NCSX
Transport and Experiment

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Transport Update

Evaluating c82(d18.3.121.116) and c93

Thermal Transport (H.Mynick)
GTC simulations, with T(0)=2.14keV, n(0)=6.7e19
B=1.26T

	τ_{Ei}
c10	20.2 ms
c82	16.9
c82(d18…)	18.9

Fast Ion Confinement (D. Spong)
50 keV NBI, same deposition profile, co-only

	% energy lost
c82	35.7
c82(d18…)	40.7
c93	36.2

Transport Activities

- Self-consistent calculation of Ti, Te for range of densities
  Begun for c82 (like was done for c10)

  Will start to add anomalous models

- c82(d18…): why did τ_{Ei} rise, but NBI confinement drop??

- Monte-Carlo module for configuration optimization
  - First version working, stand-alone
  - Starting to do benchmarking to calibrate

Current Ramp Rates

- PBX-M, high b-shots
  - dIp/dt = 2MA
  - produces reasonably broad j(r) profile

- Beam-current may peak-up current profile

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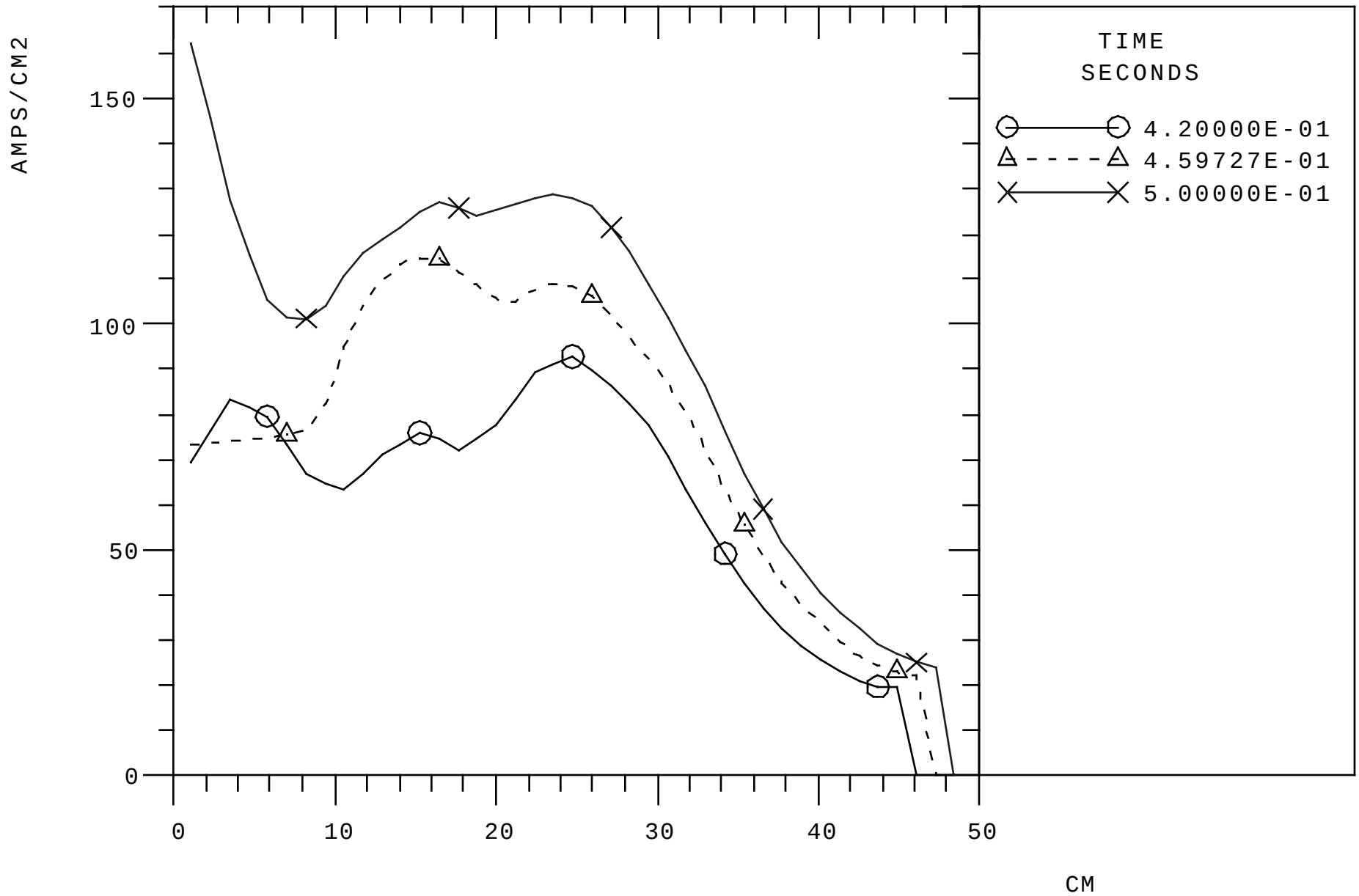
RPLOT GENERATED PLOT 06may1999



TOTAL PLASMA CURRENT (CUR) VS. RADIUS

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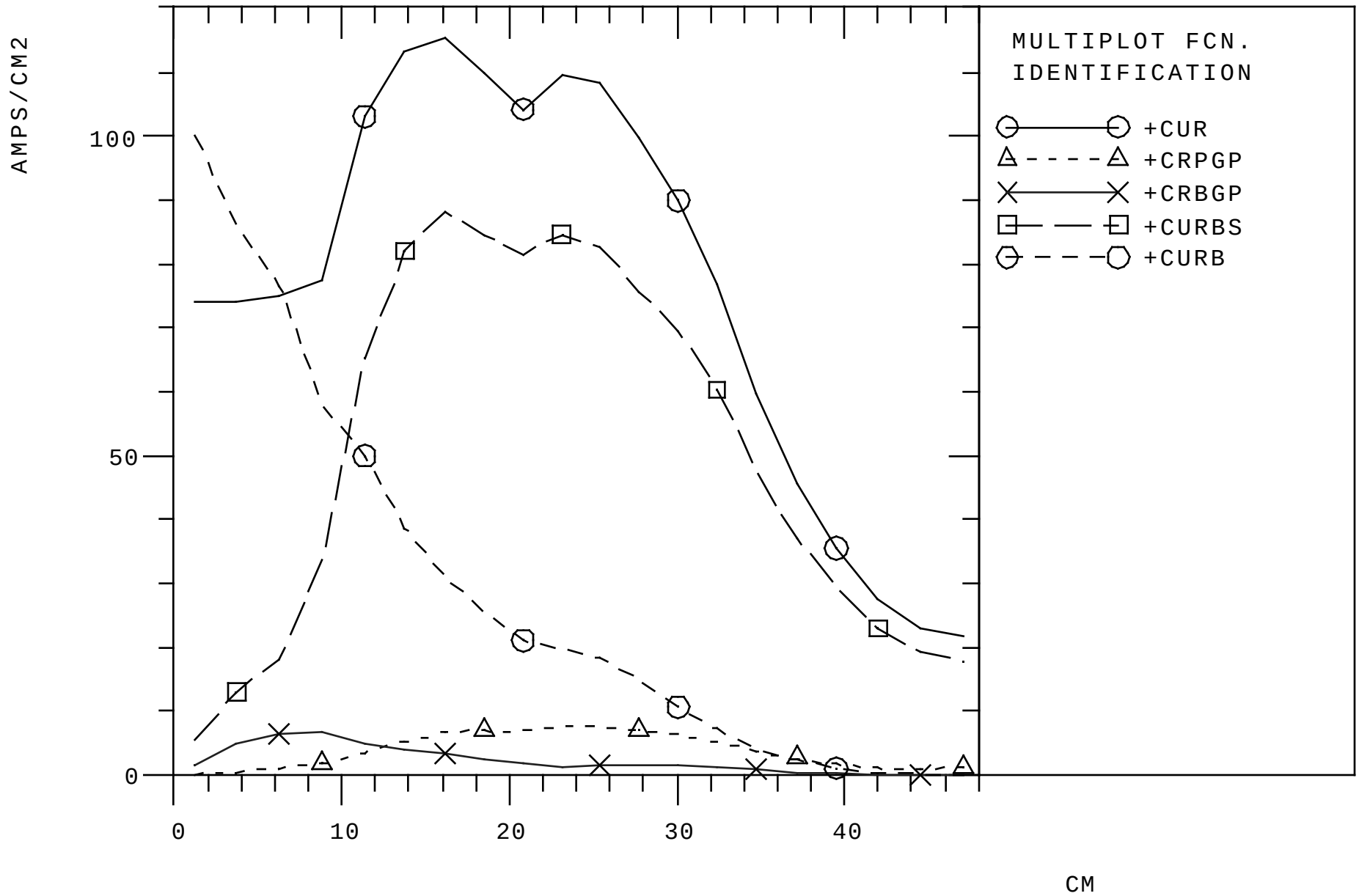
TIME = 4.6000E-01 SECONDS



PLASMA CURRENTS (PCURS) VS RADIUS (RZON)

PVR Sections

- Experiment Goals, Approach, and Requirements (Zarnstorff, Neilson, …)
- Neoclassical Thermal Transport (Mynick, Lin)
- Fast Ion Confinement (Spong, Redi)
- Operating Points and Plasma Parameters (Zarnstorff, Mynick, Spong)