BPHOR "FI ROT. ORBIT LOSS"  
-BPHXB "FI ROT. JXB TORQUE"  
-BPHCL "FI ROT. COLLISIONAL TORQUE"  
[VS. TIME ONLY.]

BPHBA\_D "BEAM MOMENTUM BALANCE (D)" (NT-M)  
-BPHST\_D "D BEAM: ANGULAR MOMENTUM GAIN"  
+BPHCK\_D "D BEAM: BALANCE CHECK"  
+BIPHER\_D "D BEAM ORBIT TORQUE ERROR"  
+BPHDP\_D "D BEAM: DEPOSITION, ION point"  
+BPHOH\_D "D BEAM: FROM OH"  
-BPHW0\_D "D BEAM: NEUTRAL ESCAPE"  
-BPHTH\_D "D BEAM: THERMALIZATION"  
-BPHOR\_D "D BEAM: ORBIT LOSS"  
-BPHXB\_D "D BEAM: JXB TORQUE"  
-BPHDFB\_D "D BEAM: ANOM.DIFF. TORQUE"  
-BPHCL\_D "D BEAM: COLLISIONAL TORQUE"  
[VS. TIME ONLY.]

BPHBX "FAST ION CX MOMENTUM BALANCE" (NT-M)  
-BPHW0 "FI ROT. NEUTRAL ESCAPE"  
+BPHCX "FI ROT. CX LOSS"  
-BPHRC "FI ROT. CX RECAPTURE"  
[VS. TIME ONLY.]

BPHBX\_D "BEAM CX MOMENTUM BALANCE (D)" (NT-M)  
-BPHW0\_D "D BEAM: NEUTRAL ESCAPE"  
+BPHCX\_D "D BEAM: CX LOSS"  
-BPHRC\_D "D BEAM: CX RECAPTURE"  
[VS. TIME ONLY.]

BPHDEPB\_D "the total D-beam injected momentum" (NT-M)  
+BPHINJS\_D "DBEAM MOMENTUM INJECTED"  
-BPHSHIN\_D "DBEAM SH\_THRU MOMENTUM"  
-BPHDEPO\_D "DBEAM DEPOSITED MOMENTUM, ION point"  
-BPHDEPGC\_D "DBEAM DEPOSITED MOMENTUM, at GC"  
-BPHDPBA\_D "DBEAM MOMENTUM, BALANCE CHECK"  
[VS. TIME ONLY.]

BPHIS "BEAM & FAST ION ANGULAR MOMENTA" (NT-M-SEC)  
+BPHI "FAST ION ANGULAR MOMENTUM"  
+BPHI\_D "D BEAM ION ANGULAR MOMENTUM"  
[VS. TIME ONLY.]

BZXRCMP "BZXR COMPARISON" (TESLA\*CM)  
+BZXR "VACUUM FIELD "BZ\*R"  
+GRBA\_DATA "(R\*Bt) Ufile data at bdy"  
[VS. TIME ONLY.]

CPDIS "CPU TIME DISTRIBUTION" (HOURS)  
+CPTIM "CPU TIME USED SO FAR"

+CPOUT "CPU TIME: OUTPUT SYSTEM"  
 +CPTRK "CPU TIME: STRAIGHT LINE TRACKER"  
 +CPLH "CPU TIME: JET LOWER HYBRID"  
 +CPGEOM "CPU TIME: FLUX SURFACE GEOMETRY"  
 +CPMCFI "CPU: MONTE CARLO FAST ION CODE"  
 +CPXPGL "CPU: xplasma load"  
 +CPECH "CPU TIME IN ECH MODEL"  
 +CPFPP "CPU: ICRF & FP MODEL"  
 +CPSCO "CPU: NEUTRAL TRANSPORT MODEL"  
 [VS. TIME ONLY.]

CPGEO "CPU TIME USE: MHD GEOMETRY" (HOURS)  
 +CPGEOM "CPU TIME: FLUX SURFACE GEOMETRY"  
 +CPMHDQ "CPU TIME: MHD EQUILIBRIUM"  
 +CPGEOCAL "CPU TIME: Flux Surf. Averages"  
 [VS. TIME ONLY.]

CPICH "CPU TIME USE: ICRF CODE" (HOURS)  
 +CPFPP "CPU: ICRF & FP MODEL"  
 +CPWAVE "CPU: ICRF WAVE CODE (ONLY)"  
 +CPFP\_SOLV "CPU: Fokker-Planck Solver"  
 +CPFP\_COEF "CPU: FPP Coefficient setup"  
 +CPFP\_QLO "CPU: FPP Quasilinear Operator"  
 +CPFP\_RAD "CPU: FPP Radial Transport Loop"  
 +CPFP\_OUT "CPU: FPP Final Output"  
 [VS. TIME ONLY.]

CPWALL "WALL CLOCK & CPU TIME" (HOURS)  
 +CPTIM "CPU TIME USED SO FAR"  
 +WALLTIME "Elapsed wall clock time"  
 [VS. TIME ONLY.]

CZIMP "Impurity Z Data Comparison" ()  
 +XZIMP "Avg Z of Impurity"  
 +XZIMPD "Avg Z of Impurity Data"  
 [VS. TIME ONLY.]

DFLX "PARA/DIAMAGNETIC FLUX" (WEBERS)  
 +DFLUX "COMPUTED DIAMAGNETIC FLUX"  
 [VS. TIME ONLY.]

DTGEQ "Equilibrium Timesteps" (SECONDS)  
 +DTG "Timestep for Geometry"  
 +DTMAXG "Maximum Timestep for Geometry"  
 [VS. TIME ONLY.]

DTS "Timesteps" (SECONDS)  
 +DT "Energy Balance Timestep"  
 +DTG "Timestep for Geometry"  
 +DTSCE "Timestep for Sources"  
 +DTPROFIL "Time Spacing for Profile Output"

+DTSCALAR "TIME SPACING FOR SCALAR OUTPUT"  
[VS. TIME ONLY.]

EEGYRO "POWER FROM EACH GYROTRON" (WATTS)  
+PECIN "ECRF INPUT POWER"  
+PECIN1 "POWER FROM GYROTRON 1"  
[VS. TIME ONLY.]

EINJ01 "Beam#01(D) Injected Energies" (eV)  
+EINJ01\_E1 "Einj: beam#01(D), E-frac#1"  
+EINJ01\_E2 "Einj: beam#01(D), E-frac#2"  
+EINJ01\_E3 "Einj: beam#01(D), E-frac#3"  
+DINJ01\_E1 "Einj RMS Var.: beam#01(D), E#1"  
+DINJ01\_E2 "Einj RMS Var.: beam#01(D), E#2"  
+DINJ01\_E3 "Einj RMS Var.: beam#01(D), E#3"  
[VS. TIME ONLY.]

EINJ02 "Beam#02(D) Injected Energies" (eV)  
+EINJ02\_E1 "Einj: beam#02(D), E-frac#1"  
+EINJ02\_E2 "Einj: beam#02(D), E-frac#2"  
+EINJ02\_E3 "Einj: beam#02(D), E-frac#3"  
+DINJ02\_E1 "Einj RMS Var.: beam#02(D), E#1"  
+DINJ02\_E2 "Einj RMS Var.: beam#02(D), E#2"  
+DINJ02\_E3 "Einj RMS Var.: beam#02(D), E#3"  
[VS. TIME ONLY.]

EINJ03 "Beam#03(D) Injected Energies" (eV)  
+EINJ03\_E1 "Einj: beam#03(D), E-frac#1"  
+EINJ03\_E2 "Einj: beam#03(D), E-frac#2"  
+EINJ03\_E3 "Einj: beam#03(D), E-frac#3"  
+DINJ03\_E1 "Einj RMS Var.: beam#03(D), E#1"  
+DINJ03\_E2 "Einj RMS Var.: beam#03(D), E#2"  
+DINJ03\_E3 "Einj RMS Var.: beam#03(D), E#3"  
[VS. TIME ONLY.]

EINJ04 "Beam#04(D) Injected Energies" (eV)  
+EINJ04\_E1 "Einj: beam#04(D), E-frac#1"  
+EINJ04\_E2 "Einj: beam#04(D), E-frac#2"  
+EINJ04\_E3 "Einj: beam#04(D), E-frac#3"  
+DINJ04\_E1 "Einj RMS Var.: beam#04(D), E#1"  
+DINJ04\_E2 "Einj RMS Var.: beam#04(D), E#2"  
+DINJ04\_E3 "Einj RMS Var.: beam#04(D), E#3"  
[VS. TIME ONLY.]

EINJAV "avg beam voltages by species" (EV)  
+EINJAV\_D "D: avg full injection energy"  
[VS. TIME ONLY.]

FBPOL "TRANSP POLOIDAL BETAS" ()  
+BETA E "ELECTRON BETA (POLOIDAL)"  
+BETA R "ROTATION BETA (POLOIDAL)"

+BETAI "THERMAL ION BETA POLOIDAL"  
 +BPEQ "EQUILIBRIUM BETA(POLOIDAL)"  
 +BPDIA "DIAMAGNETIC BETA(POLOIDAL)"  
 +BPFASTPP "TOTAL FAST ION BETA(POL) PERP"  
 +BPFASTPA "TOTAL FAST ION BETA(POL) PLL"  
 [VS. TIME ONLY.]

FBPOLPA "FAST ION PLL BETA(POLOIDAL)S" ()  
 +BBPAR "BEAM BETA(POLOIDAL) PLL"  
 +BPMINPA "MINORITY BETA (POLOIDAL) PLL"  
 +BPFASTPA "TOTAL FAST ION BETA(POL) PLL"  
 [VS. TIME ONLY.]

FBPOLPP "FAST ION PERP BETA(POLOIDAL)S" ()  
 +BBPER "BEAM BETA(POLOIDAL) PERP"  
 +BPMINPP "MINORITY BETA (POLOIDAL) PERP"  
 +BPFASTPP "TOTAL FAST ION BETA(POL) PERP"  
 [VS. TIME ONLY.]

FLUXRATE "Relative motion of grids" (1/SEC)  
 +ELDOT "ELDOT: GRID MOTION"  
 [VS. TIME ONLY.]

FREQRF "RF Frequencies" (Hz)  
 +FREQA1 "FREQUENCY ON ICRF ANTENNA #1"  
 +FREQA2 "FREQUENCY ON ICRF ANTENNA #2"  
 [VS. TIME ONLY.]

GFLR\_LOSS "Fraction MC Ion GFLR Loss" ()  
 +GFLRL\_DI "Fraction MC Ion GFLR Loss Dist"  
 +GFLRL\_LI "Fraction MC Ion GFLR Loss Limit"  
 +GFLRL\_MA "Fraction MC Ion GFLR Loss Map"  
 +GFLRL\_ES "Fraction MC Ion GFLR Loss Est."  
 +GFLRL\_BA "Fraction MC Ion GFLR Loss Bad"  
 [VS. TIME ONLY.]

GFLR\_STAT "Fraction MC Ion GFLR Mapping" ()  
 +GFLR\_OK "Fraction MC Ion GFLR OK"  
 +GFLR\_C "Fraction MC Ion GFLR Classical"  
 +GFLR\_GC "Fraction MC Ion GFLR GC"  
 +GFLR\_AP "Fraction MC Ion GFLR Approx."  
 [VS. TIME ONLY.]

HFAC "TauE98y & TaeE97L H factors" ()  
 +H98Y2 "TauE98y,2 confinement Hfactor"  
 +H98Y2E "TauE98y,2e confinement Hfactor"  
 +H97LG "TauE97L,g confinement Hfactor"  
 +H97LTH "TauE97L,th confinement Hfactor"  
 [VS. TIME ONLY.]

HH "TauE98y2 confinement ratio H factors" ()

+H98Y2	"TauE98y,2 confinement Hfactor"	
+H98Y2E	"TauE98y,2e confinement Hfactor"	
	[VS. TIME ONLY.]	
HL	"TauE97L confinement ratio H factors"	()
+H97LG	"TauE97L,g confinement Hfactor"	
+H97LTH	"TauE97L,th confinement Hfactor"	
	[VS. TIME ONLY.]	
IPCMP	"PLASMA CURRENT COMPARISON"	(AMPS)
+PCUR	"MEASURED PLASMA CURRENT"	
+PCUREQ	"EQ PLASMA CURRENT"	
+PCURC	"CALCULATED PLASMA CURRENT"	
	[VS. TIME ONLY.]	
L2COM	"MAGNETIC LI/2 COMPARISON"	()
+LIO2M	"LI/2 (MAGNETICS DATA ESTIMATE)"	
+LIO2C	"LI/2 (COMPUTED FROM J PROFILE)"	
	[VS. TIME ONLY.]	
LAMDA	"LAMDA COMPARISON"	()
+LAMDM	"MAGNETICS EST. LAMDA"	
+LAMDC	"KINETIC+J EST. LAMDA"	
	[VS. TIME ONLY.]	
LBPOL	"POLOIDAL BETAS, LI/2+BETA"	()
+LIO2	"INDUCTANCE (LI/2)"	
+LI2PB	"LI/2 + BETA(POLOIDAL)"	
+BPEQ	"EQUILIBRIUM BETA(POLOIDAL)"	
+BPEQ1	"1D EQUILIBRIUM BETA(POLOIDAL)"	
+LIO21	"1D DEFINITION OF LI/2"	
+L2PB1	"1D DEFINITION LI/2+BETA"	
	[VS. TIME ONLY.]	
LHPWRS	"POWER FROM EACH LH ANTENNA"	(WATTS)
+PLHANT1	"POWER INPUT ON ANT. 1"	
+PLHABS1	"POWER ABSORBED ANT. 1"	
+PLHANT2	"POWER INPUT ON ANT. 2"	
+PLHABS2	"POWER ABSORBED ANT. 2"	
	[VS. TIME ONLY.]	
LIHI2	"INDUCTANCE"	()
+LIO2	"INDUCTANCE (LI/2)"	
+HIO2	"INDUCTANCE (HI/2)"	
+LIO21	"1D DEFINITION OF LI/2"	
	[VS. TIME ONLY.]	
LINORM	"VARIOUS NORMALIZED INDUCTANCES"	()
+LI_1	"Inductance definition Li_1"	
+LI_3	"Inductance definition Li_3"	
+LI_VDIFF	"Inductance: TRANSP V-diff norm."	

[VS. TIME ONLY.]

MBPOL "EQ. + DIA. BETA(POLOIDAL)" ()  
+BPDM "MAGNETICS EST. BETA(DIA)"  
+BPDC "KINETIC BETA(DIA)"  
+BPDIA "DIAMAGNETIC BETA(POLOIDAL)"  
+BPDA1 "1D DIAMAGNETIC BETA(POLOIDAL)"

[VS. TIME ONLY.]

MBTOR "EQ. + DIA. BETA(TOROIDAL)" ()  
+BTEQ "EQUILIBRIUM BETA(TOROIDAL)"  
+BTDIA "DIAMAGNETIC BETA(TOROIDAL)"

[VS. TIME ONLY.]

MUCOM "MAGNETIC MUDIA COMPARISON" ()  
+MUIM "MAGNETICS EST. MU(DIA)"  
+MUIC "TRANSP EST. MU(DIA) MHD EQ"

[VS. TIME ONLY.]

NBXPNT "Dominant X point or 0 for limited" ()  
+NBEQ "0 limited, -1 lower, 1 upper Div as used"  
+NBGUESS "0 limited, -1 lower, 1 upper Div as guessed from boundary"

[VS. TIME ONLY.]

NCXORB "# CX events during orbiting" (N)  
+NCX0\_D "# CX events D orbiting"

[VS. TIME ONLY.]

NMCLOSS "No. of prompt loss MC Ions" (N)  
+NMCLOSS\_D "Beam D MC Prompt Loss"

[VS. TIME ONLY.]

NMCTOT "Total No. of Monte Carlo Ions" (N)  
+NMCTOT\_D "Beam D Total MC Ions"

[VS. TIME ONLY.]

NNEW "# Monte Carlo Deposited" (N)  
+NNEW\_D "Beam D MC Deposited"

[VS. TIME ONLY.]

OM0EDGE "EDGE GAS ANGULAR VELOCITY" (RAD/SEC)  
+OMORECYC "RECYCLING GAS Ang. Veloc. (AVG)"  
+OMOGASFL "GAS FLOW Ang. Veloc. (AVG)"

[VS. TIME ONLY.]

POBL "LAB FRAME NEUTRAL POWER BALANCE" (WATTS)  
+POFIN "NEUTRAL INFLUX POWER"  
+PORFL "NEUTRAL POWER REFLECTED IN"  
+POCXT "TOTAL CX POWER"  
-POINZ "NEUTRAL POWER IONIZED"  
-POESC "NEUTRAL POWER ESCAPED"

-POBAL "NEUTRAL POWER BALANCE CHECK"  
[VS. TIME ONLY.]

PBBAL "FAST ION POWER BALANCE" (WATTS)  
 +PRFBTOT "ALL FAST ION HEATING by RF"  
 +PINJ "BEAM POWER INJECTED"  
 +BPST "FAST ION POWER STORED"  
 +BPOH "POWER: OH CIRCUIT TO FAST IONS"  
 +BPCPR "POWER: COMPRESSION OF FAST IONS"  
 +BPBAL "FAST ION POWER BALANCE"  
 +BPERR "FAST ION ORBIT POWER ERROR"  
 [VS. TIME ONLY.]

PBBAL\_D "BEAM POWER BALANCE (D)" (WATTS)  
 +BPST\_D "D BEAM POWER STORED"  
 +BPOH\_D "POWER: OH CIRCUIT TO D BEAM"  
 +PRFB\_D "RF POWER -> D BEAM IONS"  
 +BPCPR\_D "POWER: COMPRESSION OF D BEAM"  
 +BPBAL\_D "D BEAM POWER BALANCE"  
 +BPERR\_D "D BEAM ORBIT POWER ERROR"  
 +PINJ\_D "TOTAL INJECTED D BEAM POWER"  
 [VS. TIME ONLY.]

PBCXB "FAST ION CX POWER TERMS" (WATTS)  
 +BPCXI "FAST ION POWER TO CX (INT)"  
 +BPCXX "FAST ION POWER TO CX (EXT)"  
 +BPCIO "FAST ION CX SCE POWER (INT)"  
 +BPCX0 "FAST ION CX SCE POWER (EXT)"  
 +BPCRI "FAST ION CX RECAPTURE (INT)"  
 +BPCRX "FAST ION CX RECAPTURE (EXT)"  
 +BPCXE "FAST ION CX TRACKER ERROR"  
 [VS. TIME ONLY.]

PBCXB\_D "BEAM CX POWER TERMS (D)" (WATTS)  
 +BPCXI\_D "D BEAM POWER TO CX (INT)"  
 +BPCXX\_D "D BEAM POWER TO CX (EXT)"  
 +BPCIO\_D "D BEAM CX SCE POWER (INT)"  
 +BPCX0\_D "D BEAM CX SCE POWER (EXT)"  
 +BPCRI\_D "D BEAM CX RECAPTURE (INT)"  
 +BPCRX\_D "D BEAM CX RECAPTURE (EXT)"  
 +BPCXE\_D "D BEAM CX TRACKER ERROR"  
 [VS. TIME ONLY.]

PBDEPB\_D "the total D-beam injected power" (WATTS)  
 +PBINJ\_D "DBEAM MC IONS POWER INJECTED"  
 -PBDEPMC\_D "DBEAM MC IONS POWER DEPOSITED"  
 -PBSHINE\_D "DBEAM SHINE-THRU POWER"  
 -PBDEPBA\_D "DBEAM POWER, BALANCE CHECK"  
 [VS. TIME ONLY.]

PBLOS "FAST ION POWER LOSSES" (WATTS)



+BPSHI "FAST ION SHINE-THRU POWER"  
+BPLIM "FAST ION ORBIT LOSS"  
+BPCXI "FAST ION POWER TO CX (INT)"  
+BPCXX "FAST ION POWER TO CX (EXT)"  
+BPTH "FAST ION POWER THERMALIZED"  
[VS. TIME ONLY.]

PBLOS\_D "BEAM POWER LOSSES (D)" (WATTS)  
+BPLIM\_D "D BEAM ORBIT LOSS"  
+BPSHI\_D "D BEAM SHINE-THRU POWER"  
+BPCXI\_D "D BEAM POWER TO CX (INT)"  
+BPCXX\_D "D BEAM POWER TO CX (EXT)"  
+BPTH\_D "D BEAM POWER THERMALIZED"  
[VS. TIME ONLY.]

PBROT "FAST ION POWER TO ROTATION" (WATTS)  
+BPTHs "NB PWR: TH.SCE.FRICTION"  
+BPTHr "NB PWR: THERMALIZATION>ROTATION"  
+BPJXB "NB PWR: JXB TORQUE"  
+BPCOL "NB PWR: COLLISIONAL TORQUE"  
[VS. TIME ONLY.]

PBROT\_D "BEAM POWER TO ROTATION (D)" (WATTS)  
+BPTHs\_D "D BEAM PWR: TH.SCE.FRICTION"  
+BPTHr\_D "D BEAM PWR: THERMALIZ>ROTATION"  
+BPJXB\_D "D BEAM PWR: JXB TORQUE"  
+BPTDFB\_D "D BEAM PWR: ANOM.DIFF TORQUE"  
+BPCOL\_D "D BEAM PWR: COLLISIONAL TORQUE"  
[VS. TIME ONLY.]

PECRF "ECRF HEATING" (WATTS)  
+PECIN "ECRF INPUT POWER"  
+PECHT "ECRF ELECTRON HEATING"  
[VS. TIME ONLY.]

PEDGE "EXPANSION/SCRAPEOFF POWER" (WATTS)  
+PEEDG "ELECTRON ENERGY VIA BDY"  
+PIEDG "ION ENERGY VIA BDY"  
[VS. TIME ONLY.]

PED\_NHGT "density pedestal height" (N/CM\*\*3)  
+NEPED "ELECTRON PEDESTAL DENSITY"  
[VS. TIME ONLY.]

PED\_SCAL "pedestal scale factors" ()  
+LHMODE "H-Mode indicator"  
+SC\_TEPED "TE PEDESTAL HEIGHT SCALE FACTOR"  
+SC\_TIPED "TI PEDESTAL HEIGHT SCALE FACTOR"  
+SC\_NEPED "NE PEDESTAL HEIGHT SCALE FACTOR"  
[VS. TIME ONLY.]

PED\_THGT "temperature pedestal heights" (eV)  
 +TEPED "ELECTRON PEDESTAL TEMPERATURE"  
 +TIPED "ION PEDESTAL TEMPERATURE"  
 [VS. TIME ONLY.]

PED\_WID "pedestal model widths" ()  
 +TEPEDW "ELECTRON PEDESTAL WIDTH: TE"  
 +TIPEDW "ION PEDESTAL WIDTH"  
 +NEPEDW "ELECTRON PEDESTAL WIDTH: NE"  
 [VS. TIME ONLY.]

PFIO "FAST ION SOURCE POWERS" (WATTS)  
 +PINJ\_D "TOTAL INJECTED D BEAM POWER"  
 [VS. TIME ONLY.]

PHEAT "HEATING POWERS" (WATTS)  
 +POHT "OHMIC INPUT POWER"  
 +PRFBTOT "ALL FAST ION HEATING by RF"  
 +BPHTO "TOTAL FAST ION HEATING"  
 +BPCAP "BEAM POWER CAPTURED"  
 +PINJ "BEAM POWER INJECTED"  
 +PLH "LH INPUT POWER"  
 +PLHABS "LH POWER ABSORBED IN PLASMA"  
 +PECIN "ECRF INPUT POWER"  
 +PECHT "ECRF ELECTRON HEATING"  
 +PICHTOT "TOTAL ICRF ANTENNA POWER"  
 [VS. TIME ONLY.]

PHEAT\_IN "INPUT HEATING POWERS" (WATTS)  
 +PINJ "BEAM POWER INJECTED"  
 +PLH "LH INPUT POWER"  
 +PECIN "ECRF INPUT POWER"  
 +PICHTOT "TOTAL ICRF ANTENNA POWER"  
 [VS. TIME ONLY.]

PHGYRO "Toroidal aiming of each GYROTRON" (DEGREES)  
 +PHAIECH1 "Toroidal aiming, GYROTRON 1"  
 [VS. TIME ONLY.]

PICHA "ICRF ANTENNA POWERS" (WATTS)  
 +PICHTOT "TOTAL ICRF ANTENNA POWER"  
 +PICHA1 "POWER ON ICRF ANTENNA #1"  
 +PICHA2 "POWER ON ICRF ANTENNA #2"  
 [VS. TIME ONLY.]

PICH\_CHK1 "Power check: Antenna #1" (WATTS)  
 +RFPWRAB1 "Power ABSORBED, Antenna #1"  
 +PICHA1 "POWER ON ICRF ANTENNA #1"  
 [VS. TIME ONLY.]

PICH\_CHK2 "Power check: Antenna #2" (WATTS)

+RFPWRAB2 "Power ABSORBED, Antenna #2"  
 +PICHA2 "POWER ON ICRF ANTENNA #2"  
 [VS. TIME ONLY.]

PINJB "the total/beam injected power" (WATTS)  
 +PINJ "BEAM POWER INJECTED"  
 +PINJ01 "Beam#01(D) injected power"  
 +PINJ02 "Beam#02(D) injected power"  
 +PINJ03 "Beam#03(D) injected power"  
 +PINJ04 "Beam#04(D) injected power"  
 [VS. TIME ONLY.]

PL2H "L-H power condition" (WATTS)  
 +PL2HREQ "L-H transition power"  
 +PL2HTOT "Total heating power"  
 [VS. TIME ONLY.]

PLFLXCMP "POLOIDAL FLUX COMPARISON" (Wb/rad)  
 +PLFLXA "ENCLOSED POLOIDAL FLUX"  
 +PLFLXD "ENCLOSED POLOIDAL FLUX (data)"  
 [VS. TIME ONLY.]

PLHBAL "LH POWER BALANCE" (WATTS)  
 +PLH "LH INPUT POWER"  
 +PLHI "LH POWER TO IONS"  
 +PLHE "LH POWER TO ELECTRONS"  
 +PLHABS "LH POWER ABSORBED IN PLASMA"  
 +PLHREF "LH POWER NOT ABSORBED IN PLASMA"  
 +PLHBCK "LH POWER BALANCE CHECK"  
 [VS. TIME ONLY.]

POHC "OHMIC HEATING, IP\*VS" (WATTS)  
 +POHT "OHMIC INPUT POWER"  
 +IPXVS "PCUR \* VSUR"  
 [VS. TIME ONLY.]

PRFBAL "ICRF POWER BALANCE" (WATTS)  
 +PICHTOT "TOTAL ICRF ANTENNA POWER"  
 +PICHEXT "RF POWER BEYOND SEPARATRIX"  
 +PICHE "POWER: ICH DIRECT TO ELECTRONS"  
 +PICHI "POWER: ICH DIRECT TO TH.IONS"  
 +PICHFAST "Power: ICH DIRECT to Fast ions"  
 +PICHMC "POWER: ICH TO MODE CONVERSION"  
 +PICHMIN "POWER: ICH TO MINORITY IONS"  
 +PICHBAL "RF POWER BALANCE"  
 [VS. TIME ONLY.]

PRFFI "ICRF POWER to FAST IONS" (WATTS)  
 +PRFB\_D "RF POWER -> D BEAM IONS"  
 +PICHTOT "TOTAL ICRF ANTENNA POWER"  
 +PICHMIN "POWER: ICH TO MINORITY IONS"

[VS. TIME ONLY.]

PSIO "Poloidal flux on axis" (Wb/rad)  
+PSIO\_TR "Psi\_poloidal(axis) in simulation"  
+PSIO\_DATA "Psi\_poloidal(axis) input data"  
[VS. TIME ONLY.]

PVOLS "PLASMA VOLUMES" (CM\*\*3)  
+PVOL "PLASMA VOLUME"  
+PVOLB "PLASMA VOLUME FROM BOUNDARY"  
+PVOLF "PLASMA VOLUME FROM FLUX SURF"  
[VS. TIME ONLY.]

QKPRHO "ICRF avg kperp(rho) adjustment" ()  
+BQKPRHO\_D "RF->D Beam:avg kprp(rho) adj"  
+MQKPRHO\_H "RF->H Minority:avg kprp(r) adj"  
[VS. TIME ONLY.]

RFMLOSS "RF Minority Orbit Loss (ang.m)" (NT-M)  
+RFMLOSS\_H "RF H Minority: Orbit loss"  
[VS. TIME ONLY.]

RFPLOSS "RF Minority Orbit Loss (power)" (WATTS)  
+RFPLOSS\_H "RF H Minority: Orbit loss"  
[VS. TIME ONLY.]

RFSLOSS "RF Minority Orbit Loss (ptcls)" (N/SEC)  
+RFSLOSS\_H "RF H Minority: Orbit loss"  
[VS. TIME ONLY.]

RKPRHO "ICRF adjusted avg P(fpp)/P(ich)" ()  
+BRKPRHO\_D "RF->D Beam:avg wave Dep/Pfpp"  
+MRKPRHO\_H "RF->H Minority:avg Pwave/Pfpp"  
[VS. TIME ONLY.]

RMAJB "EQUILIBRIUM RMAJ FLUX/BOUNDARY" (CM)  
+RMAJDIFF "MAX DIFF BOUND AND FLUX MIDPLANE"  
+RMAJBLIM "RMAJ EXTENT OF THE BOUNDARY"  
[VS. TIME ONLY.]

RTCOM "MAGNETIC RT COMPARISON" (CM)  
+RTPC "MAG:RT, CALCULATED"  
[VS. TIME ONLY.]

SBBAL "FAST ION PTCL BALANCE" (N/SEC)  
+SFDEP "FAST ION SCE: DEPOSITION"  
+SFRCAP "FAST ION CX RECAPTURE"  
-BSTH "FAST ION THERMALIZATIONS"  
-BSORB "FAST ION ORBIT LOSSES"  
-BSNXI "FAST ION CX SINK (INT)"  
-BSNXO "FAST ION CX SINK (EXT)"

-BSBAL "FAST ION PTCL BALANCE"  
-BDNDT "D/DT(FAST ION POPULATION)"  
-BDNDTX "D/DT(FAST IONS OUTSIDE PLASMA)"  
[VS. TIME ONLY.]

SBBAL\_D "BEAM PTCL BALANCE (D)" (N/SEC)  
-BDNDT\_D "D/DT(D BEAM ION POPULATION)"  
-BDNDTX\_D "D/DT(D BEAM IONS OUTSIDE PLASMA)"  
-BSTH\_D "D BEAM THERMALIZATIONS"  
-BSORB\_D "D BEAM ORBIT LOSSES"  
-BSNXI\_D "D BEAM CX SINK (INT)"  
-BSNXO\_D "D BEAM CX SINK (EXT)"  
-BSBAL\_D "D BEAM PTCL BALANCE"  
+SBDEPSC\_D "D BEAM TOTAL DEPOSITION SCE"  
+SBXRCSC\_D "D BEAM TOTAL RECAPTURE SCE"  
[VS. TIME ONLY.]

SBCX0B\_D "BEAM CX NEUTRAL PTCL BAL (D)" (N/SEC)  
+SBCX0MC\_D "D BEAM CX NEUTRALS LAUNCHED"  
-SBCXESC\_D "D BEAM CX NEUTRALS ESCAPED"  
-SBCXRR\_D "D BEAM CX NEUTRALS "R.R.""  
-SBCXRMC\_D "D BEAM CX MC IONS RECAPTURED"  
+SBCXBAL\_D "D BEAM CX NEUTRAL PTCL BAL"  
[VS. TIME ONLY.]

SBCXSN\_D "BEAM ION CX SINKS (D)" (N/SEC)  
+BSNXO\_D "D BEAM CX SINK (EXT)"  
+SBCX0MC\_D "D BEAM CX NEUTRALS LAUNCHED"  
+SNBXTOT\_D "TOTAL D BEAM ION CX SINK"  
+SNBXWO\_D "D BEAM ION CX SINK: WALL NEUTS"  
+SNBXVO\_D "D BEAM ION CX SINK: HALO NEUTS"  
+SNBXBB0\_D "D BEAM ION CX W/ BEAM NEUTS"  
+SNBXBB1\_D "D BEAM ION CX W/ FAST CX NEUTS"  
[VS. TIME ONLY.]

SBDEPB\_D "BEAM DEPOSITION PTCL BAL (D)" (N/SEC)  
+SINJ\_D "FAST D BEAM NEUTRALS INJECTED"  
-SINJEA\_D "D DEP E.CONSERVATION ADJUST"  
-SBSHINE\_D "D BEAM SHINE-THROUGH"  
-SBDEPMC\_D "D BEAM MC IONS DEPOSITED"  
-SBDEPBA\_D "D BEAM DEP PTCL BALANCE"  
[VS. TIME ONLY.]

SBDEPS\_D "BEAM DEPOSITION SOURCES (D)" (N/SEC)  
+SBDEPMC\_D "D BEAM MC IONS DEPOSITED"  
+SBDEPSC\_D "D BEAM TOTAL DEPOSITION SCE"  
+SBDEPIZ\_D "D BEAM DEP: TH.IONIZATION"  
+SBDEPCX\_D "D BEAM DEP: CX W/THERMAL IONS"  
+SBDBBIZ\_D "D BEAM DEP: BEAM-BEAM IONIZ."  
+SBDBBCX\_D "D BEAM DEP: BEAM-BEAM CX"  
[VS. TIME ONLY.]

SBDYD "DO BOUNDARY SOURCES" (N/SEC)  
 +GASD "DO GAS FLOW SOURCE"  
 +RCYD "DO RECYCLING SOURCE"  
 [VS. TIME ONLY.]

SBDYL "LO BOUNDARY SOURCES" (N/SEC)  
 +GASL "LITHIUM GAS FLOW SOURCE"  
 +RCYL "LITHIUM RECYCLING SOURCE"  
 [VS. TIME ONLY.]

SBORBA\_D "BEAM ORBIT PTCL BAL (D)" (N/SEC)  
 -BSTH\_D "D BEAM THERMALIZATIONS"  
 -BSORB\_D "D BEAM ORBIT LOSSES"  
 +SBDEPRR\_D "D BEAM DEP "RUSSIAN ROULETTE""  
 +SBDEPMC\_D "D BEAM MC IONS DEPOSITED"  
 -SBCXESC\_D "D BEAM CX NEUTRALS ESCAPED"  
 -SBCXRR\_D "D BEAM CX NEUTRALS "R.R.""  
 -SBORBRD\_D "D BEAM ORBIT CODE "R.R.""  
 -SBDTBMC\_D "D BEAM MC RATE OF CHANGE"  
 +SBORBAL\_D "D BEAM ORBIT PTCL BALANCE"  
 [VS. TIME ONLY.]

SBRCAP\_D "BEAM CX RECAPTURE (D)" (N/SEC)  
 +SBCXRMCD "D BEAM CX MC IONS RECAPTURED"  
 +SBXRCSC\_D "D BEAM TOTAL RECAPTURE SCE"  
 +SBXRCIZ\_D "D BEAM RECAP: TH.IONIZATION"  
 +SBXRCCX\_D "D BEAM RECAP: TH.CX"  
 +SBRBBIZ\_D "D BEAM RECAP: BEAM-BEAM IONIZ."  
 +SBRBBCX\_D "D BEAM RECAP: BEAM-BEAM CX"  
 [VS. TIME ONLY.]

SDEPOAUC "orbit av. deposition,UNCONFINED" (N/SEC)  
 +SDEPUC\_D "Beam D orbit averaged UNCONFINED"  
 [VS. TIME ONLY.]

SHCOM "MAGNETIC S1+S2 COMPARISON" ()  
 +SHFSM "MAGNETICS EST. S1+S2"  
 +SHFSC "CALCULATED S1+S2"  
 [VS. TIME ONLY.]

SUMCUR "Summed toroidal currents" (AMPS)  
 +PCUREQ "EQ PLASMA CURRENT"  
 +PCURC "CALCULATED PLASMA CURRENT"  
 [VS. TIME ONLY.]

SX\_RANGE "solver ranges [0:x]" ()  
 +SX\_TE "Te solver range [0:x]"  
 +SX\_TI "Ti solver range [0:x]"  
 +SX\_OMEGA "Ang. velocity solver range [0:x]"  
 +SX\_NE "ne solver range [0:x]"

[VS. TIME ONLY.]

TOEDGE "EDGE GAS TEMPERATURE" (EV)  
+TORECYC "RECYCLING GAS TEMPERATURE (AVG)"  
+TOGASFL "GAS FLOW TEMPERATURE (AVG)"

[VS. TIME ONLY.]

TAUH "TauE98y2 confinement scalings" (SECONDS)  
+TAUE98Y2 "TauE98y,2 confinement scaling"  
+TAUE98Y2E "TauE98y,2e confinement scaling"

[VS. TIME ONLY.]

TAUL "TauE97L confinement scalings" (SECONDS)  
+TAUE97LG "TauE97L,g confinement scaling"  
+TAUE97LTH "TauE97L,th confinement scaling"

[VS. TIME ONLY.]

TAUSCAL "TauE98y & TauE97L scalings" (SECONDS)  
+TAUE98Y2 "TauE98y,2 confinement scaling"  
+TAUE98Y2E "TauE98y,2e confinement scaling"  
+TAUE97LG "TauE97L,g confinement scaling"  
+TAUE97LTH "TauE97L,th confinement scaling"

[VS. TIME ONLY.]

TFLUXCMP "TOROIDAL FLUX COMPARISON" (WEBERS)  
+TFLUX "ENCLOSED TOROIDAL FLUX"  
+TRFLXD "ENCLOSED TOROIDAL FLUX (data)"

[VS. TIME ONLY.]

THGYRO "Poloidal aiming of each GYROTRON" (DEGREES)  
+THETECH1 "Poloidal aiming, GYROTRON 1"

[VS. TIME ONLY.]

TIEFAC "Ti <-> Te switching factors" ()  
+FIEFAC "Ti <-> Te switching factor"  
+GIEFAC "Ti/Te ratio when Te used for Ti"

[VS. TIME ONLY.]

TSHF0 "SHAFRANOV & DATA SHIFT ON AXIS" (CM)  
+ASHAF "SHAFRANOV AXIS SHIFT"  
+ASHAFDA "SHAFRANOV AXIS SHIFT (MHD DATA)"

[VS. TIME ONLY.]

VISBR "SINGLE CHORD VB LIGHT" (VB UNITS)  
+VISBC "CHORDAL VB LIGHT (CALCULATED)"

[VS. TIME ONLY.]

VOLTSEC "Volt-Second Flux Consumption" (V\*s)  
+VOLTSEC0 "Axial flux consumption"  
+VOLTSECBM "Boundary flux consumption based on meas. data"  
+VOLTSECA "Poynting Average flux consumption"

[VS. TIME ONLY.]

VSCMP "SURFACE VOLTAGE COMPARISON" (VOLTS)  
+VSUR "MEAS.AVG. SURFACE VOLTAGE"  
+VSURC "CALC.AVG. SURFACE VOLTAGE"

[VS. TIME ONLY.]

WNMCTOT "Total Monte Carlo Weight" (#ptcls)  
+WNMCTOT\_D "Beam D Total MC Ions"

[VS. TIME ONLY.]

XFUSN "FUSION REACTION RATES" (N/SEC)  
+TOTDT "TOTAL D-T FUSION"  
+TOTDDN "TOTAL D(D,N)HE3 FUSION"  
+TOT2TT "TOTAL T(T,2N)HE4 FUSION"  
+TOTDDP "TOTAL D(D,P)T FUSION"

[VS. TIME ONLY.]

XIQ "xi of Q surfaces" ()  
+XIQ1 "xi of Q=1 surface"  
+XIQ2 "xi of Q=2 surface"  
+XIQ3 "xi of Q=3 surface"  
+XIQ3\_2 "xi of Q=3/2 surface"

[VS. TIME ONLY.]

XKFMG "ION NEOCLASSICAL MULTIPLIERS" ()  
+XKFA1 "ION CHI(I) MULTIPLIER"  
+XKFA2 "Q<1 ION NC CHI(I) MULTIPLIER"

[VS. TIME ONLY.]

XNEUT "NEUTRON EMISSION" (N/SEC)  
+BTNTS "BEAM-TARGET NEUTRONS"  
+BBNTS "BEAM-BEAM NEUTRONS"  
+NEUTX "THERMONUCLEAR NEUTRONS"  
+NEUTT "TOTAL NEUTRONS"

[VS. TIME ONLY.]

XNEUT\_DD "DD NEUTRON EMISSION" (N/SEC)  
+BBNTS\_DD "DD BEAM-BEAM NEUTRONS"  
+BTNTS\_DD "DD BEAM-TARGET NEUTRONS"  
+NEUTX\_DD "DD THERMONUCLEAR NEUTRONS"

[VS. TIME ONLY.]

ZEFF0 "RESIS. & COMPOSITION ZEFF @AXIS" ()  
+ZEFFM "AXIAL MAGDIF. ZEFF"  
+ZEFFC "AXIAL PLASMA COMPOSITION ZEFF"  
+ZEFFIO "INPUT AXIAL ZEFF (UNCONSTRAINED)"

[VS. TIME ONLY.]



## PROFILE MULTIGRAPH PACKAGES

AMOM "ANGULAR MOMENTUM DENSITY" (NtM-S/CM3)  
+PPHI "ANGULAR MOMENTUM DENSITY"  
+PPHIN "NCLASS Ang Mom Dens"  
+PPHIGN\_D "D NCLASS Ang Mom Dens"  
+PPHIGN\_LI "Li NCLASS Ang Mom Dens"  
+PPHIGN\_X "Impurity NCLASS Ang Mom Dens"  
[VS. x"r/a" ctr AND TIME]

AMOM\_IMP "IMP ANGULAR MOMENTUM DENSITY" (NtM-S/CM3)  
+PPHIGN\_X "Impurity NCLASS Ang Mom Dens"  
[VS. x"r/a" ctr AND TIME]

AMTR "ANGULAR MOMENTUM TRANSPORT" (Nt-M/CM3)  
+AMTR\_MOD "Div(ang. momentum flux) (model)"  
+AMTR\_OBS "Div(ang. momentum flux) (obs.)"  
[VS. x"r/a" ctr AND TIME]

BDENS2D "beam ion density at GC 2d grid" (N/CM\*\*3)  
+BDENS2\_D "D Beam ion density, GC"  
[VS. 2d MC grid (x,th) AND TIME]

BDENSMP "Fast ion density, GC on midplane" (#/CM\*\*3)  
+BDENSTOTMP "Fast ion density, GC on midplane"  
[VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

BDENSNB "the total/beam density" (N/CM\*\*3)  
+NB01\_TOT "nb: Beam#01(D), total density"  
+NB02\_TOT "nb: Beam#02(D), total density"  
+NB03\_TOT "nb: Beam#03(D), total density"  
+NB04\_TOT "nb: Beam#04(D), total density"  
[VS. x"r/a" ctr AND TIME]

BDENSS "BEAM ION DENSITIES" (N/CM\*\*3)  
+BDENS\_D "D BEAM ION DENSITY"  
[VS. x"r/a" ctr AND TIME]

BDEN\_D "BEAM D DENSITY PROFILES" (N/CM\*\*3)  
+BDENS\_D "D BEAM ION DENSITY"  
+MCDENS\_D "D BEAM ION DENSITY (MC LIST)"  
+MCDEPS\_D "NEW D BEAM IONS (MC DEP)"  
[VS. x"r/a" ctr AND TIME]

BDEPO "BEAM DEPOSITION" (N/CM3/SEC)  
+SDBBI "BEAM DEPOSITION: BEAM-BEAM II"  
+SDBBX "BEAM DEPOSITION: BEAM-BEAM CX"  
+SDB\_II "BEAM DEP: ioniz. on therm. ions"  
+SDB\_IE "BEAM DEP: ioniz. on electrons"  
+SDB\_IZ "BEAM DEP: ioniz. on impurities"  
+SDCXD "BEAM DEPOSITION: CX W/D+ IONS"

+SDCXLITH "BEAM DEPOSITION: CX W/LI IONS"  
[VS. x"r/a" ctr AND TIME]

BDEP01 "Beam#01(D) deposition" (N/CM3/SEC)  
+BDEP01\_TOT "bdep: Beam#01(D),total depositio"  
+BDEP01\_E1 "bdep: Beam#01(D), E-frac no.1"  
+BDEP01\_E2 "bdep: Beam#01(D), E-frac no.2"  
+BDEP01\_E3 "bdep: Beam#01(D), E-frac no.3"  
[VS. x"r/a" ctr AND TIME]

BDEP02 "Beam#02(D) deposition" (N/CM3/SEC)  
+BDEP02\_TOT "bdep: Beam#02(D),total depositio"  
+BDEP02\_E1 "bdep: Beam#02(D), E-frac no.1"  
+BDEP02\_E2 "bdep: Beam#02(D), E-frac no.2"  
+BDEP02\_E3 "bdep: Beam#02(D), E-frac no.3"  
[VS. x"r/a" ctr AND TIME]

BDEP03 "Beam#03(D) deposition" (N/CM3/SEC)  
+BDEP03\_TOT "bdep: Beam#03(D),total depositio"  
+BDEP03\_E1 "bdep: Beam#03(D), E-frac no.1"  
+BDEP03\_E2 "bdep: Beam#03(D), E-frac no.2"  
+BDEP03\_E3 "bdep: Beam#03(D), E-frac no.3"  
[VS. x"r/a" ctr AND TIME]

BDEP04 "Beam#04(D) deposition" (N/CM3/SEC)  
+BDEP04\_TOT "bdep: Beam#04(D),total depositio"  
+BDEP04\_E1 "bdep: Beam#04(D), E-frac no.1"  
+BDEP04\_E2 "bdep: Beam#04(D), E-frac no.2"  
+BDEP04\_E3 "bdep: Beam#04(D), E-frac no.3"  
[VS. x"r/a" ctr AND TIME]

BDEP0\_D "BEAM DEPOSITION (D)" (N/CM3/SEC)  
+SDBBI\_D "D BEAM DEPOSITION: BEAM-BEAM II"  
+SDBBX\_D "D BEAM DEPOSITION: BEAM-BEAM CX"  
+SDBII\_D "D BEAM DEP: IONIZ. on therm.ions"  
+SDBIE\_D "D BEAM DEP: IONIZ. on electrons"  
+SDBIZ\_D "D BEAM DEP: IONIZ. on impurities"  
+SDCXD\_D "D BEAM DEPOSITION: CX W/D+ IONS"  
[VS. x"r/a" ctr AND TIME]

BDEP0\_D1 "Full Energy Beam Depo. (D)" (N/CM3/SEC)  
+SDBBI\_D1 "Full E D BEAM DEP: BEAM-BEAM II"  
+SDBBX\_D1 "Full E D BEAM DEP: BEAM-BEAM CX"  
+SDBII\_D1 "Full E D BEAM DEP: II on th.ions"  
+SDBIE\_D1 "Full E D BEAM DEP: II on (e-)"  
+SDBIZ\_D1 "Full E D BEAM DEP: IONIZ. on imp"  
+SDCXD\_D1 "Full E D BEAM DEP: CX W/D+ IONS"  
[VS. x"r/a" ctr AND TIME]

BDEP0\_D2 "Half Energy Beam Depo. (D)" (N/CM3/SEC)  
+SDBBI\_D2 "Half E D BEAM DEP: BEAM-BEAM II"

+SDBBX\_D2 "Half E D BEAM DEP: BEAM-BEAM CX"  
+SDBII\_D2 "Half E D BEAM DEP: II on th.ions"  
+SDBIE\_D2 "Half E D BEAM DEP: II on (e-)"  
+SDBIZ\_D2 "Half E D BEAM DEP: IONIZ. on imp"  
+SDCXD\_D2 "Half E D BEAM DEP: CX W/D+ IONS"  
[VS. x"r/a" ctr AND TIME]

BDEPO\_D3 "1/3 Energy Beam Depo. (D)" (N/CM3/SEC)  
+SDBBI\_D3 "1/3 E D BEAM DEP: BEAM-BEAM II"  
+SDBBX\_D3 "1/3 E D BEAM DEP: BEAM-BEAM CX"  
+SDBII\_D3 "1/3 E D BEAM DEP: II on th.ions"  
+SDBIE\_D3 "1/3 E D BEAM DEP: II on (e-)"  
+SDBIZ\_D3 "1/3 E D BEAM DEP: IONIZ. on imp"  
+SDCXD\_D3 "1/3 E D BEAM DEP: CX W/D+ IONS"  
[VS. x"r/a" ctr AND TIME]

BDEPNB "the total/beam deposition" (N/CM3/SEC)  
+BDEP01\_TOT "bdep: Beam#01(D),total depositio"  
+BDEP02\_TOT "bdep: Beam#02(D),total depositio"  
+BDEP03\_TOT "bdep: Beam#03(D),total depositio"  
+BDEP04\_TOT "bdep: Beam#04(D),total depositio"  
[VS. x"r/a" ctr AND TIME]

BDEPS "BEAM DEPOSITION TOTAL SOURCE" (N/CM3/SEC)  
+BDEP\_D "D BEAM DEPOSITION (TOTAL)"  
+SDEP\_D "D BEAM ORBIT AV DEP (TOTAL)"  
[VS. x"r/a" ctr AND TIME]

BDEPS\_D "D BEAM DEP FULL/HALF/THIRD SCES" (N/CM3/SEC)  
+BDEPE\_D1 "FULL E D BEAM DEP (TOTAL)"  
+BDEPE\_D2 "HALF E D BEAM DEP (TOTAL)"  
+BDEPE\_D3 "1/3 E D BEAM DEP (TOTAL)"  
[VS. x"r/a" ctr AND TIME]

BEPLL2D "beam ion <Epll> at GC 2d grid" (eV)  
+BEPLL2\_D "D Beam ion <Epll>, GC"  
[VS. 2d MC grid (x,th) AND TIME]

BEPRP2D "beam ion <Eperp> at GC 2d grid" (eV)  
+BEPRP2\_D "D Beam ion <Eperp>, GC"  
[VS. 2d MC grid (x,th) AND TIME]

BETOR "BETA TOROIDALS" ()  
+BTBE "BEAM BETA TOROIDAL"  
+BTMIN "MINORITY BETA (TOROIDAL)"  
+BTE "ELECTRON BETA TOROIDAL"  
+BTI "ION BETA TOROIDAL"  
+BTPL "PLASMA BETA TOROIDAL"  
+BTTOT "TOTAL BETA TOROIDAL"  
+BTROT "ROTATION BETA TOROIDAL"  
[VS. x"r/a" ctr AND TIME]

BMHTG "FAST ION HEATING PROFILES" (WATTS/CM3)  
 +PBI "BEAM HEATING OF IONS"  
 +PBE "BEAM HEATING OF ELECTRONS"  
 +PBTH "FAST ION THERMALIZATION POWER"  
 [VS. x"r/a" ctr AND TIME]

BMINMAX "Bmin & Bmax on flux surfaces" (Tesla)  
 +BMAX "Bmax on flux surface"  
 +BMIN "Bmin on flux surface"  
 [VS. x"r/a" ctr AND TIME]

BN00 "BEAM 1.GEN NEUTRAL DENSITY" (N/CM\*\*3)  
 +BN0T1 "NO(BEAM):1.GEN 1/1\*EB"  
 +BN0T2 "NO(BEAM):1.GEN 1/2\*EB"  
 +BN0T3 "NO(BEAM):1.GEN 1/3\*EB"  
 [VS. x"r/a" ctr AND TIME]

BRCAP "FAST ION RECAPTURE" (N/CM3/SEC)  
 +SBCX0 "FAST ION CX: NEUTRALS BORN"  
 +SBXR\_II "FAST ION RECAPTURE on th.ions"  
 +SBXR\_IE "FAST ION RECAPTURE on electrons"  
 +SBXR\_IZ "FAST ION RECAPTURE on impurities"  
 +SBXRB "FAST ION CX: BEAM-BEAM RECAPTURE"  
 +SBXRD "BEAM CX: RECAPTURE BY CX W/D+"  
 +SBXRLITH "BEAM CX: RECAPTURE, CX W/LI++"  
 [VS. x"r/a" ctr AND TIME]

BRCAP\_D "BEAM RECAPTURE (D)" (N/CM3/SEC)  
 +SBCX0\_D "D BEAM CX: NEUTRALS BORN"  
 +SBXR\_I\_D "D B RECAP by ioniz: th.ions"  
 +SBXR\_E\_D "D B RECAP by ioniz: electrons"  
 +SBXR\_Z\_D "D B RECAP by ioniz: impurities"  
 +SBXRB\_D "D BEAM CX: RECAPTURE: BEAM-BEAM"  
 +SBXRD\_D "D BEAM CX: RECAPTURE BY CX W/D+"  
 [VS. x"r/a" ctr AND TIME]

BTQCOLS "FAST ION COLLISIONAL TORQUES" (Nt-M/CM3)  
 +TQBCO\_D "D BEAM COLLISIONAL TORQUE"  
 [VS. x"r/a" ctr AND TIME]

BTQJXBS "FAST ION TORQUES (JXB)" (Nt-M/CM3)  
 +TQJXB\_D "D BEAM JXB TORQUE"  
 [VS. x"r/a" ctr AND TIME]

BTQRPLS "FAST ION RPL TORQUES (JXB)" (Nt-M/CM3)  
 +TQRPL\_D "D BEAM RPL JXB TORQUE"  
 [VS. x"r/a" ctr AND TIME]

BUDENS "BEAM ION ENERGY DENSITIES" (JLES/CM3)  
 +UBPRP\_D "D BEAM PERP ENERGY DENSITY"

+UBPAR\_D "D BEAM PLL ENERGY DENSITY"  
[VS. x"r/a" ctr AND TIME]

BVTOR2D "beam ion <Vtor> at GC 2d grid" (cm/sec)  
+BVTOR2\_D "D Beam ion <Vtor>, GC"  
[VS. 2d MC grid (x,th) AND TIME]

CHIPH "MODEL VS EXP CHI(PHI)" (CM\*\*2/SEC)  
+CHPHI "MOMENTUM DIFFUSIVITY"  
+CHPHM "MOMENTUM CHI(PHI) MODEL"  
+CHPHDAT "MOMENTUM CHI(PHI) DATA"  
+CHPHMTB "MOMENTUM CHI(PHI) TURBULENT"  
+CHPHMNC "MOMENTUM CHI(PHI) NEOCLASSICAL"  
[VS. x"r/a" bdy AND TIME]

CHIPHA "ANALYSIS vs. PREDICTIVE MODEL Chi(Phi)" (CM\*\*2/SEC)  
+CHPHI "MOMENTUM DIFFUSIVITY"  
+CHPHM "MOMENTUM CHI(PHI) MODEL"  
[VS. x"r/a" bdy AND TIME]

CHIS "DIFFUSIVITIES" (CM\*\*2/SEC)  
+CONDE "ELECTRON HEAT DIFFUSIVITY"  
+CONDEF "1 FLUID "EFFECTIVE" CHI"  
+DIFFE "ELEC PTCL DIFFUSIVITY"  
+DIFWE "ELEC PTCL DIFFUSIVITY (WARE)"  
+CONDI "ION HEAT DIFFUSIVITY"  
+CHPHI "MOMENTUM DIFFUSIVITY"  
[VS. x"r/a" bdy AND TIME]

CHI\_CDBM "CDBM CHIS" (CM\*\*2/SEC)  
+XKICDBM "CDBM MODEL CHI(I)"  
+XKECDBM "CDBM MODEL CHI(E)"  
[VS. x"r/a" bdy AND TIME]

CHI\_ETG "HORTON ETG MODEL DIFFUSIVITY" (CM\*\*2/SEC)  
+XKEETG "HORTON ETG MODEL CHI(E)"  
[VS. x"r/a" bdy AND TIME]

CHI\_GKF "IFS-PPPL GYROFLUID CHIS" (CM\*\*2/SEC)  
+CONDE "ELECTRON HEAT DIFFUSIVITY"  
+CONDI "ION HEAT DIFFUSIVITY"  
+XKAPIGKF "IFS-PPPL GYROFLUID MODEL CHI(I)"  
+XKAPEGKF "IFS-PPPL GYROFLUID MODEL CHI(E)"  
[VS. x"r/a" bdy AND TIME]

CHI\_GLF "GLF23 CHIS" (CM\*\*2/SEC)  
+XKIGLF23 "GLF23 MODEL CHI(I)"  
+XKEGLF23 "GLF23 MODEL CHI(E)"  
+DIFFIGLF "GLF23 ION DIFFUSIVITY"  
+ETPHIGLF "GLF23 MOM (TOR) DIFFUSIVITY"  
+ETPARGLF "GLF23 MOM (PAR) DIFFUSIVITY"

+ETPERGLF "GLF23 MOM (PERP) DIFFUSIVITY"  
[VS. x"r/a" bdy AND TIME]

CHI\_KB "MMM95 KIN BALLOON DIFFUSIVITY" (CM\*\*2/SEC)  
+THIKB "MMM95 ION THER DIFF (KB)"  
+THDKB "MMM95 ION DIFF (KB)"  
+THEKB "MMM95 ELEC THER DIFF (KB)"  
+THZKB "MMM95 IMP DIFF (KB)"  
[VS. x"r/a" bdy AND TIME]

CHI\_MMM "MMM95 CHIS" (CM\*\*2/SEC)  
+XKIMMM95 "MMM95 MODEL CHI(I)"  
+XKEMMM95 "MMM95 MODEL CHI(E)"  
[VS. x"r/a" bdy AND TIME]

CHI\_RB "MMM95 RES BALLOON DIFFUSIVITY" (CM\*\*2/SEC)  
+THIRB "MMM95 ION THER DIFF (RB)"  
+THDRB "MMM95 ION DIFF (RB)"  
+THERB "MMM95 ELEC THER DIFF (RB)"  
+THZRB "MMM95 IMP DIFF (RB)"  
[VS. x"r/a" bdy AND TIME]

CHI\_WEI "MMM95 WEILAND DIFFUSIVITY" (CM\*\*2/SEC)  
+THIIG "MMM95 ION THER DIFF (WEILAND)"  
+THDIG "MMM95 ION DIFF (WEILAND)"  
+THEIG "MMM95 ELEC THER DIFF (WEILAND)"  
+THZIG "MMM95 IMP DIFF (WEILAND)"  
[VS. x"r/a" bdy AND TIME]

CONDS "DIFFUSIVITIES" (CM\*\*2/SEC)  
+CONDIWNC "NCLASS ion heat diffusivity"  
+CONDICWNC "NCLASS ion class heat diffus"  
+CONDE "ELECTRON HEAT DIFFUSIVITY"  
+FKCHH "CHI(I) NC CHANG-HINTON ORIGINAL: TRANSP"  
+CONDI "ION HEAT DIFFUSIVITY"  
+CHPHI "MOMENTUM DIFFUSIVITY"  
[VS. x"r/a" bdy AND TIME]

CONDWNCS "NCLASS DIFFUSIVITIES" (CM\*\*2/SEC)  
+CONDIWNC "NCLASS ion heat diffusivity"  
+CONDWNCE "NCLASS e- heat diffusivity"  
+CONDWNCX "NCLASS Imp heat diffusivity"  
+CONDWNCD "NCLASS D+ heat diffusivity"  
+CONDWNCLI "NCLASS Li heat diffusivity"  
[VS. x"r/a" bdy AND TIME]

CPBOLO "PRAD READ AND CALCULATED" (WATTS/CM3)  
+PRADC "NET RADIATED POWER (THEORY)"  
+PRAD\_BR "BREMSSTRAHLUNG RADIATION"  
+PRAD\_LI "LINE RADIATION"  
+PRAD\_CY "CYCLOTRON RADIATION"

[VS. x"r/a" ctr AND TIME]

CQIE "ION-ELECTRON COUPLING" (WATTS/CM3)  
+QIE "ION-ELECTRON COUPLING"  
+QIESLVTX "ION-ELECTRON COUPLING(SLVTX)"  
[VS. x"r/a" ctr AND TIME]

DENSO "THERMAL NEUTRAL DENSITIES" (N/CM\*\*3)  
+DNOVD "VOL NEUTRAL DENSITY G=D"  
+DNOWD "WALL NEUTRAL DENS G=D"  
+DNOVLITH "VOL NEUTRAL DENSITY G=LITH"  
+DNOWLITH "WALL NEUTRAL DENS G=LITH"  
[VS. x"r/a" ctr AND TIME]

DENSOAGF "all gas flow densities" (N/CM\*\*3)  
+NOGF\_D\_D "D n0 due to D gas flow"  
+NOGF\_L\_D "Li n0 due to D gas flow"  
+NOGF\_D\_L "D n0 due to Li gas flow"  
+NOGF\_L\_L "Li n0 due to Li gas flow"  
[VS. x"r/a" ctr AND TIME]

DENSOARC "all recyc densities" (N/CM\*\*3)  
+NORC\_D\_D "D n0 due to D recyc"  
+NORC\_L\_D "Li n0 due to D recyc"  
+NORC\_D\_L "D n0 due to Li recyc"  
+NORC\_L\_L "Li n0 due to Li recyc"  
[VS. x"r/a" ctr AND TIME]

DENSOHALO "Beam halo neutral densities" (N/CM\*\*3)  
+NOBH\_D "beam halo neutral density G=D"  
+NOBH\_LI "beam halo neutral density G=Li"  
[VS. x"r/a" ctr AND TIME]

DENSOSGF "summed gas flow neutral dens." (N/CM\*\*3)  
+NOSGF\_D "gas flow neutral dens G=D"  
+NOSGF\_LI "gas flow neutral dens G=Li"  
[VS. x"r/a" ctr AND TIME]

DENSOSRC "summed recycling neutral dens." (N/CM\*\*3)  
+NOSRC\_D "recycling neutral dens G=D"  
+NOSRC\_LI "recycling neutral dens G=Li"  
[VS. x"r/a" ctr AND TIME]

DFNC "Nclass particle diffusivities" (CM\*\*2/SEC)  
+DFENC "Nclass e- particle diffusivity"  
+DFINC\_D "Nclass D+ particle diffusivity"  
+DFINC\_LI "Nclass Li particle diffusivity"  
[VS. x"r/a" bdy AND TIME]

DIFBX "Fast ion anomalous diffusivity" (CM\*\*2/SEC)  
+BDIFBX\_D "D anom beam ion diffusivity"

[VS. x"r/a" bdy AND TIME]

DNSB0 "BEAM NEUTRAL DENSITIES" (N/CM\*\*3)  
+NOBCXD0 "CX FAST NEUTRAL DENSITY (D0)"  
+NOBD0 "1.GEN FAST NEUTRAL DENSITY (D0)"  
[VS. x"r/a" ctr AND TIME]

DRBM\_FR "DRBM FREQUENCY (MODE 1, 2, 3)" (RAD/SEC)  
+OMGDRBM1 "DRBM FREQUENCY MODE=1"  
+OMGDRBM2 "DRBM FREQUENCY MODE=2"  
+OMGDRBM3 "DRBM FREQUENCY MODE=3"  
[VS. x"r/a" bdy AND TIME]

DRBM\_GR "DRBM GROWTH RATES (MODE 1, 2, 3)" (1/SEC)  
+GAMDRBM1 "DRBM GRTH RATE MODE=1"  
+GAMDRBM2 "DRBM GRTH RATE MODE=2"  
+GAMDRBM3 "DRBM GRTH RATE MODE=3"  
[VS. x"r/a" bdy AND TIME]

E0BAL "PLASMA FRAME NEUTRAL POWER BAL" (WATTS/CM3)  
+PCX "CHARGE EXCHANGE LOSS"  
-PNI "NEUTRAL IONIZATION SOURCE"  
-BALE0 "NEUTRAL POWER BALANCE"  
+SOVLE "TOTAL NEUTRAL VOL SCE"  
+FLOEI "DIV(NEUTRAL E-INFLUX)"  
-FLOEX "DIV(NEUTRAL E-OUTFLUX)"  
[VS. x"r/a" ctr AND TIME]

E0BAL\_AGF "gas flow neutral power bal all" (WATTS/CM3)  
+PCXGF\_D "CX POWER to D gas NEUTRALS"  
-PIGF\_D "D gas flow ionization POWER"  
-PFLX0GF\_D "D DIV(gas flow POWER FLUX)"  
-BALE0\_GF\_D "D gas flow POWER BALANCE"  
+PCXGF\_L "CX POWER to Li gas NEUTRALS"  
-PIGF\_L "Li gas flow ionization POWER"  
-PFLX0GF\_L "Li DIV(gas flow POWER FLUX)"  
-BALE0\_GF\_L "Li gas flow POWER BALANCE"  
[VS. x"r/a" ctr AND TIME]

E0BAL\_ARC "recyc neutral power bal all" (WATTS/CM3)  
+PCXRC\_D "CX POWER to D recyc NEUTRALS"  
-PIRC\_D "D recyc ionization POWER"  
-PFLX0RC\_D "D DIV(recyc POWER FLUX)"  
-BALE0\_RC\_D "D recyc POWER BALANCE"  
+PCXRC\_L "CX POWER to Li recyc NEUTRALS"  
-PIRC\_L "Li recyc ionization POWER"  
-PFLX0RC\_L "Li DIV(recyc POWER FLUX)"  
-BALE0\_RC\_L "Li recyc POWER BALANCE"  
[VS. x"r/a" ctr AND TIME]

E0BAL\_HALO "Beam Halo neutral power balance" (WATTS/CM3)



+POHALO "HALO NEUTRAL SCE POWER"  
 +PCXHALO "CX POWER TO HALO NEUTRALS"  
 -PIHALO "HALO NEUTRAL RECAPTURE POWER"  
 -PFLX0HALO "DIV(HALO NEUTRAL POWER FLUX)"  
 -BALE0\_HALO "HALO NEUTRAL POWER BALANCE"  
 [VS. x"r/a" ctr AND TIME]

EOBAL\_SGF "gas flow neutral power bal sum" (WATTS/CM3)  
 +PCXSGF "CX POWER to gas flow NEUTRALS"  
 -PISGF "gas fl neutral ionization POWER"  
 -PFLX0SGF "DIV(gas flow NEUTRAL POWER FLUX)"  
 -BALE0\_SGF "gas flow NEUTRAL POWER BALANCE"  
 [VS. x"r/a" ctr AND TIME]

EOBAL\_SRC "recyc neutral power bal sum" (WATTS/CM3)  
 +PCXSRC "CX POWER to recycling NEUTRALS"  
 -PISRC "recyc neutral ionization POWER"  
 -PFLX0SRC "DIV(recycling NEUTRAL POWER FLUX)"  
 -BALE0\_SRC "recycling NEUTRAL POWER BALANCE"  
 [VS. x"r/a" ctr AND TIME]

EBAPLMP "FAST ION <EplI> , GC on midplane" (eV)  
 +EBAPLAV\_MP "FAST ION <EplI> , GC on midplane"  
 [VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

EBAPPMP "FAST ION <Eperp>, GC on midplane" (eV)  
 +EBAPPV\_MP "FAST ION <Eperp>, GC on midplane"  
 [VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

ECON "ENERGY CONFINEMENT" (SECONDS)  
 +TEE "ELECTRON ENERGY CONFINEMENT"  
 +TEI "ION ENERGY CONFINEMENT"  
 +TAUE "PLASMA ENERGY CONFINEMENT"  
 [VS. x"r/a" bdy AND TIME]

ECONST "ENERGY CONFINEMENT ("\*" VSNS)" (SECONDS)  
 +TEE "ELECTRON ENERGY CONFINEMENT"  
 +TEEST "ELECTRON ENERGY CONFINEMENT (\*)"  
 +TEI "ION ENERGY CONFINEMENT"  
 +TEIST "ION ENERGY CONFINEMENT (\*)"  
 +TAUES "PLASMA ENERGY CONFINEMENT (\*)"  
 +TAUE "PLASMA ENERGY CONFINEMENT"  
 [VS. x"r/a" bdy AND TIME]

EEBAL "ELECTRON POWER BALANCE" (WATTS/CM3)  
 -PION "NEUTRAL IONIZATION WORK"  
 -PRAD "NET RADIATED POWER USED"  
 -PCNVE "ELECTRON CONVECTION LOSS"  
 -GAINE "ELECTRON GAIN"  
 -PCNDE "ELECTRON CONDUCTION LOSS"  
 -QIE "ION-ELECTRON COUPLING"

+EHEAT "TOTAL ELECTRON HEATING"  
 +TEBAL "ELECTRON POWER BALANCE"  
 [VS. x"r/a" ctr AND TIME]

EEHEAT "ELECTRON HEATING" (WATTS/CM3)  
 +POH "OHMIC HEATING POWER"  
 +PBE "BEAM HEATING OF ELECTRONS"  
 +PELH "LH ELECTRON HEATING"  
 +PEECH "ECRH ELECTRON HEATING"  
 +PEICH "ICRF ELECTRON HEATING"  
 +PCMPE "ELECTRON COMPRESSION"  
 +EHEAT "TOTAL ELECTRON HEATING"  
 +BOGUSE "BOGUS HEATING TO KEEP TE > 0"  
 [VS. x"r/a" ctr AND TIME]

EEHEATANT "ELECTRON HEATING (EACH GYROTRON)" (WATTS/CM3)  
 +PEECH "ECRH ELECTRON HEATING"  
 +PEECH1 "ECRH ELEC HEATING (GYROTRON 1)"  
 [VS. x"r/a" ctr AND TIME]

EETR "ELECTRON ENERGY TRANSPORT" (WATTS/CM3)  
 +EETR\_MOD "Div(elec energy flux) (model)"  
 +EETR\_OBS "Div(elec energy flux) (observed)"  
 [VS. x"r/a" ctr AND TIME]

EPBAL "ELECTRON PTCL BALANCE" (N/CM3/SEC)  
 +SBE "ELECTRON SCE FAST ION DEPOSITION"  
 -DNEDT "D/DT(ELECTRON DENSITY)"  
 -DIVFE "DIV(ELECTRON FLUX)"  
 +SCEW "ELECTRON SCE (WALL NEUTRALS)"  
 +SCEV "ELECTRON SCE (VOL. NEUTRALS)"  
 +SCEZ "ELECTRON SCE (Impurity Ioniz.)"  
 [VS. x"r/a" ctr AND TIME]

EPOT "ELECTROSTATIC POTENTIAL" (VOLTS)  
 +EPOTNC "ER POTENTIAL: NC ANALYSIS"  
 +VRPOT "RADIAL ELECTRICAL POTENTIAL"  
 +EPOTRO "RADIAL POTENTIAL due to ROTATION"  
 [VS. x"r/a" bdy AND TIME]

EPTR "ELECTRON PTCL TRANSPORT" (N/CM3/SEC)  
 +EPTR\_MOD "Div(electron flux) (model)"  
 +EPTR\_OBS "Div(electron flux) (observed)"  
 [VS. x"r/a" ctr AND TIME]

ERAD "NC Diagnostic Radial E Field" (V/CM)  
 +ERTOT "NC radial E Field"  
 +ERPRESS "NC radial E field, Pressure term"  
 +ERVPOL "NC radial E field, Vpol term"  
 +ERVTOR "NC radial E field, Vtor term"  
 [VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

ETAS "RESISTIVITIES" (OHM\*CM)  
 +ETA\_USE "RESISTIVITY USED OR INFERRED"  
 +ETA\_NC "NC RESISTIVITY (old fit)"  
 +ETA\_SP "SPITZER RESISTIVITY"  
 +ETA\_SPS "SPITZER RESISTIVITY (Sauter)"  
 +ETA\_WNC "NCLASS Resistivity"  
 +ETA\_TSC "TSC Neoclassical Resistivity"  
 +ETA\_SNC "Sauter Neoclassical Resistivity"  
 [VS. x"r/a" ctr AND TIME]

ETATH "ETA(THERMAL)S" ()  
 +ETAE "D(LN(TE))/D(LN(NE))"  
 +ETAI "D(LN(TI))/D(LN("NI"))"  
 +ETAIE "D(LN(TI))/D(LN(NE))"  
 [VS. x"r/a" bdy AND TIME]

EXFS\_D "approx excit. enhancmnt of D dep" ()  
 +EXCS\_D\_1 "FULL E D: DEPO EXCIT. FACTOR"  
 +EXCS\_D\_2 "HALF E D: DEPO EXCIT. FACTOR"  
 +EXCS\_D\_3 "1/3 E D: DEPO EXCIT. FACTOR"  
 +EXCS\_D\_X "CX D: RECAP EXCIT. FACTOR"  
 [VS. x"r/a" ctr AND TIME]

FB "B FIELD FACTORS" ()  
 +FBX "|B|/|BT(EXTERNAL)|"  
 +FBTX "|BT|/|BT(EXTERNAL)|"  
 [VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

FBP "|BP|/|BT| COMPARISON" ()  
 +FBPBT "|BP|/|BT| COMPUTED"  
 [VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

FBTH "FAST ION DENSITIES" (N/CM\*\*3)  
 +FBTH1 "FI DIST 0.< R/A <.2"  
 +FBTH2 "FI DIST .2< R/A <.4"  
 +FBTH3 "FI DIST .4< R/A <.6"  
 +FBTH4 "FI DIST .6< R/A <.8"  
 +FBTH5 "FI DIST .8< R/A <1."  
 [VS. POL. ANGLE AND TIME]

FBTRAP\_D "D beam ion banana fractions" ()  
 +BTRAP0\_D "D beam full E dep banana frac."  
 +BTRAP\_D "D beam ions banana fraction"  
 [VS. x"r/a" ctr AND TIME]

FPAX "FRAC. BEAM SCATTERING>IMPURITIES" ()  
 +FPAX\_D "D BEAM SCATTERING >IMPURITIES"  
 [VS. x"r/a" ctr AND TIME]

FPBX "FRACTIONAL BEAM DRAG->IMPURITIES" ()

+FPBX\_D "D BEAM DRAG >IMPURITIES"  
 [VS. x"r/a" ctr AND TIME]

GCHK "G PARA/DIAMAGNETIC CHECK" ()  
 +GFUN "G: PARA/DIAMAGNETISM"  
 +GFUNC "G: GRAD-SHAF EQUILIBRIUM CHECK"  
 +GDATA "G profile (Ufile data)"  
 [VS. x"r/a" bdy AND TIME]

GDBAL "PTCL BALANCE ION (D+)" (N/CM3/SEC)  
 -DNDDT "D/DT(ION DENS D+)"  
 -DIVFD "DIV(ION FLUX D+)"  
 +SVD "TOT ION SCE BEAM+HALO D+"  
 +SWD "TOT ION SCE WALL D+"  
 +SBAL\_D "D PTCL BALANCE"  
 [VS. x"r/a" ctr AND TIME]

GEOPARM "surface geometry parameters" ()  
 +ELONG "Flux surface elongation"  
 +TRIANG "Flux surface triangularity"  
 +TRIANGU "Flux surf. upper triangularity"  
 +TRIANGL "Flux surf. lower triangularity"  
 +SQUARE\_UO "Flux surf upper outer squareness"  
 +SQUARE\_LO "Flux surf lower outer squareness"  
 [VS. x"r/a" bdy AND TIME]

GFL\_NC "NC Ptcl Transport" (N/CM3/SEC)  
 +GFLNC\_E "div(NC ptcl flux) electrons"  
 +GFLNC\_X "div(NC ptcl flux) impurity"  
 +GFLNC\_I "div(NC ptcl flux) thermal ions"  
 +GFLNC\_D "div(NC ptcl flux) thermal D+"  
 +GFLNC\_L "div(NC ptcl flux) thermal Li"  
 [VS. x"r/a" ctr AND TIME]

GLITHBAL "PTCL BALANCE ION (LITH+++)" (N/CM3/SEC)  
 -DNLITHDT "D/DT(ION DENS LI+++)"  
 -DIVLITH "DIV(ION FLUX LI+++)"  
 +SVLITH "TOT ION SCE BEAM+HALO LI+++"  
 +SWLITH "TOT ION SCE WALL LI+++"  
 +SBAL\_LI "Li PTCL BALANCE"  
 [VS. x"r/a" ctr AND TIME]

GRBCOM "GRB data map check" (Tesla\*cm)  
 +GRB\_USE "GRB data as used"  
 +GRB\_IN "GRB data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

ICHRATP "ICRF adjusted P(fpp)/P(ich)" ()  
 +BRFRAT\_D "RF -> D Beam: Pwave-dep/Pfpp"  
 +MRFRAT\_H "RF->H Minority: Pwave/Pfpp"  
 [VS. x"r/a" ctr AND TIME]

IEBAL "ION POWER BALANCE" (WATTS/CM3)  
 +PBTH "FAST ION THERMALIZATION POWER"  
 -PTMIN "MINORITY TRANSPORT"  
 -GAINI "ION GAIN"  
 -PCOND "ION CONDUCTION LOSS"  
 +QIE "ION-ELECTRON COUPLING"  
 -PONET "NET CHARGE EXCHANGE LOSS"  
 -PCONV "ION CONVECTION LOSS"  
 +QROT "E(ROT)=> ION HEAT: CONV+FRICTION"  
 +IHEAT "TOTAL ION HEATING"  
 +TIBAL "ION POWER BALANCE"  
 [VS. x"r/a" ctr AND TIME]

IEBALR "IEBAL: ROTATION TERMS" (WATTS/CM3)  
 +PBTHA "BEAM WORK -> ROTATION (TH-ASSYM)"  
 +QROTF "E(ROT)=>ION HEATING: FRICTION"  
 +QROTC "E(ROT)=>ION HEATING: CONVECTIVE"  
 +QROT "E(ROT)=> ION HEAT: CONV+FRICTION"  
 [VS. x"r/a" ctr AND TIME]

IEHEAT "ION HEATING" (WATTS/CM3)  
 +PBI "BEAM HEATING OF IONS"  
 +PILH "LH ION HEATING"  
 +PIICH "ICRF ION HEATING"  
 +PCMPI "ION COMPRESSION"  
 +IHEAT "TOTAL ION HEATING"  
 +BOGUSI "BOGUS HEATING TO KEEP TI > 0"  
 [VS. x"r/a" ctr AND TIME]

IETR "ION ENERGY TRANSPORT" (WATTS/CM3)  
 +IETR\_MOD "Div(ion energy flux) (model)"  
 +IETR\_OBS "Div(ion energy flux) (observed)"  
 [VS. x"r/a" ctr AND TIME]

IMBAL "IMPURITY PTCL BALANCE" (N/CM3/SEC)  
 -DNIMP "D/DT(IMPURITY DENSITY)"  
 -DFIMP "DIV(IMPURITY FLUX)"  
 +SCIMP "IMPURITY SOURCE"  
 -DZIMP "D/DT(IMPURITY SPECIE)"  
 [VS. x"r/a" ctr AND TIME]

IPBAL "ION PTCL BALANCE" (N/CM3/SEC)  
 -DNIDT "D/DT(TOTAL ION DENSITY)"  
 -DIVFI "DIV(TOTAL ION FLUX)"  
 +SBTOT "TOTAL ION SCE(BEAM + HALO)"  
 +SWTOT "TOTAL ION SCE(WALL NEUTRALS)"  
 +SBAL\_ION "Total Ion Particle Balance"  
 [VS. x"r/a" ctr AND TIME]

IPTR "ION PTCL TRANSPORT" (N/CM3/SEC)  
 +IPTR\_MOD "Div(total ion flux) (model)"

+IPTR\_OBS "Div(total ion flux) (observed)"  
[VS. x"r/a" ctr AND TIME]

IRB "fast ion radial currents" (AMPS)  
+CURBRORB "FAST ION RADIAL CURRENT (ORBIT)"  
+CURBRABD "FAST ION RAD.CUR (ANOM DIFFUS)"  
+CURBRFSH "FAST ION RAD.CUR (FISHBONES)"  
+CURBRRIP "FAST ION RAD.CUR (RIPPLE LOSS)"  
[VS. x"r/a" bdy AND TIME]

IRBCMP "fast ion rad. cur (2 methods)" (AMPS)  
+CURBRORB "FAST ION RADIAL CURRENT (ORBIT)"  
[VS. x"r/a" bdy AND TIME]

IRB\_D "beam ion radial currents (D)" (AMPS)  
+IBRORB\_D "D BEAM ION RADIAL CUR (ORBIT)"  
[VS. x"r/a" bdy AND TIME]

ITEMP "ION TEMPERATURES" (EV)  
+TIPRO "MEASURED TI PROFILE"  
+TI "ION TEMPERATURE"  
+TX "IMPURITY TEMPERATURE"  
+TMJ "H/HE MAJORITY TEMPERATURE"  
+TIAV "Tlavg=(nx\*TX+nmj\*TMJ)/(nx+nmj)"  
+TIMTX "TI-TX (UNSMOOTHED)"  
+TIMTXSM "TI-TX (SMOOTHED)"  
[VS. x"r/a" ctr AND TIME]

ITG "ION TEMPERATURE GRADIENT DATA" ()  
+RLTCRGKF "R/LTi: critical ITG main br."  
+RLTCRGKZ "R/LTi: critical ITG Carbon br."  
+RLTI "R/LTi: actual ITG:R\*Grad(Ti)/Ti"  
[VS. x"r/a" bdy AND TIME]

JBFACS "BEAM CURRENT SHIELDING FACTOR" ()  
+JBFAC "Species avg Jb shielding"  
+JBFACZ1 "Z=1 Jb shielding"  
[VS. x"r/a" ctr AND TIME]

JICHANT "ICRF CUR DRIVE by ANTENNA" (AMPS/CM2)  
+CICHD\_ALL "ICH DIRECT CUR DRIVE"  
+CICHM\_ALL "ICH MINORITY CUR DRIVE"  
+JIC\_F1 "RF J-direct drive, Freq.1"  
+JIC\_F2 "RF J-direct drive, Freq.2"  
[VS. x"r/a" ctr AND TIME]

JICNF1 "Direct drive vs. Nphi, Freq.#1" (AMPS/CM2)  
+JICF01N01 "ICRF CUR, Nphi= 33, FREQ#1"  
[VS. x"r/a" ctr AND TIME]

JICNF2 "Direct drive vs. Nphi, Freq.#2" (AMPS/CM2)

+JICF02N01 "ICRF CUR, Nphi= -7, FREQ#2"  
 +JICF02N02 "ICRF CUR, Nphi= 14, FREQ#2"  
 [VS. x"r/a" ctr AND TIME]

JMHD "FLUX SURFACE AVGS INVOLVING J" (AMPS/CM)  
 +JGPHR2I "<J.grad(phi)>/<1/R\*\*2>"  
 +PLJBBGPI "<J.B>/<B.grad(phi)>"  
 [VS. x"r/a" ctr AND TIME]

KAPA "THERMAL DIFFUSIVITY 1" (CM\*\*2/SEC)  
 +CONDE "ELECTRON HEAT DIFFUSIVITY"  
 +CONDEF "1 FLUID "EFFECTIVE" CHI"  
 +KETOT "CHI(E) "COUNTING" CONVECTION"  
 +CONDI "ION HEAT DIFFUSIVITY"  
 +XKINC "NEOCLASSICAL CHI(I)"  
 [VS. x"r/a" bdy AND TIME]

KAPA6 "THERMAL DIFFUSIVITY 6" (CM\*\*2/SEC)  
 +CONDE "ELECTRON HEAT DIFFUSIVITY"  
 +KETOT "CHI(E) "COUNTING" CONVECTION"  
 +XETEO "CHI:E(ETA(E)) GUZDAR"  
 +XETAE "CHI:E(ETA(E)) ACTIVE"  
 [VS. x"r/a" bdy AND TIME]

KAPAN "THERMAL DIFFUSIVITY ANALYSIS" (CM\*\*2/SEC)  
 +CONDE "ELECTRON HEAT DIFFUSIVITY"  
 +CONDEPR "chi(e) predictive model"  
 +CONDI "ION HEAT DIFFUSIVITY"  
 +CONDIPR "chi(i) predictive model"  
 [VS. x"r/a" bdy AND TIME]

MFLUX "MAGNETIC FLUXES" (WEBERS)  
 +PLFLX2PI "TOTAL POLOIDAL FLUX"  
 +TRFLX "TOROIDAL FLUX"  
 [VS. x"r/a" bdy AND TIME]

MGBAL "MAGDIF ENERGY BALANCE" (WATTS/CM3)  
 -POH "OHMIC HEATING POWER"  
 +UDEXB "E CROSS B POWER"  
 -UBPDT "D/DT(POLOIDAL FIELD ENERGY)"  
 +UBCMP "B(POL) COMPRESSION"  
 +UMGBA "MAGDIF ENERGY BALANCE"  
 -POHB "POWER: OH CIRCUIT TO FAST IONS"  
 [VS. x"r/a" ctr AND TIME]

MMM\_FR "MMM95 FREQUENCY (MODE 1 & 2)" (RAD/SEC)  
 +OMEMMM1 "MMM95 FREQUENCY MODE=1"  
 +OMEMMM2 "MMM95 FREQUENCY MODE=2"  
 [VS. x"r/a" bdy AND TIME]

MMM\_GR "MMM95 GROWTH RATES (MODE 1 & 2)" (1/SEC)

+GAMMMM1 "MMM95 GRTH RATE MODE=1"  
 +GAMMMM2 "MMM95 GRTH RATE MODE=2"  
 [VS. x"r/a" bdy AND TIME]

MMM\_V "MMM95 CONVECTIVE VELOCITIES" (CM/SEC)  
 +VCONIMMM "MMM95 MODEL ION CONV. VEL."  
 +VCONEMMM "MMM95 MODEL ELEC. CONV. VEL."  
 +VCONZMMM "MMM95 MODEL IMP. CONV. VEL."  
 [VS. x"r/a" bdy AND TIME]

MOBAL "ANGULAR MOMENTUM BALANCE" (Nt-M/CM3)  
 -MODOT "MOMENTUM GAIN"  
 -M0NET "NET CX MOMENTUM LOSS"  
 -MVISC "VISCOUS TRANSPORT"  
 -MCONV "CONVECTIVE TRANSPORT"  
 +TQIN "TOTAL INPUT TORQUE"  
 +PHBAL "ANGULAR MOMENTUM BALANCE"  
 [VS. x"r/a" ctr AND TIME]

MOBALI "INPUT TORQUES" (Nt-M/CM3)  
 +TQBCO "BEAM COLLISIONAL TORQUE"  
 +TQRPL "BEAM RPL JXB TORQUE"  
 +TQBTH "BEAM THERMALIZATION TORQUE"  
 +TQJXB "BEAM JXB TORQUE"  
 +TQIN "TOTAL INPUT TORQUE"  
 [VS. x"r/a" ctr AND TIME]

MOI "ANGULAR INERTIA DENSITY" (NtMS2/CM3)  
 +AMOI "Total Therm Ang Inertia Dens"  
 +MOIG\_D "D Therm Ang Inertia Dens"  
 +MOIG\_LI "Li Therm Ang Inertia Dens"  
 +MOIG\_X "Impurity Therm Ang Inertia Dens"  
 [VS. x"r/a" ctr AND TIME]

MOI\_IMP "IMPURITY ANGULAR INERTIA DENSITY" (NtMS2/CM3)  
 +MOIG\_X "Impurity Therm Ang Inertia Dens"  
 +MOIS\_TOK "TOK Therm Ang Inertia Dens"  
 [VS. x"r/a" ctr AND TIME]

MPMHD "PLASMA PRESSURE to MHD SOLVER" (PASCALS)  
 +PMHD\_IN "PRESSURE INPUT to MHD SOLVER"  
 +PMHDT\_IN "THERMAL PRESSURE to MHD SOLVER"  
 +PMHDR\_IN "ROTATION PRESSURE to MHD SOLVER"  
 +PMHDF\_IN "NONTHERMAL PRESS to MHD SOLVER"  
 [VS. x"r/a" ctr AND TIME]

NOBAL "NEUTRAL PTCL BALANCE (E-)" (N/CM3/SEC)  
 -BALNO "BALANCE CHECK"  
 +SOVOL "TOTAL NEUTRAL VOL E-SCE"  
 +FLXOI "DIV(NEUTRAL INFLUX)"  
 -FLXOX "DIV(NEUTRAL OUTFLOW)"



-SFETO "ELECTRONS -> FAST NEUTRALS"  
 -SCEE "ELECTRON SOURCE (TH.NEUTRALS)"  
 [VS. x"r/a" ctr AND TIME]

NOBAL\_AGF "gas flow neutral ptcl bal all" (N/CM3/SEC)  
 -SEGF\_D "D gas flow electron source"  
 -SFCXGF\_D "D gas (e-)=> FAST ION CX"  
 -FLX0\_GF\_D "D DIV(gas (e-) NEUTRAL FLUX)"  
 -BALNO\_GF\_D "D gas (e-) NEUTRAL PTCL BAL."  
 -SEGF\_L "Li gas flow electron source"  
 -SFCXGF\_L "Li gas (e-)=> FAST ION CX"  
 -FLX0\_GF\_L "Li DIV(gas (e-) NEUTRAL FLUX)"  
 -BALNO\_GF\_L "Li gas (e-) NEUTRAL PTCL BAL."  
 [VS. x"r/a" ctr AND TIME]

NOBAL\_ARC "recyc neutral ptcl bal all" (N/CM3/SEC)  
 -SERC\_D "D recyc electron source"  
 -SFCXRC\_D "D recyc (e-)=> FAST ION CX"  
 -FLX0\_RC\_D "D DIV(recyc (e-) NEUTRAL FLUX)"  
 -BALNO\_RC\_D "D recyc (e-) NEUTRAL PTCL BAL."  
 -SERC\_L "Li recyc electron source"  
 -SFCXRC\_L "Li recyc (e-)=> FAST ION CX"  
 -FLX0\_RC\_L "Li DIV(recyc (e-) NEUTRAL FLUX)"  
 -BALNO\_RC\_L "Li recyc (e-) NEUTRAL PTCL BAL."  
 [VS. x"r/a" ctr AND TIME]

NOBAL\_HALO "Beam Halo neutral ptcl balance" (N/CM3/SEC)  
 +SOHALO "TOTAL (e-) in HALO NEUTRAL SCE"  
 -SEHALO "(e-) RECAP in HALO ION SCEs"  
 -SFCXHALO "HALO NEUTRALS (e-)=> FAST ION CX"  
 -FLX0\_HALO "DIV(HALO (e-) NEUTRAL FLUX)"  
 -BALNO\_HALO "HALO (e-) NEUTRAL PTCL BALANCE"  
 [VS. x"r/a" ctr AND TIME]

NOBAL\_SGF "gas flow neutral ptcl bal sum" (N/CM3/SEC)  
 -SESGF "gas flow electron source"  
 -SFCXSGF "gas flow (e-)=> FAST ION CX"  
 -FLX0\_SGF "DIV(gas flow (e-) NEUTRAL FLUX)"  
 -BALNO\_SGF "gas flow (e-) NEUTRAL PTCL BAL."  
 [VS. x"r/a" ctr AND TIME]

NOBAL\_SRC "recyc neutral ptcl bal sum" (N/CM3/SEC)  
 -SESRC "recycling electron source"  
 -SFCXSRC "recycling (e-)=> FAST ION CX"  
 -FLX0\_SRC "DIV(recycling (e-) NEUTRAL FLUX)"  
 -BALNO\_SRC "recycling (e-) NEUTRAL PTCL BAL."  
 [VS. x"r/a" ctr AND TIME]

NB01 "Beam#01(D) densities" (N/CM\*\*3)  
 +NB01\_TOT "nb: Beam#01(D), total density"  
 +NB01\_E1 "nb: Beam#01(D), E-frac no.1"

+NB01\_E2 "nb: Beam#01(D), E-frac no.2"  
 +NB01\_E3 "nb: Beam#01(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

NB02 "Beam#02(D) densities" (N/CM\*\*3)  
 +NB02\_TOT "nb: Beam#02(D), total density"  
 +NB02\_E1 "nb: Beam#02(D), E-frac no.1"  
 +NB02\_E2 "nb: Beam#02(D), E-frac no.2"  
 +NB02\_E3 "nb: Beam#02(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

NB03 "Beam#03(D) densities" (N/CM\*\*3)  
 +NB03\_TOT "nb: Beam#03(D), total density"  
 +NB03\_E1 "nb: Beam#03(D), E-frac no.1"  
 +NB03\_E2 "nb: Beam#03(D), E-frac no.2"  
 +NB03\_E3 "nb: Beam#03(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

NB04 "Beam#04(D) densities" (N/CM\*\*3)  
 +NB04\_TOT "nb: Beam#04(D), total density"  
 +NB04\_E1 "nb: Beam#04(D), E-frac no.1"  
 +NB04\_E2 "nb: Beam#04(D), E-frac no.2"  
 +NB04\_E3 "nb: Beam#04(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

NB\_F\_D "D Beam ion density by E.fraction" (N/CM\*\*3)  
 +NB\_F1\_D "density: full energy D beam"  
 +NB\_F2\_D "density: half energy D beam"  
 +NB\_F3\_D "density: 1/3 energy D beam"  
 [VS. x"r/a" ctr AND TIME]

NCFKI "FITS TO NEOCLASSICAL KAPA(I)" (CM\*\*2/SEC)  
 +CONDIWNC "NCLASS ion heat diffusivity"  
 +CONDICWNC "NCLASS ion class heat diffus"  
 +FKJUL "CHI(I) NC RUTHERFORD-JULICH: TRANSP"  
 +FKHZH "CHI(I) NC HAZELTINE-HINTON: TRANSP"  
 +FKBOL "CHI(I) NC BOLTON: TRANSP"  
 +FKCHH "CHI(I) NC CHANG-HINTON ORIGINAL: TRANSP"  
 +FKCH2 "CHI(I) NC CHANG-HINTON VSN 2: TRANSP"  
 +FKCHZ "CHI(I) NC CHANG-HINTON Z-CORR: TRANSP"  
 +XETIO "CHI(ETA(I)) RAW"  
 +CONDI "ION HEAT DIFFUSIVITY"  
 [VS. x"r/a" bdy AND TIME]

NCFKI\_B "NC KAPA(I) BOLTON FITS" (CM\*\*2/SEC)  
 +FKBOL "CHI(I) NC BOLTON: TRANSP"  
 +FKBOL\_K1 "CHI(I) NC BOLTON: KAPISN\_1"  
 +FKBOL\_K0 "CHI(I) NC BOLTON: KAPISN\_0"  
 [VS. x"r/a" bdy AND TIME]

NCFKI\_CH "NC KAPA(I) Chang-Hinton FITS" (CM\*\*2/SEC)

+FKCHH "CHI(I) NC CHANG-HINTON ORIGINAL: TRANSP"  
+FKCHH\_K1 "CHI(I) NC CHANG-HINTON ORIGINAL: KAPISN\_1"  
+FKCHH\_K0 "CHI(I) NC CHANG-HINTON ORIGINAL: KAPISN\_0"  
[VS. x"r/a" bdy AND TIME]

NCFKI\_CH2 "NC KAPA(I) Chang-Hinton FITS v2" (CM\*\*2/SEC)  
+FKCH2 "CHI(I) NC CHANG-HINTON VSN 2: TRANSP"  
+FKCH2\_K1 "CHI(I) NC CHANG-HINTON VSN 2: KAPISN\_1"  
+FKCH2\_K0 "CHI(I) NC CHANG-HINTON VSN 2: KAPISN\_0"  
[VS. x"r/a" bdy AND TIME]

NCFKI\_CHZ "NC KAPA(I) Chang-Hinton FITS Z-corr" (CM\*\*2/SEC)  
+FKCHZ "CHI(I) NC CHANG-HINTON Z-CORR: TRANSP"  
+FKCHZ\_K1 "CHI(I) NC CHANG-HINTON Z-CORR: KAPISN\_1"  
+FKCHZ\_K0 "CHI(I) NC CHANG-HINTON Z-CORR: KAPISN\_0"  
[VS. x"r/a" bdy AND TIME]

NCFKI\_HH "NC KAPA(I) Hazeltine-Hinton FITS" (CM\*\*2/SEC)  
+FKHZH "CHI(I) NC HAZELTINE-HINTON: TRANSP"  
+FKHZH\_K1 "CHI(I) NC HAZELTINE-HINTON: KAPISN\_1"  
+FKHZH\_K0 "CHI(I) NC HAZELTINE-HINTON: KAPISN\_0"  
[VS. x"r/a" bdy AND TIME]

NCFKI\_KAP "NC KAPA(I) KAPISN FITS (istring=1)" (CM\*\*2/SEC)  
+FKJUL\_K1 "CHI(I) NC RUTHERFORD-JULICH: KAPISN\_1"  
+FKHZH\_K1 "CHI(I) NC HAZELTINE-HINTON: KAPISN\_1"  
+FKBOL\_K1 "CHI(I) NC BOLTON: KAPISN\_1"  
+FKCHH\_K1 "CHI(I) NC CHANG-HINTON ORIGINAL: KAPISN\_1"  
+FKCH2\_K1 "CHI(I) NC CHANG-HINTON VSN 2: KAPISN\_1"  
+FKCHZ\_K1 "CHI(I) NC CHANG-HINTON Z-CORR: KAPISN\_1"  
[VS. x"r/a" bdy AND TIME]

NCFKI\_RJ "NC KAPA(I) RUTHERFORD-JULICH FITS" (CM\*\*2/SEC)  
+FKJUL "CHI(I) NC RUTHERFORD-JULICH: TRANSP"  
+FKJUL\_K1 "CHI(I) NC RUTHERFORD-JULICH: KAPISN\_1"  
+FKJUL\_K0 "CHI(I) NC RUTHERFORD-JULICH: KAPISN\_0"  
[VS. x"r/a" bdy AND TIME]

NCFTS "Neoclassical trapping fractions" ()  
+NCFTMINUS "NC trapping fraction lower limit"  
+NCFTPLUS "NC trapping fraction upper limit"  
+NCFT "NC trapping fraction (net)"  
[VS. x"r/a" ctr AND TIME]

NCSQUEEZ "NC ORBIT SQUEEZING FACTORS" ()  
+SQZE\_NC "NC electron orbit squeezing"  
+SQZX\_NC "NC impurity orbit squeezing"  
+SQZD\_NC "NC D+ orbit squeezing"  
+SQZLI\_NC "NC Li ion orbit squeezing"  
[VS. x"r/a" ctr AND TIME]

NECOM "NE DATA INPUT" (n/cm\*\*3)  
 +NER\_USE "NER data as used"  
 +NER\_IN "NER data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

NERCOM "NER data map check" (n/cm\*\*3)  
 +NER\_USE "NER data as used"  
 +NER\_IN "NER data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

NETWD "NE DATA PROFILE ASYMMETRY" (N/CM\*\*3)  
 +NE "ELECTRON DENSITY"  
 +NETW "NE(R) ASSYMMETRY"  
 [VS. x"r/a" ctr AND TIME]

NMC "Monte Carlo Ion Count Profiles" (N)  
 +NMC\_D "Beam D No. of MC Ions"  
 [VS. x"r/a" ctr AND TIME]

OMOHALO "Beam halo ang. velocities" (RAD/SEC)  
 +OMOBH\_D "beam halo n0 ang. veloc. G=D"  
 +OMOBH\_LI "beam halo n0 ang. veloc. G=Li"  
 [VS. x"r/a" ctr AND TIME]

OMEGO "THERMAL NEUTRAL ANG.VELLOCITIES" (RAD/SEC)  
 +OMOVD "VOL NEUTRAL ANG.VEL G=D"  
 +OMOWD "WALL NEUTRAL ANG.VEL G=D"  
 +OMOVLITH "VOL NEUTRAL ANG.VEL G=LITH"  
 +OMOWLITH "WALL NEUTRAL ANG.VEL G=LITH"  
 [VS. x"r/a" ctr AND TIME]

OMEGOAGF "all gas flow ang. velocities" (RAD/SEC)  
 +OMOGF\_D\_D "D omega0 due to D gas flow"  
 +OMOGF\_L\_D "Li omega0 due to D gas flow"  
 +OMOGF\_D\_L "D omega0 due to Li gas flow"  
 +OMOGF\_L\_L "Li omega0 due to Li gas flow"  
 [VS. x"r/a" ctr AND TIME]

OMEGOARC "all recyc ang. velocities" (RAD/SEC)  
 +OMORC\_D\_D "D omega0 due to D recyc"  
 +OMORC\_L\_D "Li omega0 due to D recyc"  
 +OMORC\_D\_L "D omega0 due to Li recyc"  
 +OMORC\_L\_L "Li omega0 due to Li recyc"  
 [VS. x"r/a" ctr AND TIME]

OMEGOCX "CX angular velocities" (RAD/SEC)  
 +OMOCX\_GFD "CX ANG. VELOC. gas flow D"  
 +OMOCX\_GFL "CX ANG. VELOC. gas flow Li"  
 +OMOCX\_RCD "CX ANG. VELOC. recyc. D"  
 +OMOCX\_RCL "CX ANG. VELOC. recyc. Li"  
 [VS. x"r/a" ctr AND TIME]

OMEGS "PLASMA ANGULAR VELOCITIES" (RAD/SEC)  
 +OMEGA "TOROIDAL ANGULAR VELOCITY"  
 +OMEGA\_NC "N.C. TOROIDAL ANGULAR VELOCITY"  
 +OMEGDATA "Toroidal Ang.Velocity Data"  
 [VS. x"r/a" ctr AND TIME]

OMEGSFI "Avg Fast ion Angular Velocities" (RAD/SEC)  
 +OMEGB "BEAM ION AVG ANG.VELLOCITY"  
 +OMEGB\_D "D BEAM ION AVG ANG.VELLOCITY"  
 [VS. x"r/a" ctr AND TIME]

POVOLSC "Power in volume neutral sources" (WATTS/CM3)  
 +PBCX "THERMAL ION LOSS, FAST ION CX"  
 +POHALO "HALO NEUTRAL SCE POWER"  
 [VS. x"r/a" ctr AND TIME]

PBE01 "Beam#01(D) electron heating" (WATTS/CM3)  
 +PBE01\_TOT "Beam#01(D), electron heating"  
 +PBE01\_E1 "Pbe: Beam#01(D), E-frac no.1"  
 +PBE01\_E2 "Pbe: Beam#01(D), E-frac no.2"  
 +PBE01\_E3 "Pbe: Beam#01(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBE02 "Beam#02(D) electron heating" (WATTS/CM3)  
 +PBE02\_TOT "Beam#02(D), electron heating"  
 +PBE02\_E1 "Pbe: Beam#02(D), E-frac no.1"  
 +PBE02\_E2 "Pbe: Beam#02(D), E-frac no.2"  
 +PBE02\_E3 "Pbe: Beam#02(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBE03 "Beam#03(D) electron heating" (WATTS/CM3)  
 +PBE03\_TOT "Beam#03(D), electron heating"  
 +PBE03\_E1 "Pbe: Beam#03(D), E-frac no.1"  
 +PBE03\_E2 "Pbe: Beam#03(D), E-frac no.2"  
 +PBE03\_E3 "Pbe: Beam#03(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBE04 "Beam#04(D) electron heating" (WATTS/CM3)  
 +PBE04\_TOT "Beam#04(D), electron heating"  
 +PBE04\_E1 "Pbe: Beam#04(D), E-frac no.1"  
 +PBE04\_E2 "Pbe: Beam#04(D), E-frac no.2"  
 +PBE04\_E3 "Pbe: Beam#04(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBENB "the electron heating/beam power" (WATTS/CM3)  
 +PBE01\_TOT "Beam#01(D), electron heating"  
 +PBE02\_TOT "Beam#02(D), electron heating"  
 +PBE03\_TOT "Beam#03(D), electron heating"  
 +PBE04\_TOT "Beam#04(D), electron heating"  
 [VS. x"r/a" ctr AND TIME]

PBI01 "Beam#01(D) ion heating" (WATTS/CM3)  
 +PBI01\_TOT "Beam#01(D), ion heating"  
 +PBI01\_E1 "Pbi: Beam#01(D), E-frac no.1"  
 +PBI01\_E2 "Pbi: Beam#01(D), E-frac no.2"  
 +PBI01\_E3 "Pbi: Beam#01(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBI02 "Beam#02(D) ion heating" (WATTS/CM3)  
 +PBI02\_TOT "Beam#02(D), ion heating"  
 +PBI02\_E1 "Pbi: Beam#02(D), E-frac no.1"  
 +PBI02\_E2 "Pbi: Beam#02(D), E-frac no.2"  
 +PBI02\_E3 "Pbi: Beam#02(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBI03 "Beam#03(D) ion heating" (WATTS/CM3)  
 +PBI03\_TOT "Beam#03(D), ion heating"  
 +PBI03\_E1 "Pbi: Beam#03(D), E-frac no.1"  
 +PBI03\_E2 "Pbi: Beam#03(D), E-frac no.2"  
 +PBI03\_E3 "Pbi: Beam#03(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBI04 "Beam#04(D) ion heating" (WATTS/CM3)  
 +PBI04\_TOT "Beam#04(D), ion heating"  
 +PBI04\_E1 "Pbi: Beam#04(D), E-frac no.1"  
 +PBI04\_E2 "Pbi: Beam#04(D), E-frac no.2"  
 +PBI04\_E3 "Pbi: Beam#04(D), E-frac no.3"  
 [VS. x"r/a" ctr AND TIME]

PBINB "the ion heating/beam power" (WATTS/CM3)  
 +PBI01\_TOT "Beam#01(D), ion heating"  
 +PBI02\_TOT "Beam#02(D), ion heating"  
 +PBI03\_TOT "Beam#03(D), ion heating"  
 +PBI04\_TOT "Beam#04(D), ion heating"  
 [VS. x"r/a" ctr AND TIME]

PBL01 "Beam#01(D) heating power el+i+th" (WATTS/CM3)  
 +PBTOT01 "Beam#01(D), total power"  
 +PBE01\_TOT "Beam#01(D), electron heating"  
 +PBI01\_TOT "Beam#01(D), ion heating"  
 +PBTH01 "Beam#01(D), thermalization power"  
 [VS. x"r/a" ctr AND TIME]

PBL02 "Beam#02(D) heating power el+i+th" (WATTS/CM3)  
 +PBTOT02 "Beam#02(D), total power"  
 +PBE02\_TOT "Beam#02(D), electron heating"  
 +PBI02\_TOT "Beam#02(D), ion heating"  
 +PBTH02 "Beam#02(D), thermalization power"  
 [VS. x"r/a" ctr AND TIME]

PBL03 "Beam#03(D) heating power el+i+th" (WATTS/CM3)

+PBTOT03 "Beam#03(D), total power"  
 +PBE03\_TOT "Beam#03(D), electron heating"  
 +PBI03\_TOT "Beam#03(D), ion heating"  
 +PBTH03 "Beam#03(D), thermalization power"  
 [VS. x"r/a" ctr AND TIME]

PBL04 "Beam#04(D) heating power el+i+th" (WATTS/CM3)  
 +PBTOT04 "Beam#04(D), total power"  
 +PBE04\_TOT "Beam#04(D), electron heating"  
 +PBI04\_TOT "Beam#04(D), ion heating"  
 +PBTH04 "Beam#04(D), thermalization power"  
 [VS. x"r/a" ctr AND TIME]

PBOLO "PRAD USED AND BOLOMETER DATA" (WATTS/CM3)  
 +PRAD "NET RADIATED POWER USED"  
 +PRADC "NET RADIATED POWER (THEORY)"  
 +PRAD0 "RADIATION: BOLO DATA"  
 +PRAD\_ADJ "RADIATION: BOLO DATA ADJUSTED"  
 [VS. x"r/a" ctr AND TIME]

PBOLOS "PRAD CALCULATED BY SPECIES" (WATTS/CM3)  
 +PRADC "NET RADIATED POWER (THEORY)"  
 +PRADS\_TOK "TOK Impurity Radiation"  
 [VS. x"r/a" ctr AND TIME]

PBSBR\_TOK "PRAD BREM RAD FOR TOK" (WATTS/CM3)  
 +PRBS\_TOK "TOK Impurity Brem Radiation"  
 [VS. x"r/a" ctr AND TIME]

PBSLI\_TOK "PRAD LINE RAD FOR TOK" (WATTS/CM3)  
 +PRLS\_TOK "TOK Impurity Line Radiation"  
 [VS. x"r/a" ctr AND TIME]

PBS\_TOK "PRAD CALCULATED FOR TOK" (WATTS/CM3)  
 +PRADS\_TOK "TOK Impurity Radiation"  
 +PRLS\_TOK "TOK Impurity Line Radiation"  
 +PRBS\_TOK "TOK Impurity Brem Radiation"  
 [VS. x"r/a" ctr AND TIME]

PBTHNB "the thermalization power" (WATTS/CM3)  
 +PBTH01 "Beam#01(D), thermalization power"  
 +PBTH02 "Beam#02(D), thermalization power"  
 +PBTH03 "Beam#03(D), thermalization power"  
 +PBTH04 "Beam#04(D), thermalization power"  
 [VS. x"r/a" ctr AND TIME]

PBTOTNB "the total/beam power" (WATTS/CM3)  
 +PBTOT01 "Beam#01(D), total power"  
 +PBTOT02 "Beam#02(D), total power"  
 +PBTOT03 "Beam#03(D), total power"  
 +PBTOT04 "Beam#04(D), total power"

[VS. x"r/a" ctr AND TIME]

PBX\_SINGL "PRAD CALCULATED FOR SINGL" (WATTS/CM3)

+PRX\_SINGL "SINGL Impurity Radiation"  
+PRLX\_SINGL "SINGL Impurity Line Radiation"  
+PRBX\_SINGL "SINGL Impurity Brem Radiation"

[VS. x"r/a" ctr AND TIME]

PB\_F\_D "D Beam heating by E.fraction" (WATTS/CM3)

+PBE\_F1\_D "Pbe: full energy D beam"  
+PBE\_F2\_D "Pbe: half energy D beam"  
+PBE\_F3\_D "Pbe: 1/3 energy D beam"  
+PBI\_F1\_D "Pbi: full energy D beam"  
+PBI\_F2\_D "Pbi: half energy D beam"  
+PBI\_F3\_D "Pbi: 1/3 energy D beam"

[VS. x"r/a" ctr AND TIME]

PCMPR "COMPRESSION POWERS" (WATTS/CM3)

+UBCMP "B(POL) COMPRESSION"  
+PCPRB "POWER: COMPRESSION OF FAST IONS"  
+PCMPE "ELECTRON COMPRESSION"  
+PCMPI "ION COMPRESSION"

[VS. x"r/a" ctr AND TIME]

PCON "PTCL CONFINEMENT" (SECONDS)

+TAUPE "ELECTRON PTCL CONFINEMNT"  
+TAPWE "ELECTRON TAU(P) WARE CORRECTION"  
+TAUPD "D+ ION PTCL CONFINEMENT"  
+TAUPLITH "LITH+++ ION PTCL CONFINEMENT"  
+TAUPI "ION PTCL CONFINEMENT"

[VS. x"r/a" bdy AND TIME]

PCURFEQ "FEQ PLASMA CURRENTS" (AMPS/CM2)

+CUR "TOTAL PLASMA CURRENT"

[VS. x"r/a" ctr AND TIME]

PCURNC "NC Bootstrap Cur Comparison" (AMPS/CM2)

+CURBS "BOOTSTRAP CURRENT"  
+CURBSWNC "NCLASS Bootstrap Current"  
+CURBSEPS "Aspect Ratio Bootstrap Current"  
+CURBSSAU "Sauter Bootstrap Current as Used"

[VS. x"r/a" ctr AND TIME]

PCURS "PLASMA CURRENTS" (AMPS/CM2)

+CUR "TOTAL PLASMA CURRENT"  
+CUROH "OHMIC PLASMA CURRENT"  
+CURGP "GRAD(P) TOROIDAL CUR"  
+CURBS "BOOTSTRAP CURRENT"  
+CURB "BEAM DRIVEN CURRENT"  
+LHCUR "LH DRIVEN CURRENT"  
+ECCUR "ECRH CURRENT"



+ICCUR "ICRF DRIVEN CURRENT"  
[VS. x"r/a" ctr AND TIME]

PCURSAU "SAUTER BOOTSTRAP CURRENTS" (AMPS/CM2)  
 +CURBSSAU "Sauter Bootstrap Current as Used"  
 +CURBSSAU0 "Sauter Bootstrap Current Original Form"  
 +CURBSSAU1 "Sauter Bootstrap Current CS Chang Form"  
 +CURBSNE "Ne contrib Sauter Bootstrap Cur"  
 +CURBSTE "Te contrib Sauter Bootstrap Cur"  
 +CURBSNI "Ni contrib Sauter Bootstrap Cur"  
 +CURBSTI "Ti contrib Sauter Bootstrap Cur"  
 [VS. x"r/a" ctr AND TIME]

PCX\_COEFF "CX Power Coefficients" (WATTS/CM3/EV)  
 +CFPCX\_GFD "CX POWER COEFF. gas flow D"  
 +CFPCX\_GFL "CX POWER COEFF. gas flow Li"  
 +CFPCX\_RCD "CX POWER COEFF. recyc. D"  
 +CFPCX\_RCL "CX POWER COEFF. recyc. Li"  
 [VS. x"r/a" ctr AND TIME]

PDENS "PLASMA DENSITIES" (N/CM\*\*3)  
 +BDENS "BEAM ION DENSITY"  
 +NMINI "TOTAL ICRF MINORITY DENSITY"  
 +NE "ELECTRON DENSITY"  
 +ND "DEUTERIUM ION DENSITY"  
 +NLITH "LITHIUM ION DENSITY"  
 +NIMP "TOTAL IMPURITY DENSITY"  
 [VS. x"r/a" ctr AND TIME]

PDENS\_NC "NCLASS PLASMA DENSITIES" (N/CM\*\*3)  
 +NE "ELECTRON DENSITY"  
 +ND "DEUTERIUM ION DENSITY"  
 +ND\_NC "NCLASS D+ ION DENSITY"  
 +NLITH "LITHIUM ION DENSITY"  
 +NLITH\_NC "NCLASS Li+++ ION DENSITY"  
 +NIMP "TOTAL IMPURITY DENSITY"  
 +NIMP\_NC "NCLASS impurity density"  
 [VS. x"r/a" ctr AND TIME]

PDIFF "PTCL DIFFUSIVITIES" (CM\*\*2/SEC)  
 +DIFB "ANOMOLOUS FAST ION DIFFUSIVITY"  
 +DIFFE "ELEC PTCL DIFFUSIVITY"  
 +DIFWE "ELEC PTCL DIFFUSIVITY (WARE)"  
 +DEINT "INTOR ELECTRON DIFFUSIVITY"  
 +DIFFX "EFF. IMP ION DIFFUSIVITY"  
 +DIFFD "EFF. D+ ION DIFFUSIVITY"  
 +DIFFLI "EFF. LI+++ ION DIFFUSIVITY"  
 +DIFFI "ION DIFFUSIVITY FROM TOTAL FLUX"  
 +DIFFIO "INPUT ION DIFFUSIVITY (NMODEL=4)"  
 [VS. x"r/a" bdy AND TIME]

PDIFFI "INPUT DIFFUSIVITIES" (CM\*\*2/SEC)  
 +DFI\_D "D+ ION DIFFUSIVITY (NMODEL=4)"  
 +DFI\_LITH "LITH ION DIFFUSIVITY (NMODEL=4)"  
 [VS. x"r/a" bdy AND TIME]

PECCURS "PLASMA CUR (FOR EACH GYROTRON)" (AMPS/CM2)  
 +ECCUR "ECRH CURRENT"  
 +ECCUR1 "ECRH CURRENT (GYROTRON 1)"  
 [VS. x"r/a" ctr AND TIME]

PEFIS "ELEC HEATING BY FAST ION SPECIES" (WATTS/CM3)  
 +PBE\_D "D BEAM->ELECTRON HEATING"  
 [VS. x"r/a" ctr AND TIME]

PFUSN "FUSION REACTION RATE PROFILES" (N/CM3/SEC)  
 +FTOTDT "TOTAL D-T FUSION"  
 +FTOTDDN "TOTAL D(D,N)HE3 FUSION"  
 +FTOT2TT "TOTAL T(T,2N)HE4 FUSION"  
 +FTOTDDP "TOTAL D(D,P)T FUSION"  
 [VS. x"r/a" ctr AND TIME]

PHALO "BEAM HALO POWERS" (WATTS/CM3)  
 +PSC\_HALO "beam halo source/sink power"  
 +PCX\_HALO "beam halo driven cx power"  
 [VS. x"r/a" ctr AND TIME]

PICHANT "ICRF HEATING by ANTENNA" (WATTS/CM3)  
 +QICHA "TOTAL ICH HEATING"  
 +PIC\_F1 "RF PWR Absorbed, Freq.1"  
 +PIC\_F2 "RF PWR Absorbed, Freq.2"  
 [VS. x"r/a" ctr AND TIME]

PICNF1 "Absorbed Pwr vs. Nphi, Freq.#1" (WATTS/CM3)  
 +PICF01N01 "ICRF PWR, Nphi= 33, FREQ#1"  
 [VS. x"r/a" ctr AND TIME]

PICNF2 "Absorbed Pwr vs. Nphi, Freq.#2" (WATTS/CM3)  
 +PICF02N01 "ICRF PWR, Nphi= -7, FREQ#2"  
 +PICF02N02 "ICRF PWR, Nphi= 14, FREQ#2"  
 [VS. x"r/a" ctr AND TIME]

PIFIS "ION HEATING BY FAST ION SPECIES" (WATTS/CM3)  
 +PBI\_D "D B->TH ION HEATING"  
 [VS. x"r/a" ctr AND TIME]

PLABL "PELLET ABLATION" (N/CM\*\*3)  
 +PLABD "PELLET ABLATION (DATA)"  
 [VS. x"r/a" ctr AND TIME]

PLCUR "POLOIDAL CURRENT TO BOUNDARY" (AMPS)  
 +PLCURPLL "POLOIDAL CUR (J PLL)"

+PLCURPRP "POLOIDAL CUR (J PERP)"  
 +PLCURTOT "TOTAL POLOIDAL CUR TO WALL"  
 [VS. x"r/a" bdy AND TIME]

PLJBS "<J.B> PROFILES" (AMP\*TESLA/CM2)  
 +PLJB "<J.B> FLUX SURFACE VOL.AVG"  
 +PLJBXT "<J.B> DRIVEN (SMOOTHED, USED)"  
 +PLJBXTU "<J.B> DRIVEN (UNSMOOTHED)"  
 +PLJBOH "<J.B> OHMIC"  
 +PLJBSNC "<J.B> NCLASS Bootstrap"  
 [VS. x"r/a" ctr AND TIME]

PLJBXTS "<J.B>ext sum & from resistivity" (AMP\*TESLA/CM2)  
 +PLJBXT "<J.B> DRIVEN (SMOOTHED, USED)"  
 +PLJBXTR "<J.B> DRIVEN, FROM RESISTIVITY"  
 [VS. x"r/a" ctr AND TIME]

PMIN\_QLO "FPP Minority ions QLO RENORM CK" (WATTS/CM3)  
 +QMINICH "ICRH Power (Renormalized QLO)"  
 +QICHMIN "ICH PWR TO MINORITY (wave code)"  
 [VS. x"r/a" ctr AND TIME]

PND\_NC "ND & NCLASS SMOOTHED ND" (N/CM\*\*3)  
 +ND "DEUTERIUM ION DENSITY"  
 +ND\_NC "NCLASS D+ ION DENSITY"  
 [VS. x"r/a" ctr AND TIME]

PNL\_NC "NLith & NCLASS SMOOTHED NLith" (N/CM\*\*3)  
 +NLITH "LITHIUM ION DENSITY"  
 +NLITH\_NC "NCLASS Li+++ ION DENSITY"  
 [VS. x"r/a" ctr AND TIME]

PNTN2 "NEUTRON EMISSIVITIES" (N/CM3/SEC)  
 +BBNT2\_DD "DD BEAM-BEAM NEUTRONS"  
 +BTNT2\_DD "DD BEAM-TARGET NEUTRONS"  
 [VS. 2d MC grid (x,th) AND TIME]

PNTN2\_DD "DD NEUTRON EMISSIVITIES" (N/CM3/SEC)  
 +BBNT2\_DD "DD BEAM-BEAM NEUTRONS"  
 +BTNT2\_DD "DD BEAM-TARGET NEUTRONS"  
 [VS. 2d MC grid (x,th) AND TIME]

PNTNS "NEUTRON EMISSIVITIES" (N/CM3/SEC)  
 +BTNTX "BEAM-TARGET NEUTRONS"  
 +BBNTX "BEAM-BEAM NEUTRONS"  
 +THNTX "THERMONUCLEAR NEUTRONS"  
 +TTNTX "TOTAL NEUTRONS"  
 [VS. x"r/a" ctr AND TIME]

PNTNS\_DD "DD NEUTRON EMISSIVITIES" (N/CM3/SEC)  
 +BBNTX\_DD "DD BEAM-BEAM NEUTRONS"

+BTNTX\_DD "DD BEAM-TARGET NEUTRONS"  
 +THNTX\_DD "DD THERMONUCLEAR NEUTRONS"  
 [VS. x"r/a" ctr AND TIME]

PNX\_NC "NX & NCLASS SMOOTHED NX" (N/CM\*\*3)  
 +NIMP "TOTAL IMPURITY DENSITY"  
 +NIMP\_NC "NCLASS impurity density"  
 [VS. x"r/a" ctr AND TIME]

PRESS "PLASMA PRESSURE" (PASCALS)  
 +PDATA "P profile (Ufile data)"  
 +PTOWB "KINETIC MHD PRESSURE W/FAST IONS"  
 +PCHK "P: Surf. Avg. Grad-Shaf Check"  
 +PPLAS "PLASMA PRESSURE"  
 +PMHD\_IN "PRESSURE INPUT to MHD SOLVER"  
 [VS. x"r/a" ctr AND TIME]

PRSCOM "PRS data map check" (Pascals)  
 +PRS\_USE "PRS data as used"  
 +PRS\_IN "PRS data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

PRVEL "PTCL RADIAL VELOCITIES" (CM/SEC)  
 +VELE "ELECTRON RADIAL VELOCITY"  
 +VELB "ANOMOLOUS FAST ION VELOCITY"  
 +VELWE "ELECTRON WARE VELOCITY"  
 +VELIM "IMPURITY RADIAL VELOCITY"  
 +VELD "ION VELOCITY (NET) D+"  
 +VELLITH "ION VELOCITY (NET) LI+++"  
 [VS. x"r/a" bdy AND TIME]

PSFMTOT "NC Pfirsch-Schluter moments" (CM\*\*-2)  
 +PSFM1 "NC Pfirsch-Schluter 1 moment"  
 +PSFM2 "NC Pfirsch-Schluter 2 moment"  
 +PSFM3 "NC Pfirsch-Schluter 3 moment"  
 +PSFM4 "NC Pfirsch-Schluter 4 moment"  
 +PSFM5 "NC Pfirsch-Schluter 5 moment"  
 +PSFM6 "NC Pfirsch-Schluter 6 moment"  
 +PSFM7 "NC Pfirsch-Schluter 7 moment"  
 +PSFM8 "NC Pfirsch-Schluter 8 moment"  
 +PSFM9 "NC Pfirsch-Schluter 9 moment"  
 +PSFM10 "NC Pfirsch-Schluter 10 moment"  
 +PSFM11 "NC Pfirsch-Schluter 11 moment"  
 [VS. x"r/a" ctr AND TIME]

PTEMP "PLASMA TEMPERATURES" (EV)  
 +TE "ELECTRON TEMPERATURE"  
 +TIPRO "MEASURED TI PROFILE"  
 +TI "ION TEMPERATURE"  
 [VS. x"r/a" ctr AND TIME]

PTEMP\_NC "NCLASS PLASMA TEMPERATURES" (EV)  
 +TE "ELECTRON TEMPERATURE"  
 +TI "ION TEMPERATURE"  
 +TX "IMPURITY TEMPERATURE"  
 +TMJ "H/HE MAJORITY TEMPERATURE"  
 +TINC "NCLASS Ti (smoothed)"  
 +TMJNC "NCLASS majority Ti (smoothed)"  
 +TXNC "NCLASS impurity Ti (smoothed)"  
 [VS. x"r/a" ctr AND TIME]

PTHFIS "P(THERM) BY FAST ION SPECIES" (WATTS/CM3)  
 +PBTH\_D "D BEAM THERMALIZATION POWER"  
 [VS. x"r/a" ctr AND TIME]

PTI\_NC "TI & NCLASS SMOOTHED TI" (EV)  
 +TI "ION TEMPERATURE"  
 +TINC "NCLASS Ti (smoothed)"  
 [VS. x"r/a" ctr AND TIME]

PTMJ\_NC "TMJ & NCLASS SMOOTHED TMJ" (EV)  
 +TMJ "H/HE MAJORITY TEMPERATURE"  
 +TMJNC "NCLASS majority Ti (smoothed)"  
 [VS. x"r/a" ctr AND TIME]

PTR\_D "D+ Ion Transport" (N/CM3/SEC)  
 +PTRD\_MOD "Div(D ion flux) (model)"  
 +PTRD\_OBS "Div(D ion flux) (observed)"  
 [VS. x"r/a" ctr AND TIME]

PTR\_LI "Li+++ Ion Transport" (N/CM3/SEC)  
 +PTRLI\_MOD "Div(Li ion flux) (model)"  
 +PTRLI\_OBS "Div(Li ion flux) (observed)"  
 [VS. x"r/a" ctr AND TIME]

PTX\_NC "TX & NCLASS SMOOTHED TX" (EV)  
 +TX "IMPURITY TEMPERATURE"  
 +TXNC "NCLASS impurity Ti (smoothed)"  
 [VS. x"r/a" ctr AND TIME]

QFL\_NC "NC Heat Transport" (WATTS/CM3)  
 +QFLNC\_E "div(NC heat flux) electrons"  
 +QFLNCC\_E "div(NC class heat flux) electr"  
 +QFLNC\_X "div(NC heat flux) impurity"  
 +QFLNCC\_X "div(NC class heat flux) impurity"  
 +QFLNC\_I "div(NC heat flux) thermal ions"  
 +QFLNCC\_I "div(NC class heat flux) thermals"  
 +QFLNC\_D "div(NC heat flux) thermal D+ "  
 +QFLNC\_L "div(NC heat flux) thermal Li"  
 [VS. x"r/a" ctr AND TIME]

QFL\_NCD "NC Heat Transport D+" (WATTS/CM3)

+QFLNC\_D "div(NC heat flux) thermal D+"  
 +QFLNCC\_D "div(NC class heat flux) D+"  
 [VS. x"r/a" ctr AND TIME]

QFL\_NCL "NC Heat Transport Li+++" (WATTS/CM3)  
 +QFLNC\_L "div(NC heat flux) thermal Li"  
 +QFLNCC\_L "div(NC class heat flux) Li"  
 [VS. x"r/a" ctr AND TIME]

QMINBA "MINORITY SPECIES POWER BALANCE" (WATTS/CM3)  
 +QMINICH "ICRH Power (Renormalized QLO)"  
 -QMINE "POWER MIN.IONS->ELECTRONS"  
 -QMINI "POWER MIN.IONS->TH.IONS"  
 +QMINOH "POWER OH->MIN.IONS"  
 -QMINFISH "Minority ion fishbone loss"  
 -QMINORB "ORBIT LOSS OF MINORITY IONS"  
 +QMINPSC "MIN.IONS Ptcl Source/Sink"  
 -QMINTRAN "Min.ions transport (del.flux)"  
 -QMINDOT "D/DT(MINORITY ION ENERGY)"  
 -QMINWJXB "JxB omega\*Torque work done"  
 +QMINBAL "Minority Power Balance"  
 [VS. x"r/a" ctr AND TIME]

QP "Q PROFILES" ()  
 +QCHK "MHD EQUILIBRIUM Q CHECK"  
 +Q "Q PROFILE"  
 +QDATA "Q profile (Ufile data)"  
 [VS. x"r/a" bdy AND TIME]

QPRCOM "QPR data map check" ()  
 +QPR\_USE "QPR data as used"  
 +QPR\_IN "QPR data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

QRFBAL "ICRF HEATING PROFILES" (WATTS/CM3)  
 +QICHA "TOTAL ICH HEATING"  
 +QICHE "ICH DIRECT ELECTRON HEATING"  
 +QICHI "ICH DIRECT TH.ION HEATING"  
 +QICHMC "ICH HEATING BY MODE CONVERSION"  
 +QICHFAST "ICH Heating of Beam & Fusn Ions"  
 +QICHMIN "ICH PWR TO MINORITY (wave code)"  
 [VS. x"r/a" ctr AND TIME]

RFDENS "RF MINORITY ION DENSITIES" (N/CM\*\*3)  
 +NMINI\_H "H ICRF MINORITY DENSITY"  
 +NMINI "TOTAL ICRF MINORITY DENSITY"  
 [VS. x"r/a" ctr AND TIME]

RFHB\_D "RF vs FPP(q.l.o) Pwr: D Beam" (WATTS/CM3)  
 +PBWAV\_D "RF Pwr -> D Beam: Wave Depo"  
 +PBQSL\_D "RF PWR -> D Beam: FPP q.l.op"

+PBQLN\_D "RF PWR -> D Beam: FPP QLO renorm"  
[VS. x"r/a" ctr AND TIME]

RFHMIN\_H "RF vs FPP(qlo) Pwr: H minority" (WATTS/CM3)  
+PWAVMIN\_H "RF Pwr->H Minority: Wave Depo"  
+PQSLMIN\_H "RF PWR->H Minority: FPP q.l.op"  
+PQLNORM\_H "RF PWR->H Min.i: FPP QLO renorm"  
[VS. x"r/a" ctr AND TIME]

ROBAL "ROTATION POWER BALANCE" (WATTS/CM3)  
-RODOT "ROTATIONAL ENERGY GAIN"  
-RONET "CX ROTATIONAL ENERGY LOSS"  
-RVISC "VISCOUS ROT.ENERGY LOSS"  
-RCONV "CONVECTIVE ROT.ENERGY LOSS"  
-RSFRC "ROTATION SOURCE FRICTION"  
+UPHIN "TOTAL ROTATIONAL ENERGY INPUT"  
+UPBAL "ROTATIONAL ENERGY BALANCE"  
[VS. x"r/a" ctr AND TIME]

ROBALI "ROTATIONAL ENERGY INPUTS" (WATTS/CM3)  
+RQBCO "BEAM WORK -> ROTATION (COL.)"  
+RQBTH "BEAM WORK -> ROTATION (THRMLIZ)"  
+RQJXB "BEAM WORK -> ROTATION (JXB)"  
+RQRPL "BEAM WORK -> ROTATION RPL (JXB)"  
+RCMPR "ROTATION COMPRESSION"  
+UPHIN "TOTAL ROTATIONAL ENERGY INPUT"  
[VS. x"r/a" ctr AND TIME]

RSNBI "II rates with beam ions" (1/sec)  
+RSNBI\_D\_D "D\_0 ii sink by D beam ions"  
+RSNBI\_L\_D "Li\_0 ii sink by D beam ions"  
[VS. x"r/a" ctr AND TIME]

RSNBX "CX rates with beam ions" (1/sec)  
+RSNBX\_D\_D "D\_0 cx sink by D beam ions"  
+RSNBX\_L\_D "Li\_0 cx sink by D beam ions"  
[VS. x"r/a" ctr AND TIME]

SEFIS "ELEC SOURCES BY FAST ION SPECIES" (N/CM3/SEC)  
+SBE\_D "ELECTRON SCE D BEAM DEPOSITION"  
[VS. x"r/a" ctr AND TIME]

SHALO "BEAM HALO SCE/SINK" (N/CM3/SEC)  
+SBCXD "D\_0 NEUTRAL SOURCE BEAM HALO"  
+SIHALO\_D "BEAM HALO RECAP ION SCE G=D"  
+SBCXLI "Li\_0 NEUTRAL SOURCE BEAM HALO"  
+SIHALO\_LI "BEAM HALO RECAP ION SCE G=Li"  
[VS. x"r/a" ctr AND TIME]

SINBNO "FAST ION THERMAL NEUTRAL SINKS" (N/CM3/SEC)  
+SBOXD "D0 NEUTRAL SINK BEAM CX"

+SBOID "DO NEUTRAL SINK BEAM II"  
 +SBOXLITH "LITH NEUTRAL SINK BEAM CX"  
 +SBOILITH "LITH NEUTRAL SINK BEAM II"  
 [VS. x"r/a" ctr AND TIME]

SI\_AGF "all gas flow ion sources" (N/CM3/SEC)  
 +SIGF\_D\_D "D ion sce from D gas flow"  
 +SIGF\_L\_D "Li ion sce from D gas flow"  
 +SIGF\_D\_L "D ion sce from Li gas flow"  
 +SIGF\_L\_L "Li ion sce from Li gas flow"  
 [VS. x"r/a" ctr AND TIME]

SI\_ARC "all recyc ion sources" (N/CM3/SEC)  
 +SIRC\_D\_D "D ion sce from D recyc"  
 +SIRC\_L\_D "Li ion sce from D recyc"  
 +SIRC\_D\_L "D ion sce from Li recyc"  
 +SIRC\_L\_L "Li ion sce from Li recyc"  
 [VS. x"r/a" ctr AND TIME]

SMINBA "MINORITY SPECIES PTCL BALANCE" (N/CM3/SEC)  
 -SMINFISH "Minority ion fishbone loss"  
 -SMINORB "ORBIT LOSS OF MINORITY IONS"  
 +SMINPSC "MIN.IONS Ptcl Source/Sink"  
 -SMINTRAN "Min.ions transport (del.flux)"  
 -SMINDOT "D/DT(MINORITY ION population)"  
 +SMINBAL "Minority Particle Balance"  
 [VS. x"r/a" ctr AND TIME]

SNCXTOT\_D "total CX sink rate D" (N/CM3/SEC)  
 +SNCX\_D "CX sink rate beam D"  
 +SNCXMC\_D "MC CX sink rate beam D,orbit"  
 [VS. x"r/a" ctr AND TIME]

SPNPHI1 "Nphi Spectrum, Antenna #1" ()  
 +VACSPEC1 "Vacuum Spectrum, Antenna #1"  
 +CPLSPEC1 "Coupled Spectrum, Antenna #1"  
 [VS. Nphi Grid AND TIME]

SPNPHI2 "Nphi Spectrum, Antenna #2" ()  
 +VACSPEC2 "Vacuum Spectrum, Antenna #2"  
 +CPLSPEC2 "Coupled Spectrum, Antenna #2"  
 [VS. Nphi Grid AND TIME]

SQPARM "squareness parameters" ()  
 +SQUARE\_UO "Flux surf upper outer squareness"  
 +SQUARE\_LO "Flux surf lower outer squareness"  
 [VS. x"r/a" bdy AND TIME]

SREXB "ExB Shearing Rates" (RAD/SEC)  
 +SREXB\_NCL "ExB shear rate (nclass,R>R\_axis)"  
 +SREXBMOD "ExB Shear Rate (transport model)"



+SREXBA "ExB Shear Rate (selected)"  
 +SREXBV1 "ExB Shear Rate (exbshear.f90)"  
 +SREXBV2 "ExB Shear Rate (exbshear2.f90)"  
 [VS. x"r/a" bdy AND TIME]

SREXB\_T "ExB Shearing Rate Terms" (RAD/SEC)  
 +SREXBV2 "ExB Shear Rate (exbshear2.f90)"  
 +SREXBPHI "ExB Shear Rate (V\_tor)"  
 +SREXBTHT "ExB Shear Rate (V\_phi)"  
 +SREXBGRP "ExB Shear Rate (dp/dr)"  
 [VS. x"r/a" bdy AND TIME]

SSGF "SUMMED GAS FLOW ION SCES" (N/CM3/SEC)  
 +SISGF\_D "gas flow ION SCE G=D"  
 +SISGF\_LI "gas flow ION SCE G=Li"  
 [VS. x"r/a" ctr AND TIME]

SSRC "SUMMED RECYCLING ION SCES" (N/CM3/SEC)  
 +SISRC\_D "recycling ION SCE G=D"  
 +SISRC\_LI "recycling ION SCE G=Li"  
 [VS. x"r/a" ctr AND TIME]

STHFIS "THERMALIZATION BY F.I. SPECIES" (N/CM3/SEC)  
 +SBTH\_D "D BEAM THERMALIZATION SOURCE"  
 [VS. x"r/a" ctr AND TIME]

TO "THERMAL NEUTRAL TEMPERATURES" (EV)  
 +TOVD "VOL NEUTRAL TEMP G=D"  
 +TOWD "WALL NEUTRAL TEMP G=D"  
 +TOVLITH "VOL NEUTRAL TEMP G=LITH"  
 +TOWLITH "WALL NEUTRAL TEMP G=LITH"  
 [VS. x"r/a" ctr AND TIME]

TOAGF "all gas flow temperatures" (EV)  
 +TOGF\_D\_D "D T0 due to D gas flow"  
 +TOGF\_L\_D "Li T0 due to D gas flow"  
 +TOGF\_D\_L "D T0 due to Li gas flow"  
 +TOGF\_L\_L "Li T0 due to Li gas flow"  
 [VS. x"r/a" ctr AND TIME]

TOARC "all recyc temperatures" (EV)  
 +TORC\_D\_D "D T0 due to D recyc"  
 +TORC\_L\_D "Li T0 due to D recyc"  
 +TORC\_D\_L "D T0 due to Li recyc"  
 +TORC\_L\_L "Li T0 due to Li recyc"  
 [VS. x"r/a" ctr AND TIME]

TOCX "CX neutral temperatures" (EV)  
 +TOCX\_GFD "CX NEUTRAL TEMP. gas flow D"  
 +TOCX\_GFL "CX NEUTRAL TEMP. gas flow Li"  
 +TOCX\_RCD "CX NEUTRAL TEMP. recyc. D"

+TOCX\_RCL "CX NEUTRAL TEMP. recyc. Li"  
[VS. x"r/a" ctr AND TIME]

TOHALO "Beam halo neutral temps" (EV)  
+TOBH\_D "beam halo neutral temp G=D"  
+TOBH\_LI "beam halo neutral temp G=Li"  
[VS. x"r/a" ctr AND TIME]

TAUPA "FAST ION P.A. SCATTERING TIMES" (SECONDS)  
+TPA1A\_D "D FULL E TAU(SCATTERING,CO)"  
+TPA1B\_D "D FULL E TAU(SCATTERING,CTR)"  
[VS. x"r/a" ctr AND TIME]

TAUSL "FAST ION SLOWING DOWN TIMES" (SECONDS)  
+TSL1A\_D "D FULL E TAU(SLOWING DOWN,CO)"  
+TSL1B\_D "D FULL E TAU(SLOWING DOWN,CTR)"  
[VS. x"r/a" ctr AND TIME]

TBPA\_D "D BEAM PITCH ANGLE SCATTERING" (SECONDS)  
+TPA1A\_D "D FULL E TAU(SCATTERING,CO)"  
+TPA2A\_D "D HALF E TAU(SCATTERING,CO)"  
+TPA3A\_D "D 1/3 E TAU(SCATTERING,CO)"  
+TPA1B\_D "D FULL E TAU(SCATTERING,CTR)"  
+TPA2B\_D "D HALF E TAU(SCATTERING,CTR)"  
+TPA3B\_D "D 1/3 E TAU(SCATTERING,CTR)"  
[VS. x"r/a" ctr AND TIME]

TBSL\_D "D BEAM SLOWING DOWN TIMES" (SECONDS)  
+TSL1A\_D "D FULL E TAU(SLOWING DOWN,CO)"  
+TSL2A\_D "D HALF E TAU(SLOWING DOWN,CO)"  
+TSL3A\_D "D 1/3 E TAU(SLOWING DOWN,CO)"  
+TSL1B\_D "D FULL E TAU(SLOWING DOWN,CTR)"  
+TSL2B\_D "D HALF E TAU(SLOWING DOWN,CTR)"  
+TSL3B\_D "D 1/3 E TAU(SLOWING DOWN,CTR)"  
[VS. x"r/a" ctr AND TIME]

TCHK "TOROIDAL FLUX CHECK" (WEBERS)  
+TRFLX "TOROIDAL FLUX"  
+TRFCK "MHD TOROIDAL FLUX CHECK"  
[VS. x"r/a" bdy AND TIME]

TCONS "CONFINEMENT TIMES" (SECONDS)  
+TAUPE "ELECTRON PTCL CONFINEMNT"  
+TAPWE "ELECTRON TAU(P) WARE CORRECTION"  
+TEE "ELECTRON ENERGY CONFINEMENT"  
+TAUPHI "MOMENTUM CONFINEMENT"  
+TAUE "PLASMA ENERGY CONFINEMENT"  
[VS. x"r/a" bdy AND TIME]

TCX\_COEFF "CX Torque Coefficients" (Nt-M/CM3/(RAD/S))  
+CFTCX\_GFD "CX TORQUE COEFF. gas flow D"

+CFTCX\_GFL "CX TORQUE COEFF. gas flow Li"  
 +CFTCX\_RCD "CX TORQUE COEFF. recyc. D"  
 +CFTCX\_RCL "CX TORQUE COEFF. recyc. Li"  
 [VS. x"r/a" ctr AND TIME]

TECOM "TE DATA INPUT" (eV)  
 +TER\_USE "TER data as used"  
 +TER\_IN "TER data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

TERCOM "TER data map check" (eV)  
 +TER\_USE "TER data as used"  
 +TER\_IN "TER data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

TESAW "SAWTOOTH DATA: TE" (EV)  
 +TE "ELECTRON TEMPERATURE"  
 [VS. x"r/a" ctr AND TIME]

TI2COM "TI2 data map check" (eV)  
 +TI2\_USE "TI2 data as used"  
 +TI2\_IN "TI2 data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

TICOM "TI DATA INPUT" (eV)  
 +TI2\_USE "TI2 data as used"  
 +TI2\_IN "TI2 data as input"  
 [VS. MAJOR RADII (DATA MAPPING) AND TIME]

TMJS "MAJORITY TEMPERATURES" (EV)  
 +TMJ "H/HE MAJORITY TEMPERATURE"  
 +TMJSM "H/HE MAJORITY TEMP(SMOOTHED)"  
 [VS. x"r/a" ctr AND TIME]

TQ0BA "NEUTRAL TORQUE BALANCE" (Nt-M/CM3)  
 -TQBA0 "NEUTRAL TORQUE BALANCE"  
 +TQ0VL "NEUTRAL VOL SCE TORQUE"  
 -TQ0FL "DIV(neutral ANG.MOMENTUM FLUX)"  
 +TQCX "CHARGE EXCHANGE TORQUE"  
 -TQIZ "IONIZATION TORQUE"  
 [VS. x"r/a" ctr AND TIME]

TQ0BA\_AGF "gas flow neutral ang mo. bal all" (Nt-M/CM3)  
 +TQCXGF\_D "CX TORQUE TO D gas NEUTRALS"  
 -TQIGF\_D "D gas flow ionization TORQUE"  
 -TQ0FLGF\_D "D DIV(gas flow ANG.MO. FLUX)"  
 -TQBA0\_GF\_D "D gas flow ANG.MO. BALANCE"  
 +TQCXGF\_L "CX TORQUE TO Li gas NEUTRALS"  
 -TQIGF\_L "Li gas flow ionization TORQUE"  
 -TQ0FLGF\_L "Li DIV(gas flow ANG.MO. FLUX)"  
 -TQBA0\_GF\_L "Li gas flow ANG.MO. BALANCE"

[VS. x"r/a" ctr AND TIME]

TQ0BA\_ARC "recyc neutral ang mo. bal all" (Nt-M/CM3)  
+TQCXRC\_D "CX TORQUE TO D recyc NEUTRALS"  
-TQIRC\_D "D recyc ionization TORQUE"  
-TQ0FLRC\_D "D DIV(recyc ANG.MO. FLUX)"  
-TQBA0\_RC\_D "D recyc ANG.MO. BALANCE"  
+TQCXRC\_L "CX TORQUE TO Li recyc NEUTRALS"  
-TQIRC\_L "Li recyc ionization TORQUE"  
-TQ0FLRC\_L "Li DIV(recyc ANG.MO. FLUX)"  
-TQBA0\_RC\_L "Li recyc ANG.MO. BALANCE"

[VS. x"r/a" ctr AND TIME]

TQ0BA\_HALO "Beam Halo neutral ang mo. bal" (Nt-M/CM3)  
+TQ0HALO "HALO NEUTRAL SCE TORQUE"  
+TQCXHALO "CX TORQUE TO HALO NEUTRALS"  
-TQIHALO "HALO NEUTRAL RECAPTURE TORQUE"  
-TQ0FLHALO "DIV(HALO NEUTRAL ANG.MO. FLUX)"  
-TQBA0\_HALO "HALO NEUTRAL ANG.MO. BALANCE"

[VS. x"r/a" ctr AND TIME]

TQ0BA\_SGF "gas flow neutral ang mo. bal sum" (Nt-M/CM3)  
+TQCXSGF "CX TORQUE TO gas flow NEUTRALS"  
-TQISGF "gas fl NEUTRAL ionization TORQUE"  
-TQ0FLSGF "DIV(gas fl NEUTRAL ANG.MO. FLUX)"  
-TQBA0\_SGF "gas flow NEUTRAL ANG.MO. BALANCE"

[VS. x"r/a" ctr AND TIME]

TQ0BA\_SRC "recyc neutral ang mo. bal sum" (Nt-M/CM3)  
+TQCXSRC "CX TORQUE TO recycling NEUTRALS"  
-TQISRC "recyc NEUTRAL ionization TORQUE"  
-TQ0FLSRC "DIV(recyc NEUTRAL ANG.MO. FLUX)"  
-TQBA0\_SRC "recycling NEUTRAL ANG.MO. BALANCE"

[VS. x"r/a" ctr AND TIME]

TQ0VOLSC "Torque in volume neutral sources" (Nt-M/CM3)  
+TQBCX "BEAM CX ANTI-TORQUE"  
+TQ0HALO "HALO NEUTRAL SCE TORQUE"

[VS. x"r/a" ctr AND TIME]

TQB01 "Beam#01(D) torque" (Nt-M/CM3)  
+TQTOT01 "Beam#01(D) total torque"  
+TQCOL01 "Beam#01(D) collisional torque"  
+TQJB01 "Beam#01(D) JxB torque"  
+TQTH01 "Beam#01(D) thermalization torque"

[VS. x"r/a" ctr AND TIME]

TQB02 "Beam#02(D) torque" (Nt-M/CM3)  
+TQTOT02 "Beam#02(D) total torque"  
+TQCOL02 "Beam#02(D) collisional torque"  
+TQJB02 "Beam#02(D) JxB torque"

+TQTH02 "Beam#02(D) thermalization torque"  
[VS. x"r/a" ctr AND TIME]

TQB03 "Beam#03(D) torque" (Nt-M/CM3)  
+TQTOT03 "Beam#03(D) total torque"  
+TQCOL03 "Beam#03(D) collisional torque"  
+TQJB03 "Beam#03(D) JxB torque"  
+TQTH03 "Beam#03(D) thermalization torque"  
[VS. x"r/a" ctr AND TIME]

TQB04 "Beam#04(D) torque" (Nt-M/CM3)  
+TQTOT04 "Beam#04(D) total torque"  
+TQCOL04 "Beam#04(D) collisional torque"  
+TQJB04 "Beam#04(D) JxB torque"  
+TQTH04 "Beam#04(D) thermalization torque"  
[VS. x"r/a" ctr AND TIME]

TQCOLNB "the total collisional torque" (Nt-M/CM3)  
+TQCOL01 "Beam#01(D) collisional torque"  
+TQCOL02 "Beam#02(D) collisional torque"  
+TQCOL03 "Beam#03(D) collisional torque"  
+TQCOL04 "Beam#04(D) collisional torque"  
[VS. x"r/a" ctr AND TIME]

TQHALO "BEAM HALO TORQUES" (Nt-M/CM3)  
+TQSC\_HALO "beam halo source/sink torque"  
+TQCX\_HALO "beam halo driven cx torque"  
[VS. x"r/a" ctr AND TIME]

TQJBNB "the total/beam JxB torque" (Nt-M/CM3)  
+TQJB01 "Beam#01(D) JxB torque"  
+TQJB02 "Beam#02(D) JxB torque"  
+TQJB03 "Beam#03(D) JxB torque"  
+TQJB04 "Beam#04(D) JxB torque"  
[VS. x"r/a" ctr AND TIME]

TQJBNBD "the dep/beam JxB torque" (Nt-M/CM3)  
+TQJBD01 "Beam#01(D) JxB torque"  
+TQJBD02 "Beam#02(D) JxB torque"  
+TQJBD03 "Beam#03(D) JxB torque"  
+TQJBD04 "Beam#04(D) JxB torque"  
+TQJBD "BEAM DEP. JXB TORQUE"  
[VS. x"r/a" ctr AND TIME]

TQJXBD "BEAM TOT. JXB TORQUE" (Nt-M/CM3)  
+TQJXBT "BEAM JXB TORQUE"  
+TQJBD "BEAM DEP. JXB TORQUE"  
[VS. x"r/a" ctr AND TIME]

TQJXBD01 "Beam#01(D) JxB torque" (Nt-M/CM3)  
+TQJB01 "Beam#01(D) JxB torque"

+TQJBD01 "Beam#01(D) JxB torque"  
[VS. x"r/a" ctr AND TIME]

TQJXBD02 "Beam#02(D) JxB torque" (Nt-M/CM3)  
+TQJB02 "Beam#02(D) JxB torque"  
+TQJBD02 "Beam#02(D) JxB torque"  
[VS. x"r/a" ctr AND TIME]

TQJXBD03 "Beam#03(D) JxB torque" (Nt-M/CM3)  
+TQJB03 "Beam#03(D) JxB torque"  
+TQJBD03 "Beam#03(D) JxB torque"  
[VS. x"r/a" ctr AND TIME]

TQJXBD04 "Beam#04(D) JxB torque" (Nt-M/CM3)  
+TQJB04 "Beam#04(D) JxB torque"  
+TQJBD04 "Beam#04(D) JxB torque"  
[VS. x"r/a" ctr AND TIME]

TQMINSBA "MINORITY SPECIES Torque Balance" (Nt-M/CM3)  
+TQICHMIN "ICH Torque TO MINORITY IONS"  
-TQMINE "TORQUE MIN.IONS->ELECTRONS"  
-TQMINS "TORQUE MIN.IONS->TH.IONS"  
+TQMINSOH "TORQUE OH->MIN.IONS"  
-TQMINSFISH "Minority ion fishbone loss"  
-TQMINSORB "ORBIT LOSS OF MINORITY IONS"  
+TQMINSOSC "MIN.IONS Ptcl Source/Sink"  
-TQMINSOTRAN "Min.ions transport (del.flux)"  
-TQMINSODOT "D/DT(MINORITY ION Momentum)"  
-TQMINSOJXB "JxB TORQUE Minority->TH.IONS"  
+TQMINSOBAL "Minority Momentum Balance"  
[VS. x"r/a" ctr AND TIME]

TQTHNB "the total thermalization torque" (Nt-M/CM3)  
+TQTH01 "Beam#01(D) thermalization torque"  
+TQTH02 "Beam#02(D) thermalization torque"  
+TQTH03 "Beam#03(D) thermalization torque"  
+TQTH04 "Beam#04(D) thermalization torque"  
[VS. x"r/a" ctr AND TIME]

TQTOTNB "the total/beam torque" (Nt-M/CM3)  
+TQTOT01 "Beam#01(D) total torque"  
+TQTOT02 "Beam#02(D) total torque"  
+TQTOT03 "Beam#03(D) total torque"  
+TQTOT04 "Beam#04(D) total torque"  
[VS. x"r/a" ctr AND TIME]

TRVEL "Generalized transport velocities" (CM/SEC)  
+VELE "ELECTRON RADIAL VELOCITY"  
+VMO\_NET "Momentum v\_rad used in run"  
+VELIAV "density averaged ion radial velocity"  
+VEL\_TE "electron energy radial velocity"

+VEL\_TI "ion energy radial velocity"  
[VS. x"r/a" bdy AND TIME]

TSHAF "SHAFRANOV SHIFT: CODE & DATA" (CM)  
+SSHAF "SHAFRANOV SHIFT"  
+SSHAFDA "SHAFRANOV SHIFT (MHD DATA)"  
[VS. x"r/a" bdy AND TIME]

UBCUR "UNSHIELDED BEAM CURRENTS" (AMPS/CM2)  
+UCURB "UNSHIELDED BEAM CURRENT"  
+UJBCO "UNSHIELDED BEAM CUR (CO BEAMS)"  
+UJBCR "UNSHIELDED BEAM CUR (CTR BEAMS)"  
[VS. x"r/a" ctr AND TIME]

UBDOT "FIELD ENERGY GAIN" (WATTS/CM3)  
+UBTDT "D/DT(FIELD ENERGY)"  
+UBPDT "D/DT(POLOIDAL FIELD ENERGY)"  
[VS. x"r/a" ctr AND TIME]

UDENS "ENERGY DENSITY" (JLES/CM3)  
+UPHI "THERMAL PLASMA ROTATIONAL ENERGY"  
+UE "ELECTRON ENERGY DENSITY"  
+UTOTL "TOTAL ENERGY DENSITY"  
+UI "ION ENERGY DENSITY"  
+UFASTPP "FAST ION PERP ENERGY DENSITY"  
+UFASTPA "FAST ION PLL ENERGY DENSITY"  
[VS. x"r/a" ctr AND TIME]

UDENSPA "FAST ION PLL ENERGY DENSITY" (JLES/CM3)  
+UMINPA "MINORITY PLL ENERGY DENSITY"  
+UBPAR "BEAM PLL ENERGY DENSITY"  
+UFASTPA "FAST ION PLL ENERGY DENSITY"  
[VS. x"r/a" ctr AND TIME]

UDENSPP "FAST ION PERP ENERGY DENSITY" (JLES/CM3)  
+UMINPP "MINORITY PERP ENERGY DENSITY"  
+UBPRP "BEAM PERP ENERGY DENSITY"  
+UFASTPP "FAST ION PERP ENERGY DENSITY"  
[VS. x"r/a" ctr AND TIME]

UPWIND "UPWIND ADJUSTMENT PARAMETERS" ()  
+UPWIND\_TE "Electron Energy Balance UPWIND ADJUST"  
+UPWIND\_TI "Ion Energy Balance UPWIND ADJUST"  
+UPWIND\_MO "Angular Momentum Balance UPWIND ADJUST"  
+UPWIND\_D "D ION UPWIND ADJUST ACTIVATION"  
+UPWIND\_LI "Li ION UPWIND ADJUST ACTIVATION"  
[VS. x"r/a" bdy AND TIME]

VBFORMP "FAST ION <Vtor>, GC on midplane" (CM/SEC)  
+VBFORMP\_MP "FAST ION <Vtor>, GC on midplane"  
[VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

VCHK            "VOLTAGE CHECK" (VOLTS)  
   +V            "VOLTAGE"  
   +VCHEK        "VOLTAGE CHECK"  
   +VPOH        "VOLTAGE for POH calculation"  
   +VLH         "LH ESTIMATE OF LOOP VOLTAGE"  
                  [VS. x"r/a" ctr AND TIME]

VELBX          "Fast ion anomalous velocity" (CM/SEC)  
   +BVELBX\_D    "D anom beam ion velocity"  
                  [VS. x"r/a" bdy AND TIME]

VISBP          "PROFILE VB LIGHT" (VB INTENS)  
   +VBRC        "VB PROFILE (CALCULATED)"  
                  [VS. x"r/a" ctr AND TIME]

VMO            "Momentum Advection Velocities" (CM/SEC)  
   +VMO\_PBAL    "Momentum v\_rad from ptcl-bal"  
   +VMO\_DATA    "Momentum v\_rad input data"  
   +VMO\_PINCH   "Momentum v\_rad pinch term"  
   +VMO\_THMOD   "Momentum v\_rad, transport model"  
   +VMO\_NET     "Momentum v\_rad used in run"  
                  [VS. x"r/a" bdy AND TIME]

VNDIFF        "ION NON-DIFFUSIVE FLOW VELOCITY" (CM/SEC)  
   +VND\_D       "D+ NON-DIFFUSIVE FLOW VELOCITY"  
   +VND\_LITH    "LITH NON-DIFFUSIVE FLOW VELOCITY"  
                  [VS. x"r/a" bdy AND TIME]

VNDNC         "Nclass particle convection velocities" (CM/SEC)  
   +VNDNC\_E     "Nclass e- radial particle convection velocity"  
   +VNDNC\_D     "Nclass D+ avg radial particle convection velocity"  
   +VNDNC\_LI    "Nclass Li avg radial particle convection velocity"  
                  [VS. x"r/a" bdy AND TIME]

VPB01         "Beam#01(D) vpll.B profiles" (T\*CM/SEC)  
   +VPB01\_E1    "Vpll\*B: Beam no.01(D), E-frac#1"  
   +VPB01\_E2    "Vpll\*B: Beam no.01(D), E-frac#2"  
   +VPB01\_E3    "Vpll\*B: Beam no.01(D), E-frac#3"  
                  [VS. x"r/a" ctr AND TIME]

VPB02         "Beam#02(D) vpll.B profiles" (T\*CM/SEC)  
   +VPB02\_E1    "Vpll\*B: Beam no.02(D), E-frac#1"  
   +VPB02\_E2    "Vpll\*B: Beam no.02(D), E-frac#2"  
   +VPB02\_E3    "Vpll\*B: Beam no.02(D), E-frac#3"  
                  [VS. x"r/a" ctr AND TIME]

VPB03         "Beam#03(D) vpll.B profiles" (T\*CM/SEC)  
   +VPB03\_E1    "Vpll\*B: Beam no.03(D), E-frac#1"  
   +VPB03\_E2    "Vpll\*B: Beam no.03(D), E-frac#2"  
   +VPB03\_E3    "Vpll\*B: Beam no.03(D), E-frac#3"



[VS. x"r/a" ctr AND TIME]

VPB04 "Beam#04(D) vpll.B profiles" (T\*CM/SEC)

+VPB04\_E1 "Vpll\*B: Beam no.04(D), E-frac#1"

+VPB04\_E2 "Vpll\*B: Beam no.04(D), E-frac#2"

+VPB04\_E3 "Vpll\*B: Beam no.04(D), E-frac#3"

[VS. x"r/a" ctr AND TIME]

VPB\_F\_D "D Beam vpll.B flow by E.fraction" (T\*(cm/sec))

+VPB\_F1\_D "Vpll.B: full energy D beam"

+VPB\_F2\_D "Vpll.B: half energy D beam"

+VPB\_F3\_D "Vpll.B: 1/3 energy D beam"

[VS. x"r/a" ctr AND TIME]

VPOLMP "POLOIDAL VELOCITIES ON MIDPLANE" (CM/SEC)

+VPOLE\_NC "NC electron poloidal velocity"

+VPOLX\_NC "NC impurity poloidal velocity"

+VPOL\_AVG "NC avg poloidal velocity"

+VPOLD\_NC "NC D+ poloidal velocity"

+VPOLLINC "NC Li ion poloidal velocity"

[VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

VTORMP "TOROIDAL VELOCITIES ON MIDPLANE" (CM/SEC)

+VTORE\_NC "NC electron toroidal velocity"

+VTORX\_NC "NC impurity toroidal velocity"

+VTOR\_AVG "momentum balance avg velocity"

+VTORD\_NC "NC D+ toroidal velocity"

+VTORLINC "NC Li ion toroidal velocity"

[VS. MIDPLANE-FLUX SURFACE RADII AND TIME]

WNMC "Monte Carlo Weight Profiles" (#ptcls)

+WNMC\_D "Beam D No. of MC Ions"

[VS. x"r/a" ctr AND TIME]

XDENS "IMPURITY DENSITY" (N/CM\*\*3)

+NIMP "TOTAL IMPURITY DENSITY"

+NIMPS\_TOK "TOK Total Impurity Density"

[VS. x"r/a" ctr AND TIME]

XIMS\_TOK "Impurity Density for TOK" (N/CM\*\*3)

+NIMPS\_TOK "TOK Total Impurity Density"

[VS. x"r/a" ctr AND TIME]

XIM\_SINGL "Impurity Density for SINGL" (N/CM\*\*3)

+NIMP\_SINGL "SINGL Impurity Density"

[VS. x"r/a" ctr AND TIME]

XPTR "IMPURITY PTCL TRANSPORT" (N/CM3/SEC)

+XPTR\_MOD "Div(impurity flux) (model)"

+XPTR\_OBS "Div(impurity flux) (observed)"

[VS. x"r/a" ctr AND TIME]

ZEFF "Z-EFFECTIVE PROFILES" ()  
+ZEFMD "MAGDIF ZEFF PROFILE"  
+ZEFFP "PLASMA COMPOSITION ZEFF PROFILE"  
+ZEFFI "ZEFF DATA (UNCONSTRAINED)"  
[VS. x"r/a" ctr AND TIME]

ZIMP "Average Mult. Impurity Z" ()  
+XZIMPJ "Zonal Avg Z of Impurity"  
+ZIMPS\_TOK "TOK Avg. Mult. Impurity Z"  
[VS. x"r/a" ctr AND TIME]