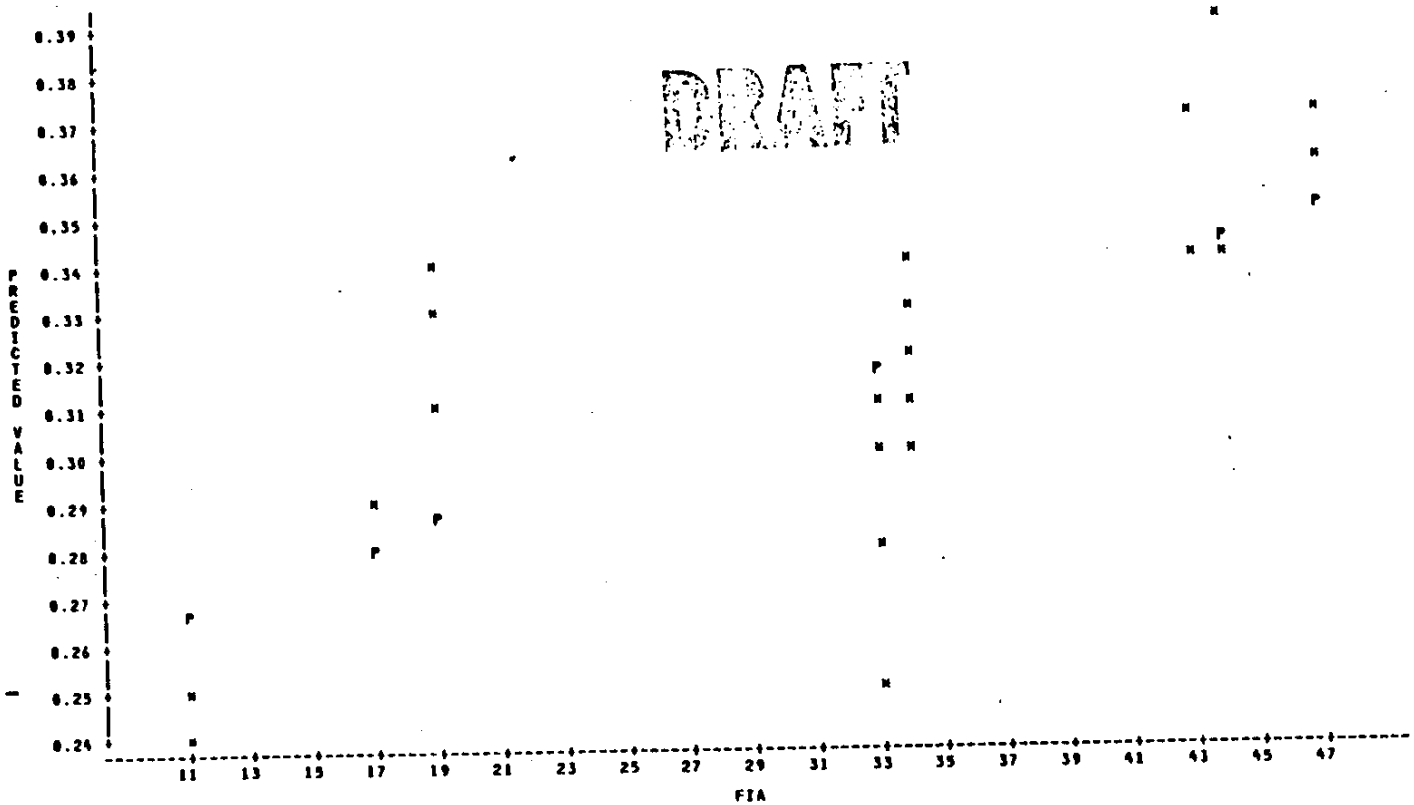
APPENDIX C

ARB Staff Statistical Analysis of CRC Data

DDAD 60

PLOT OF PMCS*FIA SYMBOL USED IS *
PLOT OF PRED800*FIA SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 37 OBS HIDDEN

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.01764693	0.01764693	21.969	0.0001
ERROR	29	0.02329500	0.000803276		
C TOTAL	30	0.04094194			

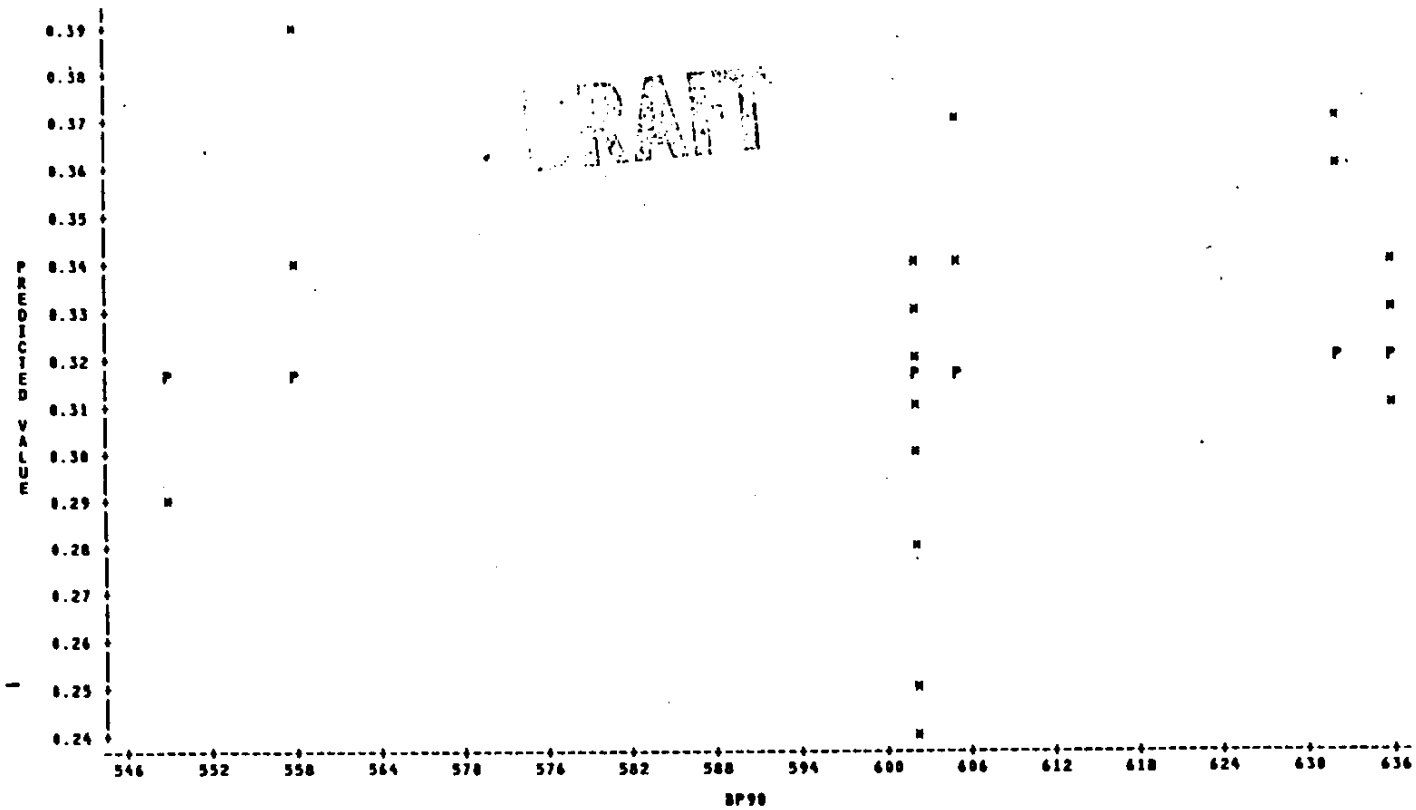
ROOT MSE	0.02834212	R-SQUARE	0.4310
DEP MEAN	0.3177419	ADJ R-SQ	0.4114
C.V.	8.919856		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.24132976	0.01707897	14.130	0.0001
FIA	1	0.002329181	0.000496937	4.687	0.0001

0000

PLOT OF FMCS*BP90 SYMBOL USED IS M
PLOT OF PRED813*BP90 SYMBOL USED IS P



DRAFT

NOTE: 132 OBS HAD MISSING VALUES 42 OBS HIDDEN

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.000040444	0.000040444	0.029	0.8667
ERROR	29	0.04090149	0.001410396		
C TOTAL	30	0.04094194			

ROOT MSE	0.03755524	R-SQUARE	0.0010
DEP MEAN	0.3177419	ADJ R-SQ	-0.0335
C.V.	11.81942		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.28957834	0.16645163	1.740	0.0925
BP90	1	0.000047063	0.000277924	0.169	0.8667

DEP VARIABLE: PMCS

DRAFT

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.01802897	0.009014485	11.016	0.0003
ERROR	28	0.02291297	0.000818320		
C TOTAL	30	0.04094194			

ROOT MSE	0.0286063	R-SQUARE	0.4404
DEP MEAN	0.3177419	ADJ R-SQ	0.4004
C.V.	9.002997		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.15323349	0.13008054	1.178	0.2487
FIA	1	0.002363119	0.000504022	4.689	0.0001
BF90	1	0.000145354	0.000212733	0.683	0.5001

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.01025141	0.01025141	9.687	0.0042
ERROR	29	0.03069053	0.001058294		
C TOTAL	30	0.04094194			

ROOT MSE	0.03253143	R-SQUARE	0.2504
DEP MEAN	0.3177419	ADJ R-SQ	0.2245
C.V.	10.23832		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.27961039	0.01357359	20.600	0.0001
SULFUR	1	0.17244025	0.05540515	3.112	0.0042

DRAFT

DEP VARIABLE: PMCS

DRAFT

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.02624969	0.008749897	16.080	0.0001
ERROR	27	0.01469224	0.000544157		
C TOTAL	30	0.04094194			

ROOT MSE	0.02332718	R-SQUARE	0.6411
DEP MEAN	0.3177419	ADJ R-SQ	0.6013
C.V.	7.341548		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.06791853	0.10832218	0.627	0.5359
FIA	1	0.002206916	0.000412968	5.344	0.0001
SULFUR	1	0.15684228	0.04035249	3.887	0.0006
BP90	1	0.000238528	0.000175123	1.362	0.1844

EP VARIABLE: PMCS

ANALYSIS OF VARIANCE

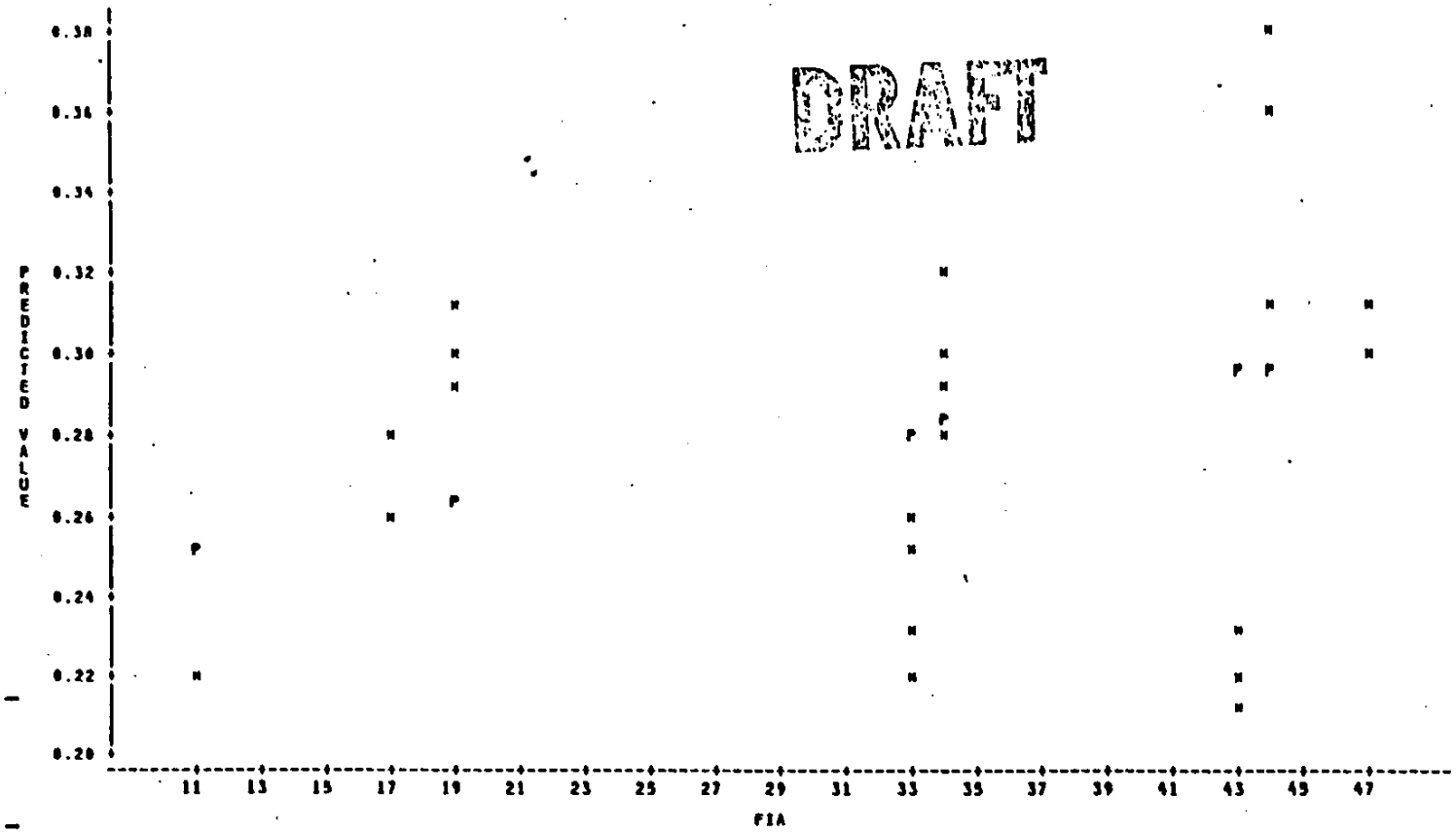
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.02524017	0.01262008	22.505	0.0001
ERROR	28	0.01570177	0.000560777		
C TOTAL	30	0.04094194			

ROOT MSE	0.02368074	R-SQUARE	0.6165
DEP MEAN	0.3177419	ADJ R-SQ	0.5891
C.V.	7.452822		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.21386918	0.01610354	13.281	0.0001
FIA	1	0.002159760	0.000417751	5.170	0.0001
SULFUR	1	0.14931871	0.04057850	3.680	0.0010

PLOT OF PMHSHFIA SYMBOL USED IS M
PLOT OF PREDB19HFIA SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 36 OBS HIDDEN

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.005806816	0.005806816	3.363	0.0770
ERROR	29	0.05006493	0.001726378		
C TOTAL	30	0.05587897			

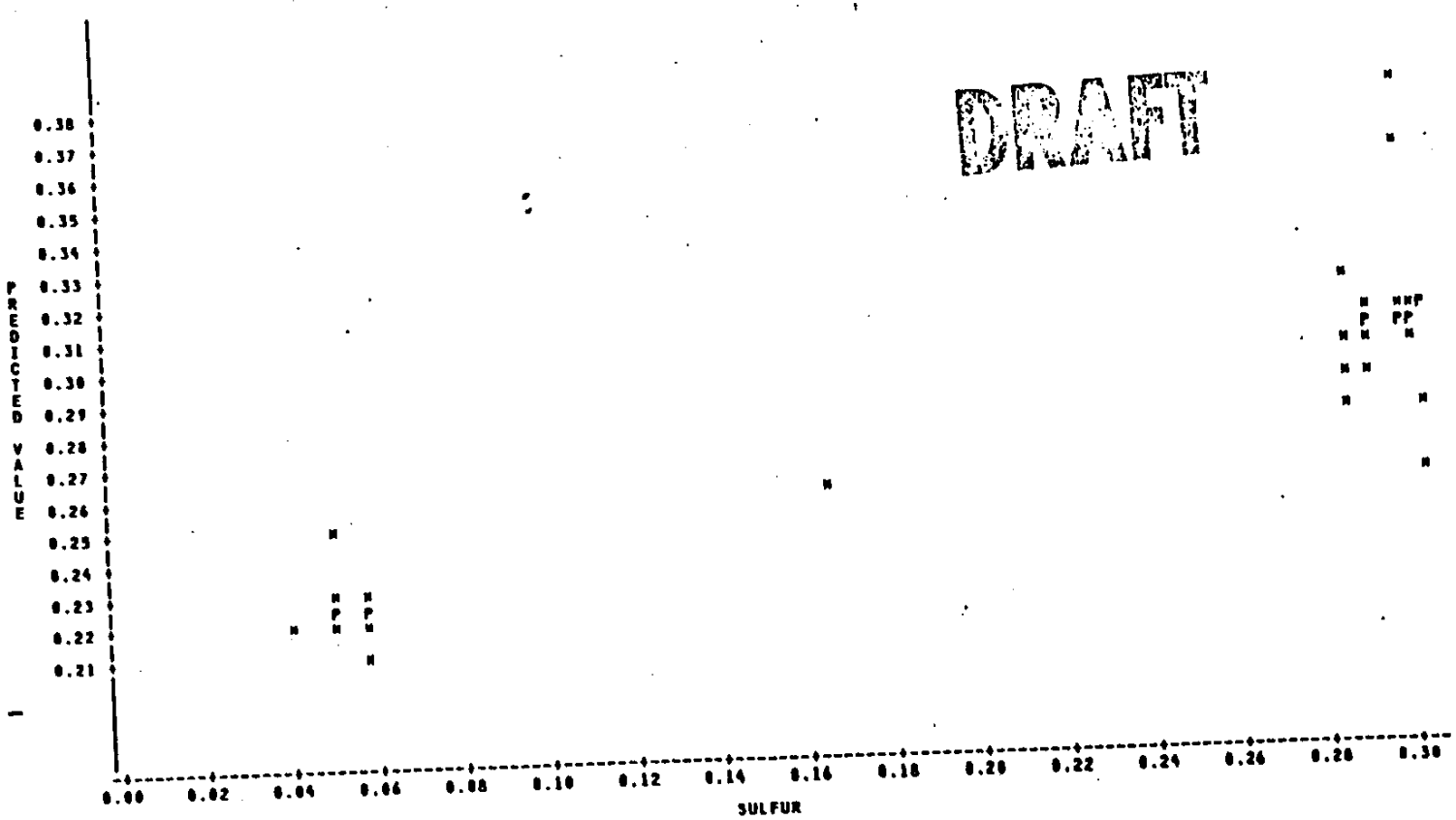
ROOT MSE	0.0415497	R-SQUARE	0.1039
DEP MEAN	0.2809677	ADJ R-SQ	0.0730
C.V.	14.78807		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.23713818	0.02503786	9.471	0.0001
FIA	1	0.001336004	0.000728512	1.834	0.0770

SAS

PLOT OF PMHS*SULFUR SYMBOL USED IS *
PLOT OF PRED82A*SULFUR SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 35 OBS HIDDEN

DEP VARIABLE: PMHS

DRAFT

ANALYSIS OF VARIANCE

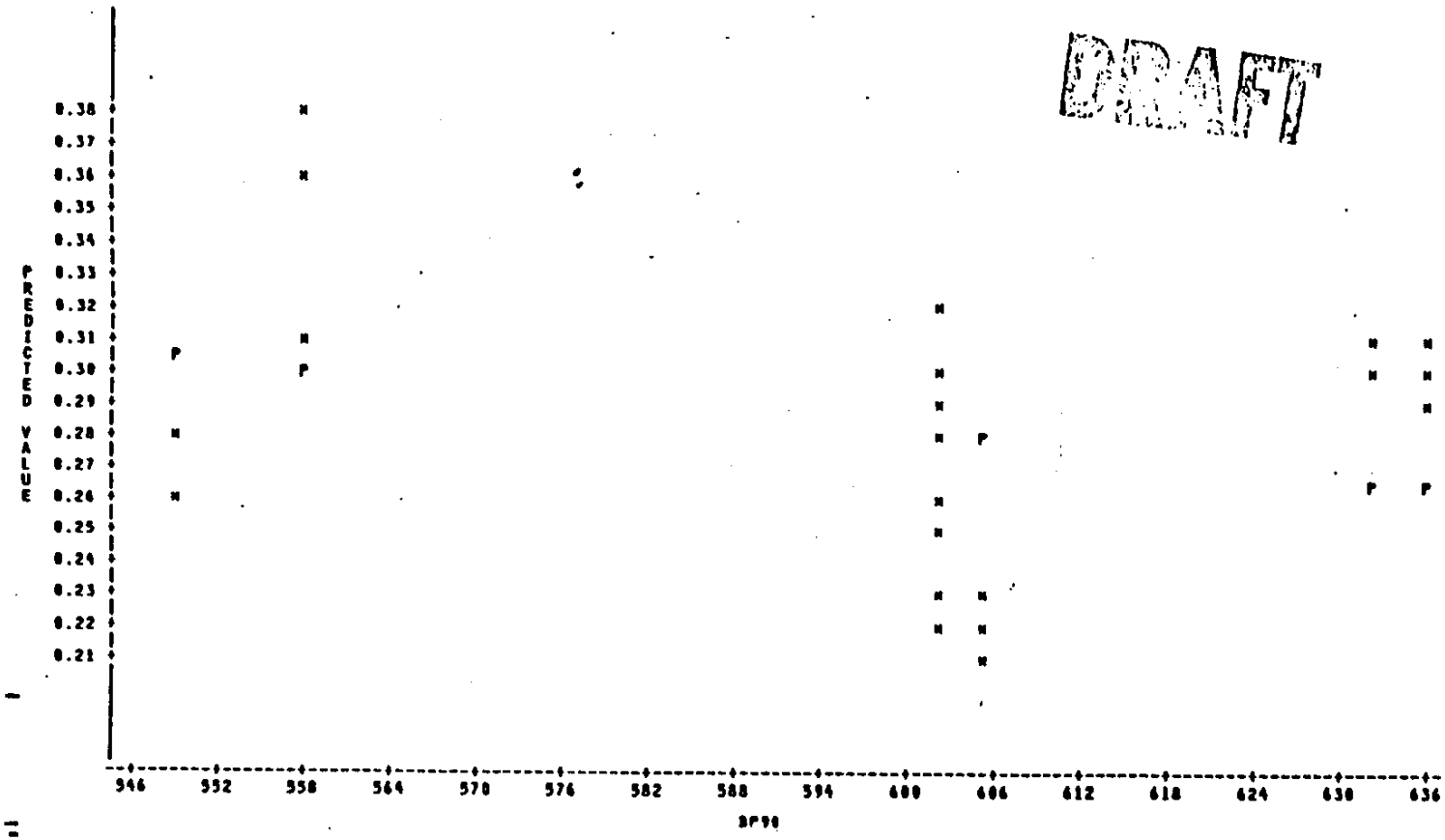
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.03788619	0.03788619	61.091	0.0001
ERROR	29	0.01798478	0.000620165		
C TOTAL	30	0.05587097			

ROOT MSE	0.02490311	R-SQUARE	0.6781
DEP MEAN	0.2809677	ADJ R-SQ	0.6670
C.V.	8.863334		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.20766282	0.01039071	19.985	0.0001
SULFUR	1	0.33150294	0.04241315	7.816	0.0001

PLOT OF PMHISHBP90 SYMBOL USED IS H
PLOT OF PREDB33HBP90 SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 39 OBS HIDDEN

DEP VARIABLE: PMHS

SAS

8:57 TUESDAY, JULY 5, 1988 687

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.003853975	0.003853975	2.149	0.1535
ERROR	29	0.05201699	0.001793689		
C TOTAL	30	0.05587097			

ROOT MSE	0.04235197	R-SQUARE	0.0690
DEP MEAN	0.2809677	ADJ R-SQ	0.0367
C.V.	15.07361		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.65639612	0.25623457	2.562	0.0159
EP	1	-0.000582001	0.000397048	-1.466	0.1535

DRAFT

CLP VARIABLE: PMHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.04092005	0.02046002	38.317	0.0001
ERROR	28	0.01495092	0.000533961		
C TOTAL	30	0.05587097			

ROOT MSE	0.02310761	R-SQUARE	0.7324
DEP MEAN	0.2809677	ADJ R-SQ	0.7133
C.V.	8.224291		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.17808593	0.01571380	11.333	0.0001
FIA	1	0.000971673	0.000407641	2.384	0.0242
SULFUP	1	0.32110058	0.03959640	8.109	0.0001

F VARIABLE: PMHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.008981769	0.004490885	2.682	0.0860
ERROR	28	0.04688920	0.001674614		
C TOTAL	30	0.05587097			

ROOT MSE	0.04092205	R-SQUARE	0.1608
DEP MEAN	0.2809677	ADJ R-SQ	0.1008
C.V.	14.56468		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.49113414	0.18608360	2.639	0.0134
FIA	1	0.001238156	0.000721017	1.717	0.0970
BP90	1	-0.000419081	0.000304321	-1.377	0.1794

DRAFT

P VARIABLE: PMHS

ANALYSIS OF VARIANCE

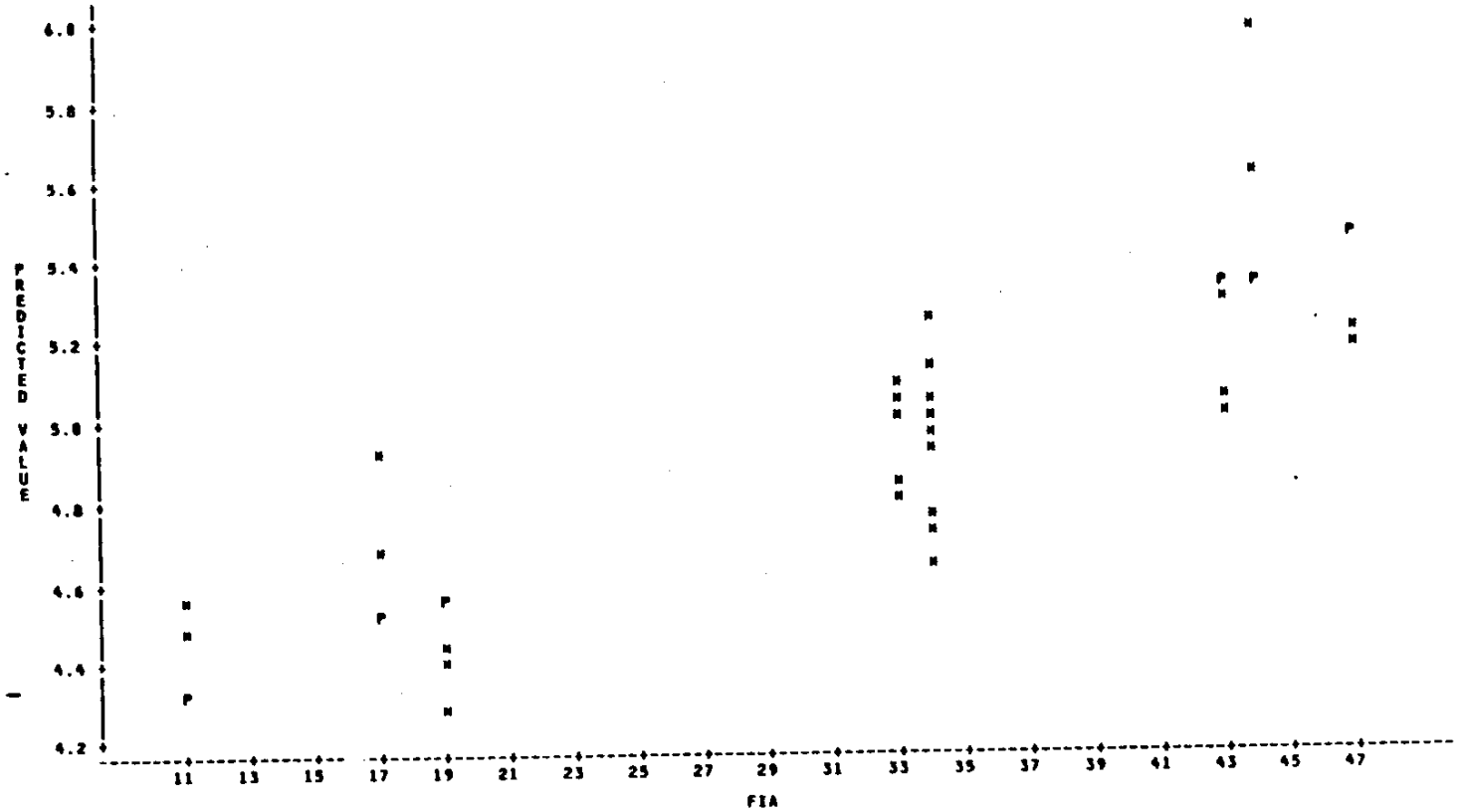
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.04198073	0.01396024	26.942	0.0001
ERROR	27	0.01399023	0.00051815		
C TOTAL	30	0.05587097			

ROOT MSE	0.02276306	R-SQUARE	0.7496
DEP MEAN	0.2809677	ADJ R-SQ	0.7218
C.V.	8.101662		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.32046253	0.10570264	3.032	0.0053
FIA	1	0.000925672	0.00040298	2.297	0.0296
SULFUR	1	0.31376124	0.03937665	7.968	0.0001
BP90	1	-0.000232687	0.00017088	-1.362	0.1846

PLOT OF NOXCSNFIA SYMBOL USED IS N
PLOT OF PRED500NFIA SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 30 OBS HIDDEN

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	3.04477629	3.04477629	37.398	0.0001
ERROR	29	2.36104306	0.08141528		
C TOTAL	30	5.40581935			

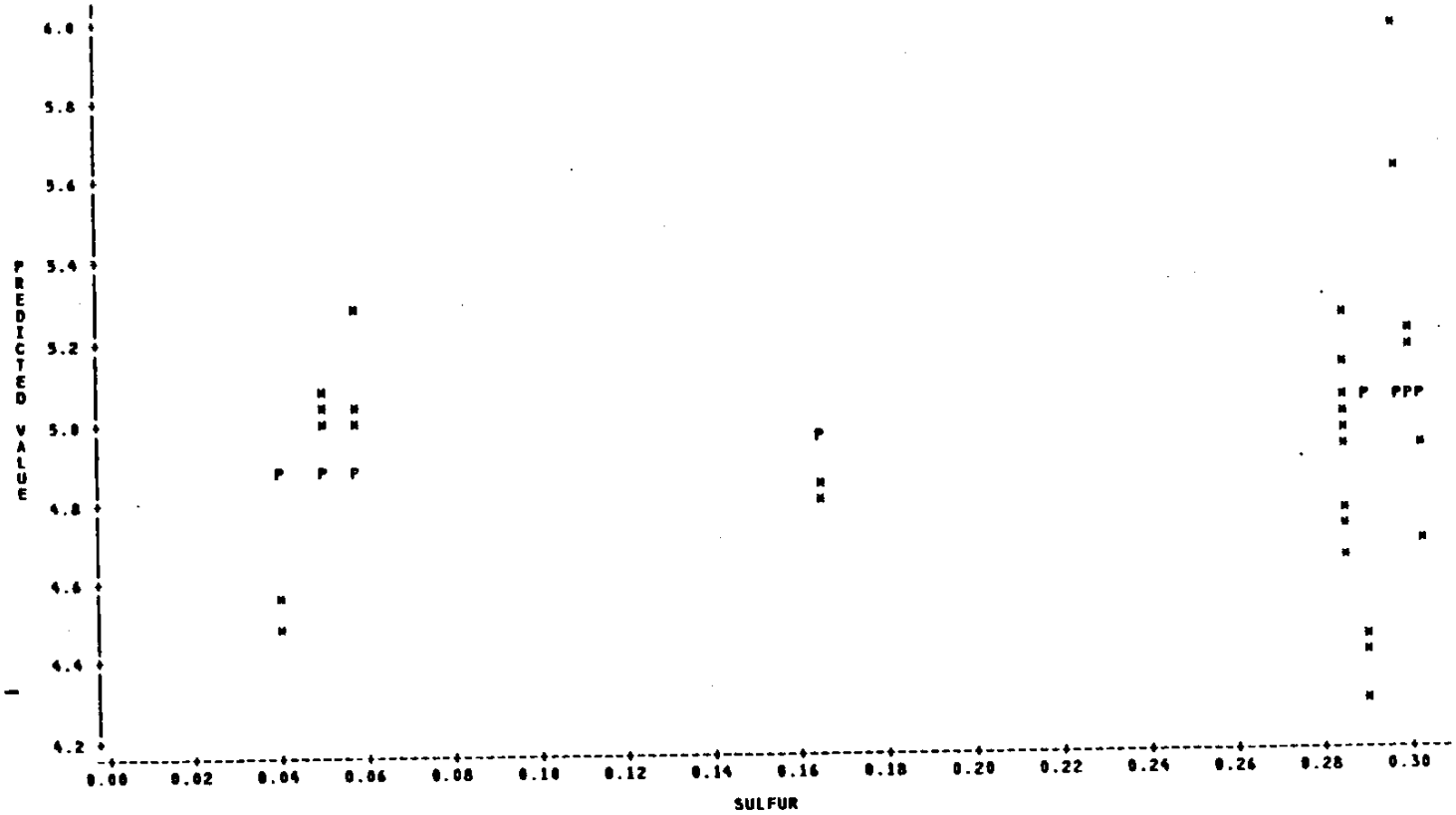
ROOT MSE	0.2853336	R-SQUARE	0.5632
DEP MEAN	4.991613	ADJ R-SQ	0.5482
C.V.	5.716261		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.98790882	0.17194210	23.193	0.0001
FIA	1	0.03059472	0.005002898	6.115	0.0001

UDAD

PLOT OF NOXCS*SULFUR SYMBOL USED IS *
PLOT OF PRED509*SULFUR SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 29 OBS HIDDEN

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.11666875	0.11666875	0.640	0.4303
ERROR	29	5.28915060	0.18238450		
C TOTAL	30	5.40581935			

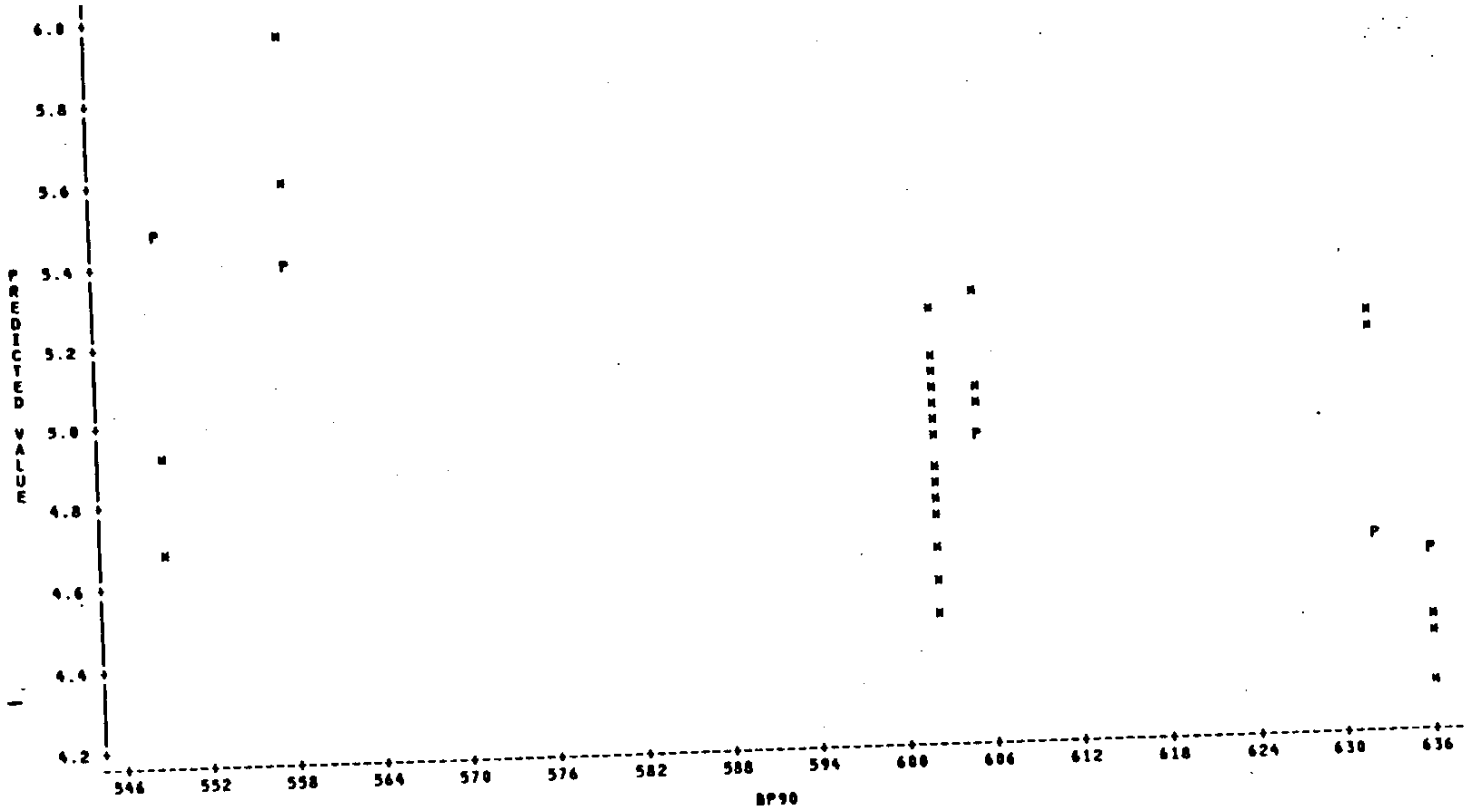
ROOT MSE	0.427065	R-SQUARE	0.0216
DEP MEAN	4.991613	ADJ R-SQ	-0.0122
C.V.	8.555651		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.86297470	0.17819089	27.291	0.0001
SULFUR	1	0.58173368	0.72734573	0.800	0.4303

SAS

PLOT OF NOXCSMBP90 SYMBOL USED IS M
PLOT OF PRED513MBP90 SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 34 OBS HIDDEN

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	1.84210005	1.84210005	14.990	0.0006
ERROR	29	3.56371931	0.12288687		
C TOTAL	30	5.40581935			

ROOT MSE	0.3505522	R-SQUARE	0.3408
DEP MEAN	4.991613	ADJ R-SQ	0.3180
C.V.	7.022825		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	11.80220454	1.55371098	7.081	0.0001
BP90	1	-0.01004411	0.002594226	-3.872	0.0006

EP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	3.06732701	1.53366350	18.363	0.0001
ERROR	28	2.33849235	0.08351758		
C TOTAL	30	5.40581935			

ROOT MSE	0.2889941	R-SQUARE	0.5674
DEP MEAN	4.991613	ADJ R-SQ	0.5365
C.V.	5.789593		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.94058539	0.19652381	20.051	0.0001
FIA	1	0.03030275	0.00509137	5.944	0.0001
SULFUR	1	0.25732434	0.49521035	0.520	0.6074

> VARIABLE: NOXES

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	4.46344904	2.23172452	66.310	0.0001
ERROR	28	0.94237031	0.03365608		
C TOTAL	30	5.40581935			

ROOT MSE	0.1834559	R-SQUARE	0.8257
DEP MEAN	4.991613	ADJ R-SQ	0.8132
C.V.	3.675294		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	2.35630479	0.27422362	11.216	0.0001
FIA	1	0.02852662	0.003232359	8.825	0.0001
RPM	1	-0.00885793	0.001364297	-6.492	0.0001

P VARIABLE: NOXCS

ANALYSIS OF VARIANCE

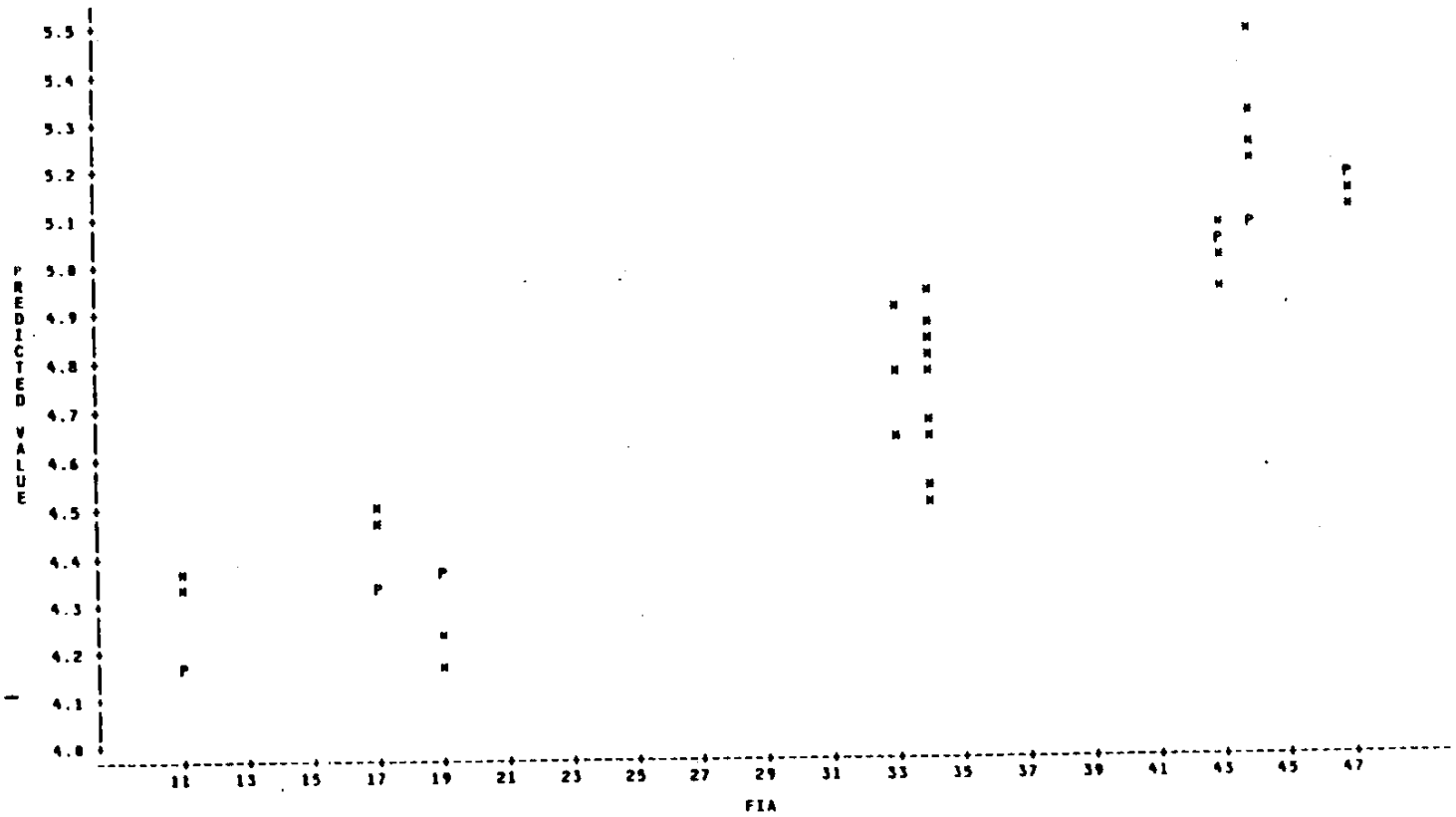
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	4.46361792	1.48787264	42.637	0.0001
ERROR	27	0.94220144	0.03489635		
C TOTAL	30	5.40581935			

ROOT MSE	0.1868056	R-SQUARE	0.8257
DEP MEAN	4.991613	ADJ R-SQ	0.8063
C.V.	3.74239		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	9.36453265	0.86745153	10.800	0.0001
FIA	1	0.02854901	0.003307076	8.633	0.0001
SULFUR	1	-0.02247961	0.32314555	-0.070	0.9451
HF90	1	-0.008870937	0.001402399	-6.326	0.0001

PLOT OF NOXHS*FIA SYMBOL USED IS *
PLOT OF PRED519*FIA SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 31 OBS HIDDEN

DEP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

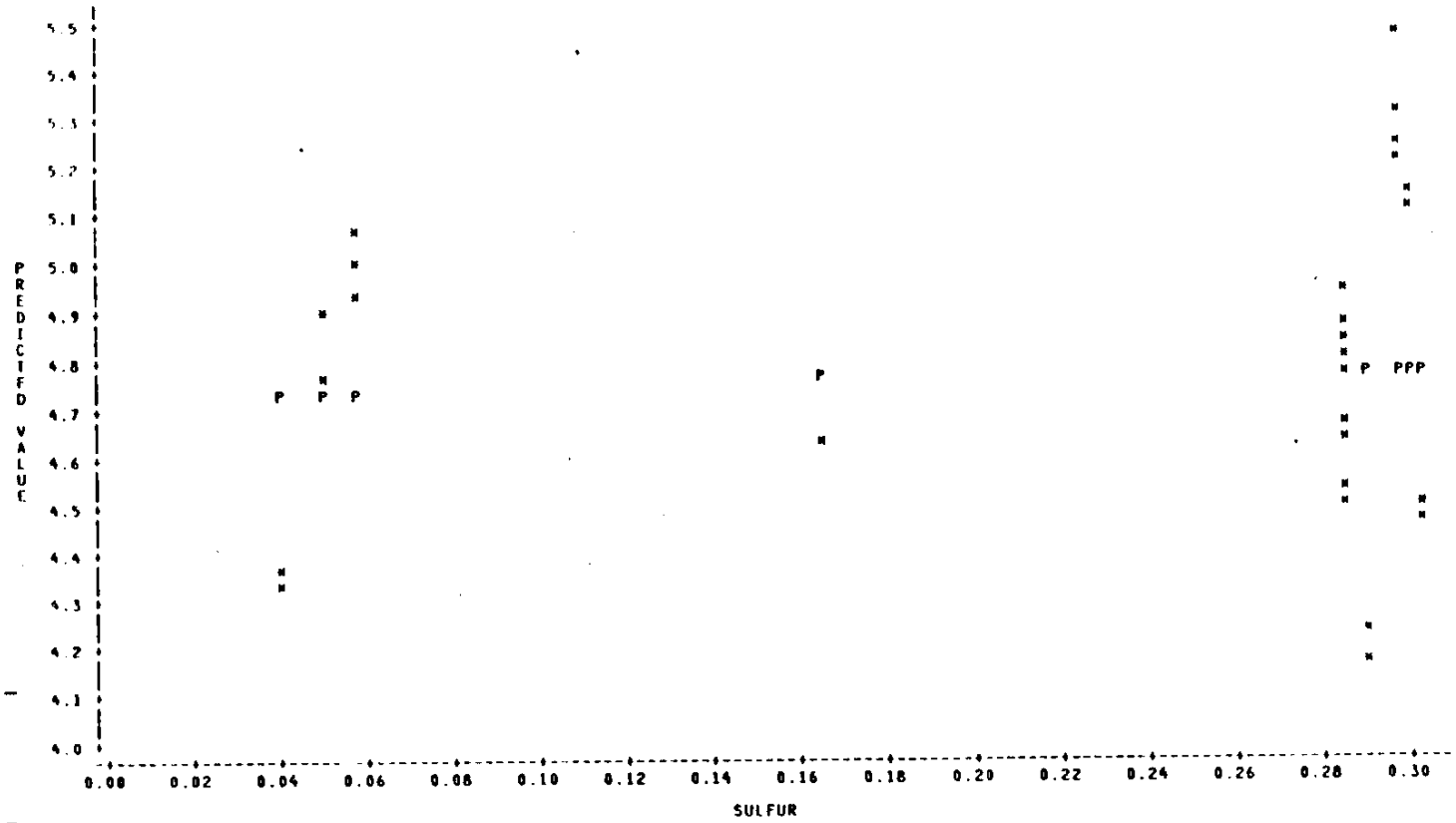
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	2.52997224	2.52997224	98.894	0.0001
ERROR	29	0.80719550	0.02783433		
C TOTAL	30	3.33716774			

ROOT MSE	0.1668362	R-SQUARE	0.7581
DEP MEAN	4.764516	ADJ R-SQ	0.7498
C.V.	3.501641		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.84959033	0.10053554	38.291	0.0001
FIA	1	0.02788859	0.002925224	9.534	0.0001

PLOT OF NOXHS*SULFUR SYMBOL USED IS *
PLOT OF PRED529*SULFUR SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 30 OBS HIDDEN

DEP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

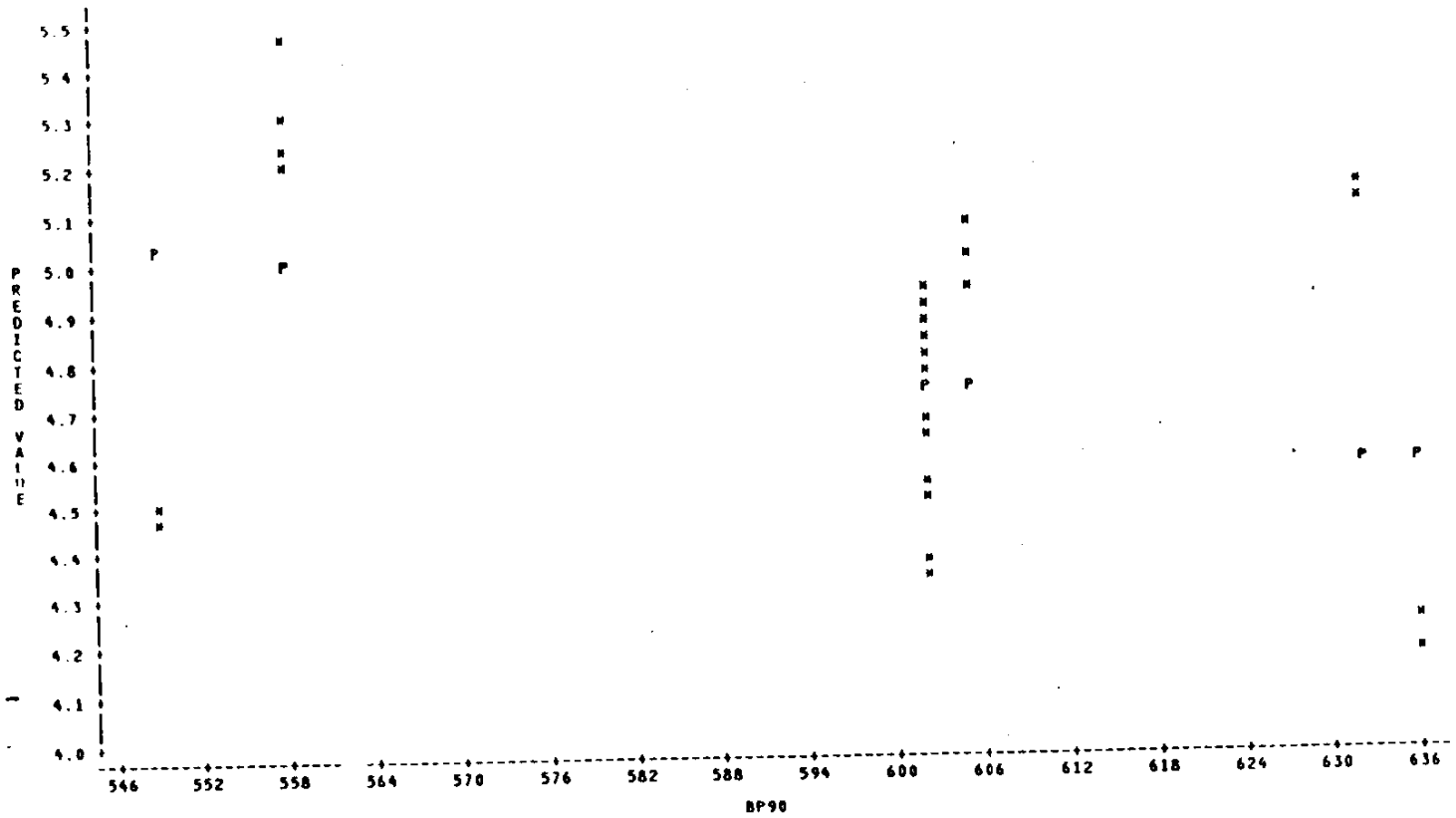
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.003009730	0.003009730	0.026	0.8726
ERROR	29	3.33415801	0.11497097		
C TOTAL	30	3.33716774			

ROOT MSE	0.3390737	R-SQUARE	0.0009
DEP MEAN	4.764516	ADJ R-SQ	-0.0335
C.V.	7.116645		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.74385489	0.14147693	33.531	0.0001
SULFUR	1	0.09343523	0.57748541	0.162	0.8726

PLOT OF NOXH5*BP90 SYMBOL USED IS *
PLOT OF PRED533*BP90 SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 35 OBS HIDDEN

DEP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.53718010	0.53718010	5.564	0.0253
ERROR	29	2.79998764	0.09655130		
C TOTAL	30	3.33716774			

ROOT MSE	0.310727	R-SQUARE	0.1610
DEP MEAN	4.764516	ADJ R-SQ	0.1320
C.V.	6.521692		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	8.01030729	1.37719852	5.816	0.0001
BP90	1	-0.005423941	0.002299503	-2.359	0.0253

EP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	2.54465706	1.27232853	44.952	0.0001
ERROR	28	0.79251069	0.02830395		
C TOTAL	30	3.33716774			

ROOT MSE	0.1682378	R-SQUARE	0.7625
DEP MEAN	4.764516	ADJ R-SQ	0.7456
C.V.	3.531057		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.89777863	0.11440625	34.082	0.0001
FIA	1	0.02812420	0.00296787[illegible]	9.476	0.0001
SULFUR	1	-0.20765144	0.28828649	-0.720	0.4773

> VARIABLE: NOXHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	2.86520541	1.43260471	84.993	0.0001
ERROR	28	0.47195633	0.01685565		
C TOTAL	30	3.33716774			

ROOT MSE	0.1298293	R-SQUARE	0.8586
DEP MEAN	4.764516	ADJ R-SQ	0.8485
C.V.	2.724922		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	6.45922378	0.55034896	10.941	0.0001
FTA	1	0.02688327	0.00228749B	11.752	0.0001
RF90	1	-0.004305764	0.000965488	-4.460	0.0001

P VARIABLE: NOXHS

ANALYSIS OF VARIANCE

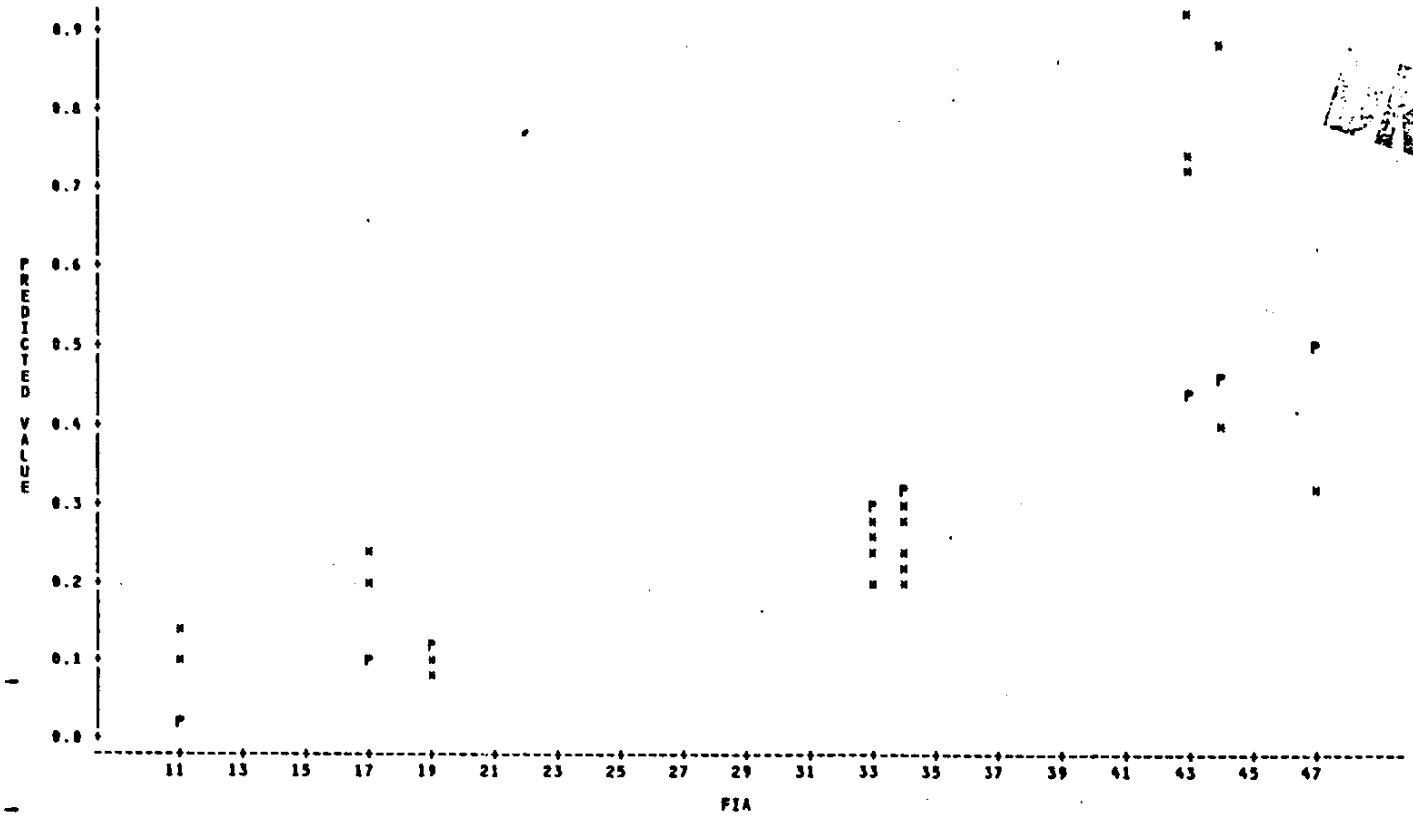
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	2.90615165	0.96871722	60.693	0.0001
ERROR	27	0.43101609	0.01596356		
C TOTAL	30	3.33716774			

ROOT MSE	0.126347	R-SQUARE	0.8708
DEP MEAN	4.764516	ADJ R-SQ	0.8565
C.V.	2.651832		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	6.64961896	0.58670539	11.334	0.0001
FIA	1	0.02723186	0.002236758	12.175	0.0001
SULFUR	1	-0.35002068	0.21856119	-1.601	0.1209
RF90	1	-0.704513697	0.000948520	-4.759	0.0001

PLOT OF HCCS*FIA SYMBOL USED IS M
PLOT OF PRED*FIA SYMBOL USED IS P



NOTE: 133 OBS HAD MISSING VALUES 36 OBS HIDDEN

DRAFT

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.54502068	0.54502068	18.699	0.0002
ERROR	28	0.81612599	0.02914736		
C TOTAL	29	1.36114667			

ROOT MSE	0.170726	R-SQUARE	0.4004
DEP MEAN	0.3086667	ADJ R-SQ	0.3790
C.V.	55.31079		

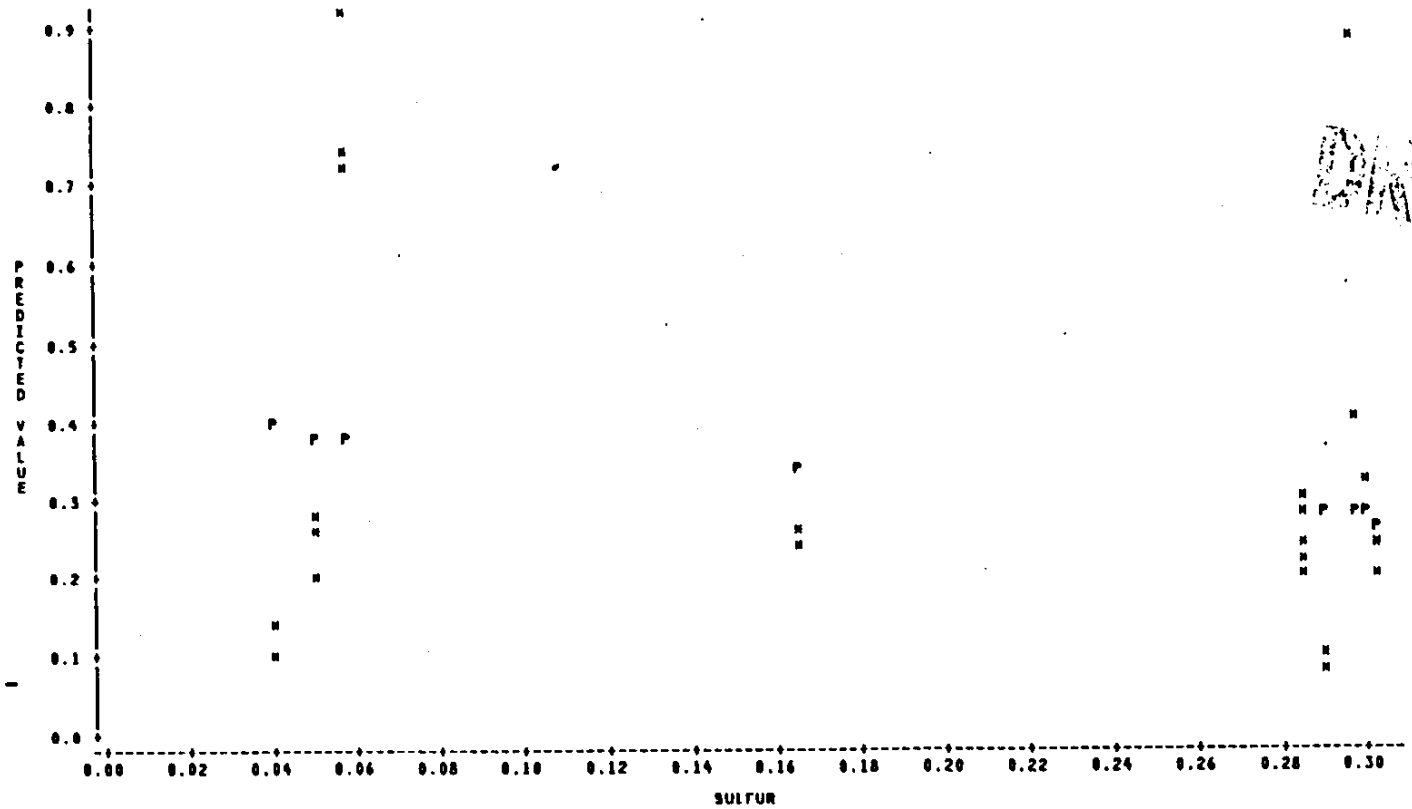
PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	-0.13560496	0.10736475	-1.263	0.2170
FIA	1	0.01335486	0.003088392	4.324	0.0002

DRAFT

DDAD

PLOT OF HCCS*SULFUR SYMBOL USED IS M
PLOT OF PRED9*SULFUR SYMBOL USED IS P



DRAFT

NOTE: 133 OBS HAD MISSING VALUES 34 OBS HIDDEN

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.07832484	0.07832484	1.710	0.2017
ERROR	28	1.28282182	0.04581507		
C TOTAL	29	1.36114667			

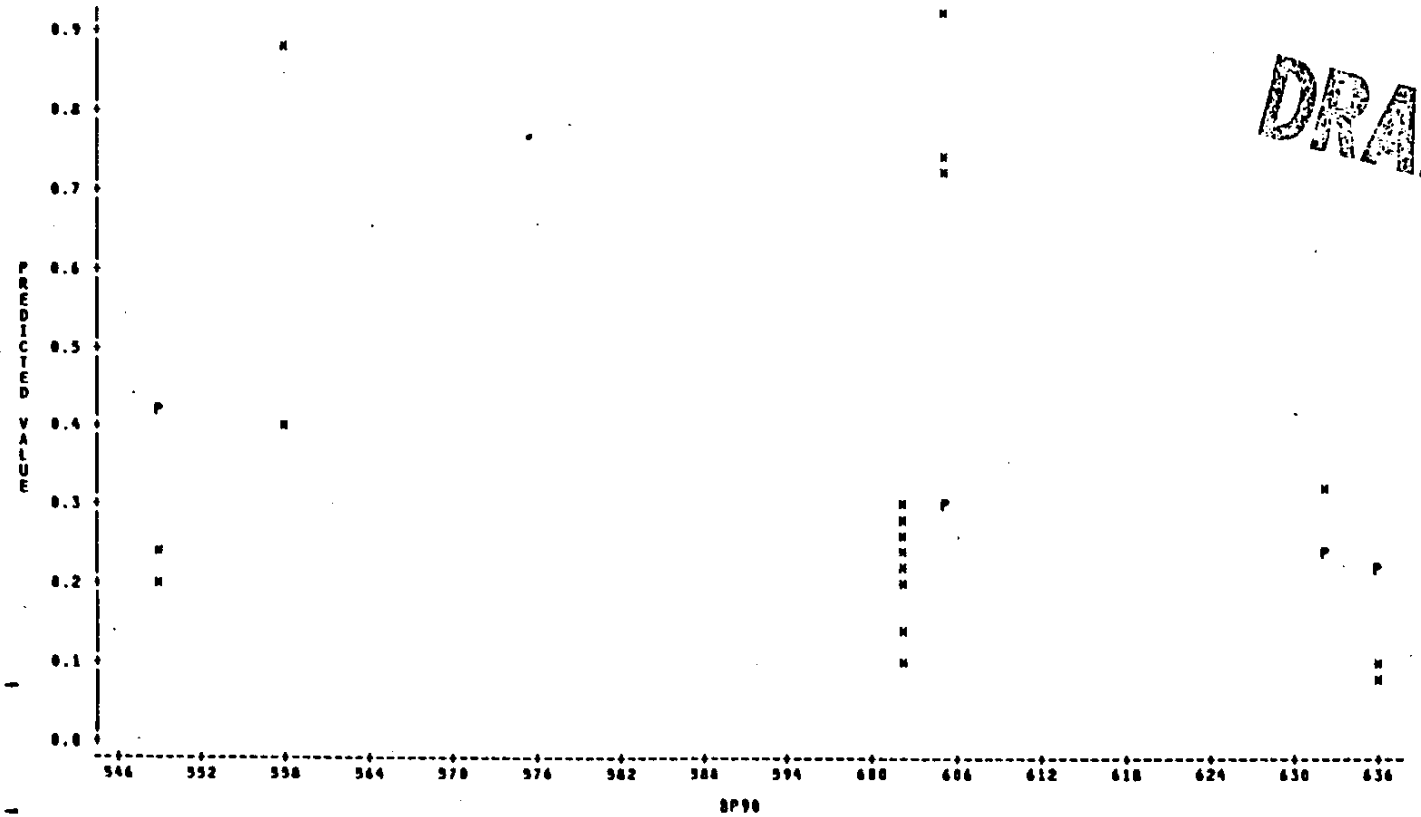
ROOT MSE	0.2140445	R-SQUARE	0.0575
DEP MEAN	0.3086667	ADJ R-SQ	0.0239
C.V.	69.34488		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.41372850	0.08935151	4.630	0.0001
SULFUR	1	-0.48017290	0.36724174	-1.308	0.2017

DRAFT

PLOT OF HCCS*BP90 SYMBOL USED IS H
PLOT OF PRED13*BP90 SYMBOL USED IS P



DRAFT

NOTE: 133 OBS HAD MISSING VALUES 41 OBS HIDDEN

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.07647213	0.07647213	1.667	0.2073
ERROR	28	1.28467454	0.04588123		
C TOTAL	29	1.36114667			

ROOT MSE	0.2141991	R-SQUARE	0.0562
DEP MEAN	0.3086667	ADJ R-SQ	0.0225
C.V.	69.39494		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	1.58272807	0.98763629	1.603	0.1203
BP90	1	-0.002133511	0.001652573	-1.291	0.2073

DRAFT

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.69824517	0.34912259	14.220	0.0001
ERROR	27	0.66290149	0.02455191		
C TOTAL	29	1.36114667			

ROOT MSE	0.1566905	R-SQUARE	0.5130
DEP MEAN	0.3086667	ADJ R-SQ	0.4769
C.V.	50.76366		

DRAFT

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	-0.02171850	0.10857278	-0.200	0.8436
FIA	1	0.01439615	0.002864977	5.025	0.0001
SULFUR	1	-0.67882483	0.27172915	-2.498	0.0189

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.60935807	0.30467903	10.942	0.0003
ERROR	27	0.75178860	0.02784402		
C TOTAL	29	1.36114667			

ROOT MSE	0.1668653	R-SQUARE	0.4477
DEP MEAN	0.3086667	ADJ R-SQ	0.4068
C.V.	54.06003		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	1.03833560	0.77938660	1.332	0.1939
FIA	1	0.01321177	0.003020020	4.375	0.0002
BP90	1	-0.001957880	0.001288013	-1.520	0.1401

DRAFT

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.80896394	0.26965465	12.697	0.0001
ERROR	26	0.55219273	0.02123780		
C TOTAL	29	1.36114667			

ROOT MSE	0.1457319	R-SQUARE	0.5943
DEP MEAN	0.3086667	ADJ R-SQ	0.5475
C.V.	47.21337		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	1.56440343	0.70197438	2.229	0.0347
FIA	1	0.01437363	0.002664626	5.394	0.0001
SULFUR	1	-0.76870521	0.25726623	-3.066	0.0050
BF90	1	-0.00261456	0.001145100	-2.283	0.0308

DRAFT

DDAD

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.43325980	0.43325980	8.444	0.0069
ERROR	29	1.48791439	0.05130739		
C TOTAL	30	1.92117419			

ROOT MSE	0.2265114	R-SQUARE	0.2255
DEP MEAN	0.2451613	ADJ R-SQ	0.1988
C.V.	92.39279		

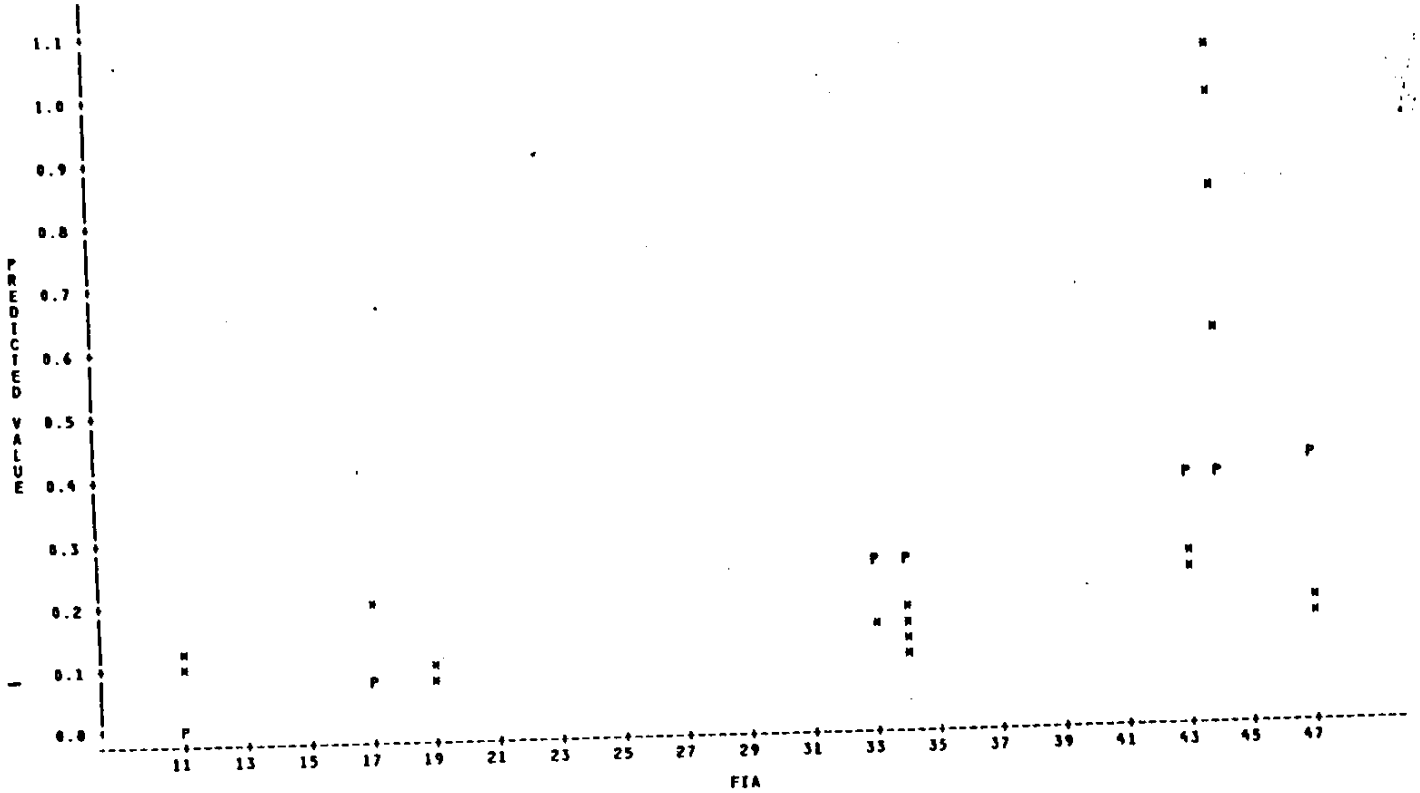
PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	-0.13345753	0.13649579	-0.978	0.3363
FIA	1	0.01154099	0.003971538	2.906	0.0069

DRAFT

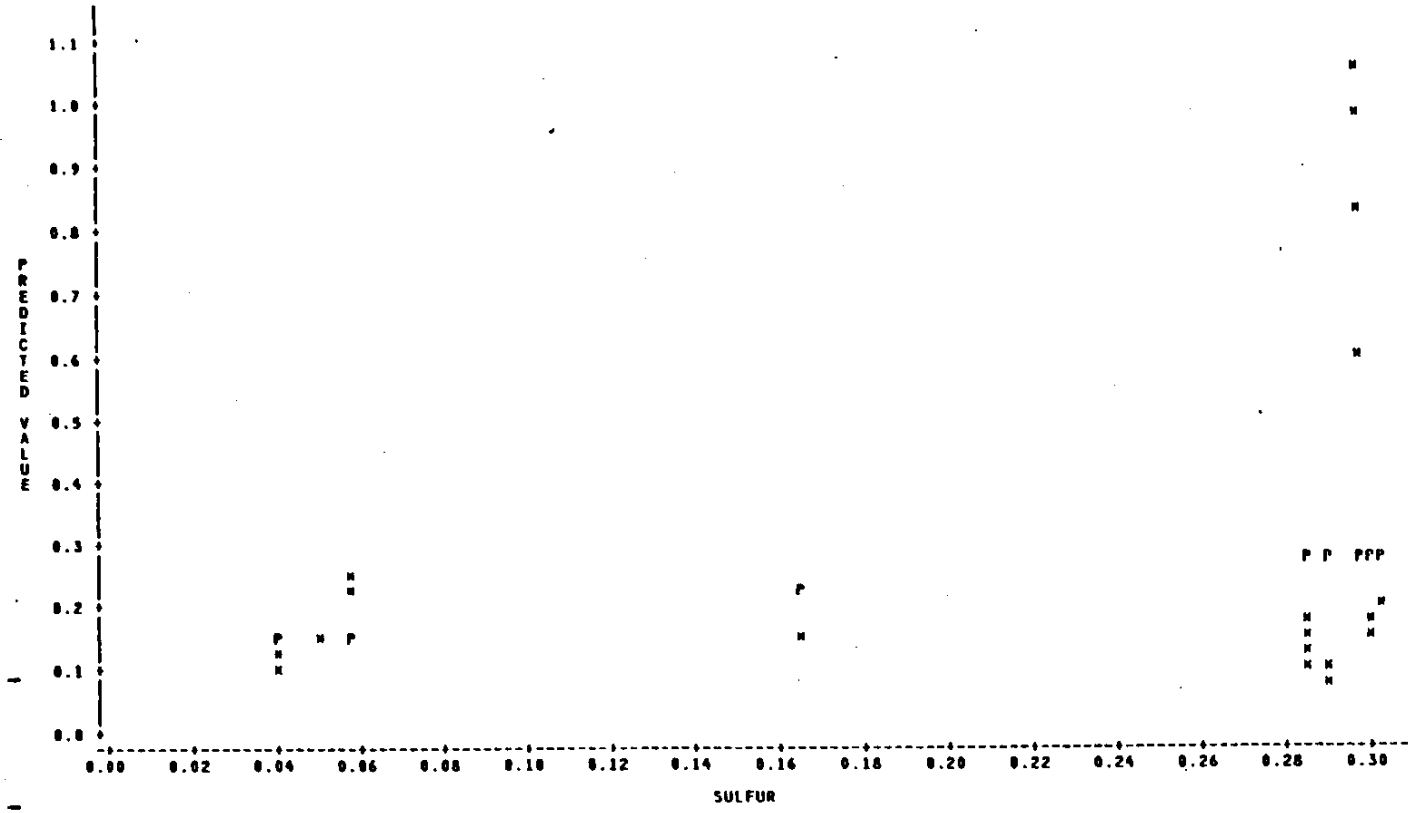
1/140

PLOT OF HCHS*FIA SYMBOL USED IS *
PLOT OF PRED19*FIA SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 40 OBS HIDDEN

PLOT OF HCHS*SULFUR SYMBOL USED IS *
PLOT OF PRID28*SULFUR SYMBOL USED IS P



NOTE: 132 OBS HAD MISSING VALUES 38 OBS HIDDEN

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

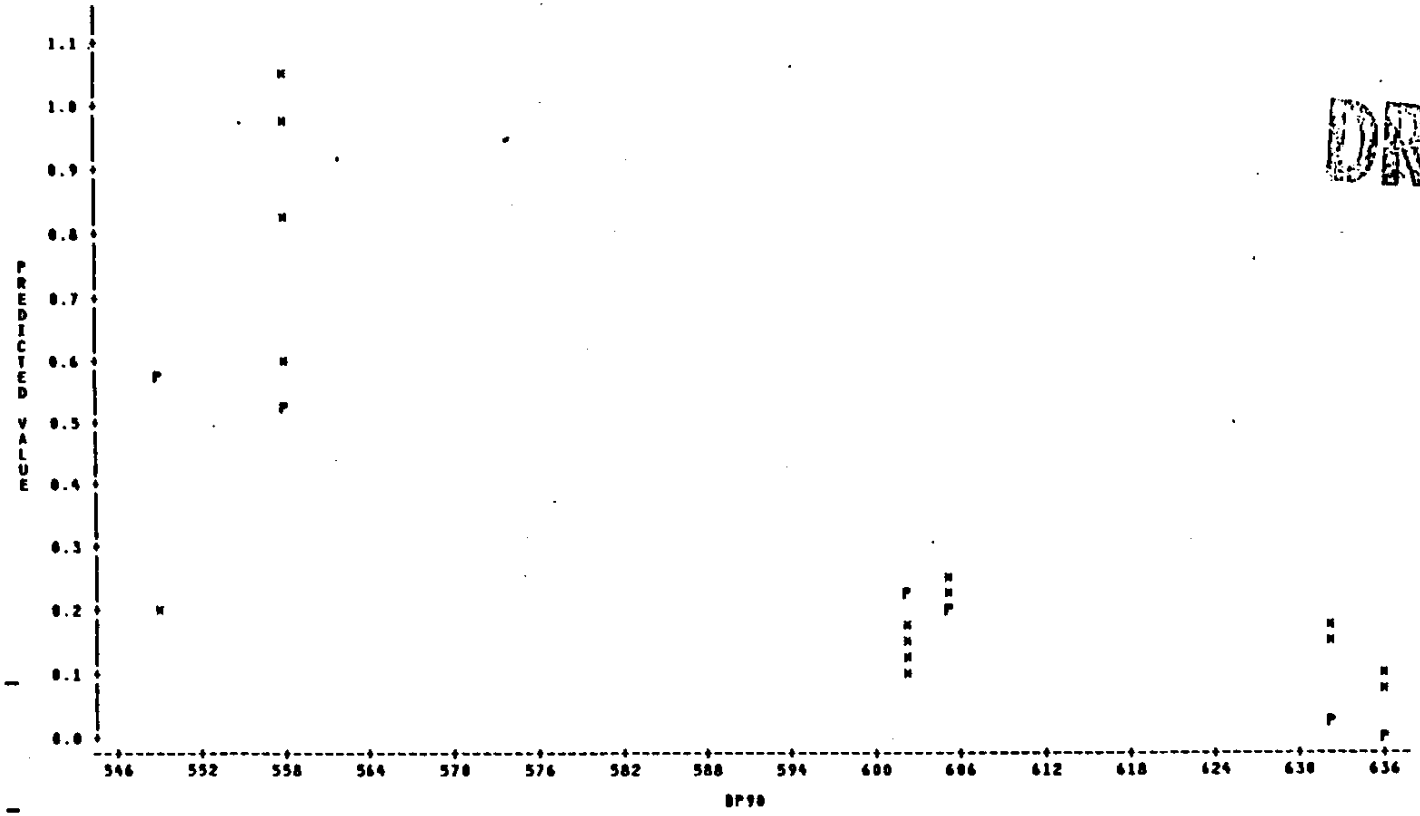
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.09278304	0.09278304	1.472	0.2349
ERROR	29	1.82839115	0.06304797		
C TOTAL	30	1.92117419			

ROOT MSE	0.2510935	R-SQUARE	0.0483
DEP MEAN	0.2451613	ADJ R-SQ	0.0155
C.V.	102.4197		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.13044450	0.10476762	1.245	0.2231
SULFUR	1	0.51877762	0.42764410	1.213	0.2349

PLOT OF NCHS*BP90 SYMBOL USED IS N
PLOT OF PRED32*BP90 SYMBOL USED IS P



DRAFT

NOTE: 132 OBS HAD MISSING VALUES 45 OBS HIDDEN

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.85786891	0.85786891	23.397	0.0001
ERROR	29	1.06330528	0.03666570		
C TOTAL	30	1.92117419			

ROOT MSE	0.1914829	R-SQUARE	0.4465
DEP MEAN	0.2451613	ADJ R-SQ	0.4274
C.V.	78.10487		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.34692917	0.84868686	5.122	0.0001
BP90	1	-0.006854337	0.001417049	-4.837	0.0001

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	1.18245288	0.59122644	22.409	0.0001
ERROR	28	0.73872131	0.02638290		
C TOTAL	30	1.92117419			

ROOT MSE	0.1624292	R-SQUARE	0.6155
DEP MEAN	0.2451613	ADJ R-SQ	0.5880
C.V.	66.25359		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.76776126	0.73860458	5.101	0.0001
FIA	1	0.01003810	0.002861865	3.508	0.0016
RF90	1	-0.006436814	0.001207912	-5.329	0.0001

DRAFT

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.48777294	0.24388647	4.764	0.0166
ERROR	28	1.43340125	0.05119290		
C TOTAL	30	1.92117419			

ROOT MSE	0.2262585	R-SQUARE	0.2539
DEP MEAN	0.2451613	ADJ R-SQ	0.2006
C.V.	92.28965		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	-0.20703531	0.15386190	-1.346	0.1892
FIA	1	0.01108704	0.003991420	2.778	0.0097
SULFUR	1	0.40008414	0.38770877	1.032	0.3109

DRAFT

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	1.19592993	0.39864331	14.841	0.0001
ERROR	27	0.72524427	0.02686090		
C TOTAL	30	1.92117419			

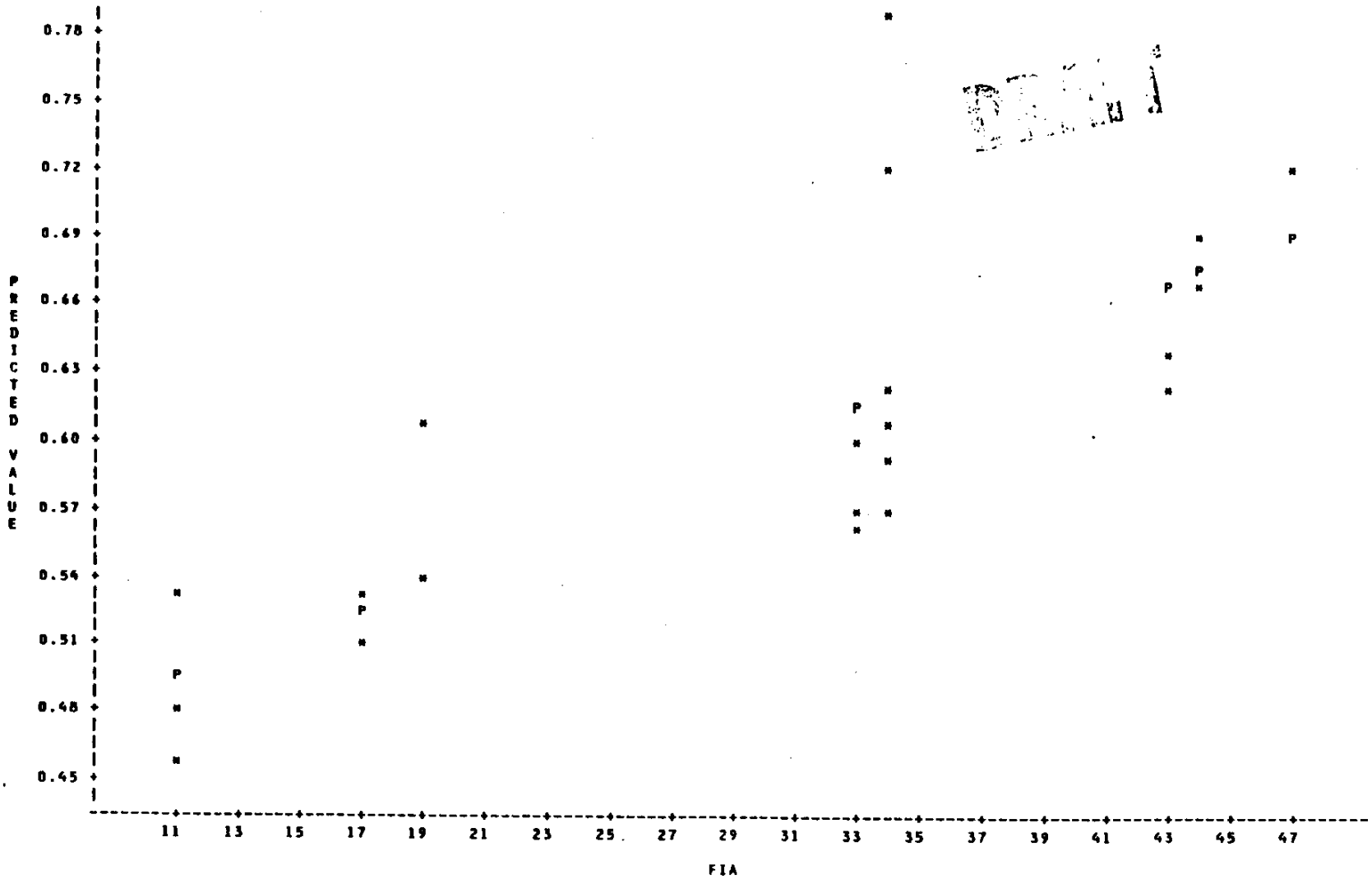
ROOT MSE	0.1638929	R-SQUARE	0.6225
DEP MEAN	0.2451613	ADJ R-SQ	0.5806
C.V.	66.85107		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.658524884	0.76105403	4.807	0.0001
FIA	1	0.009838096	0.002901445	3.391	0.0022
SULFUR	1	0.22081931	0.28351005	0.708	0.4848
BP90	1	-0.006317515	0.001230387	-5.135	0.0001

Cummins NTCC 400

PLOT OF PMCS*FIA SYMBOL USED IS *
PLOT OF PRED800*FIA SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 27 OBS HIDDEN

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.08997608	0.08997608	32.889	0.0001
ERROR	24	0.06565854	0.002735772		
C TOTAL	25	0.15563462			

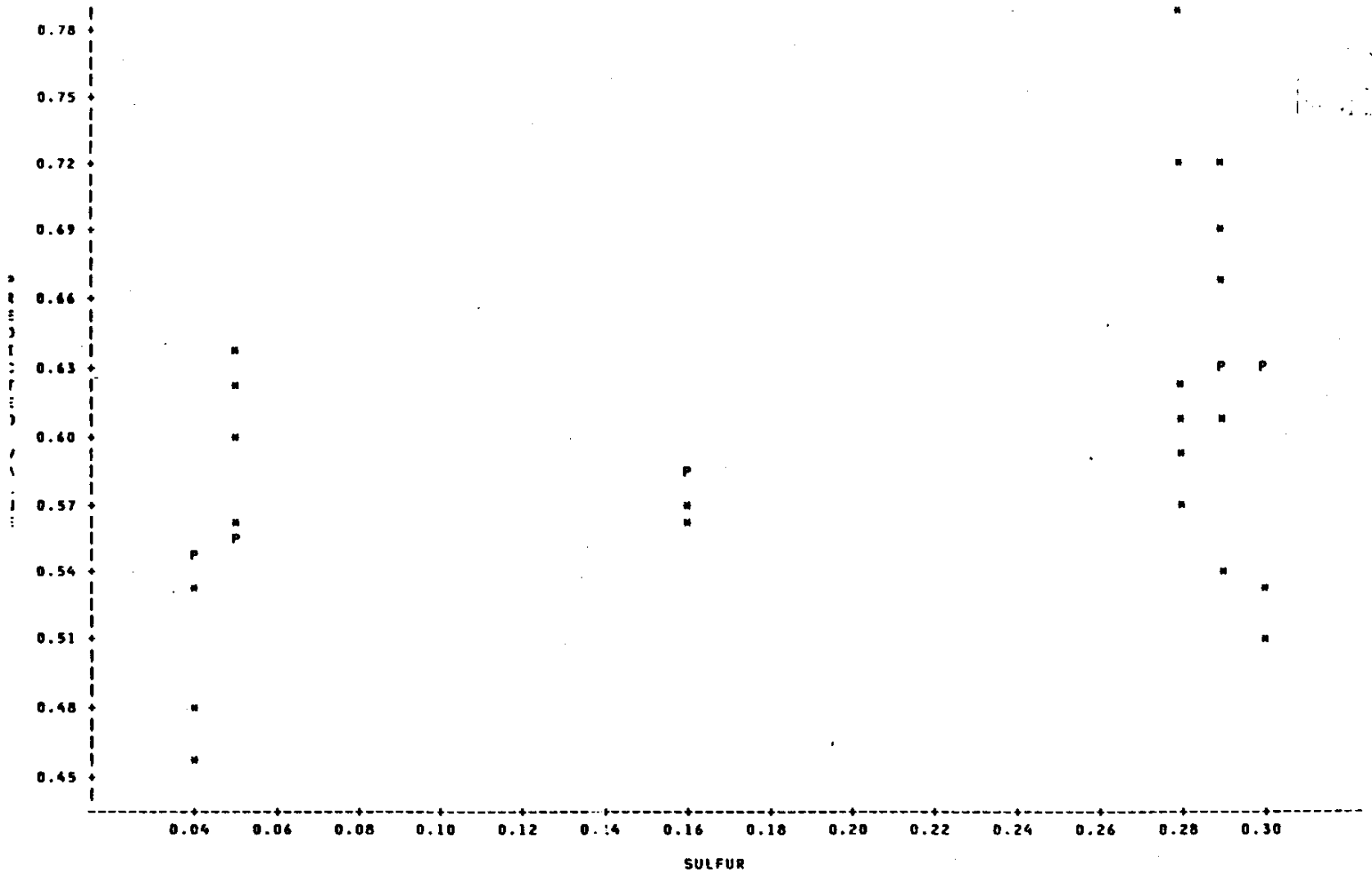
ROOT MSE	0.05230461	R-SQUARE	0.5781
DEP MEAN	0.6042308	ADJ R-SQ	0.5605
C.V.	8.656397		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.43656321	0.03098379	14.090	0.0001
FIA	1	0.005375286	0.000937299	5.735	0.0001

CUMMINS

PLOT OF PMCS*SULFU' SYMBOL USED IS *
PLOT OF PRED809*SU .FUR SYMBOL USED IS P



OTE: 118 OBS HAD MISSING VALUES 28 OBS HIDDEN

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

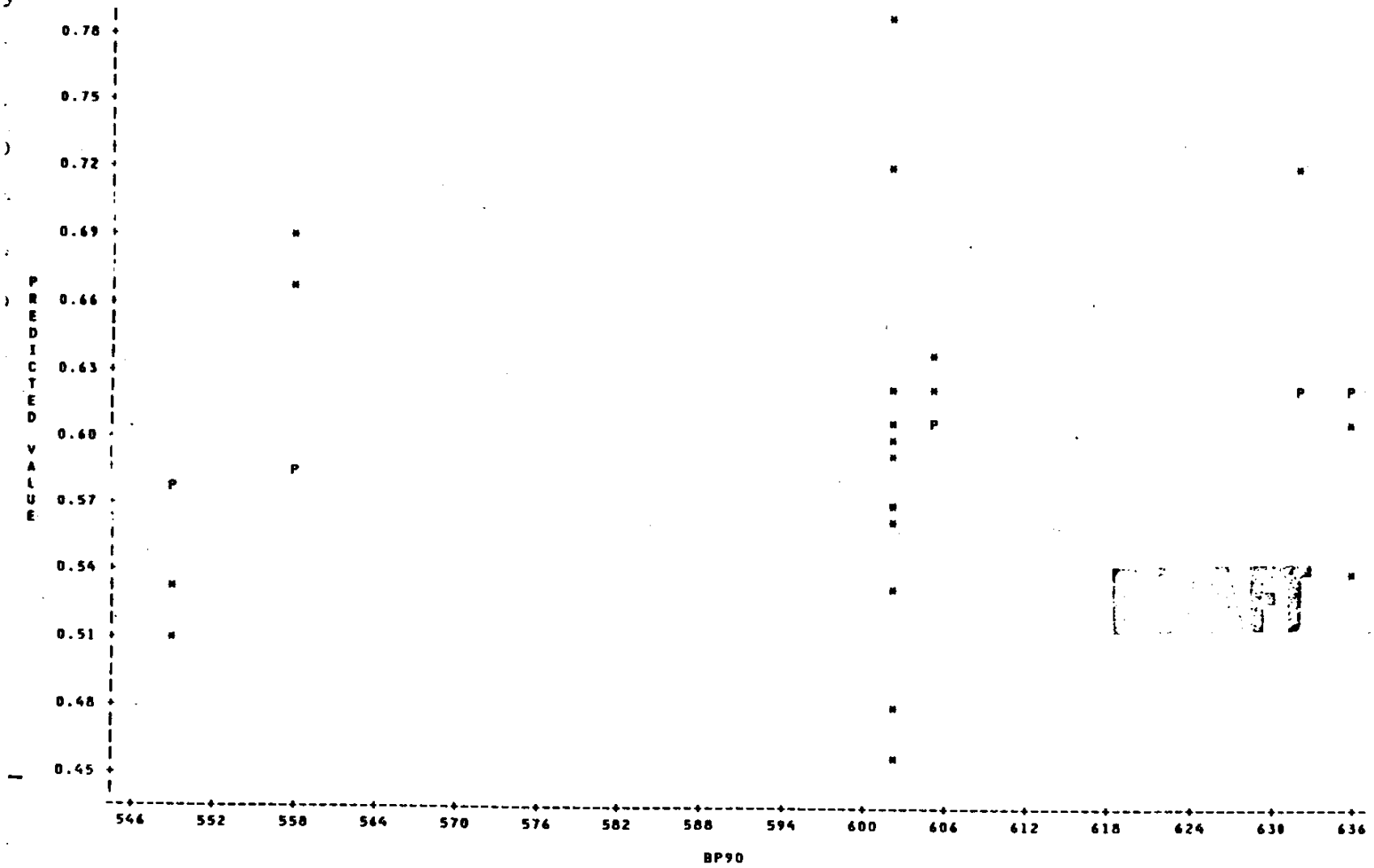
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.02818293	0.02818293	5.307	0.0302
ERROR	24	0.12745168	0.005310487		
C TOTAL	25	0.15563462			

ROOT MSE	0.07287309	R-SQUARE	0.1811
DEP MEAN	0.6042308	ADJ. R-SQ	0.1470
C.V.	12.06047		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.53859470	0.03187507	16.897	0.0001
SULFUR	1	0.31027959	0.13468749	2.304	0.0302

PLOT OF PMCS*BP90 SYMBOL USED IS *
PLOT OF PRED813*BP90 SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 30 OBS HIDDEN

DEP VARIABLE: PICS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.004033190	0.004033190	0.638	0.4321
ERROR	24	0.15160143	0.006316726		
C TOTAL	25	0.15563462			

ROOT MSE	0.07947783	R-SQUARE	0.0259
DEP MEAN	0.6042308	ADJ R-SQ	-0.0147
C.V.	13.15356		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.27622378	0.41078789	0.672	0.5077
BP90	1	0.000546959	0.000684504	0.799	0.4321

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.09908189	0.04954094	20.148	0.0001
ERROR	23	0.05655273	0.002456814		
C TOTAL	25	0.15563462			

ROOT MSE	0.04958643	R-SQUARE	0.6366
DEP MEAN	0.6042308	ADJ R-SQ	0.6050
C.V.	8.206539		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.41189007	0.03204984	12.852	0.0001
FIA	1	0.004930384	0.000916171	5.370	0.0001
SULFUR	1	0.18223936	0.09469909	1.924	0.0668

DEP VARIABLE: PMCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.09137312	0.04568656	16.352	0.0001
ERROR	23	0.06426150	0.002793978		
C TOTAL	25	0.15563462			

ROOT MSE	0.052859C9	R-SQUARE	0.5871
DEP MEAN	0.6042306	ADJ R-SQ	0.5512
C.V.	8.747998		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.24960834	0.27326093	0.895	0.3400
FIA	1	0.005316391	0.000950872	5.591	0.0001
BP90	1	0.000323152	0.00045699A	0.707	0.4866

DRAFT

:P VARIABLE: FMCS

ANALYSIS OF VARIANCE

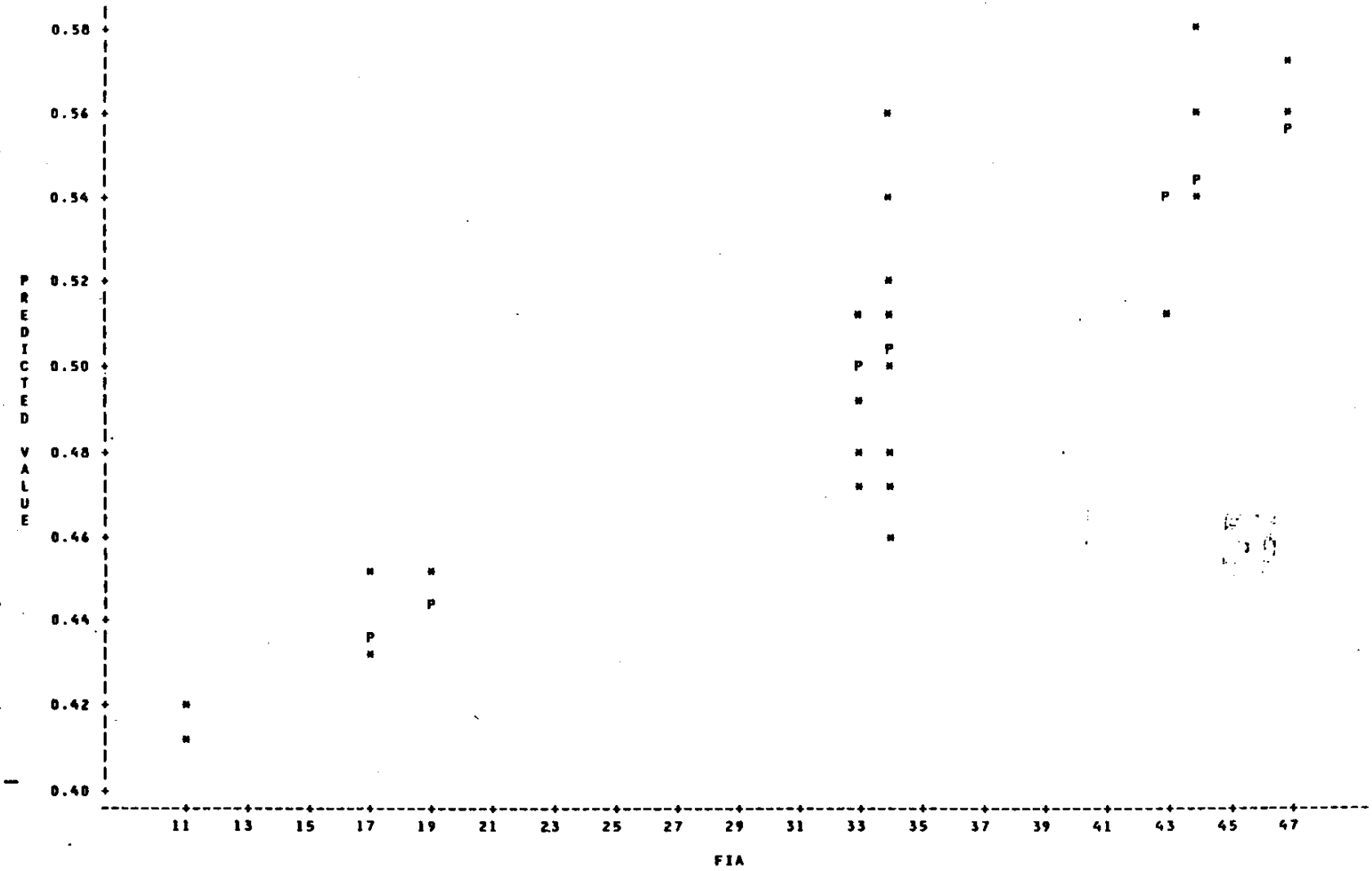
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.10172764	0.03390921	13.839	0.0001
ERROR	22	0.05390698	0.002450317		
C TOTAL	25	0.15563462			

ROOT MSE	0.04950068	R-SQUARE	0.6536
DEP MEAN	0.6042308	ADJ R-SQ	0.6064
C.V.	8.192347		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.14312271	0.26062180	0.549	0.5984
FIA	1	0.004814132	0.000923386	5.214	0.0001
SULFUR	1	0.19631977	0.09550152	2.056	0.0519
PPM	1	0.000449255	0.000432345	1.039	0.3100

PLOT OF PMHS*FIA SYMBOL USED IS *
PLOT OF PRED819*FIA SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 28 OBS HIDDEN

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

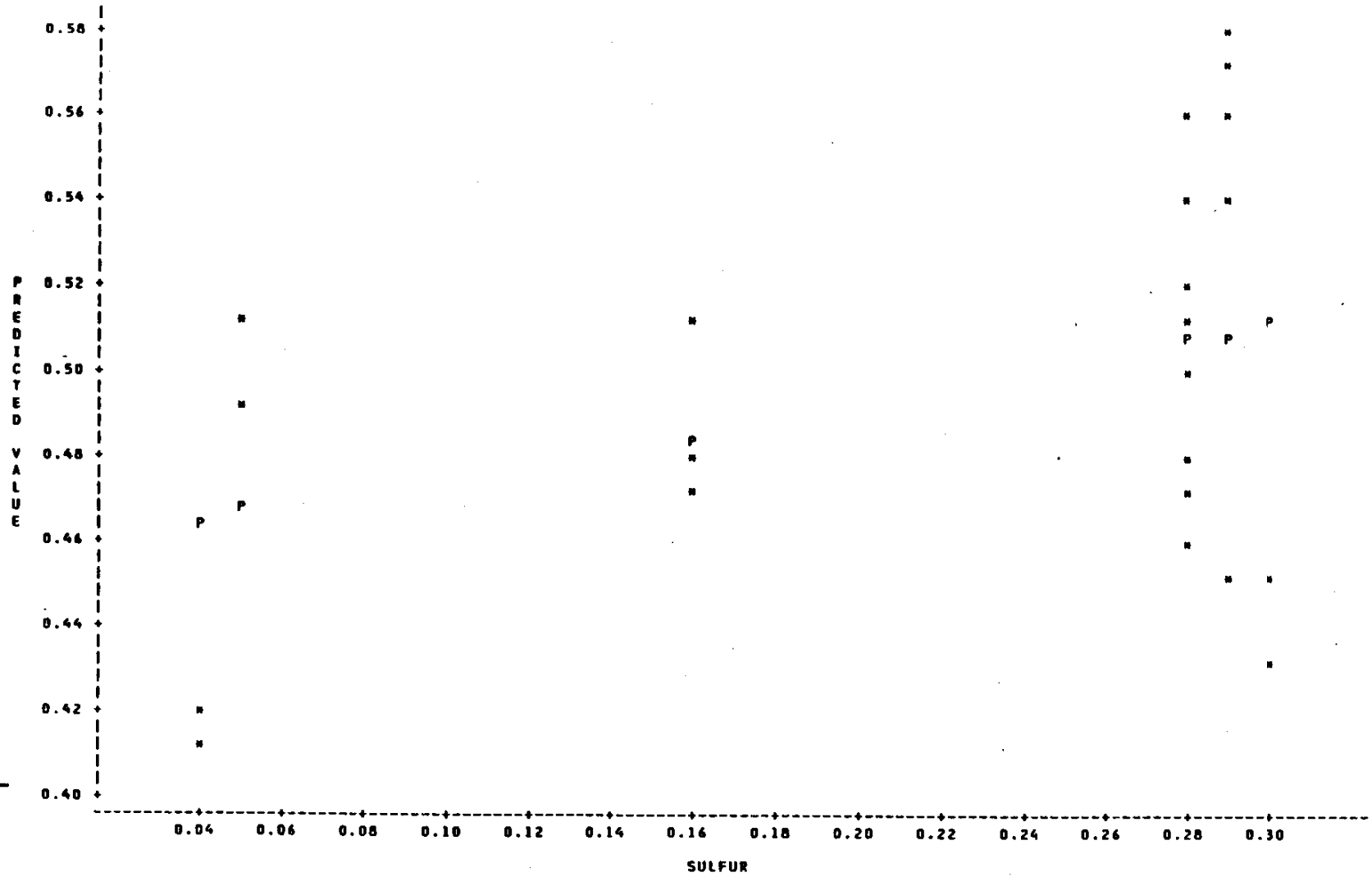
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.05109371	0.05109371	96.989	0.0001
ERROR	27	0.01422354	0.000526798		
C TOTAL	28	0.06531724			

ROOT MSE	0.02295207	R-SQUARE	0.7822
DEP MEAN	0.4955172	ADJ R-SQ	0.7742
C.V.	4.631942		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.37001199	0.01343766	27.535	0.0001
FIA	1	0.003947562	0.000400836	9.848	0.0001

PLOT OF PMHS*SULFUR SYMBOL USED IS *
PLOT OF PRED828*SULFUR SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 31 OBS HIDDEN

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

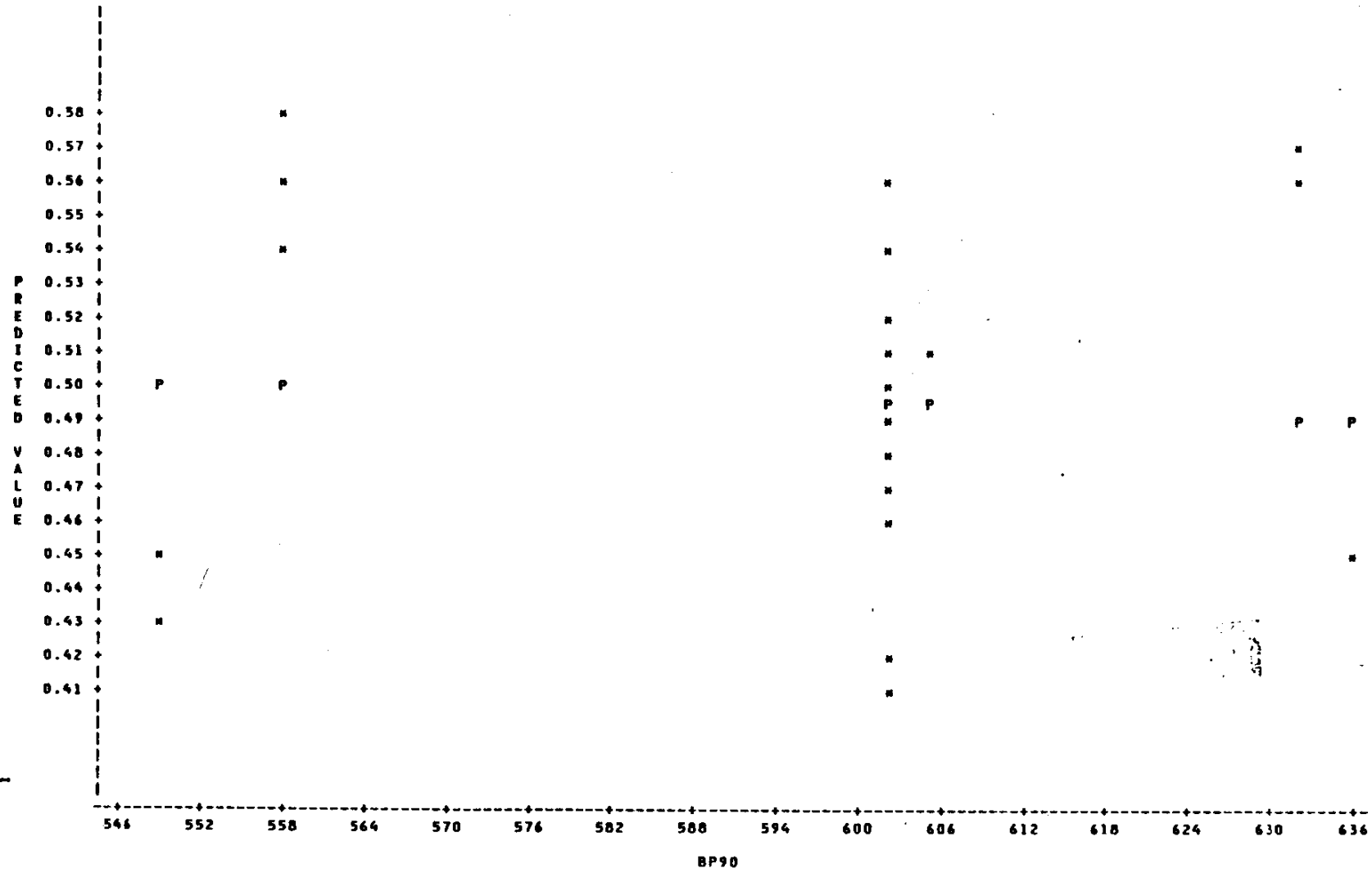
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.009471005	0.009471005	4.579	0.0416
ERROR	27	0.05584624	0.002068379		
C TOTAL	28	0.06531724			

ROOT MSE	0.04547944	R-SQUARE	0.1450
DEP MEAN	0.4955172	ADJ R-SQ	0.1133
C.V.	9.178174		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.45771816	0.01957942	23.378	0.0001
SULFUR	1	0.17595077	0.08222582	2.140	0.0416

PLOT OF PMHS*BP90 SYMBOL USED IS *
PLOT OF PRED833*BP90 SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 33 OBS HIDDEN

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.000141590	0.000141590	0.059	0.8105
ERROR	27	0.06517565	0.002413913		
C TOTAL	28	0.06531724			

ROOT MSE	0.04913159	R-SQUARE	0.0022
DEP MEAN	0.4955172	ADJ R-SQ	-0.0348
C.V.	9.915213		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.55330532	0.23878133	2.317	0.0283
BP90	1	-0.000096569	0.000398732	-0.242	0.8105

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.05252994	0.01750998	34.233	0.0001
ERROR	25	0.01278730	0.000511492		
C TOTAL	28	0.06531724			

ROOT MSE	0.02261619	R-SQUARE	0.8042
DEP MEAN	0.4955172	ADJ R-SQ	0.7807
C.V.	4.564159		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.40160403	0.11297426	3.555	0.0016
FIA	1	0.003772117	0.000411163	9.174	0.0001
SULFUR	1	0.06702923	0.04306039	1.557	0.1321
BP90	1	-0.000067535	0.000185945	-0.363	0.7195

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.05129054	0.02564527	47.536	0.0001
ERROR	26	0.01402670	0.00053949		
C TOTAL	28	0.06531724			

ROOT MSE	0.02322689	R-SQUARE	0.7853
DEP MEAN	0.4955172	ADJ R-SQ	0.7667
C.V.	4.687404		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.43807654	0.11350217	3.860	0.0007
FIA	1	0.003949871	0.00040565	9.737	0.0001
HP90	1	-0.000113864	0.00018859	-0.604	0.5511

DEP VARIABLE: PMHS

ANALYSIS OF VARIANCE

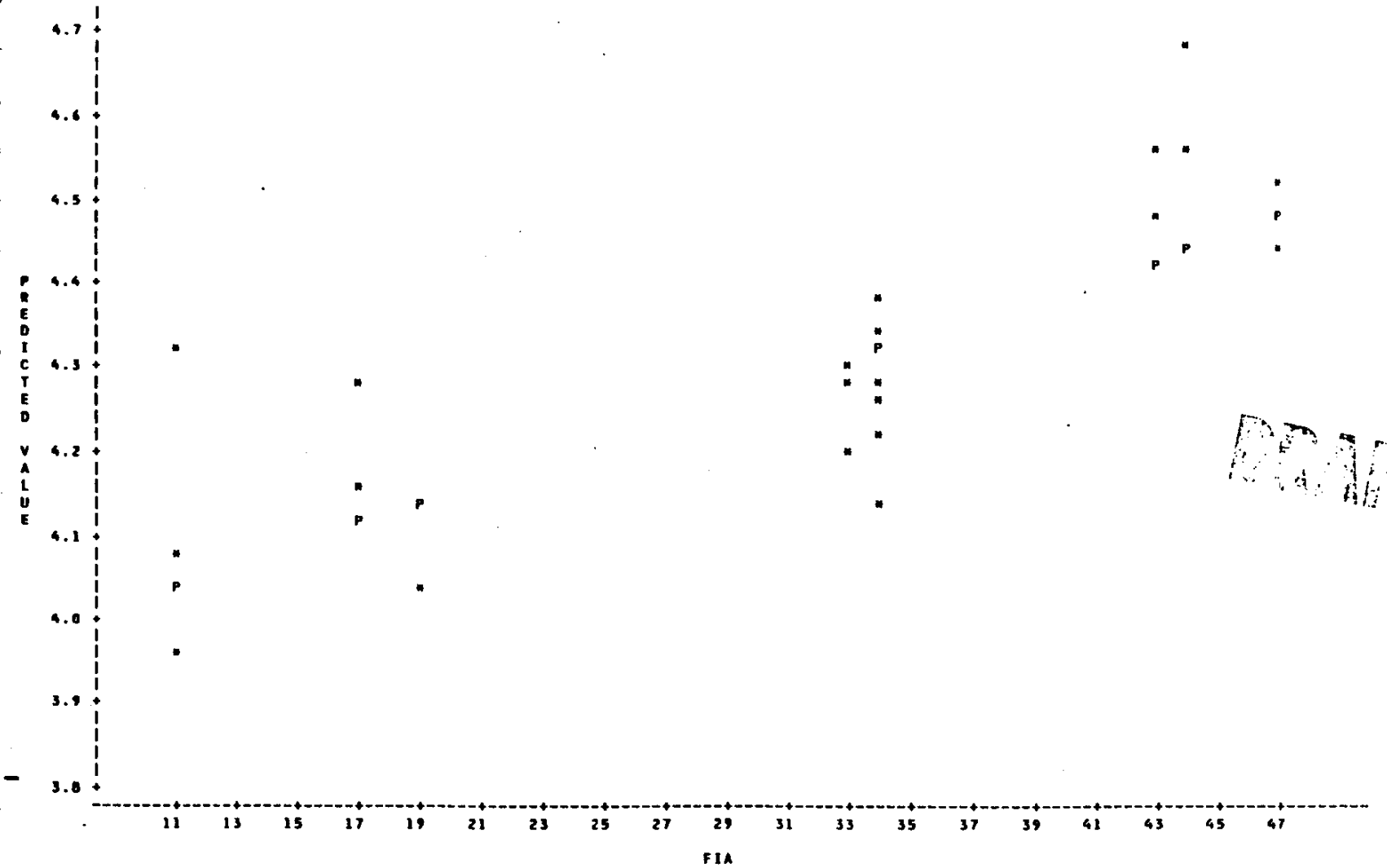
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.05246247	0.02623123	53.055	0.0001
ERROR	26	0.01285477	0.00049441		
C TOTAL	28	0.06531724			

ROOT MSE	0.02223543	R-SQUARE	0.8032
DEP MEAN	0.4955172	ADJ R-SQ	0.7881
C.V.	4.487317		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.36090594	0.01412170	25.557	0.0001
FIA	1	0.003764144	0.00040366[illegible]	9.325	0.0001
SULFUR	1	0.06953238	0.04176963	1.664	0.1[illegible]

PLOT OF NOXCS*FIA SYMBOL USED IS *
PLOT OF PRED500*FIA SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 27 OBS HIDDEN

DRAFT

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.44025293	0.44025293	30.674	0.0001
ERROR	24	0.34445861	0.01435244		
C TOTAL	25	0.78471154			

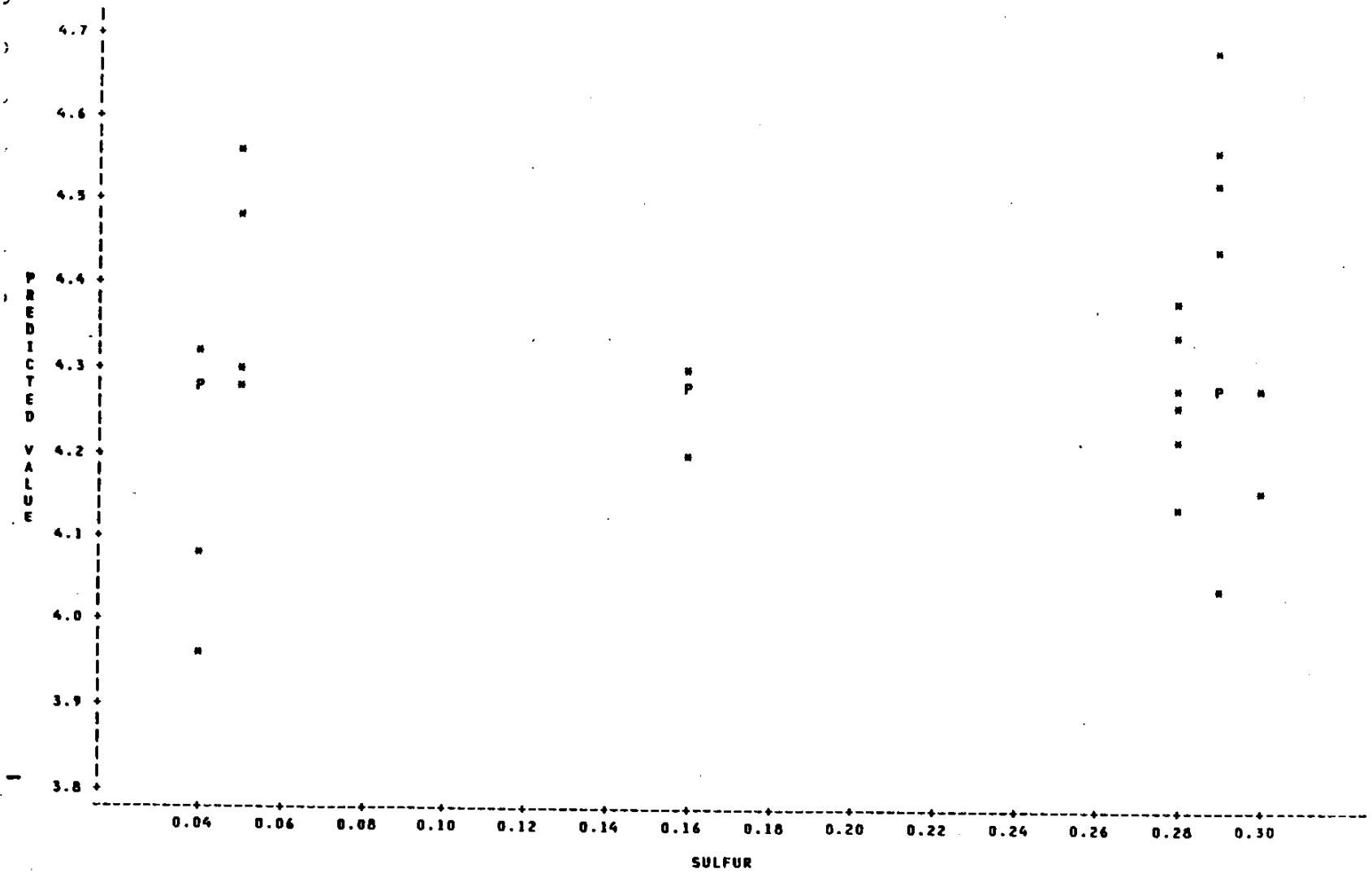
ROOT MSE	0.1198017	R-SQUARE	0.5610
DEP MEAN	4.282692	ADJ R-SQ	0.5427
C.V.	2.797345		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.91180955	0.07096717	55.121	0.0001
FIA	1	0.01189020	0.002146846	5.538	0.0001

CUMMINS

PLOT OF NOXCS*SULFUR SYMBOL USED IS *
PLOT OF PRED509*SULFUR SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 28 OBS HIDDEN

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

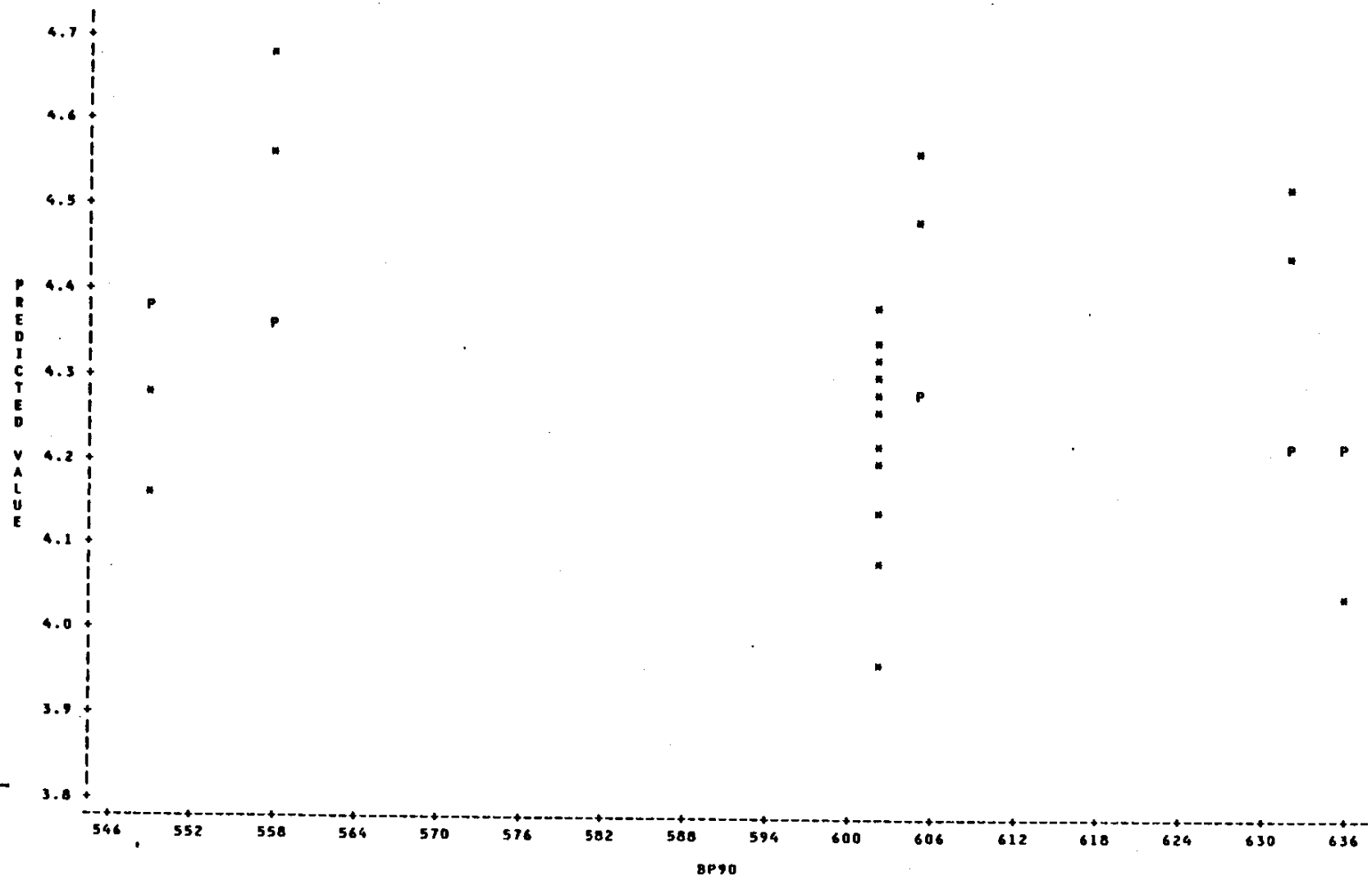
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.001548694	0.001548694	0.047	0.8294
ERROR	24	0.78316284	0.03263179		
C TOTAL	25	0.78471154			

ROOT MSE	0.1806427	R-SQUARE	0.0020
DEP MEAN	4.282692	ADJ R-SQ	-0.0396
C.V.	4.217971		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.26730608	0.07901406	54.007	0.0001
SULFUR	1	0.07273492	0.33387240	0.218	0.8294

PLOT OF NOXCS*BP90 SYMBOL USED IS *
PLOT OF PRED513*BP90 SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 30 OBS HIDDEN

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.04864380	0.04864380	1.586	0.2200
ERROR	24	0.73606774	0.03066949		
C TOTAL	25	0.78471154			

ROOT MSE	0.1751271	R-SQUARE	0.0620
DEP MEAN	4.282692	ADJ R-SQ	0.0229
C.V.	4.089182		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	5.42182027	0.90515901	5.990	0.0001
BP90	1	-0.001899521	0.001508285	-1.259	0.2200

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.45766820	0.22883410	16.093	0.0001
ERROR	23	0.32704334	0.01421928		
C TOTAL	25	0.78471154			

ROOT MSE	0.1192446	R-SQUARE	0.5832
DEP MEAN	4.282692	ADJ R-SQ	0.5470
C.V.	2.784337		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	3.94593121	0.07707290	51.197	0.0001
FIA	1	0.01250547	0.002208003	5.664	0.0001
SULFUR	1	-0.25202756	0.22773076	-1.107	0.2799

DEP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.51851141	0.25925570	22.400	0.0001
ERROR	23	0.26620013	0.01157392		
C TOTAL	25	0.78471154			

ROOT MSE	0.1075821	R-SQUARE	0.6608
DEP MEAN	4.282692	ADJ R-SQ	0.6313
C.V.	2.512021		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	5.34849044	0.55616651	9.617	0.0001
FIA	1	0.01233100	0.001935311	6.372	0.0001
PP90	1	-0.002418624	0.000930128	-2.600	0.0160

EP VARIABLE: NOXCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.54858374	0.18286125	17.037	0.0001
ERROR	22	0.23612779	0.01073308		
C TOTAL	25	0.78471154			

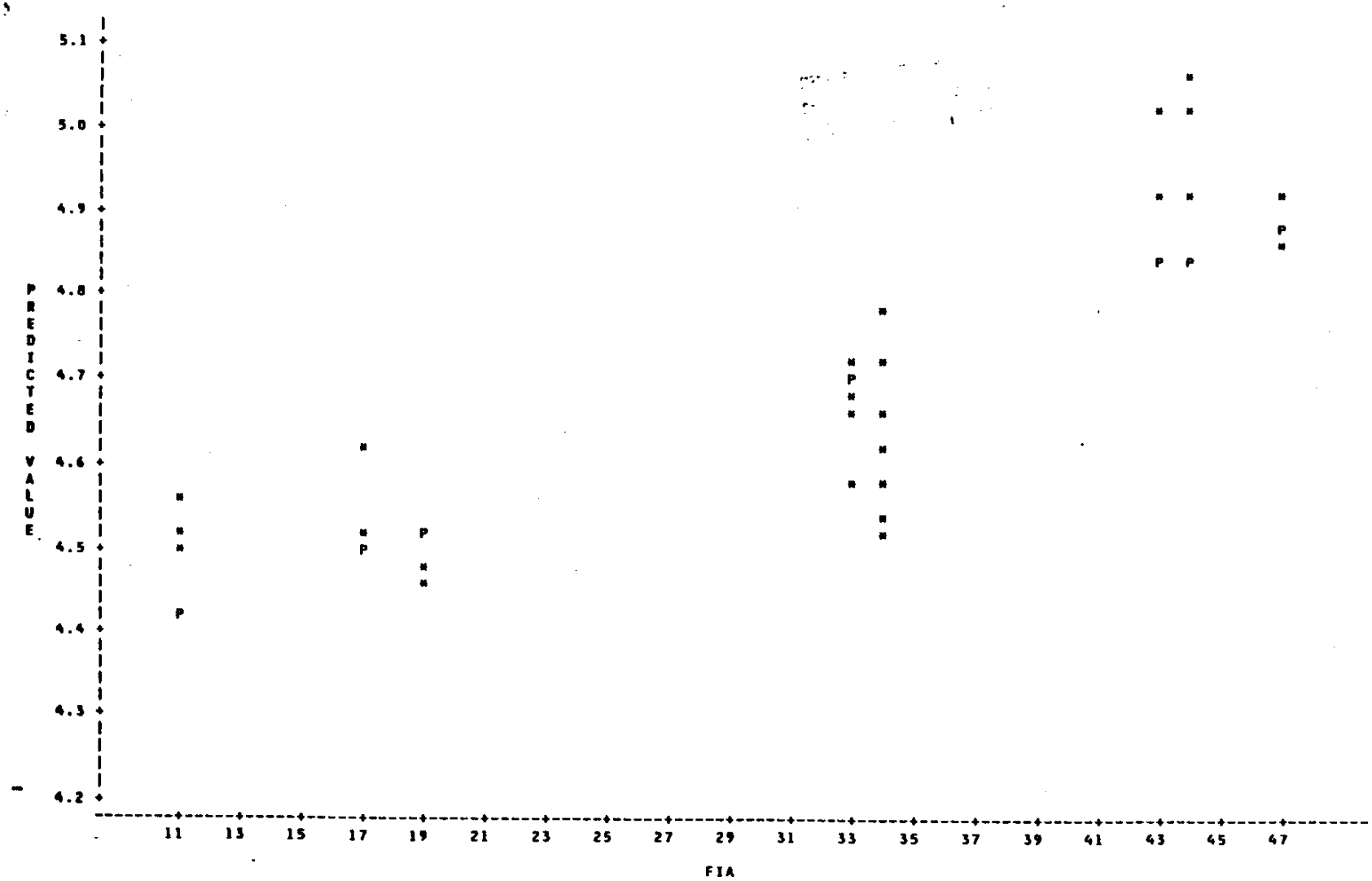
ROOT MSE	0.1036006	R-SQUARE	0.6991
DEP MEAN	4.282692	ADJ R-SQ	0.6581
C.V.	2.419053		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	5.52144151	0.54545861	10.123	0.0001
FIA	1	0.01318694	0.001932566	6.824	0.0001
SULFUR	1	-0.33456673	0.19987632	-1.674	0.1083
BP90	1	-0.002633528	0.000904859	-2.910	0.0041

CUMMING

PLOT OF NOXHS*FIA SYMBOL USED IS *
PLOT OF PRED519*FIA SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 26 OBS HIDDEN

VARIABLE: NOXHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.53662241	0.53662241	45.539	0.0001
ERROR	27	0.31816380	0.01178384		
C TOTAL	28	0.85478621			

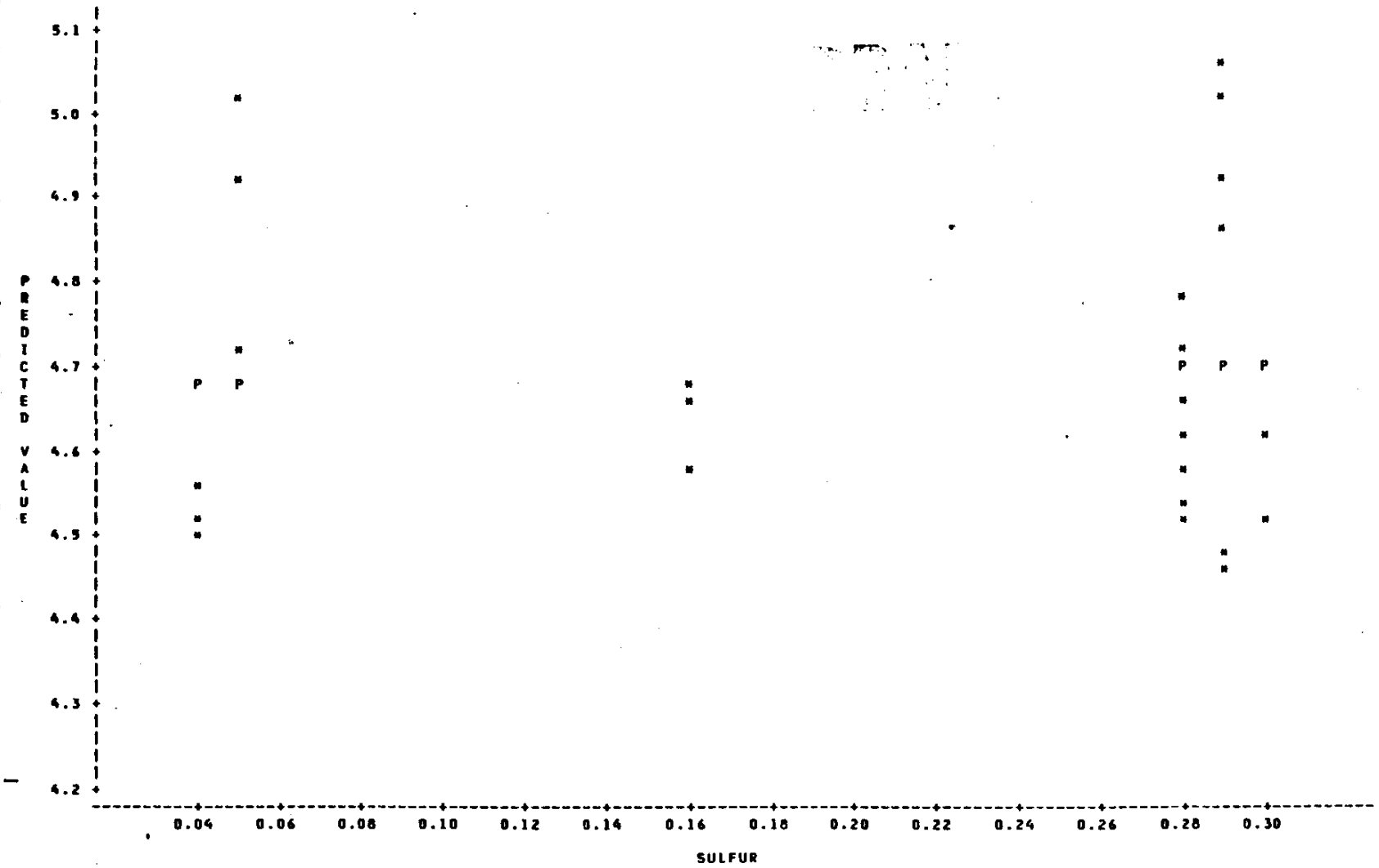
ROOT MSE	0.1085534	R-SQUARE	0.6278
DEP MEAN	4.68931	ADJ R-SQ	0.6140
C.V.	2.314912		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.28257436	0.06355435	67.384	0.0001
FIA	1	0.01279321	0.001895784	6.748	0.0001

CUMMINS

PLOT OF NOXHS*SULFUR SYMBOL USED IS *
PLOT OF PRED529*SULFUR SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 29 OBS HIDDEN

DEP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

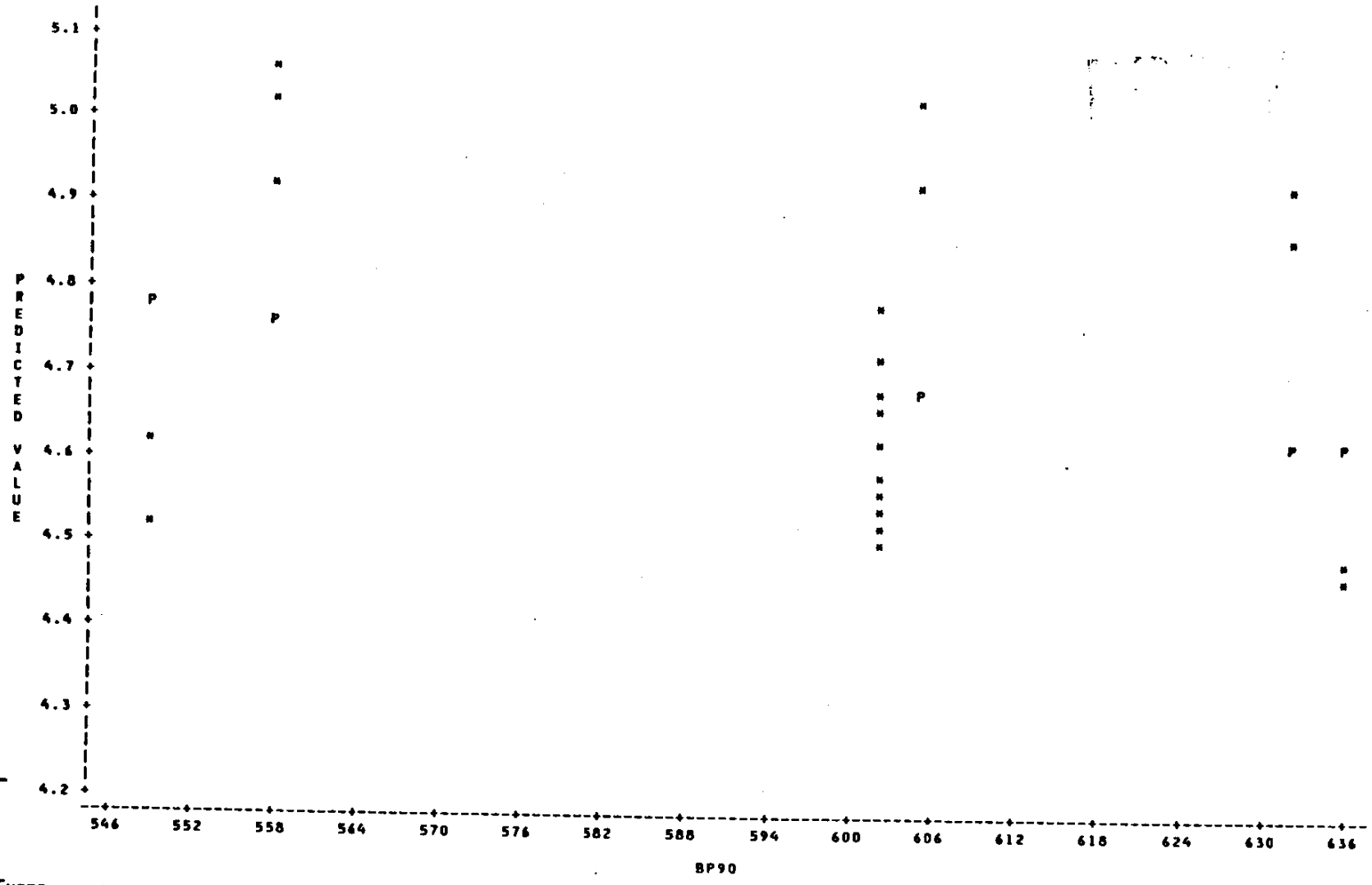
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.000367042	0.000367042	0.012	0.9150
ERROR	27	0.85441917	0.03164515		
C TOTAL	28	0.85478621			

ROOT MSE	0.1778908	R-SQUARE	0.0004
DEP MEAN	4.68931	ADJ R-SQ	-0.0366
C.V.	3.79354		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.68186918	0.07658404	61.134	0.0001
SULFUR	1	0.03463784	0.32162273	0.108	0.9150

PLOT OF NOXHS*BP90 SYMBOL USED IS *
PLOT OF PRED533*BP90 SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 32 OBS HIDDEN

DEP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.05647220	0.05647220	1.910	0.1783
ERROR	27	0.79831401	0.02956719		
C TOTAL	28	0.85478621			

ROOT MSE	0.1719511	R-SQUARE	0.0661
DEP MEAN	4.68931	ADJ R-SQ	0.0315
C.V.	3.666874		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	5.84340030	0.83568873	6.992	0.0001
BP[illegible]	1	-0.001928582	0.001395487	-1.382	0.1783

DEP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.57198087	0.28599043	26.293	0.0001
ERROR	26	0.28280534	0.01067713		
C TOTAL	28	0.85478621			

ROOT MSE	0.1042935	R-SQUARE	0.6692
DEP MEAN	4.68931	ADJ R-SQ	0.6437
C.V.	2.224068		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	4.32885640	0.06623670	65.354	0.0001
FIA	1	0.01372545	0.001893356	7.249	0.0001
SULFUR	1	-0.35340254	0.19601045	-1.803	0.0830

EP VARIABLE: NONES

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.59642819	0.29821409	30.011	0.0001
ERROR	26	0.25835802	0.009936847		
C TOTAL	28	0.85478621			

ROOT MSE	0.09968373	R-SQUARE	0.6978
DEP MEAN	4.68931	ADJ R-SQ	0.6745
C.V.	2.125765		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	5.46901239	0.48712153	11.227	0.0001
FIA	1	0.01283346	0.001740960	7.371	0.0001
BP90	1	-0.031984776	0.00C809029	-2.453	0.0212

EP VARIABLE: NOXHS

ANALYSIS OF VARIANCE

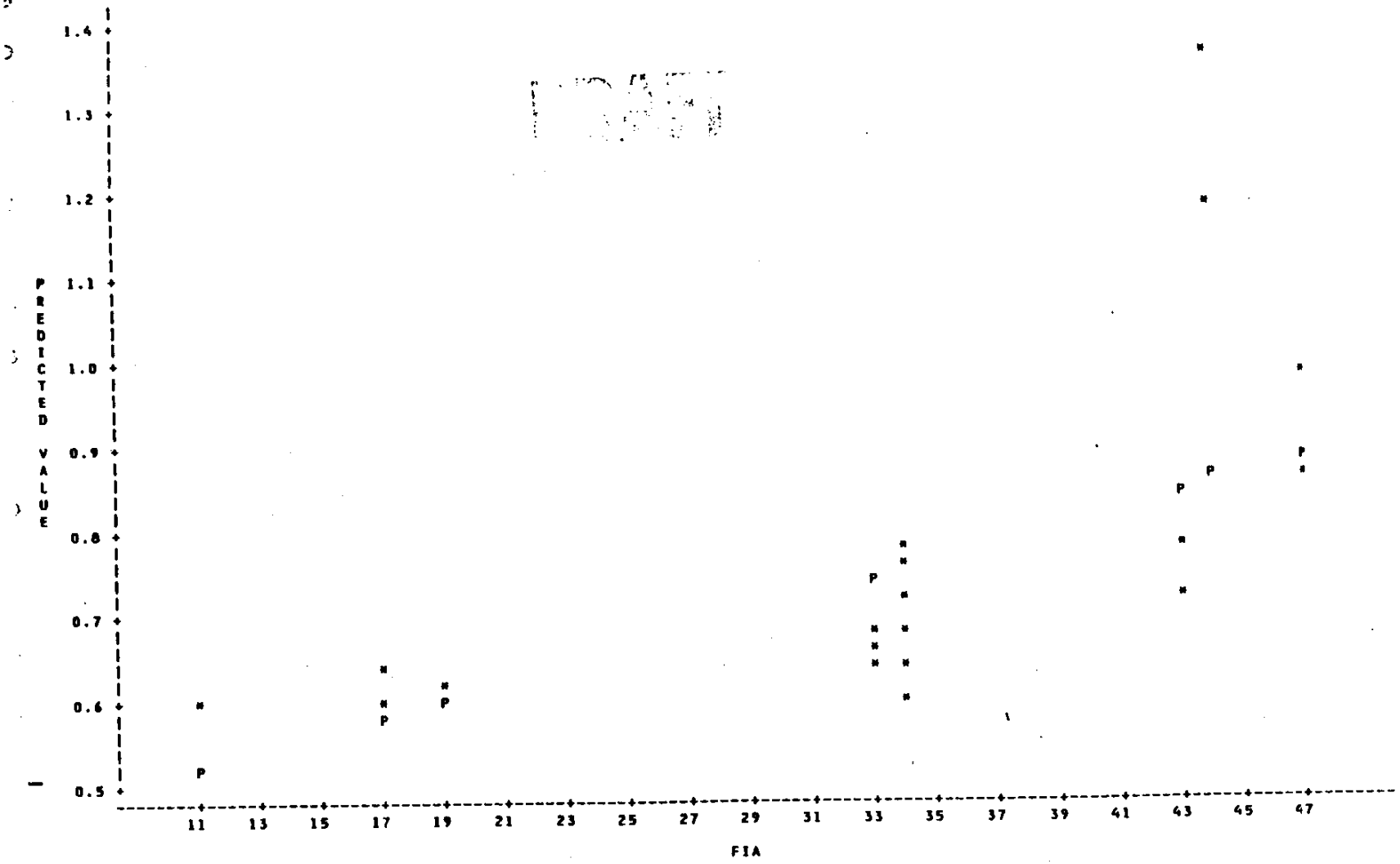
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.64939626	0.21646542	26.348	0.0001
ERROR	25	0.20538995	0.008215598		
C TOTAL	28	0.85478621			

ROOT MSE	0.09063994	R-SQUARE	0.7597
DEP MEAN	4.68931	ADJ R-SQ	0.7309
C.V.	1.932905		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	5.75744567	0.45277203	12.606	0.0001
FIA	1	0.01399550	0.001647838	8.493	0.0001
SULFUR	1	-0.43819367	0.17257506	-2.539	0.0177
BF90	1	-0.002287647	0.000745238	-3.070	0.0051

PLOT OF HCCS*FIA SYMBOL USED IS *
PLOT OF PRED*FIA SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 29 OBS HIDDEN

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.33824311	0.33824311	15.802	0.0006
ERROR	24	0.51371073	0.02140461		
C TOTAL	25	0.85195385			

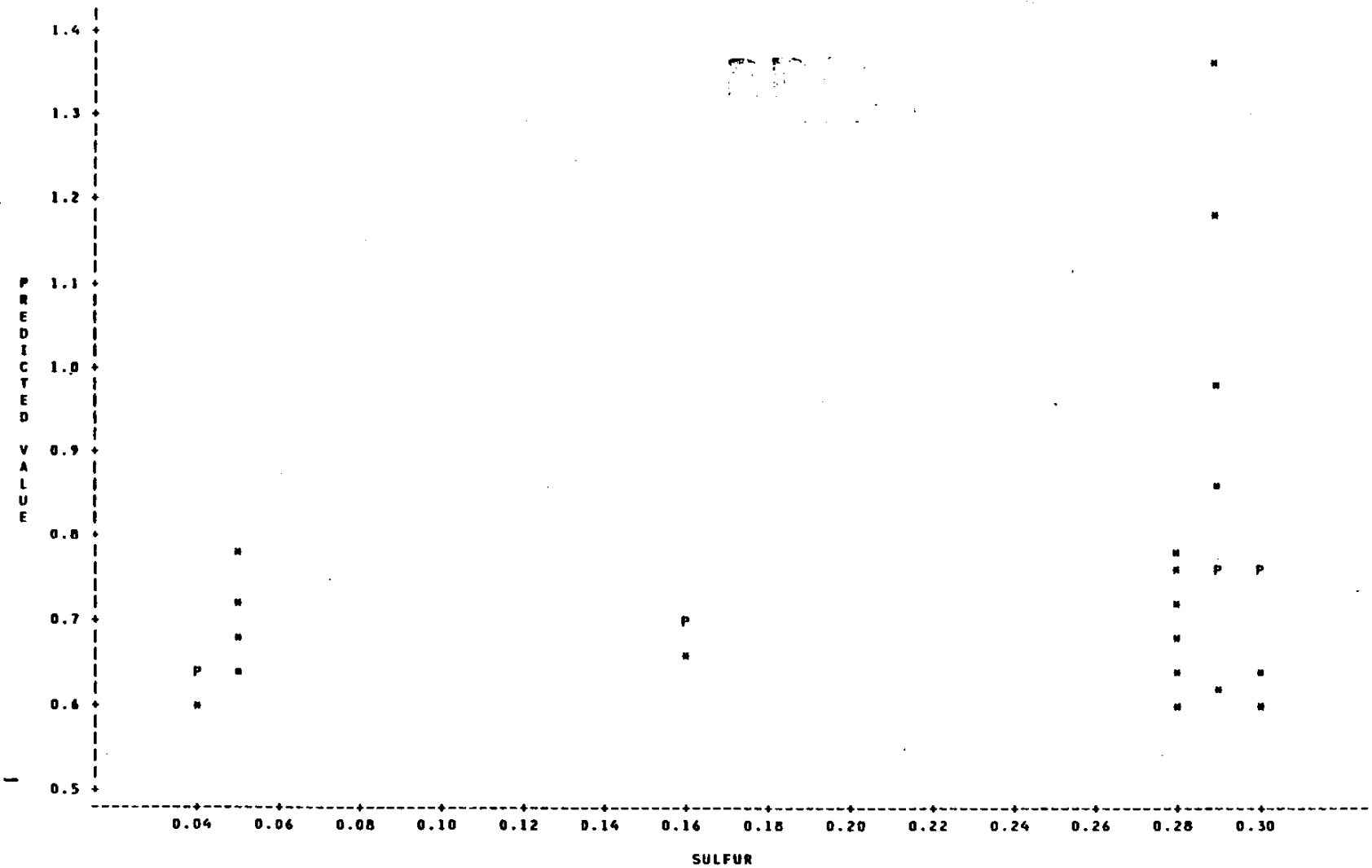
ROOT MSE	0.1463032	R-SQUARE	0.3970
DEP MEAN	0.7230769	ADJ R-SQ	0.3719
C.V.	20.23342		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.39798963	0.08666591	4.592	0.0001
FIA	1	0.01042203	0.002621753	3.975	0.0006

CUMMINS

PLOT OF HCCS*SULFUR SYMBOL USED IS *
PLOT OF PRED9*SULFUR SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 31 OBS HIDDEN

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

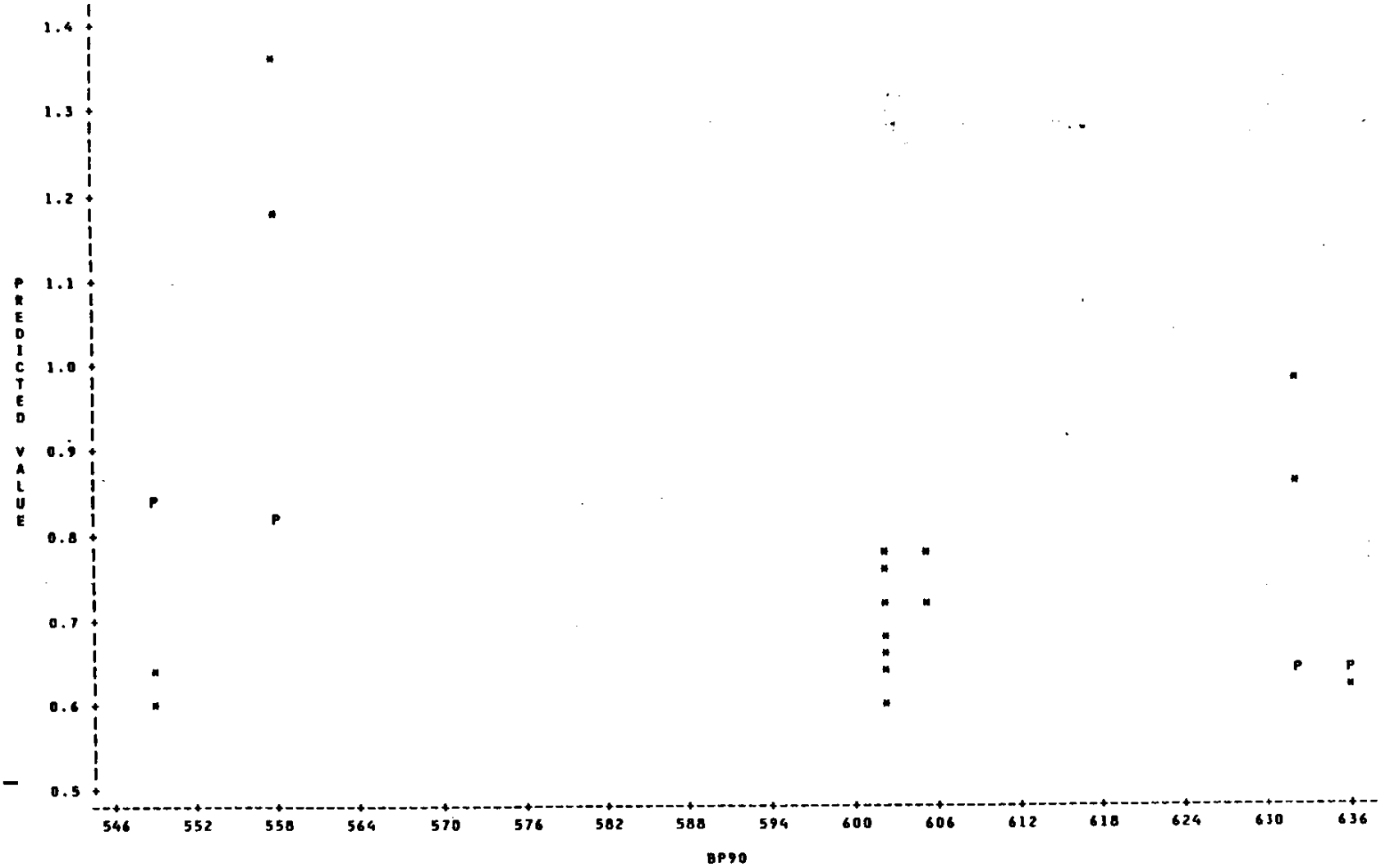
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.06362659	0.06362659	1.937	0.1768
ERROR	24	0.78832725	0.03284697		
C TOTAL	25	0.85195385			

ROOT MSE	0.1812373	R-SQUARE	0.0747
DEP MEAN	0.7230769	ADJ R-SQ	0.0361
C.V.	25.06474		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.62445606	0.07927415	7.877	0.0001
SULFUR	1	0.46620769	0.33497142	1.392	0.1768

PLOT OF HCCS*BP90 SYMBOL USED IS *
PLOT OF PRED13*BP90 SYMBOL USED IS P



NOTE: 118 OBS HAD MISSING VALUES 34 OBS HIDDEN

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.07475181	0.07475181	2.308	0.1417
ERROR	24	0.77720203	0.03238342		
C TOTAL	25	0.85195385			

ROOT MSE	0.1799539	R-SQUARE	0.0877
DEP MEAN	0.7230769	ADJ R-SQ	0.0497
C.V.	24.88725		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	2.13519046	0.93010709	2.296	0.0307
BP90	1	-0.002354730	0.001549857	-1.519	0.1417

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.35019530	0.17509765	6.026	0.0023
ERROR	23	0.50175855	0.02181559		
C TOTAL	25	0.85195385			

ROOT MSE	0.147701	R-SQUARE	0.4110
DEP MEAN	0.7230769	ADJ R-SQ	0.3596
C.V.	20.42674		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.36972204	0.05546550	3.873	0.0008
FIA	1	0.00991231B	0.00273491B	3.624	0.0014
SULFUR	1	0.20678851	0.28207619	0.740	0.4667

DEP VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.44425944	0.22212972	12.531	0.0002
ERROR	23	0.40769441	0.01772584		
C TOTAL	25	0.85195385			

ROOT MSE	0.1331394	R-SQUARE	0.5215
DEP MEAN	0.7230769	ADJ R-SQ	0.4798
C.V.	18.41276		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	2.07016183	0.68828463	3.008	0.0063
FIA	1	0.01093509	0.002395046	4.566	0.0001
BP90	1	-0.002915069	0.001151042	-2.446	0.0225

P VARIABLE: HCCS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.44832640	0.14944213	8.145	0.0004
ERROR	22	0.40362345	0.01834670		
C TOTAL	25	0.85195385			

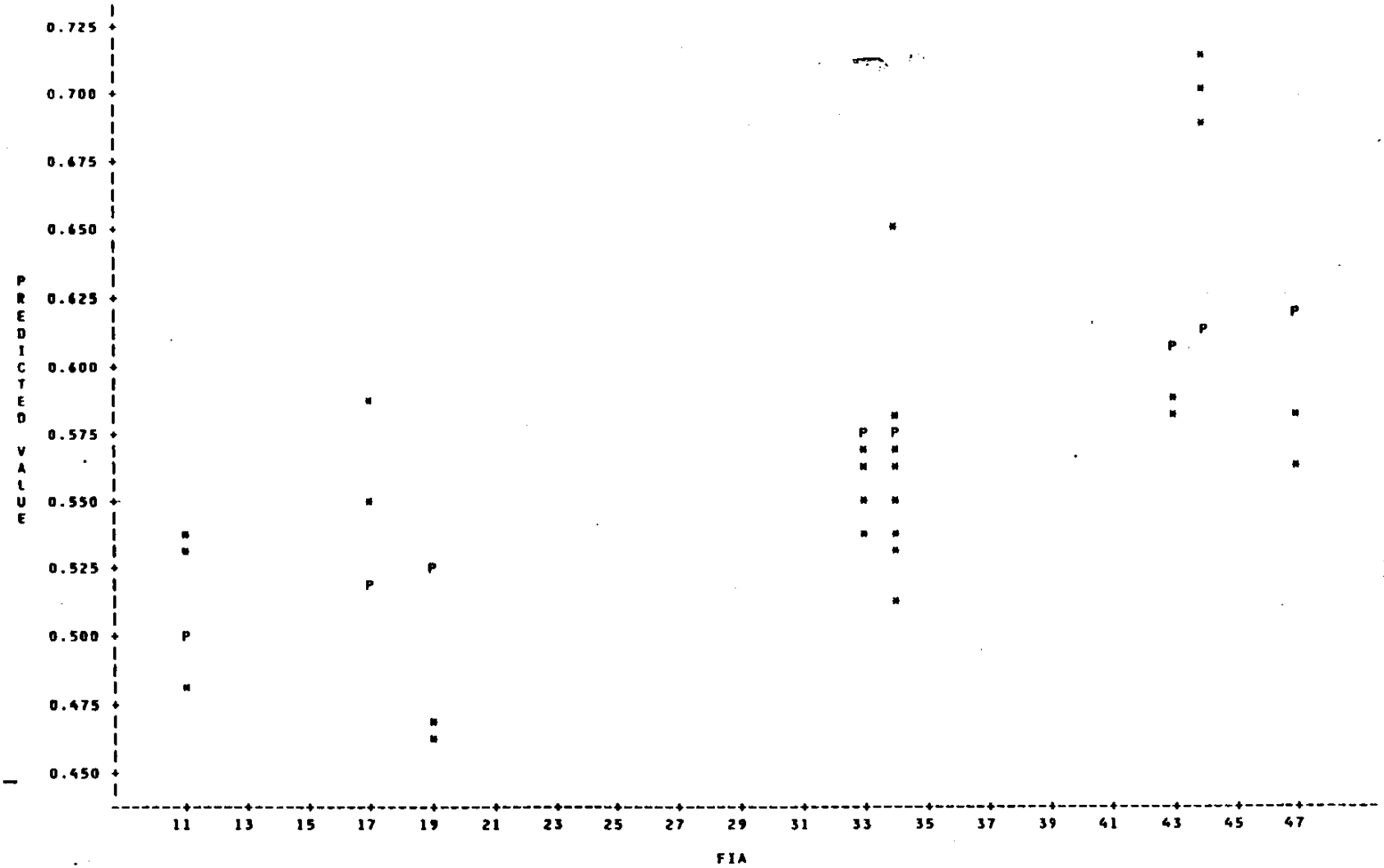
ROOT MSE	0.13545	R-SQUARE	0.5262
DEP MEAN	0.7230769	ADJ R-SQ	0.4616
C.V.	18.73245		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	2.03655929	0.71314623	2.814	0.0101
FIA	1	0.01062031	0.00252668 5	4.203	0.0004
SULFUR	1	0.12303650	0.26132371	0.471	0.6424
BP90	1	-0.002736039	0.001183036	-2.313	0.0335

CONTINUING

PLOT OF HCHS*FIA SYMBOL USED IS *
PLOT OF PRED19*FIA SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 25 OBS HIDDEN

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.03671473	0.03671473	13.995	0.0009
ERROR	27	0.07083010	0.002623337		
C TOTAL	28	0.10754483			

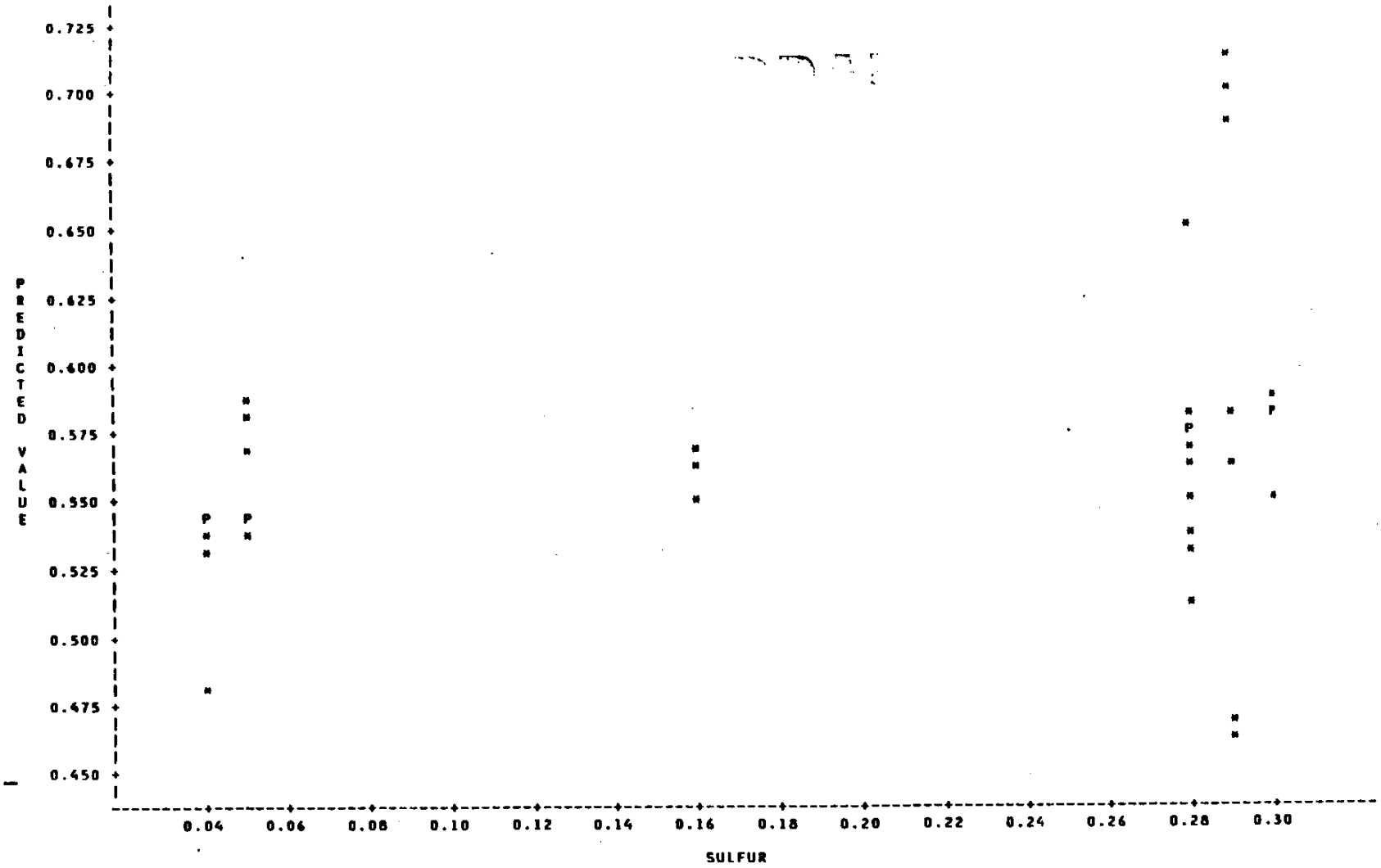
ROOT MSE	0.05121852	R-SQUARE	0.3414
DEP MEAN	0.5686207	ADJ R-SQ	0.3170
C.V.	9.007502		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.46223129	0.02998671	15.415	0.0001
FIA	1	0.003346304	0.000894483	3.741	0.0009

CUMMING

PLOT OF HCH5*SULFUR SYMBOL USED IS *
PLOT OF PRED28*SULFUR SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 26 OBS HIDDEN

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

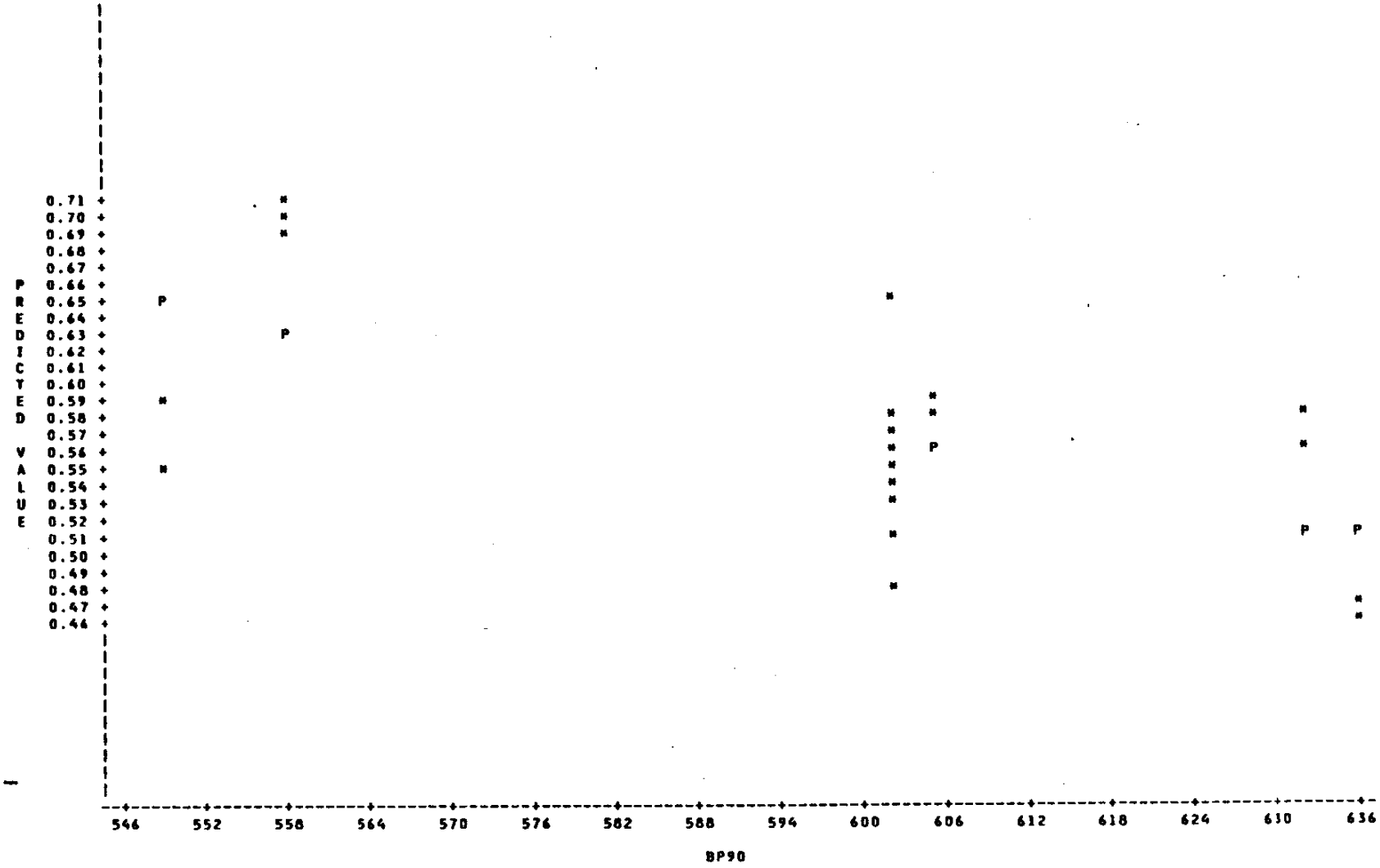
SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.005546708	0.005546708	1.468	0.2361
ERROR	27	0.10199812	0.003777708		
C TOTAL	28	0.10754483			

ROOT MSE	0.06146306	R-SQUARE	0.0516
DEP MEAN	0.5686207	ADJ R-SQ	0.0164
C.V.	10.80915		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.53969386	0.02646055	20.396	0.0001
SULFUR	1	0.13465137	0.11112386	1.212	0.2361

PLOT OF HCHS*BP90 SYMBOL USED IS *
PLOT OF PRED32*BP90 SYMBOL USED IS P



NOTE: 115 OBS HAD MISSING VALUES 33 OBS HIDDEN

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	1	0.03906271	0.03906271	15.401	0.0005
ERROR	27	0.06848212	0.002536375		
C TOTAL	28	0.10754483			

ROOT MSE	0.05036243	R-SQUARE	0.3632
DEP MEAN	0.5686207	ADJ R-SQ	0.3396
C.V.	8.856947		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	1.52847093	0.24476328	6.245	0.0001
BP90	1	-0.001603991	0.000408721	-3.924	0.0005

DEP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.03724487	0.01862243	6.887	0.0040
ERROR	26	0.07029996	0.002703845		
C TOTAL	28	0.10754483			

ROOT MSE	0.05199851	R-SQUARE	0.3463
DEP MEAN	0.5686207	ADJ R-SQ	0.2960
C.V.	9.144673		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	0.45656418	0.03302421	13.825	0.0001
FIA	1	0.003232155	0.000943987	3.424	0.0021
SULFUR	1	0.04327317	0.09772684	0.443	0.6616

DEP VARIABLE: MCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	2	0.07649791	0.03824896	32.031	0.0001
ERROR	26	0.03104692	0.001194112		
C TOTAL	28	0.10754483			

ROOT MSE	0.03455503	R-SQUARE	0.7113
DEP MEAN	0.5686207	ADJ R-SQ	0.6891
C.V.	6.077149		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	1.42989231	0.16886342	8.468	0.0001
FIA	1	0.003379128	0.000603514	5.599	0.0001
RR90	1	-0.001616787	0.000280455	-5.772	0.0001

EP VARIABLE: HCHS

ANALYSIS OF VARIANCE

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F VALUE	PROB>F
MODEL	3	0.07657920	0.02552640	20.609	0.0001
ERROR	25	0.03096563	0.001238625		
C TOTAL	28	0.10754483			

ROOT MSE	0.03519411	R-SQUARE	0.7121
DEP MEAN	0.5686207	ADJ R-SQ	0.6775
C.V.	6.189362		

PARAMETER ESTIMATES

VARIABLE	DF	PARAMETER ESTIMATE	STANDARD ERROR	T FOR H0: PARAMETER=0	PROB > |T|
INTERCEP	1	1.43923290	0.17580448	8.187	0.0001
FIA	1	0.003424651	0.000639830	5.352	0.0001
SULFUP	1	-0.01716615	0.06700826	-0.256	0.7999
BP90	1	-0.001630652	0.000289365	-5.635	0.0001