

JACKET NO 50-219

PRRS

OYSTER CREEK NUCLEAR GENERATING STATION  
TOPICAL REPORT 045  
SUPPLEMENTARY INFORMATION

A comparison has been performed between MOD3 & MOD4 on three transients, namely pressure perturbation, level perturbation, and turbine trip using point kinetics for all transients. Results of the pressure perturbation are shown in Attachment 1, while level perturbation results are shown in Attachment 2 and the turbine trip in Attachment 3. The transient's description is the same as in TR-045.

The results show that for mild transients (pressure and level perturbations) the two versions of the code are identical, while for a severe transient (turbine trip) there is a small deviation that showed in pressure, core flow, level and steam flow during the later stages in the transient. Those deviations have no impact on thermal limits or peak pressure because they take place past those limits.

The cause of the deviation was found to be the non-equilibrium pressurizer option used for the upper downcomer when this option was turned off, identical results were obtained. It is believed that the error corrections on this model caused these deviations.

The turbine trip test with point kinetics shown here in no way indicates its validity for reload application since such option is not used by GPUN and it was done for comparison purposes only.

Docket No. 50-219

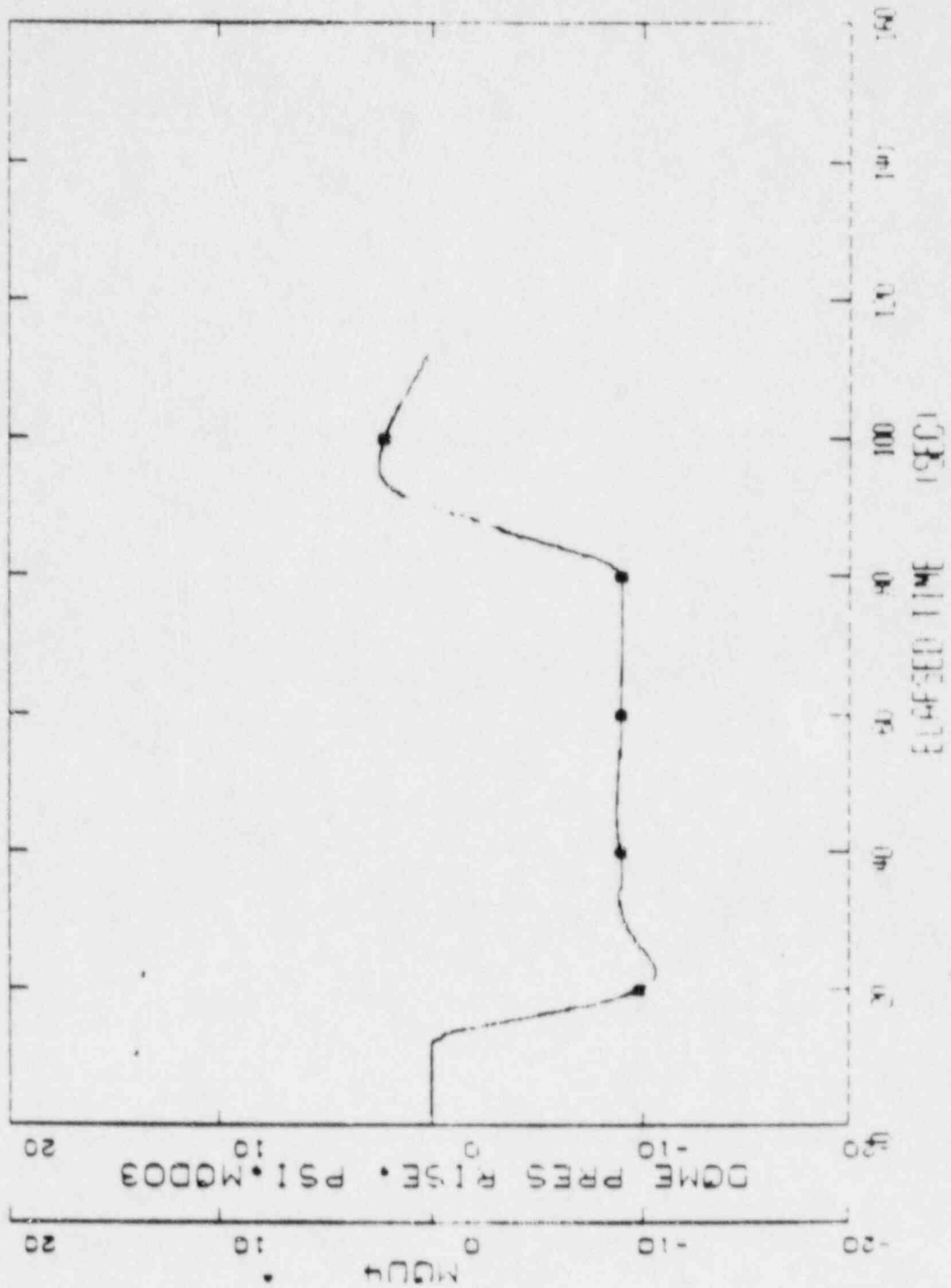
SUPPLEMENTARY INFORMATION

ATTACHMENT 1

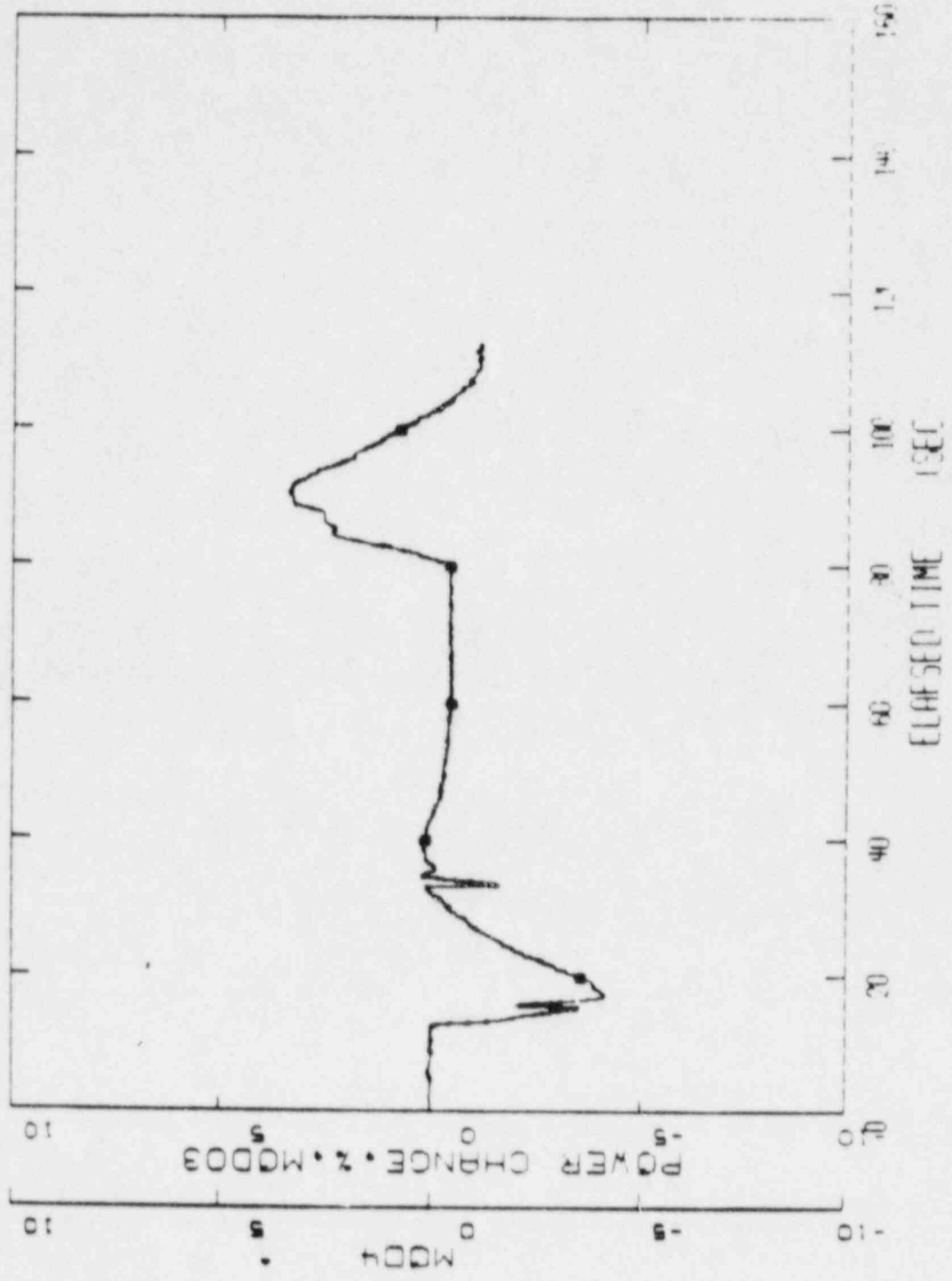
Pressure Perturbation Test Plots

- ° Dome Pressure Rise
- ° Power Change
- ° Level Change
- ° Feedwater Flow

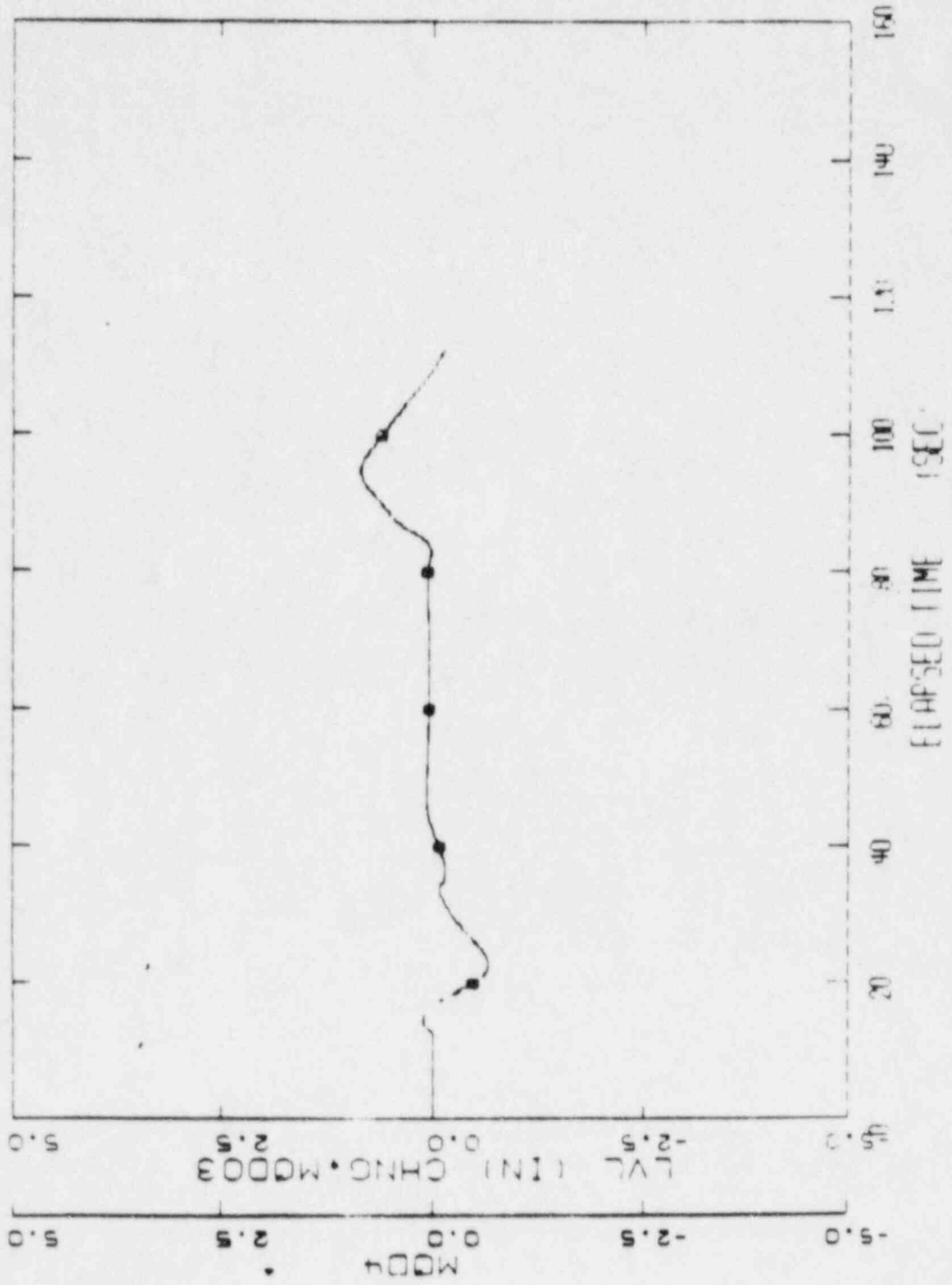
CYCLE1 EPRSIPT COMPARISON--M0004 VS M0003



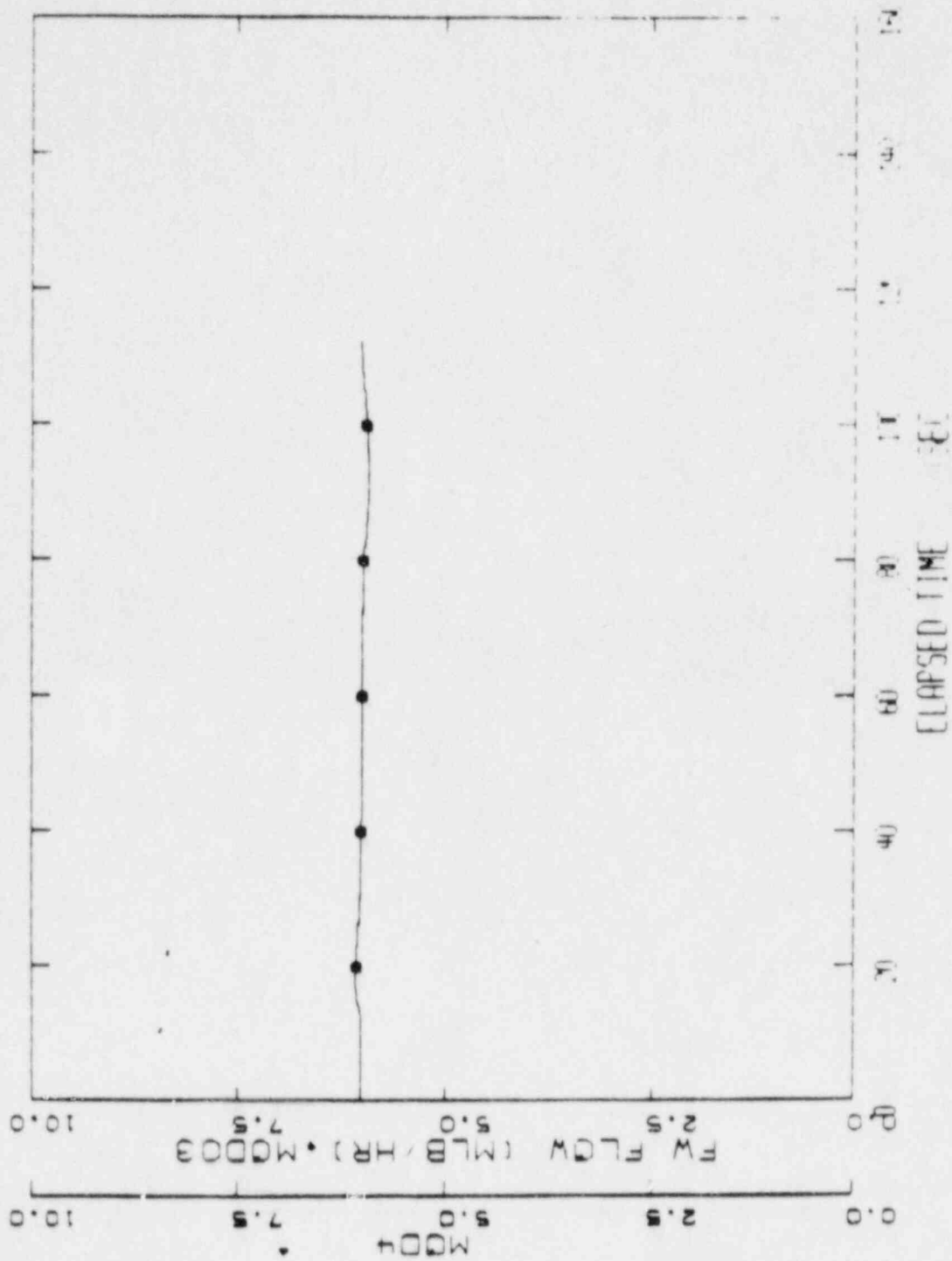
CYCLE1 EPRSTPT COMPARISON -- MOD04 VS MOD03



CYCLE EPRSTPT COMPARISON--M0004 VS M0003



CYCLE1 EPRSIPT COMPARISON--M01004 VS M0003

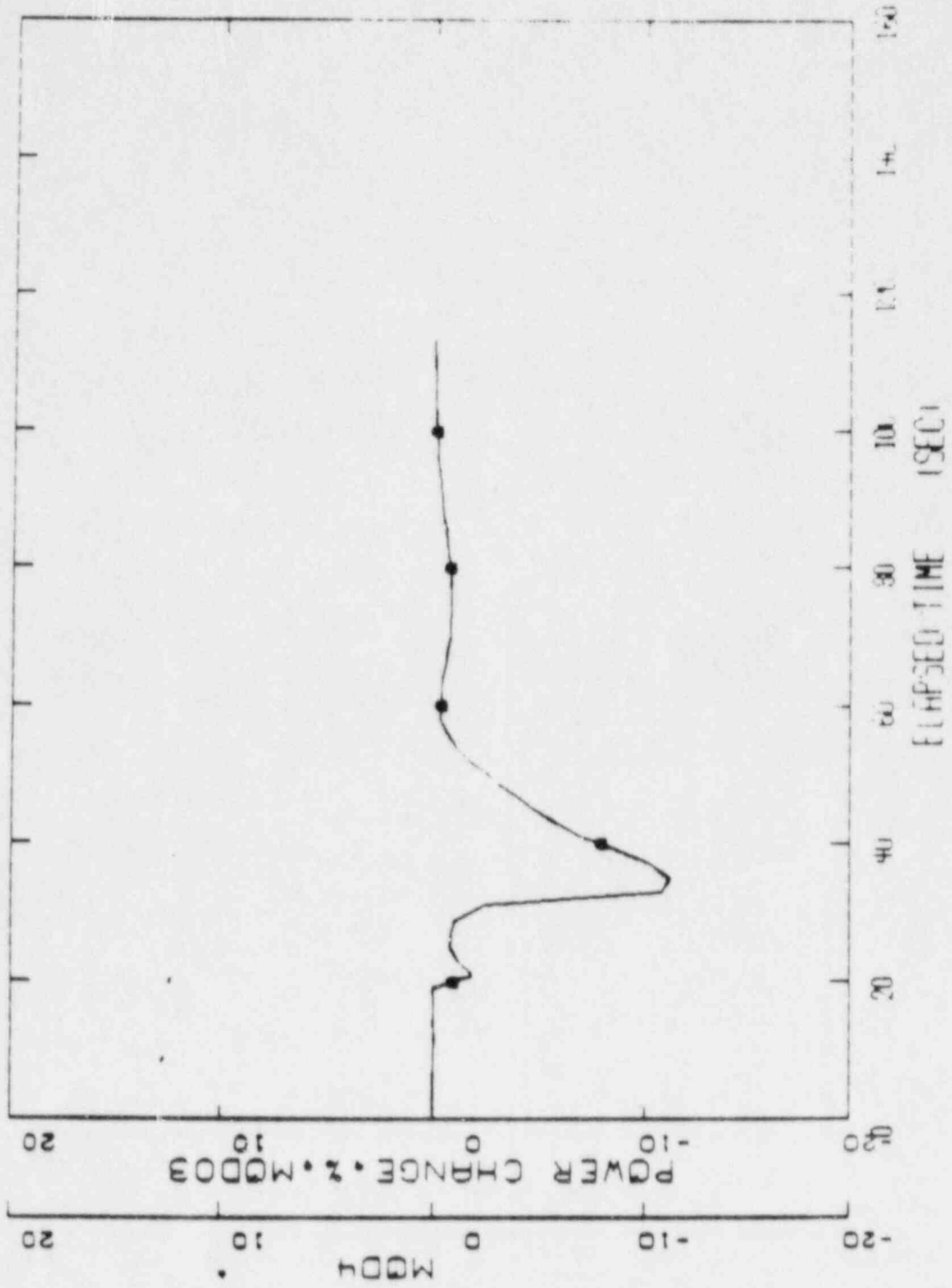


ATTACHMENT 2

Level Perturbation Test Plots

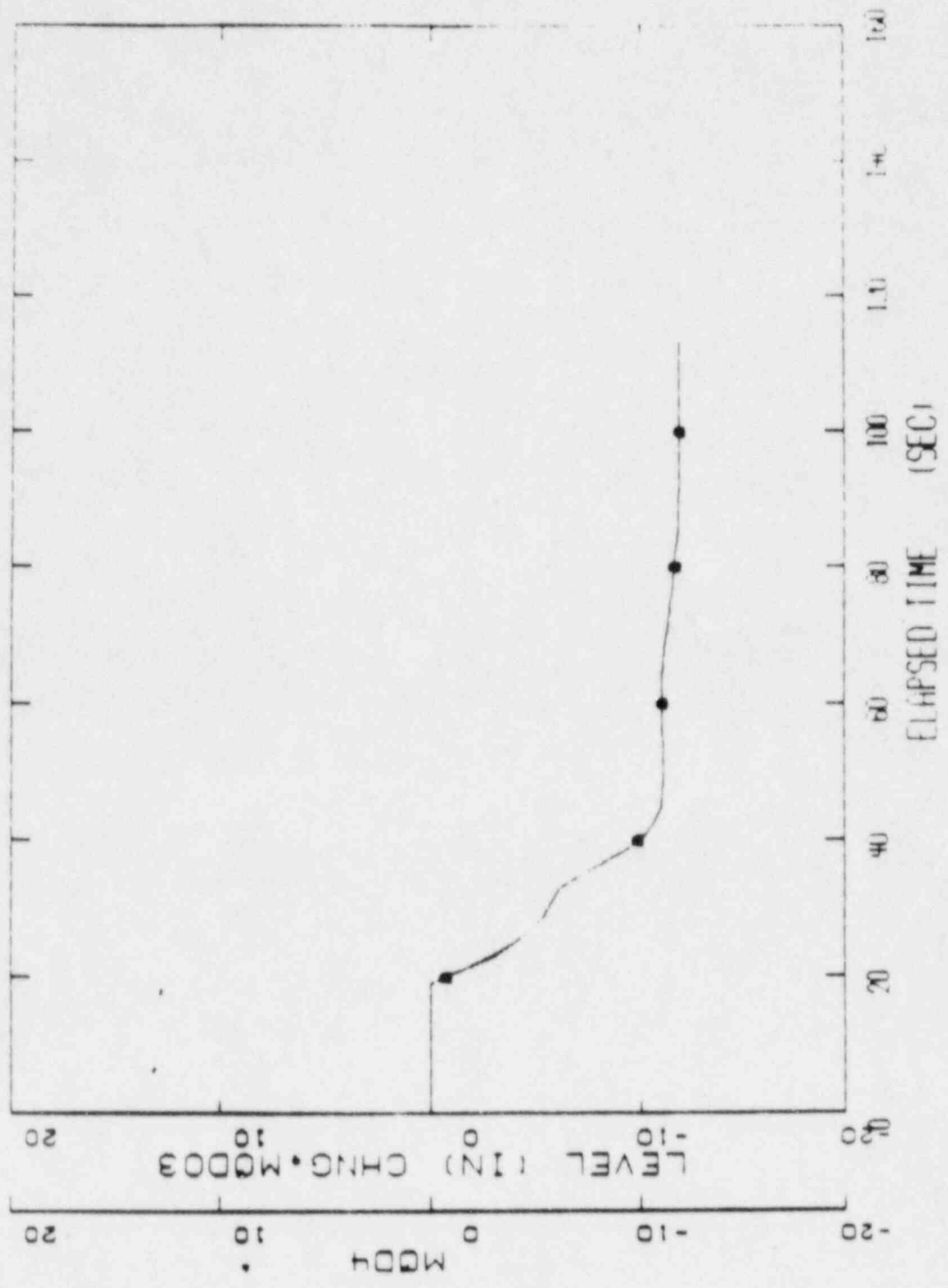
- Power Change
- Level Change
- Change in Feedwater Flow
- Dome Pressure Rise
- Steam Flow

CYCLE 1 LVL STPT MOD04 VS MOD03 COMPARISON

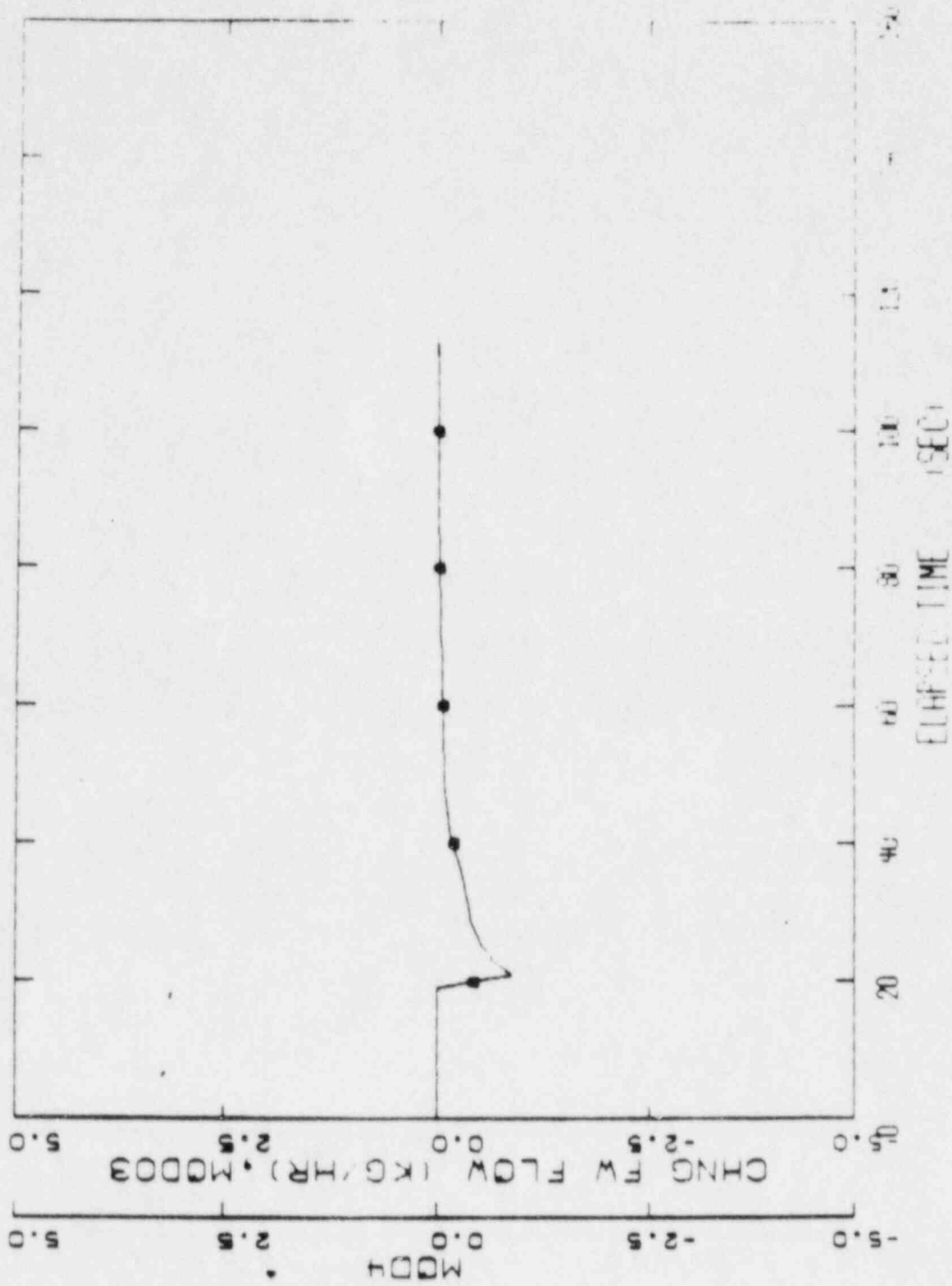




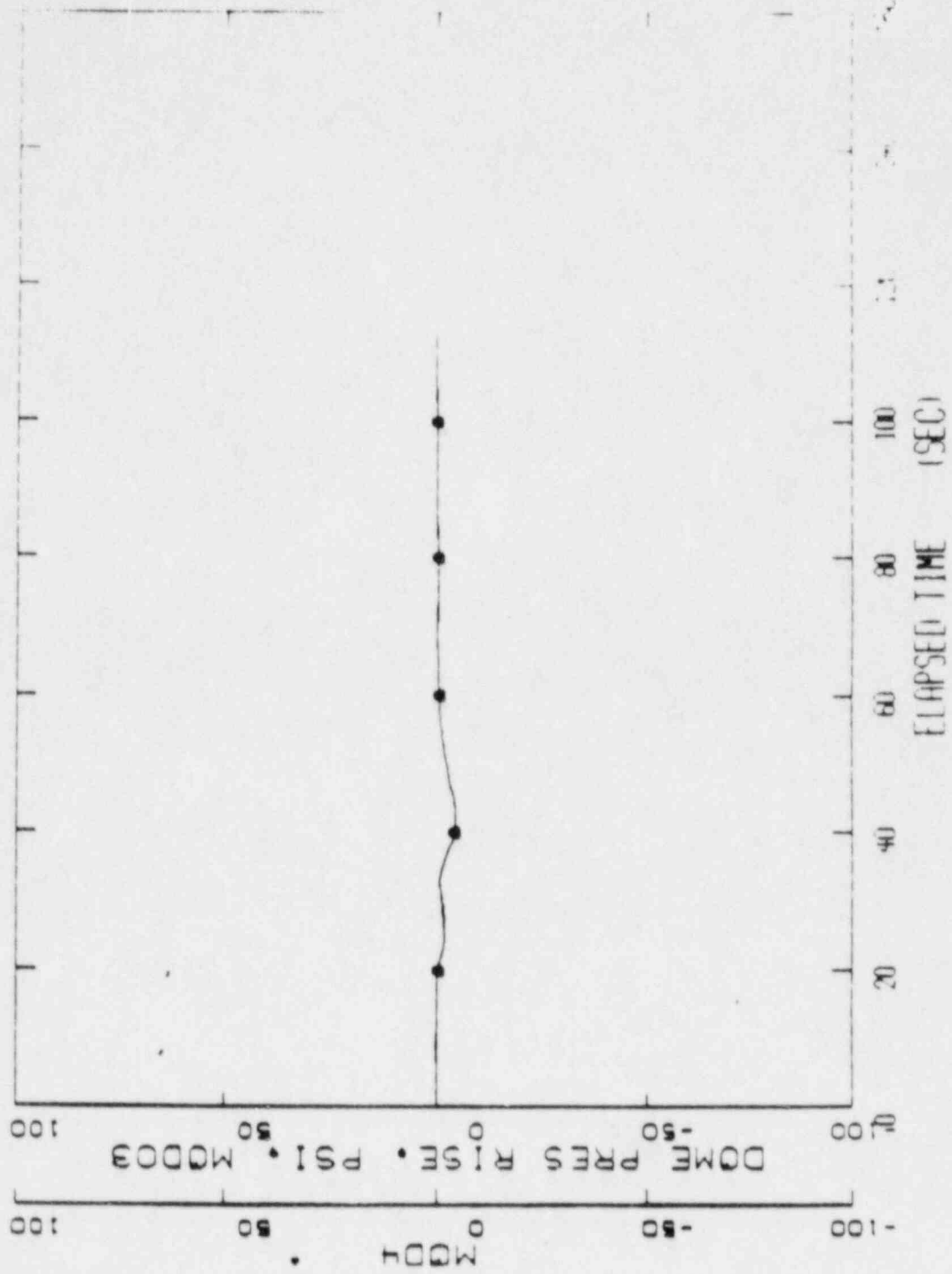
CYCLE1 LVL SIPT M0004 VS M0003 COMPARISON



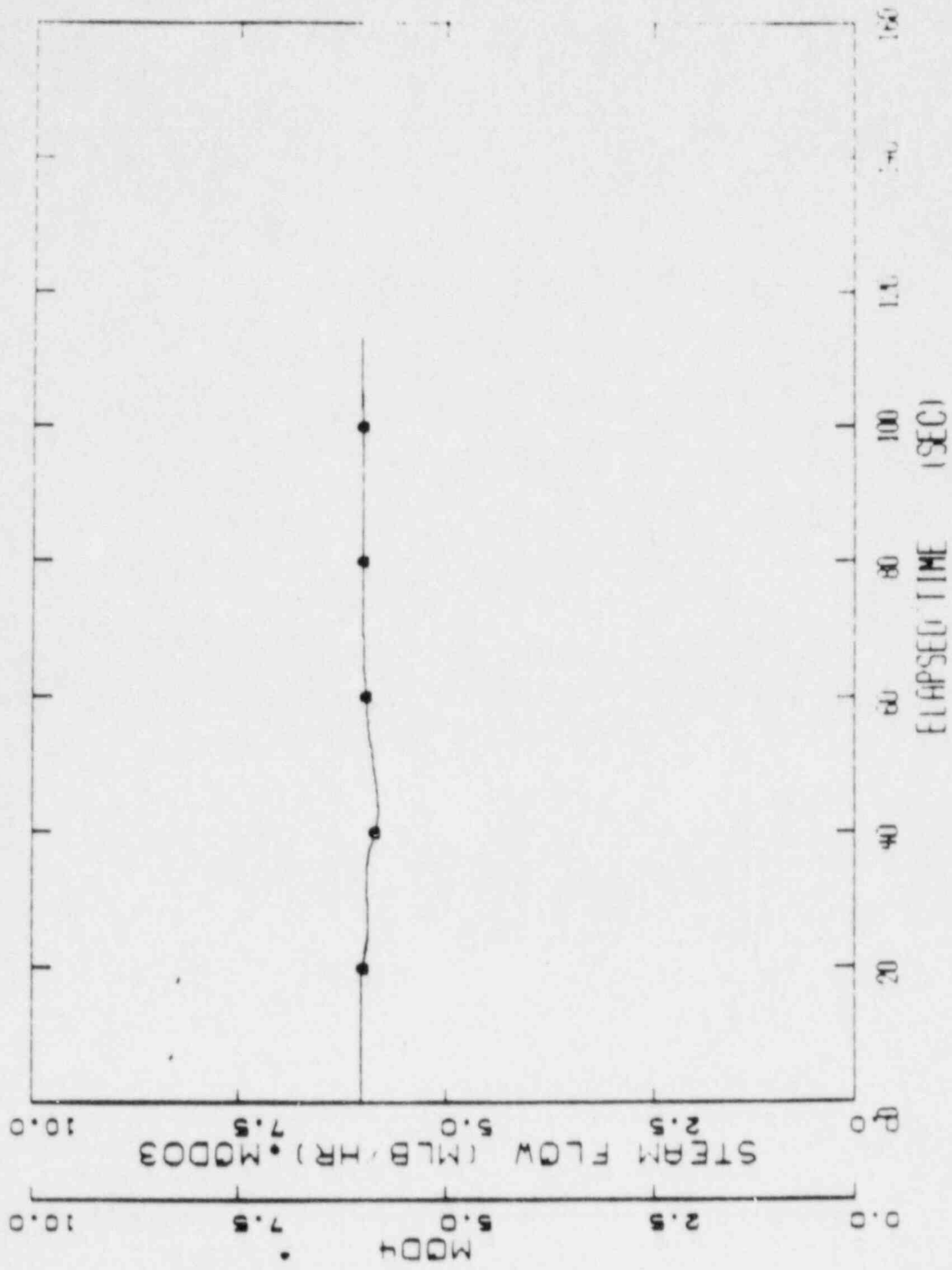
CYCLE1 LVI STFT MOD04 VS MOD03 COMPARISON



CYCLE1 LVL STPT M0004 VS M0003 COMPARE (S)A



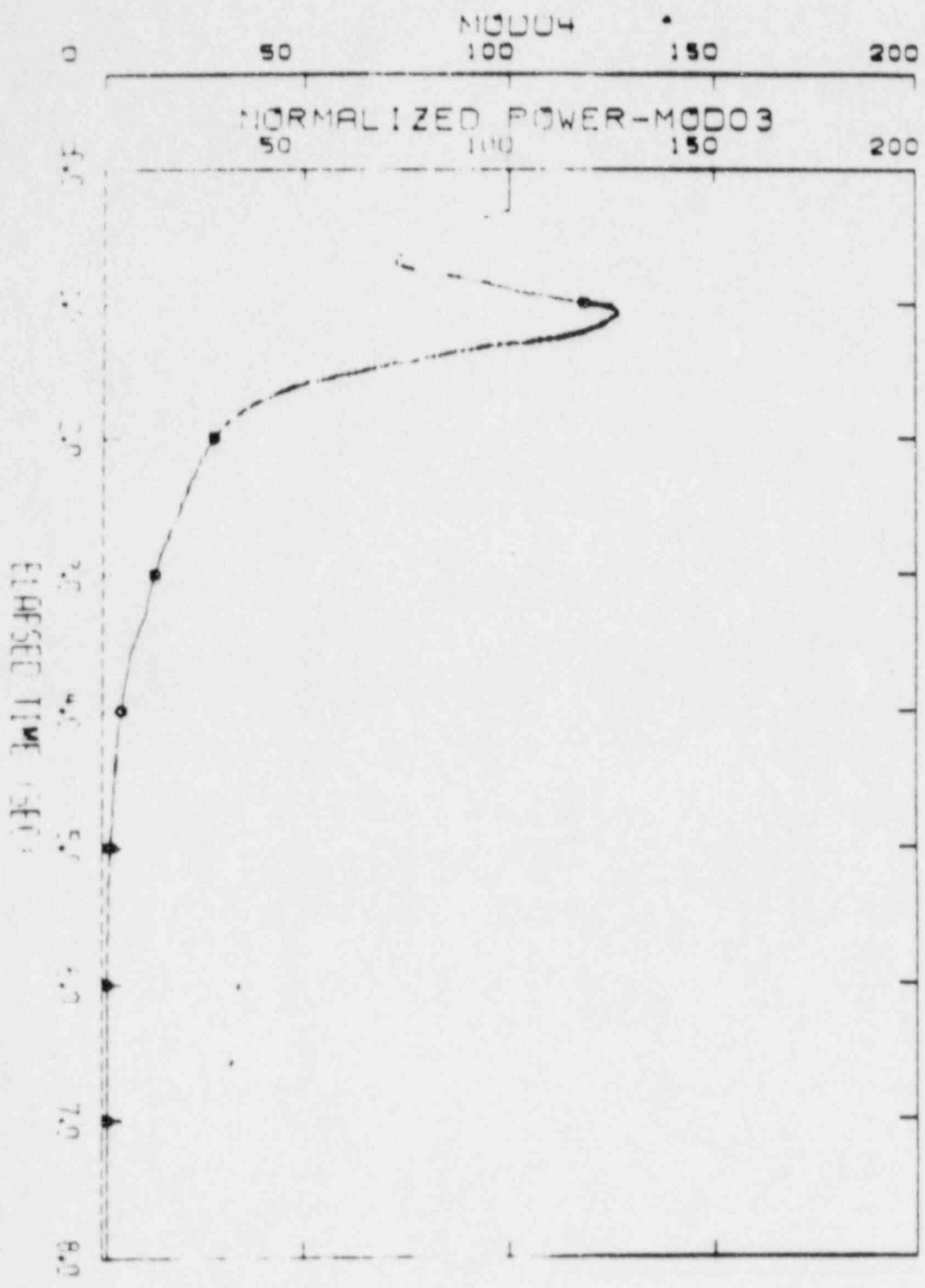
CYCLE1 LVL STPT M0004 VS M0003 COMPARISON



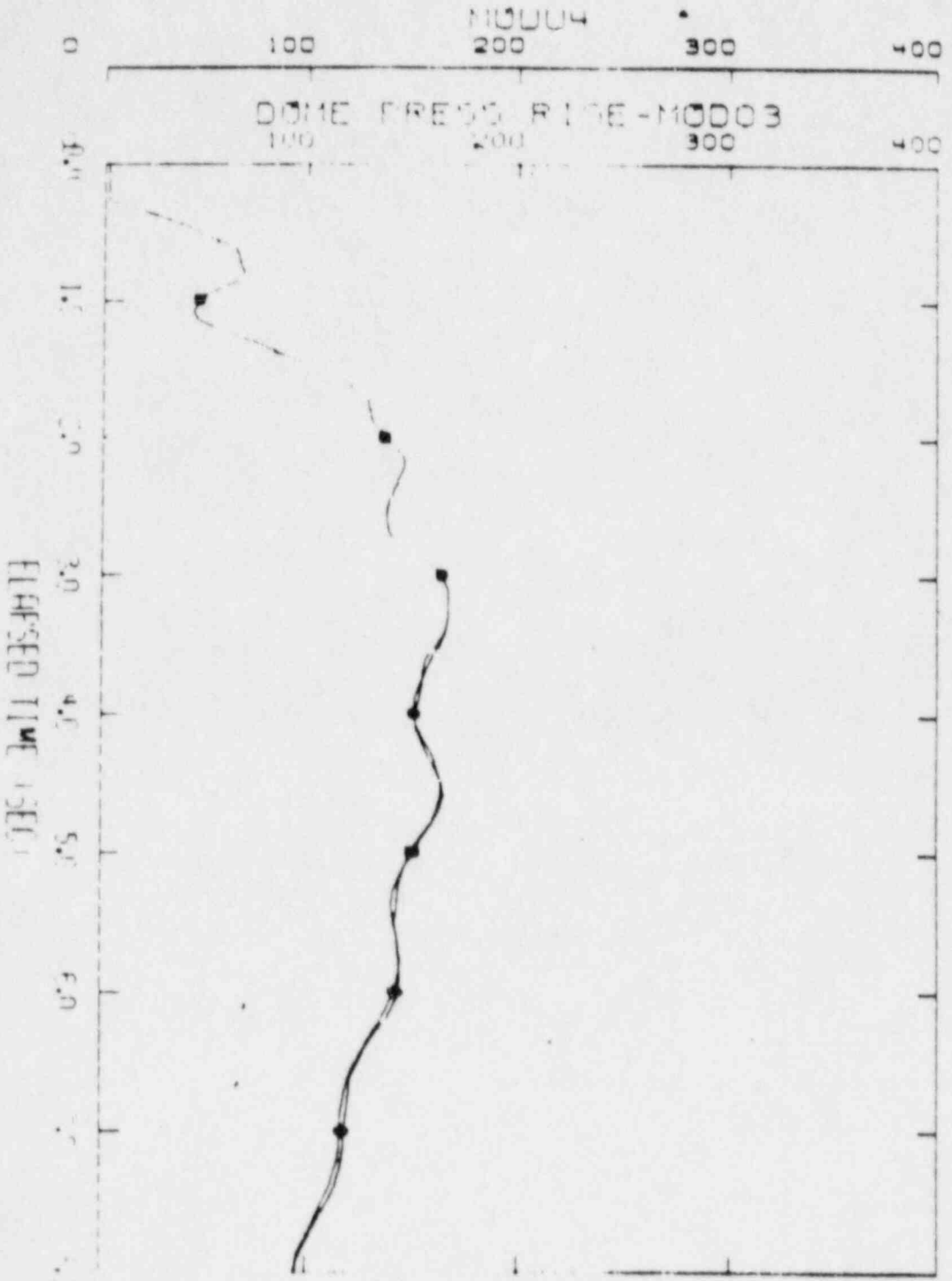
ATTACHMENT 3

Turbine Trip Without Bypass Plots

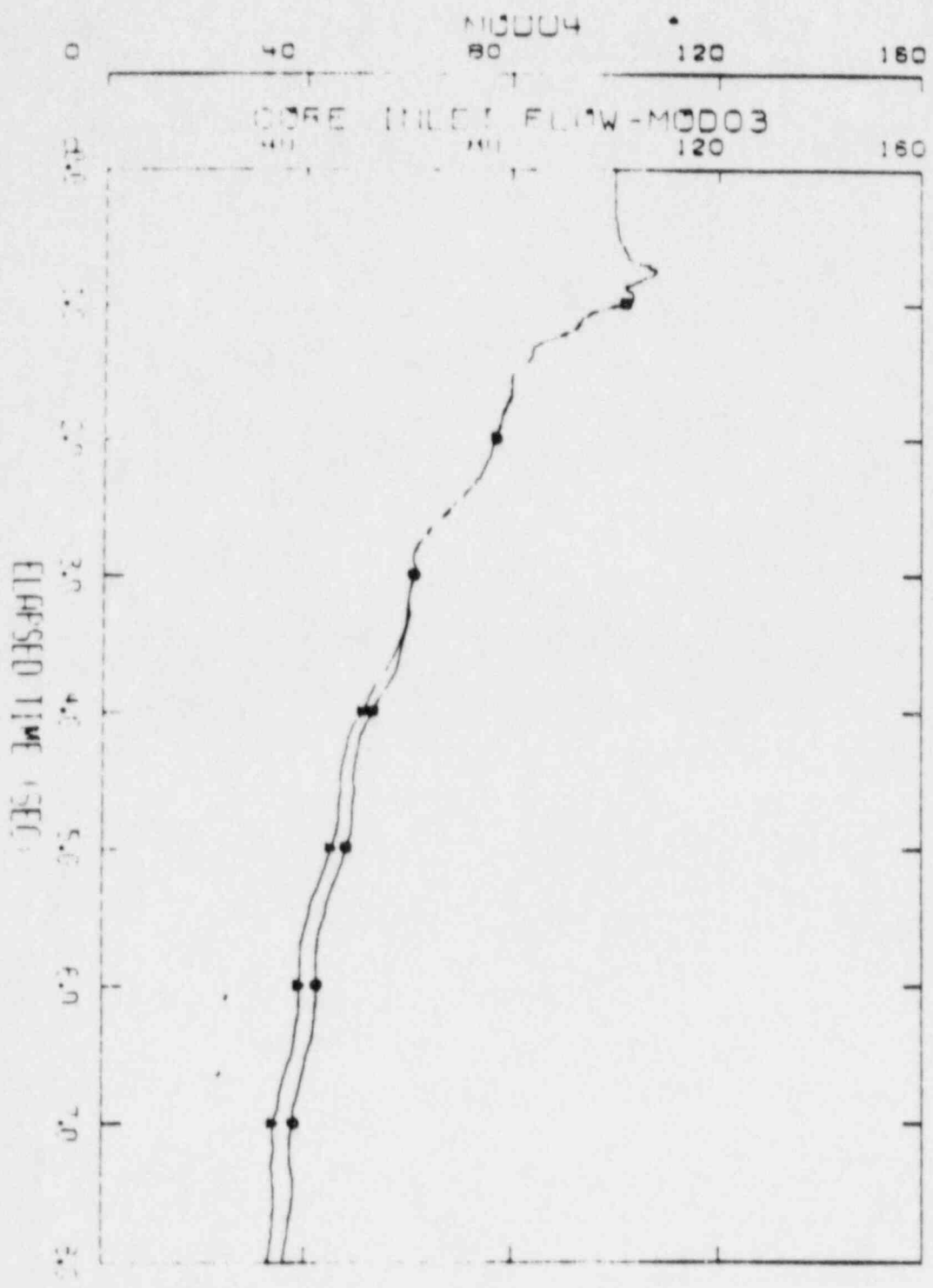
- Power Response
- Dome Pressure Rise
- Core Inlet Flow
- Average Heat Flux
- Normalized Feedwater Flow
- Change in Water Level
- Relief Valve Flow
- Normalized Steam Flow



COMPARISON MOD03 VS MOD04--TIWOBP--PIK

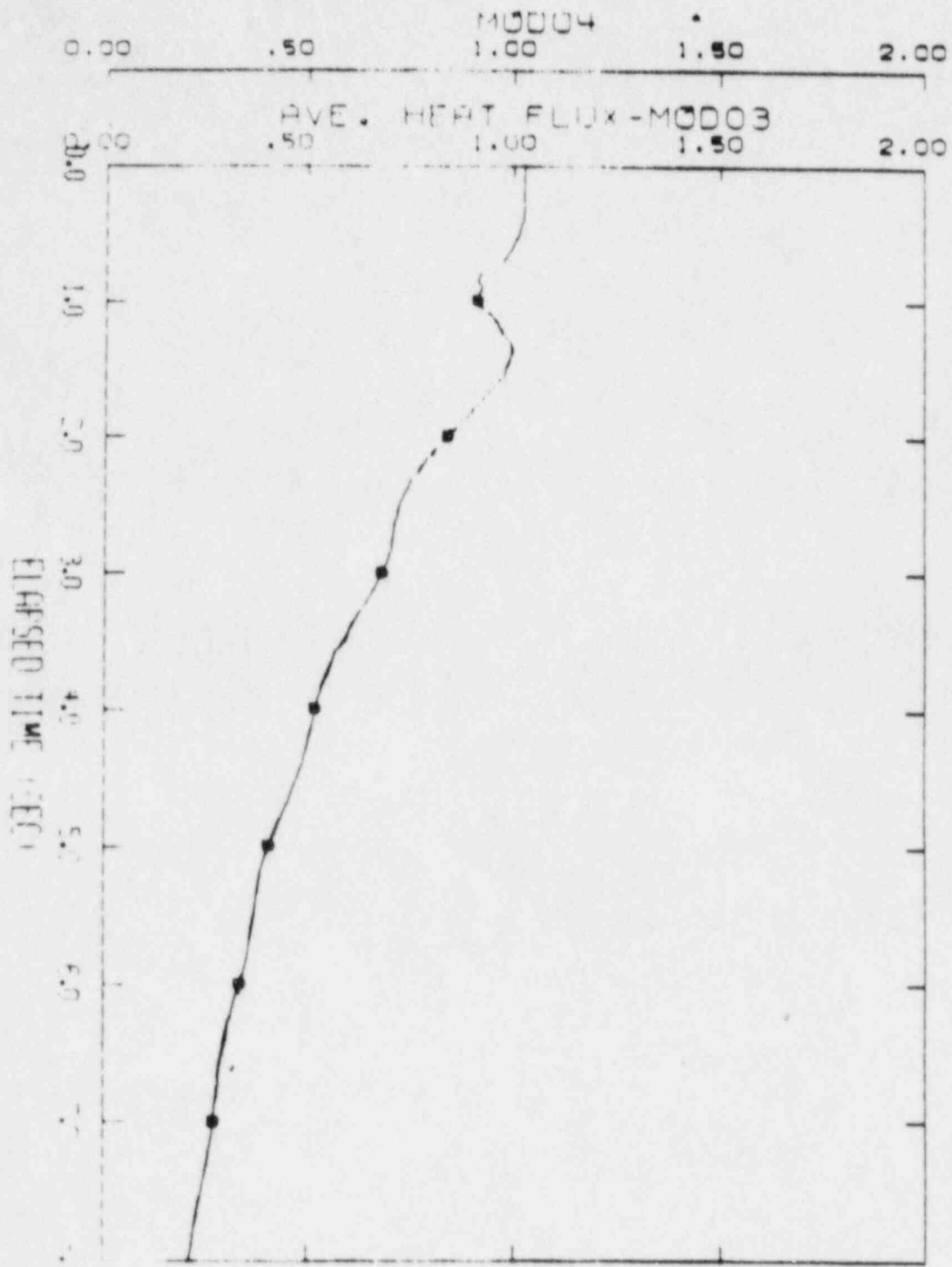


COMPARISON MOD03 VS MOD04--TIUBRP--PIK

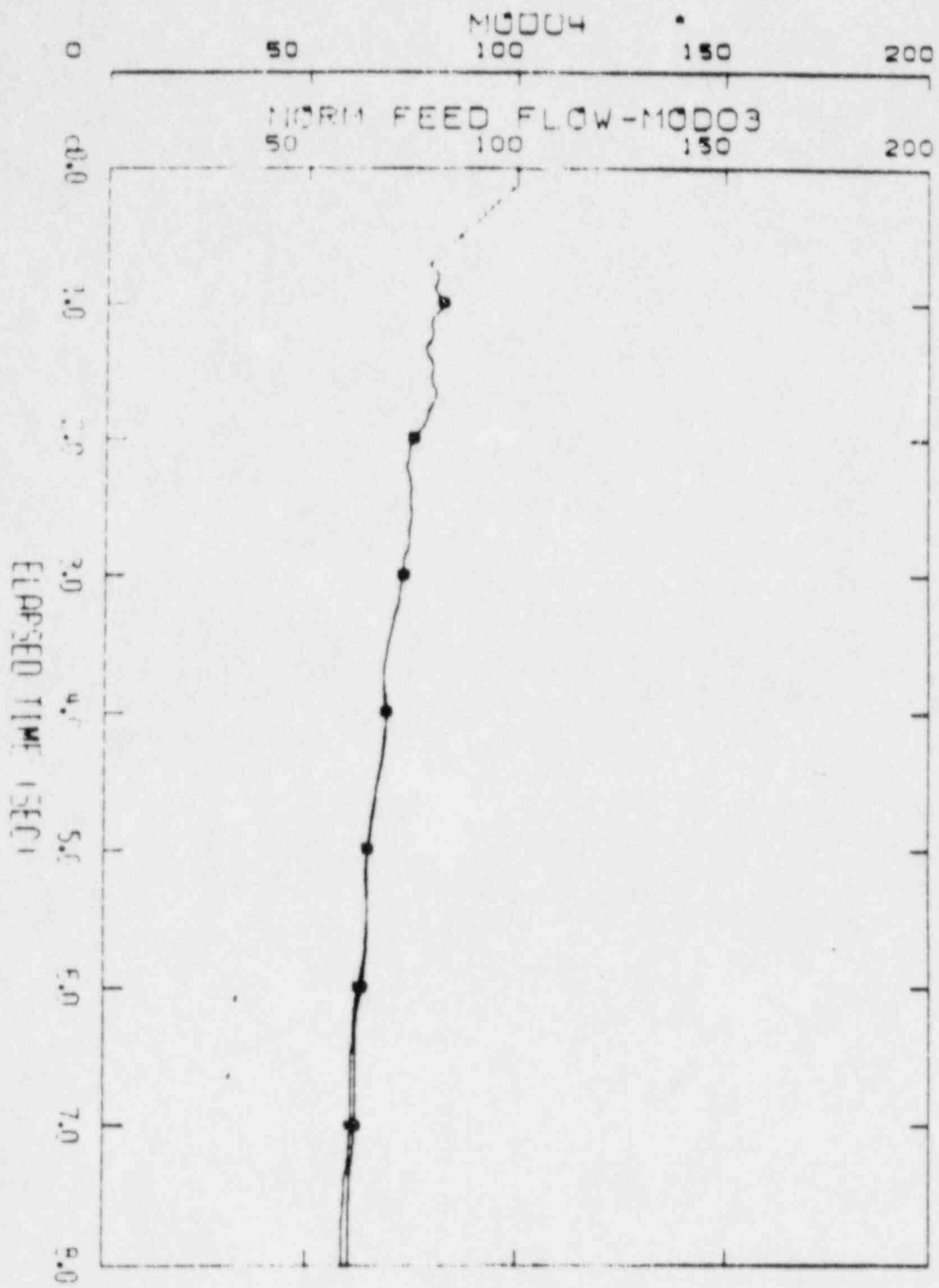


COMPARISON MOD03 VS MOD04--110BP--PTK

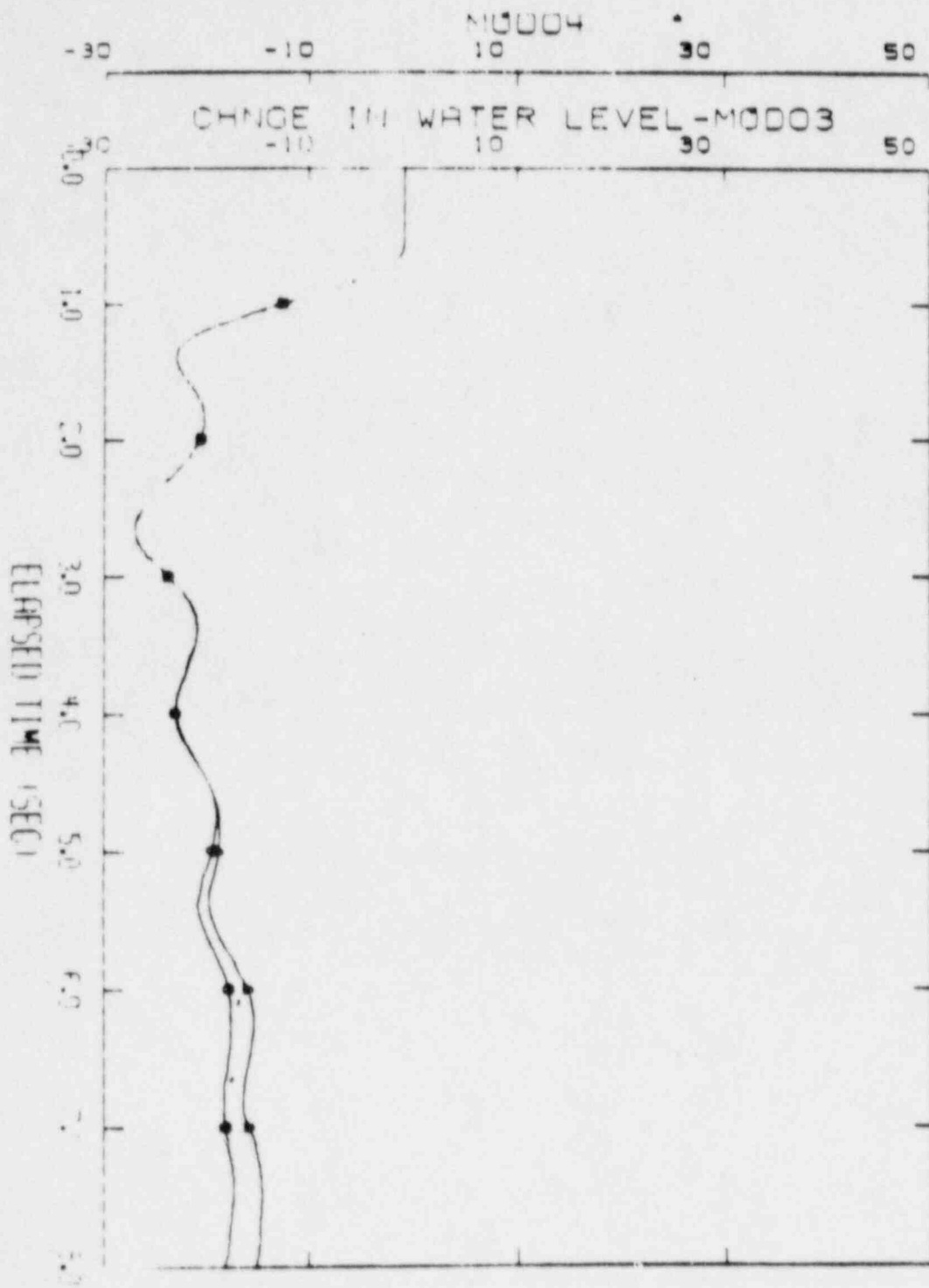




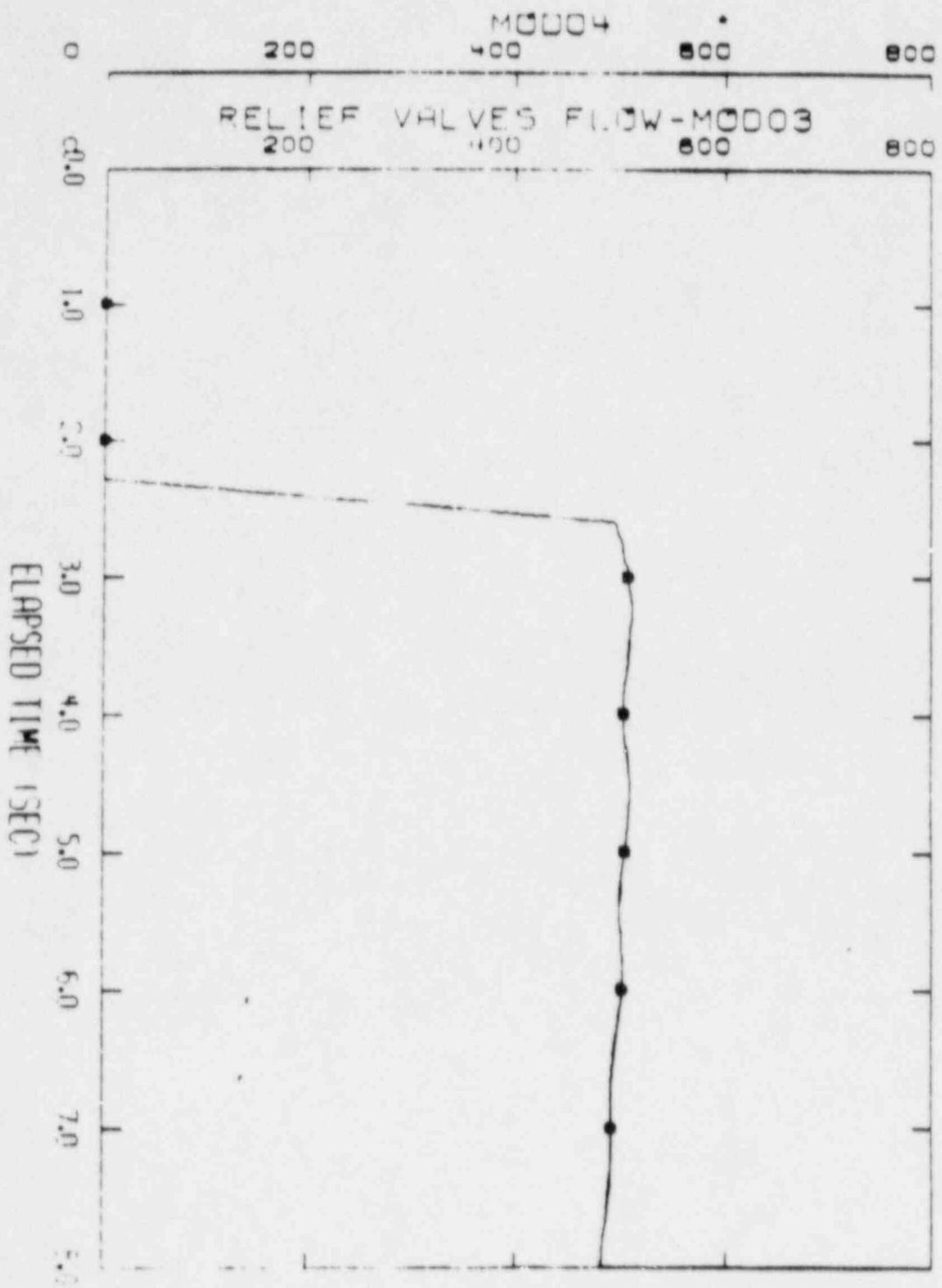
COMPARISON MOD03 VS MOD04--TIWRBP--PTK



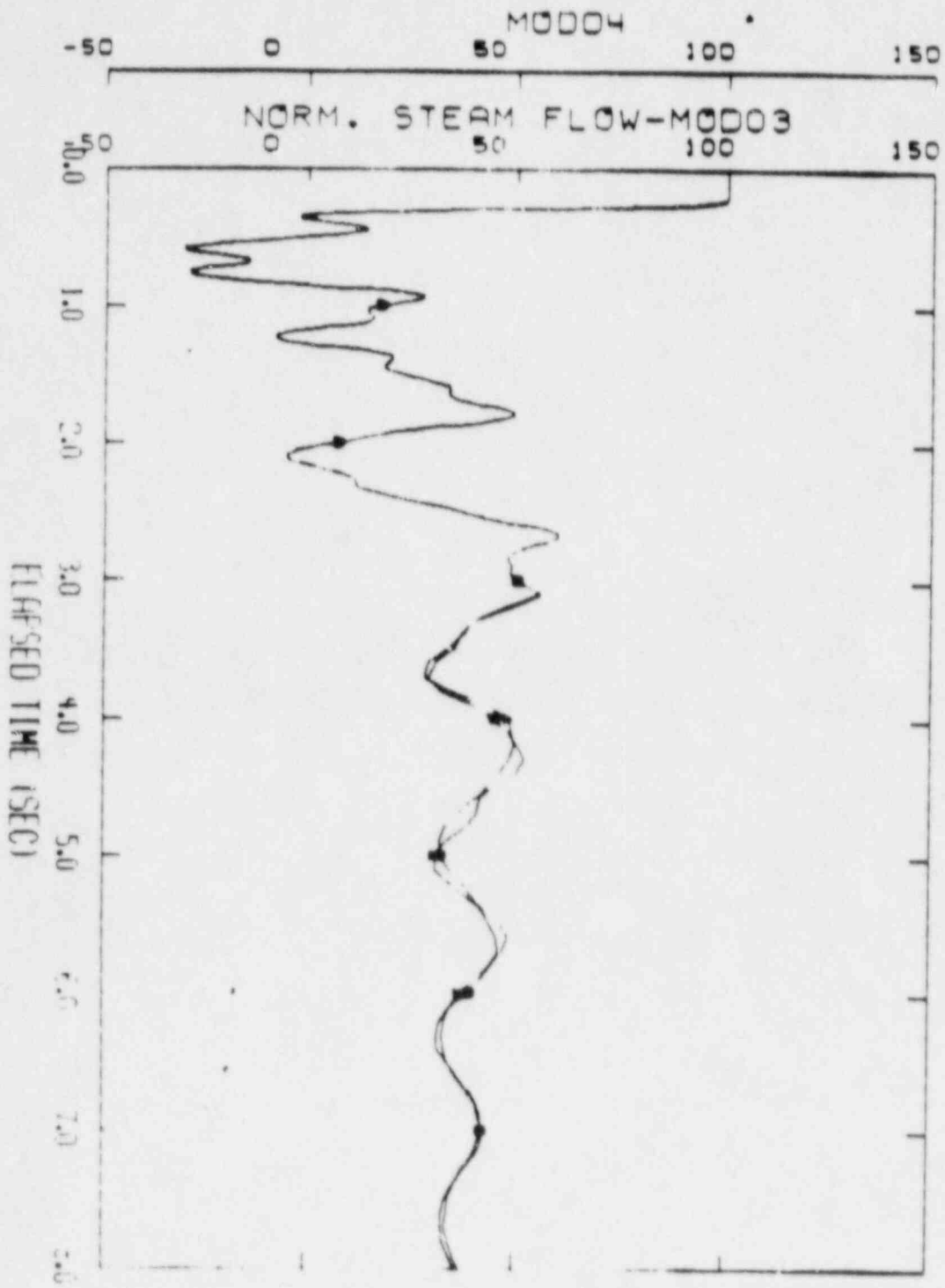
COMPARISON MODO3 VS MODO4--11W9BP--PIK



COMPARISON MOD03 VS MOD04--TIWOBP--PTK



COMPARISON MOD03 VS MOD04--TIWGP--PIK



COMPARISON M0003 VS M0004 - 11/20/87 - PTK