. // Model SP.C.PP.3

**. glm MR `subpart\_pp\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time, family(poisson) link(log) vce(cl mineid) exposure(hours) iter(50) eform**

note: sp77\_606\_pp\_c\_4lag omitted because of collinearity

Iteration 0: log pseudolikelihood = -9226.8161

Iteration 1: log pseudolikelihood = -8626.4468

Iteration 2: log pseudolikelihood = -8620.7735

Iteration 3: log pseudolikelihood = -8620.7019

Iteration 4: log pseudolikelihood = -8620.6883

Iteration 5: log pseudolikelihood = -8620.6853

Iteration 6: log pseudolikelihood = -8620.6846

Iteration 7: log pseudolikelihood = -8620.6844

Iteration 8: log pseudolikelihood = -8620.6844

Iteration 9: log pseudolikelihood = -8620.6844

Generalized linear models No. of obs = 6,253

Optimization : ML Residual df = 5,925

Scale parameter = 1

Deviance = 7666.503046 (1/df) Deviance = 1.293925

Pearson = 8644.122981 (1/df) Pearson = 1.458924

Variance function: V(u) = u [Poisson]

Link function : g(u) = ln(u) [Log]

AIC = 2.862205

Log pseudolikelihood = -8620.68437 BIC = -44122.84

(Std. Err. adjusted for 1,238 clusters in mineid)

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| Robust

MR | IRR Std. Err. z P>|z| [95% Conf. Interval]

-----------------------+----------------------------------------------------------------

sp47\_41\_pp\_c\_4lag | .9996718 .000239 -1.37 0.170 .9992034 1.00014

sp47\_42\_pp\_c\_4lag | .9992478 .0008583 -0.88 0.381 .997567 1.000931

sp47\_44\_pp\_c\_4lag | .999867 .0003937 -0.34 0.736 .9990957 1.000639

sp48\_11\_pp\_c\_4lag | 1.000181 .000232 0.78 0.435 .9997267 1.000636

sp48\_24\_pp\_c\_4lag | .9864583 .0009435 -14.26 0.000 .9846109 .9883092

sp48\_25\_pp\_c\_4lag | .9998935 .0003525 -0.30 0.763 .9992028 1.000585

sp48\_26\_pp\_c\_4lag | 1.001064 .0003338 3.19 0.001 1.00041 1.001718

sp48\_27\_pp\_c\_4lag | 1.000048 .0002472 0.20 0.845 .9995638 1.000533

sp48\_28\_pp\_c\_4lag | .9996306 .0004134 -0.89 0.372 .9988206 1.000441

sp48\_4\_pp\_c\_4lag | 1.004754 .0006084 7.83 0.000 1.003562 1.005947

sp48\_5\_pp\_c\_4lag | 1.000132 .0005944 0.22 0.825 .9989674 1.001297

sp48\_6\_pp\_c\_4lag | 1.000087 .0002575 0.34 0.736 .9995823 1.000592

sp48\_7\_pp\_c\_4lag | 1.000151 .0001819 0.83 0.408 .9997942 1.000507

sp48\_8\_pp\_c\_4lag | 1.000139 .0003476 0.40 0.689 .9994579 1.00082

sp71\_701\_pp\_c\_4lag | 1.002578 .0015411 1.67 0.094 .999562 1.005603

sp72\_503\_pp\_c\_4lag | .9996045 .0002659 -1.49 0.137 .9990834 1.000126

sp72\_610\_pp\_c\_4lag | .9999921 .0015009 -0.01 0.996 .9970546 1.002938

sp72\_620\_pp\_c\_4lag | 1.003072 .0009636 3.19 0.001 1.001185 1.004962

sp72\_630\_pp\_c\_4lag | 1.000038 .0000306 1.26 0.209 .9999784 1.000098

sp75\_100\_pp\_c\_4lag | 1.000066 .0005259 0.13 0.900 .9990361 1.001098

sp75\_1001\_1\_pp\_c\_4lag | 1.00081 .000961 0.84 0.399 .9989281 1.002695

sp75\_1001\_pp\_c\_4lag | 1.000774 .0015776 0.49 0.624 .9976865 1.00387

sp75\_1003\_1\_pp\_c\_4lag | .9975541 .0010016 -2.44 0.015 .995593 .999519

sp75\_1100\_2\_pp\_c\_4lag | 1.000054 .0000311 1.74 0.082 .9999932 1.000115

sp75\_1101\_20\_pp\_c\_4lag | .9985406 .0008592 -1.70 0.090 .996858 1.000226

sp75\_1102\_pp\_c\_4lag | .9996022 .0002536 -1.57 0.117 .9991053 1.000099

sp75\_1103\_4\_pp\_c\_4lag | 1.000053 .0000522 1.01 0.311 .9999506 1.000155

sp75\_1104\_pp\_c\_4lag | .9999288 .0001644 -0.43 0.665 .9996066 1.000251

sp75\_1106\_2\_pp\_c\_4lag | 1.000025 .0001631 0.15 0.878 .9997054 1.000345

sp75\_1106\_3\_pp\_c\_4lag | 1.000056 .0000554 1.02 0.308 .9999479 1.000165

sp75\_1106\_4\_pp\_c\_4lag | 1.000144 .0006057 0.24 0.812 .9989578 1.001332

sp75\_1106\_5\_pp\_c\_4lag | .9999634 .0002347 -0.16 0.876 .9995035 1.000423

sp75\_1106\_6\_pp\_c\_4lag | .9982045 .0011497 -1.56 0.119 .9959536 1.00046

sp75\_1106\_pp\_c\_4lag | 1.000338 .0004329 0.78 0.435 .9994898 1.001187

sp75\_1107\_14\_pp\_c\_4lag | 1.000897 .0012738 0.70 0.481 .9984037 1.003397

sp75\_1400\_1\_pp\_c\_4lag | .999709 .0006651 -0.44 0.662 .9984063 1.001013

sp75\_1400\_2\_pp\_c\_4lag | .9998911 .0012011 -0.09 0.928 .9975397 1.002248

sp75\_1400\_3\_pp\_c\_4lag | 1.000029 .0002018 0.14 0.886 .9996334 1.000424

sp75\_1400\_4\_pp\_c\_4lag | .9999858 .000622 -0.02 0.982 .9987674 1.001206

sp75\_1400\_pp\_c\_4lag | .9999796 .0002226 -0.09 0.927 .9995434 1.000416

sp75\_1401\_1\_pp\_c\_4lag | .999052 .0042269 -0.22 0.823 .9908017 1.007371

sp75\_1401\_pp\_c\_4lag | 1.000226 .0009744 0.23 0.817 .998318 1.002137

sp75\_1403\_10\_pp\_c\_4lag | 1.000073 .0000643 1.14 0.255 .9999472 1.000199

sp75\_1403\_11\_pp\_c\_4lag | 1.000365 .0009455 0.39 0.699 .9985137 1.00222

sp75\_1403\_3\_pp\_c\_4lag | .9969487 .0016165 -1.88 0.059 .9937854 1.000122

sp75\_1403\_4\_pp\_c\_4lag | 1.001993 .0009449 2.11 0.035 1.000143 1.003847

sp75\_1403\_5\_pp\_c\_4lag | .9999374 .0000426 -1.47 0.142 .999854 1.000021

sp75\_1403\_6\_pp\_c\_4lag | 1.000013 .0000347 0.37 0.710 .9999449 1.000081

sp75\_1403\_7\_pp\_c\_4lag | .9999847 .0001742 -0.09 0.930 .9996434 1.000326

sp75\_1403\_8\_pp\_c\_4lag | .9999703 .0000457 -0.65 0.516 .9998808 1.00006

sp75\_1403\_9\_pp\_c\_4lag | .9998113 .0001756 -1.07 0.283 .9994672 1.000156

sp75\_1404\_1\_pp\_c\_4lag | .9960601 .0019963 -1.97 0.049 .9921551 .9999805

sp75\_1404\_pp\_c\_4lag | .9982063 .0014682 -1.22 0.222 .9953328 1.001088

sp75\_1405\_1\_pp\_c\_4lag | 1.001371 .0010094 1.36 0.174 .9993945 1.003351

sp75\_1405\_pp\_c\_4lag | 1.000052 .0000752 0.69 0.489 .9999046 1.0002

sp75\_1431\_pp\_c\_4lag | .9976155 .0012112 -1.97 0.049 .9952444 .9999922

sp75\_1432\_pp\_c\_4lag | .9991012 .0006524 -1.38 0.168 .9978234 1.000381

sp75\_1433\_pp\_c\_4lag | 1.000043 .0004811 0.09 0.928 .9991009 1.000987

sp75\_1434\_pp\_c\_4lag | .999969 .0003858 -0.08 0.936 .9992131 1.000725

sp75\_1435\_pp\_c\_4lag | .9996534 .0014822 -0.23 0.815 .9967526 1.002563

sp75\_1437\_pp\_c\_4lag | 1.001129 .0008759 1.29 0.197 .9994135 1.002847

sp75\_150\_pp\_c\_4lag | 1.001836 .0007607 2.42 0.016 1.000346 1.003328

sp75\_151\_pp\_c\_4lag | 1.000021 .0012475 0.02 0.986 .9975793 1.002469

sp75\_153\_pp\_c\_4lag | 1.001081 .0005754 1.88 0.060 .9999534 1.002209

sp75\_156\_pp\_c\_4lag | 1.001064 .0010582 1.01 0.315 .9989918 1.00314

sp75\_160\_pp\_c\_4lag | 1.001489 .0013567 1.10 0.272 .9988332 1.004151

sp75\_1600\_2\_pp\_c\_4lag | .9998804 .0001027 -1.16 0.244 .999679 1.000082

sp75\_1712\_10\_pp\_c\_4lag | .9994977 .0004265 -1.18 0.239 .9986621 1.000334

sp75\_1712\_6\_pp\_c\_4lag | 1.000035 .0002029 0.17 0.864 .9996371 1.000432

sp75\_1720\_pp\_c\_4lag | 1.000166 .0001466 1.13 0.258 .9998786 1.000453

sp75\_1721\_pp\_c\_4lag | 1.003122 .0038119 0.82 0.412 .9956782 1.010621

sp75\_1725\_pp\_c\_4lag | 1.000005 .0000156 0.31 0.754 .9999744 1.000035

sp75\_1726\_pp\_c\_4lag | 1.000328 .000473 0.69 0.488 .9994017 1.001256

sp75\_1727\_pp\_c\_4lag | .9976714 .0049912 -0.47 0.641 .9879366 1.007502

sp75\_1728\_pp\_c\_4lag | .9998689 .001337 -0.10 0.922 .9972518 1.002493

sp75\_1729\_pp\_c\_4lag | 1.00018 .0005398 0.33 0.739 .9991224 1.001239

sp75\_1730\_pp\_c\_4lag | 1.000682 .0005395 1.26 0.206 .999625 1.00174

sp75\_1731\_pp\_c\_4lag | .9999969 .0000106 -0.29 0.773 .9999762 1.000018

sp75\_1903\_pp\_c\_4lag | 1.000187 .0001731 1.08 0.279 .999848 1.000527

sp75\_1909\_pp\_c\_4lag | .9999981 .0000272 -0.07 0.945 .9999449 1.000051

sp75\_1910\_pp\_c\_4lag | .9999804 .0000462 -0.42 0.672 .9998898 1.000071

sp75\_1911\_pp\_c\_4lag | .9999483 .0000557 -0.93 0.354 .9998392 1.000057

sp75\_1912\_pp\_c\_4lag | .9998353 .0004926 -0.33 0.738 .9988704 1.000801

sp75\_1913\_pp\_c\_4lag | 1.00054 .0004678 1.15 0.249 .9996232 1.001457

sp75\_1914\_pp\_c\_4lag | 1.000077 .0000354 2.18 0.029 1.000008 1.000147

sp75\_1915\_pp\_c\_4lag | 1.000839 .0005755 1.46 0.145 .9997115 1.001967

sp75\_202\_pp\_c\_4lag | .9999957 8.34e-06 -0.51 0.609 .9999794 1.000012

sp75\_208\_pp\_c\_4lag | 1.000084 .0000692 1.21 0.226 .9999482 1.000219

sp75\_211\_pp\_c\_4lag | 1.000038 .0000675 0.57 0.570 .999906 1.000171

sp75\_212\_pp\_c\_4lag | .9998608 .0001727 -0.81 0.420 .9995223 1.000199

sp75\_214\_pp\_c\_4lag | .9999649 .0001435 -0.24 0.807 .9996837 1.000246

sp75\_312\_pp\_c\_4lag | 1.000013 .0001726 0.07 0.941 .9996744 1.000351

sp75\_320\_pp\_c\_4lag | .9998372 .0000888 -1.83 0.067 .9996633 1.000011

sp75\_324\_pp\_c\_4lag | .9997701 .0002809 -0.82 0.413 .9992197 1.000321

sp75\_337\_pp\_c\_4lag | 1.000065 .0001242 0.52 0.602 .9998214 1.000308

sp75\_340\_pp\_c\_4lag | 1.000043 .0000501 0.87 0.387 .9999452 1.000141

sp75\_341\_pp\_c\_4lag | .9962407 .0022945 -1.64 0.102 .9917536 1.000748

sp75\_342\_pp\_c\_4lag | 1.000008 .0000242 0.33 0.744 .9999604 1.000055

sp75\_344\_pp\_c\_4lag | 1.000101 .000356 0.28 0.777 .9994032 1.000799

sp75\_352\_pp\_c\_4lag | .9997597 .0002456 -0.98 0.328 .9992785 1.000241

sp75\_382\_pp\_c\_4lag | 1.000139 .0002441 0.57 0.570 .9996604 1.000617

sp75\_503\_pp\_c\_4lag | .9999811 .0000128 -1.47 0.140 .9999561 1.000006

sp75\_504\_pp\_c\_4lag | 1.000048 .0004098 0.12 0.907 .9992448 1.000851

sp75\_505\_pp\_c\_4lag | 1.000623 .0007881 0.79 0.429 .9990794 1.002169

sp75\_506\_1\_pp\_c\_4lag | 1.001067 .000439 2.43 0.015 1.000207 1.001928

sp75\_506\_pp\_c\_4lag | .9995275 .0002805 -1.68 0.092 .9989779 1.000077

sp75\_507\_pp\_c\_4lag | .999883 .0001968 -0.59 0.552 .9994973 1.000269

sp75\_511\_1\_pp\_c\_4lag | .9937991 .0024829 -2.49 0.013 .9889447 .9986774

sp75\_511\_pp\_c\_4lag | 1.00033 .0002196 1.50 0.133 .9998994 1.00076

sp75\_512\_1\_pp\_c\_4lag | 1.001114 .0017183 0.65 0.517 .9977517 1.004487

sp75\_512\_2\_pp\_c\_4lag | 1.000095 .0000682 1.39 0.164 .9999611 1.000229

sp75\_512\_pp\_c\_4lag | 1.000005 .00002 0.27 0.786 .9999662 1.000045

sp75\_513\_1\_pp\_c\_4lag | .9999456 .0006476 -0.08 0.933 .998677 1.001216

sp75\_513\_pp\_c\_4lag | 1.000178 .0003183 0.56 0.577 .9995539 1.000802

sp75\_514\_pp\_c\_4lag | 1.000068 .0000688 0.99 0.321 .9999334 1.000203

sp75\_515\_pp\_c\_4lag | .999851 .0000445 -3.35 0.001 .9997638 .9999381

sp75\_516\_1\_pp\_c\_4lag | .9986195 .0009892 -1.39 0.163 .9966826 1.00056

sp75\_516\_2\_pp\_c\_4lag | 1.000033 .0001347 0.24 0.809 .9997685 1.000297

sp75\_516\_pp\_c\_4lag | .9999935 .0000787 -0.08 0.934 .9998392 1.000148

sp75\_517\_1\_pp\_c\_4lag | 1.000526 .0009089 0.58 0.562 .9987464 1.002309

sp75\_517\_pp\_c\_4lag | 1.000001 .0000141 0.08 0.934 .9999735 1.000029

sp75\_518\_1\_pp\_c\_4lag | .9999904 .0000896 -0.11 0.914 .9998148 1.000166

sp75\_518\_pp\_c\_4lag | 1.000032 .0000573 0.56 0.574 .9999199 1.000145

sp75\_519\_pp\_c\_4lag | 1.000245 .0012596 0.19 0.846 .9977788 1.002717

sp75\_520\_pp\_c\_4lag | 1.000039 .000117 0.34 0.737 .99981 1.000268

sp75\_523\_1\_pp\_c\_4lag | .9996921 .0001858 -1.66 0.098 .9993279 1.000056

sp75\_523\_2\_pp\_c\_4lag | 1.000054 .0001279 0.42 0.674 .9998033 1.000305

sp75\_523\_pp\_c\_4lag | .9998146 .0001512 -1.23 0.220 .9995183 1.000111

sp75\_600\_1\_pp\_c\_4lag | .9996871 .0008641 -0.36 0.717 .997995 1.001382

sp75\_600\_pp\_c\_4lag | 1.000322 .0009799 0.33 0.743 .9984029 1.002244

sp75\_601\_1\_pp\_c\_4lag | .9999439 .0000643 -0.87 0.383 .9998178 1.00007

sp75\_601\_2\_pp\_c\_4lag | .9997984 .0007753 -0.26 0.795 .9982801 1.001319

sp75\_601\_3\_pp\_c\_4lag | .9990323 .0004592 -2.11 0.035 .9981327 .9999327

sp75\_601\_pp\_c\_4lag | 1.000156 .0000786 1.99 0.046 1.000002 1.00031

sp75\_602\_pp\_c\_4lag | 1.000069 .0002375 0.29 0.770 .9996039 1.000535

sp75\_603\_pp\_c\_4lag | .9998238 .0002342 -0.75 0.452 .999365 1.000283

sp75\_604\_pp\_c\_4lag | 1.000058 .0000219 2.65 0.008 1.000015 1.000101

sp75\_605\_pp\_c\_4lag | 1.00016 .0000926 1.73 0.084 .9999785 1.000342

sp75\_606\_pp\_c\_4lag | .9999681 .0000339 -0.94 0.347 .9999016 1.000035

sp75\_607\_pp\_c\_4lag | 1.000086 .0002095 0.41 0.681 .9996756 1.000497

sp75\_700\_1\_pp\_c\_4lag | .9984491 .000889 -1.74 0.081 .9967083 1.000193

sp75\_700\_pp\_c\_4lag | .9996465 .0002541 -1.39 0.164 .9991486 1.000145

sp75\_701\_1\_pp\_c\_4lag | .9997073 .0002397 -1.22 0.222 .9992377 1.000177

sp75\_701\_2\_pp\_c\_4lag | 1.000301 .0002334 1.29 0.197 .9998436 1.000759

sp75\_701\_3\_pp\_c\_4lag | 1.000888 .0003101 2.86 0.004 1.00028 1.001496

sp75\_701\_4\_pp\_c\_4lag | 1.002439 .0007167 3.41 0.001 1.001036 1.003845

sp75\_701\_pp\_c\_4lag | 1.000013 .0000562 0.23 0.816 .9999029 1.000123

sp75\_702\_1\_pp\_c\_4lag | 1.000232 .0008681 0.27 0.789 .9985319 1.001935

sp75\_702\_pp\_c\_4lag | .9989569 .0012543 -0.83 0.406 .9965015 1.001418

sp75\_703\_1\_pp\_c\_4lag | .9963657 .0022545 -1.61 0.108 .9919568 1.000794

sp75\_703\_2\_pp\_c\_4lag | 1.000611 .0010339 0.59 0.555 .9985863 1.002639

sp75\_703\_3\_pp\_c\_4lag | 1.000234 .0003285 0.71 0.475 .9995907 1.000879

sp75\_703\_4\_pp\_c\_4lag | .9946356 .0023071 -2.32 0.020 .990124 .9991678

sp75\_703\_pp\_c\_4lag | 1.000273 .0001448 1.89 0.059 .9999895 1.000557

sp75\_704\_pp\_c\_4lag | .9988891 .0009726 -1.14 0.254 .9969847 1.000797

sp75\_705\_1\_pp\_c\_4lag | .9992131 .0004289 -1.83 0.067 .9983729 1.000054

sp75\_705\_3\_pp\_c\_4lag | 1.005126 .0016493 3.12 0.002 1.001898 1.008363

sp75\_705\_8\_pp\_c\_4lag | .999008 .0011499 -0.86 0.389 .9967568 1.001264

sp75\_705\_pp\_c\_4lag | 1.001968 .00083 2.37 0.018 1.000342 1.003596

sp75\_706\_pp\_c\_4lag | 1.000328 .0003305 0.99 0.321 .9996807 1.000976

sp75\_800\_2\_pp\_c\_4lag | 1.007746 .0052055 1.49 0.135 .9975953 1.018001

sp75\_800\_3\_pp\_c\_4lag | 1.000041 .0004492 0.09 0.927 .9991609 1.000922

sp75\_800\_4\_pp\_c\_4lag | 1.000261 .000434 0.60 0.548 .9994107 1.001112

sp75\_800\_pp\_c\_4lag | .999586 .0003175 -1.30 0.192 .998964 1.000208

sp75\_801\_pp\_c\_4lag | .9995287 .0010571 -0.45 0.656 .997459 1.001603

sp75\_802\_pp\_c\_4lag | 1.000722 .0007311 0.99 0.323 .9992901 1.002156

sp75\_803\_2\_pp\_c\_4lag | 1.000495 .0014926 0.33 0.740 .9975736 1.003424

sp75\_803\_pp\_c\_4lag | 1.000185 .0003637 0.51 0.612 .9994721 1.000898

sp75\_804\_pp\_c\_4lag | 1.000351 .0002498 1.40 0.160 .9998613 1.000841

sp75\_805\_pp\_c\_4lag | 1.000435 .0004683 0.93 0.353 .9995174 1.001353

sp75\_806\_pp\_c\_4lag | 1.003468 .0008686 4.00 0.000 1.001767 1.005172

sp75\_807\_pp\_c\_4lag | 1.000084 .0000424 1.99 0.047 1.000001 1.000167

sp75\_808\_pp\_c\_4lag | .9993966 .0003653 -1.65 0.099 .9986808 1.000113

sp75\_809\_pp\_c\_4lag | 1.000064 .0001712 0.37 0.708 .9997286 1.0004

sp75\_810\_pp\_c\_4lag | 1.00017 .0002312 0.74 0.461 .9997173 1.000623

sp75\_811\_pp\_c\_4lag | 1.000192 .0001537 1.25 0.211 .9998913 1.000494

sp75\_812\_pp\_c\_4lag | 1.000444 .0005573 0.80 0.426 .9993521 1.001537

sp75\_814\_pp\_c\_4lag | .9998495 .0005231 -0.29 0.774 .9988248 1.000875

sp75\_815\_pp\_c\_4lag | 1.001287 .0004049 3.18 0.001 1.000494 1.002081

sp75\_816\_pp\_c\_4lag | .9998563 .0001292 -1.11 0.266 .999603 1.00011

sp75\_818\_pp\_c\_4lag | .9998141 .0005829 -0.32 0.750 .9986724 1.000957

sp75\_820\_pp\_c\_4lag | 1.000919 .0005096 1.80 0.071 .9999203 1.001918

sp75\_821\_pp\_c\_4lag | 1.000392 .0002025 1.94 0.053 .9999951 1.000789

sp75\_825\_pp\_c\_4lag | 1.000374 .00057 0.66 0.512 .9992573 1.001492

sp75\_827\_pp\_c\_4lag | 1.000644 .000538 1.20 0.231 .9995899 1.001699

sp75\_831\_pp\_c\_4lag | .9989559 .0009173 -1.14 0.255 .9971596 1.000755

sp75\_832\_pp\_c\_4lag | .997772 .0028834 -0.77 0.440 .9921366 1.00344

sp75\_834\_pp\_c\_4lag | .8059081 .0145877 -11.92 0.000 .777818 .8350127

sp75\_900\_2\_pp\_c\_4lag | .9997815 .0007658 -0.29 0.775 .9982817 1.001284

sp75\_900\_3\_pp\_c\_4lag | 1.0001 .0004204 0.24 0.812 .9992766 1.000924

sp75\_900\_4\_pp\_c\_4lag | .9998744 .0001084 -1.16 0.246 .999662 1.000087

sp75\_900\_pp\_c\_4lag | .9999797 .000105 -0.19 0.847 .9997739 1.000186

sp75\_901\_pp\_c\_4lag | .9995558 .0004254 -1.04 0.297 .9987224 1.00039

sp75\_902\_1\_pp\_c\_4lag | 1.000907 .0009434 0.96 0.336 .9990593 1.002757

sp75\_902\_2\_pp\_c\_4lag | 1.000057 .0002466 0.23 0.819 .9995733 1.00054

sp75\_902\_4\_pp\_c\_4lag | 1.000087 .0002235 0.39 0.696 .9996493 1.000525

sp75\_902\_pp\_c\_4lag | 1.000156 .0000967 1.61 0.107 .9999662 1.000345

sp75\_903\_pp\_c\_4lag | .9999517 .0001674 -0.29 0.773 .9996236 1.00028

sp75\_904\_pp\_c\_4lag | 1.000007 .0000462 0.14 0.886 .999916 1.000097

sp75\_905\_pp\_c\_4lag | 1.000458 .0012896 0.36 0.722 .9979335 1.002989

sp75\_907\_pp\_c\_4lag | 1.00038 .0002933 1.30 0.195 .9998055 1.000955

sp77\_103\_pp\_c\_4lag | .999681 .0004337 -0.74 0.462 .9988312 1.000531

sp77\_104\_pp\_c\_4lag | .9983462 .0012853 -1.29 0.199 .9958302 1.000868

sp77\_1103\_pp\_c\_4lag | .9999362 .0001092 -0.58 0.559 .9997223 1.00015

sp77\_1104\_pp\_c\_4lag | 1.000065 .0000357 1.83 0.067 .9999954 1.000135

sp77\_1106\_pp\_c\_4lag | .9998307 .0024972 -0.07 0.946 .9949482 1.004737

sp77\_1111\_pp\_c\_4lag | .9970402 .0013501 -2.19 0.029 .9943976 .9996899

sp77\_1112\_pp\_c\_4lag | 1.000099 .0003166 0.31 0.755 .9994783 1.000719

sp77\_1403\_pp\_c\_4lag | 1.000248 .0005525 0.45 0.654 .9991656 1.001331

sp77\_1432\_pp\_c\_4lag | .999895 .0013032 -0.08 0.936 .9973441 1.002452

sp77\_1433\_pp\_c\_4lag | .9985183 .0006445 -2.30 0.022 .9972558 .9997824

sp77\_1434\_pp\_c\_4lag | 1.000491 .0004392 1.12 0.264 .99963 1.001352

sp77\_1437\_pp\_c\_4lag | .9992087 .0005291 -1.49 0.135 .9981722 1.000246

sp77\_1438\_pp\_c\_4lag | .9940909 .0026874 -2.19 0.028 .9888375 .9993722

sp77\_1605\_pp\_c\_4lag | .9999841 .0000504 -0.32 0.752 .9998853 1.000083

sp77\_1606\_pp\_c\_4lag | 1.000146 .0000719 2.03 0.043 1.000005 1.000287

sp77\_1710\_pp\_c\_4lag | .9998367 .0001181 -1.38 0.167 .9996053 1.000068

sp77\_1802\_pp\_c\_4lag | .9988891 .0010315 -1.08 0.282 .9968693 1.000913

sp77\_1906\_pp\_c\_4lag | 1.002114 .0013055 1.62 0.105 .9995587 1.004676

sp77\_1915\_pp\_c\_4lag | 1.000684 .0005218 1.31 0.190 .999662 1.001707

sp77\_1916\_pp\_c\_4lag | 1.000669 .0008801 0.76 0.447 .9989457 1.002396

sp77\_200\_pp\_c\_4lag | 1.000038 .0000475 0.80 0.425 .9999447 1.000131

sp77\_202\_pp\_c\_4lag | .999811 .000082 -2.31 0.021 .9996503 .9999716

sp77\_203\_pp\_c\_4lag | .9999601 .0007072 -0.06 0.955 .998575 1.001347

sp77\_204\_pp\_c\_4lag | .9998373 .000127 -1.28 0.200 .9995884 1.000086

sp77\_205\_pp\_c\_4lag | 1.000006 .0000368 0.16 0.874 .9999337 1.000078

sp77\_206\_pp\_c\_4lag | 1.000203 .000226 0.90 0.368 .9997604 1.000646

sp77\_207\_pp\_c\_4lag | 1.000108 .0001727 0.63 0.530 .9997699 1.000447

sp77\_208\_pp\_c\_4lag | 1.000125 .0000806 1.55 0.122 .9999667 1.000283

sp77\_210\_pp\_c\_4lag | .9998349 .0003809 -0.43 0.665 .9990886 1.000582

sp77\_216\_pp\_c\_4lag | 1.000307 .0001536 2.00 0.046 1.000006 1.000608

sp77\_305\_pp\_c\_4lag | 1.006843 .0024876 2.76 0.006 1.001979 1.01173

sp77\_309\_pp\_c\_4lag | .9988918 .0021398 -0.52 0.605 .9947066 1.003095

sp77\_314\_pp\_c\_4lag | .9908194 .003855 -2.37 0.018 .9832926 .9984039

sp77\_315\_pp\_c\_4lag | .9956804 .0032023 -1.35 0.178 .9894238 1.001977

sp77\_400\_pp\_c\_4lag | 1.000019 .0000405 0.48 0.635 .9999399 1.000099

sp77\_401\_pp\_c\_4lag | .9998887 .0002864 -0.39 0.698 .9993276 1.00045

sp77\_402\_pp\_c\_4lag | .9999973 .0002598 -0.01 0.992 .9994882 1.000507

sp77\_403\_1\_pp\_c\_4lag | 1.000667 .0004018 1.66 0.097 .9998796 1.001454

sp77\_403\_2\_pp\_c\_4lag | 1.004496 .0036825 1.22 0.221 .9973047 1.01174

sp77\_403\_pp\_c\_4lag | 1.001589 .0009853 1.61 0.106 .9996601 1.003523

sp77\_404\_pp\_c\_4lag | .9999152 .000048 -1.77 0.077 .9998211 1.000009

sp77\_405\_pp\_c\_4lag | 1.000548 .0003947 1.39 0.165 .9997746 1.001322

sp77\_408\_pp\_c\_4lag | .9995226 .0004677 -1.02 0.307 .9986064 1.00044

sp77\_409\_pp\_c\_4lag | .9963192 .0018149 -2.02 0.043 .9927684 .9998827

sp77\_410\_pp\_c\_4lag | 1.000097 .0000678 1.43 0.151 .9999644 1.00023

sp77\_411\_pp\_c\_4lag | .9987465 .0015258 -0.82 0.412 .9957604 1.001742

sp77\_412\_pp\_c\_4lag | 1.000236 .0003343 0.71 0.480 .999581 1.000891

sp77\_413\_pp\_c\_4lag | .9965959 .0007854 -4.33 0.000 .9950577 .9981365

sp77\_500\_pp\_c\_4lag | .9998998 .0003842 -0.26 0.794 .999147 1.000653

sp77\_501\_pp\_c\_4lag | .9997746 .0004168 -0.54 0.589 .9989579 1.000592

sp77\_502\_1\_pp\_c\_4lag | 1.001432 .0017128 0.84 0.403 .9980808 1.004795

sp77\_502\_2\_pp\_c\_4lag | .9997735 .0002806 -0.81 0.420 .9992236 1.000324

sp77\_502\_pp\_c\_4lag | .9999783 .0000445 -0.49 0.626 .9998911 1.000065

sp77\_503\_1\_pp\_c\_4lag | 1.000281 .0014585 0.19 0.847 .9974262 1.003143

sp77\_503\_pp\_c\_4lag | 1.000305 .0008474 0.36 0.719 .998645 1.001967

sp77\_504\_pp\_c\_4lag | .9997824 .0002 -1.09 0.277 .9993905 1.000175

sp77\_505\_pp\_c\_4lag | .9998942 .000114 -0.93 0.353 .9996706 1.000118

sp77\_506\_1\_pp\_c\_4lag | 1.000012 .0000932 0.13 0.897 .9998294 1.000195

sp77\_506\_pp\_c\_4lag | .9999596 .0001637 -0.25 0.805 .9996389 1.00028

sp77\_507\_pp\_c\_4lag | 1.000622 .0005068 1.23 0.219 .9996298 1.001616

sp77\_508\_1\_pp\_c\_4lag | .9986432 .0009475 -1.43 0.152 .996788 1.000502

sp77\_508\_pp\_c\_4lag | .999542 .0005529 -0.83 0.408 .998459 1.000626

sp77\_509\_pp\_c\_4lag | .9998836 .0002538 -0.46 0.646 .9993862 1.000381

sp77\_510\_pp\_c\_4lag | .9991946 .0007183 -1.12 0.262 .9977878 1.000603

sp77\_511\_pp\_c\_4lag | .9988495 .0007299 -1.58 0.115 .99742 1.000281

sp77\_512\_pp\_c\_4lag | .9999903 .0000948 -0.10 0.919 .9998044 1.000176

sp77\_513\_pp\_c\_4lag | 1.000086 .0001649 0.52 0.601 .9997631 1.000409

sp77\_514\_pp\_c\_4lag | 1.00017 .0011689 0.15 0.885 .9978814 1.002463

sp77\_515\_pp\_c\_4lag | 1.000081 .0034485 0.02 0.981 .9933451 1.006863

sp77\_516\_pp\_c\_4lag | .9999313 .000058 -1.19 0.236 .9998176 1.000045

sp77\_600\_pp\_c\_4lag | 1.001638 .0008139 2.01 0.044 1.000044 1.003235

sp77\_601\_pp\_c\_4lag | 1.000896 .0009144 0.98 0.327 .9991055 1.00269

sp77\_602\_pp\_c\_4lag | .9993017 .0013688 -0.51 0.610 .9966226 1.001988

sp77\_603\_pp\_c\_4lag | 1.004739 .0010561 4.50 0.000 1.002671 1.006811

sp77\_604\_pp\_c\_4lag | 1.000136 .0005697 0.24 0.811 .9990205 1.001254

sp77\_605\_pp\_c\_4lag | .9965772 .0043277 -0.79 0.430 .9881311 1.005096

sp77\_606\_1\_pp\_c\_4lag | .997827 .0015395 -1.41 0.159 .9948141 1.000849

sp77\_606\_pp\_c\_4lag | 1 (omitted)

sp77\_700\_1\_pp\_c\_4lag | 1.001311 .0007908 1.66 0.097 .9997625 1.002862

sp77\_700\_pp\_c\_4lag | .9995516 .0006025 -0.74 0.457 .9983715 1.000733

sp77\_701\_1\_pp\_c\_4lag | 1.000602 .0007708 0.78 0.434 .9990928 1.002114

sp77\_701\_2\_pp\_c\_4lag | .9991683 .0007411 -1.12 0.262 .9977167 1.000622

sp77\_701\_3\_pp\_c\_4lag | 1.001314 .0007112 1.85 0.064 .9999213 1.002709

sp77\_701\_4\_pp\_c\_4lag | .9999799 .0007697 -0.03 0.979 .9984724 1.00149

sp77\_701\_pp\_c\_4lag | .9997935 .0001657 -1.25 0.213 .9994687 1.000118

sp77\_703\_pp\_c\_4lag | .9980923 .0019112 -1.00 0.319 .9943534 1.001845

sp77\_704\_1\_pp\_c\_4lag | 1.000091 .000416 0.22 0.827 .999276 1.000907

sp77\_704\_8\_pp\_c\_4lag | .999148 .000985 -0.86 0.387 .9972194 1.00108

sp77\_704\_9\_pp\_c\_4lag | .9960597 .0018043 -2.18 0.029 .9925295 .9996024

sp77\_704\_pp\_c\_4lag | .9985153 .0009194 -1.61 0.107 .9967149 1.000319

sp77\_705\_pp\_c\_4lag | 1.000312 .0003528 0.89 0.376 .9996213 1.001004

sp77\_800\_1\_pp\_c\_4lag | 1.000416 .0010321 0.40 0.687 .9983948 1.002441

sp77\_800\_2\_pp\_c\_4lag | 1.000662 .0007171 0.92 0.356 .9992571 1.002068

sp77\_800\_pp\_c\_4lag | 1.00062 .0021911 0.28 0.777 .9963344 1.004923

sp77\_801\_pp\_c\_4lag | .9920259 .0031846 -2.49 0.013 .9858039 .9982872

sp77\_802\_pp\_c\_4lag | .9992373 .0013222 -0.58 0.564 .9966491 1.001832

sp77\_803\_pp\_c\_4lag | .9999671 .0009606 -0.03 0.973 .9980862 1.001852

sp77\_804\_pp\_c\_4lag | .9889341 .0055188 -1.99 0.046 .9781765 .9998101

sp77\_805\_pp\_c\_4lag | .9990576 .0008671 -1.09 0.277 .9973595 1.000759

sp77\_807\_1\_pp\_c\_4lag | .9994046 .0011761 -0.51 0.613 .9971021 1.001712

sp77\_807\_2\_pp\_c\_4lag | 1.000769 .0010493 0.73 0.463 .9987146 1.002828

sp77\_807\_3\_pp\_c\_4lag | .9999307 .0007548 -0.09 0.927 .9984523 1.001411

sp77\_807\_pp\_c\_4lag | 1.000064 .0009418 0.07 0.946 .9982194 1.001911

sp77\_808\_pp\_c\_4lag | 1.00283 .001503 1.89 0.059 .9998886 1.00578

sp77\_809\_pp\_c\_4lag | .9998025 .0002409 -0.82 0.412 .9993304 1.000275

sp77\_810\_pp\_c\_4lag | 1.000615 .0006857 0.90 0.370 .9992715 1.001959

sp77\_900\_1\_pp\_c\_4lag | 1.001883 .0011546 1.63 0.102 .9996231 1.004149

sp77\_900\_2\_pp\_c\_4lag | 1.001483 .0005908 2.51 0.012 1.000325 1.002641

sp77\_900\_pp\_c\_4lag | .9981247 .0010405 -1.80 0.072 .9960875 1.000166

sp77\_901\_1\_pp\_c\_4lag | .9996484 .0023138 -0.15 0.879 .9951237 1.004194

sp77\_901\_pp\_c\_4lag | 1.000294 .0005955 0.49 0.621 .9991276 1.001462

sp77\_902\_2\_pp\_c\_4lag | 1.001089 .0018882 0.58 0.564 .9973947 1.004796

sp77\_902\_3\_pp\_c\_4lag | .9959546 .0021654 -1.86 0.062 .9917195 1.000208

sp77\_902\_pp\_c\_4lag | 1.000277 .0006428 0.43 0.666 .999018 1.001538

sp77\_903\_pp\_c\_4lag | 1.0003 .0006581 0.46 0.648 .9990114 1.001591

sp77\_904\_pp\_c\_4lag | .999902 .0001671 -0.59 0.557 .9995746 1.000229

mine\_time | .9944926 .0069347 -0.79 0.428 .9809932 1.008178

onsite\_insp\_hours | .9998914 .0000523 -2.08 0.038 .9997889 .999994

|

state |

1 | 1.09613 .0859753 1.17 0.242 .9399353 1.278281

2 | 2.097284 .1960453 7.92 0.000 1.746186 2.518976

3 | .7546561 .1259061 -1.69 0.092 .544171 1.046557

4 | 1.092793 .0807668 1.20 0.230 .9454243 1.263133

5 | .8949005 .1204119 -0.83 0.409 .6874526 1.164949

6 | .9941558 .059954 -0.10 0.923 .8833269 1.11889

7 | 1.018047 .2919797 0.06 0.950 .580283 1.786058

8 | .9138966 .1346967 -0.61 0.541 .6846062 1.219982

9 | .8686459 .0654996 -1.87 0.062 .7493049 1.006994

10 | 1.213195 .1295692 1.81 0.070 .9840619 1.495681

11 | .8790639 .2333757 -0.49 0.627 .5224463 1.479106

12 | 1.000604 .0938442 0.01 0.995 .8325877 1.202525

13 | 1.394568 .222822 2.08 0.037 1.019615 1.907408

14 | .6326636 .0797315 -3.63 0.000 .494197 .8099265

15 | .6980488 .0488807 -5.13 0.000 .608528 .800739

17 | 1.208043 .1942678 1.18 0.240 .8814526 1.65564

|

time |

2000 | 1.116596 .0691845 1.78 0.075 .9889068 1.260772

2002 | .9819005 .0592244 -0.30 0.762 .8724215 1.105118

2003 | .8911632 .0569008 -1.80 0.071 .7863357 1.009965

2004 | .9089693 .0603583 -1.44 0.151 .7980441 1.035313

2005 | .787787 .0511504 -3.67 0.000 .6936509 .8946985

2006 | .7590859 .0565306 -3.70 0.000 .6559946 .8783783

2007 | .701601 .0555608 -4.48 0.000 .6007341 .819404

2008 | .5903358 .0480182 -6.48 0.000 .5033406 .6923668

2009 | .5319263 .0474756 -7.07 0.000 .4465599 .6336117

2010 | .5124146 .0442915 -7.74 0.000 .4325598 .6070112

2011 | .5279693 .0466059 -7.24 0.000 .4440888 .6276932

2012 | .5308008 .0453617 -7.41 0.000 .4489405 .6275877

2013 | .4913059 .046609 -7.49 0.000 .407944 .5917025

2014 | .4533962 .0449688 -7.98 0.000 .3732965 .5506833

2015 | .461529 .051881 -6.88 0.000 .3702665 .5752858

|

\_cons | .0000165 1.03e-06 -177.69 0.000 .0000147 .0000187

ln(hours) | 1 (exposure)

----------------------------------------------------------------------------------------

**. estat gof**

Deviance goodness-of-fit = 7828.753

Prob > chi2(5937) = 0.0000

Pearson goodness-of-fit = 8796.244

Prob > chi2(5937) = 0.0000

**. glm MR `subpart\_pp\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time, family(nbinomial) link(log) vce(cl mineid) exposure(hours) iter(50) eform**

note: sp77\_606\_pp\_c\_4lag omitted because of collinearity

Iteration 0: log pseudolikelihood = -9174.8122

Iteration 1: log pseudolikelihood = -9014.1501

Iteration 2: log pseudolikelihood = -9012.6927

Iteration 3: log pseudolikelihood = -9012.6457

Iteration 4: log pseudolikelihood = -9012.6418

Iteration 5: log pseudolikelihood = -9012.6411

Iteration 6: log pseudolikelihood = -9012.641

Iteration 7: log pseudolikelihood = -9012.6409

Iteration 8: log pseudolikelihood = -9012.6409

Generalized linear models No. of obs = 6,253

Optimization : ML Residual df = 5,919

Scale parameter = 1

Deviance = 3711.519488 (1/df) Deviance = .6270518

Pearson = 4059.743793 (1/df) Pearson = .6858834

Variance function: V(u) = u+(1)u^2 [Neg. Binomial]

Link function : g(u) = ln(u) [Log]

AIC = 2.98949

Log pseudolikelihood = -9012.640919 BIC = -48025.37

(Std. Err. adjusted for 1,238 clusters in mineid)

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| Robust

MR | IRR Std. Err. z P>|z| [95% Conf. Interval]

-----------------------+----------------------------------------------------------------

sp47\_41\_pp\_c\_4lag | .9994503 .0002874 -1.91 0.056 .9988872 1.000014

sp47\_42\_pp\_c\_4lag | .998848 .0008357 -1.38 0.168 .9972114 1.000487

sp47\_44\_pp\_c\_4lag | 1.000363 .0004901 0.74 0.459 .9994029 1.001324

sp48\_11\_pp\_c\_4lag | 1.0007 .0002895 2.42 0.016 1.000133 1.001268

sp48\_24\_pp\_c\_4lag | .9869127 .0009435 -13.78 0.000 .9850652 .9887637

sp48\_25\_pp\_c\_4lag | .9995589 .0004791 -0.92 0.357 .9986204 1.000498

sp48\_26\_pp\_c\_4lag | 1.001033 .0003705 2.79 0.005 1.000308 1.00176

sp48\_27\_pp\_c\_4lag | .9999413 .0003072 -0.19 0.848 .9993393 1.000544

sp48\_28\_pp\_c\_4lag | .9995163 .0005896 -0.82 0.412 .9983613 1.000673

sp48\_4\_pp\_c\_4lag | 1.004768 .0008484 5.63 0.000 1.003106 1.006432

sp48\_5\_pp\_c\_4lag | .9999667 .0008098 -0.04 0.967 .9983808 1.001555

sp48\_6\_pp\_c\_4lag | .9999617 .0003 -0.13 0.898 .9993739 1.00055

sp48\_7\_pp\_c\_4lag | 1.000166 .000253 0.66 0.512 .99967 1.000662

sp48\_8\_pp\_c\_4lag | 1.000162 .0004647 0.35 0.728 .9992513 1.001073

sp71\_701\_pp\_c\_4lag | 1.00126 .0015905 0.79 0.428 .9981479 1.004383

sp72\_503\_pp\_c\_4lag | .9996567 .0002754 -1.25 0.213 .999117 1.000197

sp72\_610\_pp\_c\_4lag | 1.000434 .0016387 0.26 0.791 .9972273 1.003651

sp72\_620\_pp\_c\_4lag | 1.002252 .0012292 1.83 0.067 .9998454 1.004664

sp72\_630\_pp\_c\_4lag | 1.000047 .000038 1.25 0.212 .999973 1.000122

sp75\_100\_pp\_c\_4lag | .999981 .0006946 -0.03 0.978 .9986206 1.001343

sp75\_1001\_1\_pp\_c\_4lag | .99989 .0007006 -0.16 0.875 .9985179 1.001264

sp75\_1001\_pp\_c\_4lag | .9997239 .0021179 -0.13 0.896 .9955815 1.003884

sp75\_1003\_1\_pp\_c\_4lag | .9975013 .0013943 -1.79 0.073 .9947723 1.000238

sp75\_1100\_2\_pp\_c\_4lag | 1.000037 .000038 0.98 0.325 .9999629 1.000112

sp75\_1101\_20\_pp\_c\_4lag | .999149 .0008151 -1.04 0.297 .9975526 1.000748

sp75\_1102\_pp\_c\_4lag | .9998164 .0002842 -0.65 0.518 .9992595 1.000374

sp75\_1103\_4\_pp\_c\_4lag | 1.000044 .00006 0.73 0.464 .9999264 1.000162

sp75\_1104\_pp\_c\_4lag | .9999454 .0001915 -0.28 0.776 .9995701 1.000321

sp75\_1106\_2\_pp\_c\_4lag | .9998399 .0002017 -0.79 0.427 .9994446 1.000235

sp75\_1106\_3\_pp\_c\_4lag | 1.000083 .0000714 1.16 0.245 .9999431 1.000223

sp75\_1106\_4\_pp\_c\_4lag | .9999499 .0006483 -0.08 0.938 .99868 1.001221

sp75\_1106\_5\_pp\_c\_4lag | .9997809 .0002424 -0.90 0.366 .999306 1.000256

sp75\_1106\_6\_pp\_c\_4lag | .9972032 .0014751 -1.89 0.058 .9943161 1.000099

sp75\_1106\_pp\_c\_4lag | 1.001142 .0007412 1.54 0.123 .9996904 1.002596

sp75\_1107\_14\_pp\_c\_4lag | .9996084 .001789 -0.22 0.827 .9961082 1.003121

sp75\_1400\_1\_pp\_c\_4lag | .9997907 .0008254 -0.25 0.800 .9981743 1.00141

sp75\_1400\_2\_pp\_c\_4lag | 1.000676 .0012169 0.56 0.579 .9982936 1.003064

sp75\_1400\_3\_pp\_c\_4lag | 1.000122 .0002709 0.45 0.653 .999591 1.000653

sp75\_1400\_4\_pp\_c\_4lag | .9995542 .0007269 -0.61 0.540 .9981306 1.00098

sp75\_1400\_pp\_c\_4lag | .9999664 .0002537 -0.13 0.895 .9994693 1.000464

sp75\_1401\_1\_pp\_c\_4lag | .998633 .0045966 -0.30 0.766 .9896643 1.007683

sp75\_1401\_pp\_c\_4lag | 1.000873 .0010725 0.81 0.416 .998773 1.002977

sp75\_1403\_10\_pp\_c\_4lag | 1.00013 .0000886 1.46 0.144 .9999559 1.000303

sp75\_1403\_11\_pp\_c\_4lag | .9993167 .0013613 -0.50 0.616 .9966522 1.001988

sp75\_1403\_3\_pp\_c\_4lag | .9972897 .0020625 -1.31 0.189 .9932554 1.00134

sp75\_1403\_4\_pp\_c\_4lag | 1.001687 .0016086 1.05 0.294 .9985392 1.004845

sp75\_1403\_5\_pp\_c\_4lag | .9999152 .0000596 -1.42 0.154 .9997984 1.000032

sp75\_1403\_6\_pp\_c\_4lag | 1.000004 .0000414 0.10 0.923 .9999228 1.000085

sp75\_1403\_7\_pp\_c\_4lag | .9999316 .0002163 -0.32 0.752 .9995077 1.000356

sp75\_1403\_8\_pp\_c\_4lag | .9999926 .0000563 -0.13 0.895 .9998823 1.000103

sp75\_1403\_9\_pp\_c\_4lag | .999861 .0002295 -0.61 0.545 .9994113 1.000311

sp75\_1404\_1\_pp\_c\_4lag | .9938553 .001992 -3.08 0.002 .9899586 .9977673

sp75\_1404\_pp\_c\_4lag | .9992967 .0018499 -0.38 0.704 .9956775 1.002929

sp75\_1405\_1\_pp\_c\_4lag | 1.002096 .0015332 1.37 0.171 .9990956 1.005106

sp75\_1405\_pp\_c\_4lag | 1.000031 .0000909 0.34 0.736 .9998525 1.000209

sp75\_1431\_pp\_c\_4lag | .9978857 .0013473 -1.57 0.117 .9952485 1.00053

sp75\_1432\_pp\_c\_4lag | .9992121 .0007286 -1.08 0.280 .997785 1.000641

sp75\_1433\_pp\_c\_4lag | 1.000032 .0005244 0.06 0.951 .9990048 1.00106

sp75\_1434\_pp\_c\_4lag | .9997004 .0005026 -0.60 0.551 .9987158 1.000686

sp75\_1435\_pp\_c\_4lag | .9998858 .0015152 -0.08 0.940 .9969205 1.00286

sp75\_1437\_pp\_c\_4lag | 1.000653 .0011292 0.58 0.563 .9984423 1.002869

sp75\_150\_pp\_c\_4lag | 1.001735 .0007647 2.27 0.023 1.000238 1.003235

sp75\_151\_pp\_c\_4lag | 1.000893 .0015075 0.59 0.553 .9979429 1.003852

sp75\_153\_pp\_c\_4lag | 1.000628 .000628 1.00 0.317 .9993981 1.00186

sp75\_156\_pp\_c\_4lag | 1.000512 .0011234 0.46 0.648 .9983128 1.002716

sp75\_160\_pp\_c\_4lag | 1.000238 .0022205 0.11 0.915 .9958956 1.0046

sp75\_1600\_2\_pp\_c\_4lag | .9998389 .0001222 -1.32 0.188 .9995994 1.000079

sp75\_1712\_10\_pp\_c\_4lag | .999179 .0004614 -1.78 0.075 .9982751 1.000084

sp75\_1712\_6\_pp\_c\_4lag | .9999825 .0002612 -0.07 0.947 .9994707 1.000495

sp75\_1720\_pp\_c\_4lag | 1.000094 .0001705 0.55 0.583 .9997595 1.000428

sp75\_1721\_pp\_c\_4lag | 1.001368 .0033491 0.41 0.683 .9948251 1.007953

sp75\_1725\_pp\_c\_4lag | 1.000017 .0000201 0.83 0.405 .9999773 1.000056

sp75\_1726\_pp\_c\_4lag | 1.000788 .0005304 1.49 0.137 .9997489 1.001828

sp75\_1727\_pp\_c\_4lag | .9965119 .0061851 -0.56 0.573 .9844628 1.008708

sp75\_1728\_pp\_c\_4lag | 1.001159 .0022855 0.51 0.612 .9966898 1.005649

sp75\_1729\_pp\_c\_4lag | 1.000406 .0005752 0.71 0.480 .9992794 1.001534

sp75\_1730\_pp\_c\_4lag | 1.000602 .0005555 1.08 0.279 .9995134 1.001691

sp75\_1731\_pp\_c\_4lag | .9999817 .0000127 -1.44 0.149 .9999569 1.000007

sp75\_1903\_pp\_c\_4lag | 1.000283 .0002055 1.38 0.169 .9998799 1.000685

sp75\_1909\_pp\_c\_4lag | .9999846 .0000323 -0.48 0.633 .9999214 1.000048

sp75\_1910\_pp\_c\_4lag | .9999909 .0000596 -0.15 0.879 .9998742 1.000108

sp75\_1911\_pp\_c\_4lag | .9999821 .0000676 -0.27 0.791 .9998497 1.000114

sp75\_1912\_pp\_c\_4lag | 1.000146 .0006304 0.23 0.817 .9989114 1.001383

sp75\_1913\_pp\_c\_4lag | 1.000522 .0005026 1.04 0.299 .9995372 1.001507

sp75\_1914\_pp\_c\_4lag | 1.000038 .0000458 0.84 0.403 .9999486 1.000128

sp75\_1915\_pp\_c\_4lag | 1.000839 .0006072 1.38 0.167 .9996498 1.00203

sp75\_202\_pp\_c\_4lag | .9999983 .0000102 -0.17 0.868 .9999784 1.000018

sp75\_208\_pp\_c\_4lag | 1.000022 .000089 0.25 0.804 .9998477 1.000196

sp75\_211\_pp\_c\_4lag | .9999742 .0000663 -0.39 0.698 .9998442 1.000104

sp75\_212\_pp\_c\_4lag | .9996872 .0001802 -1.74 0.083 .9993342 1.00004

sp75\_214\_pp\_c\_4lag | .9999998 .0001722 -0.00 0.999 .9996624 1.000337

sp75\_312\_pp\_c\_4lag | 1.000069 .0001965 0.35 0.724 .9996844 1.000455

sp75\_320\_pp\_c\_4lag | .9998316 .0000869 -1.94 0.053 .9996612 1.000002

sp75\_324\_pp\_c\_4lag | .9994089 .0003337 -1.77 0.077 .9987551 1.000063

sp75\_337\_pp\_c\_4lag | .999997 .0001522 -0.02 0.984 .9996987 1.000295

sp75\_340\_pp\_c\_4lag | .9999999 .0000609 -0.00 0.998 .9998805 1.000119

sp75\_341\_pp\_c\_4lag | .9957021 .0027942 -1.53 0.125 .9902406 1.001194

sp75\_342\_pp\_c\_4lag | 1 .0000272 0.00 0.999 .9999467 1.000053

sp75\_344\_pp\_c\_4lag | .9997286 .0005189 -0.52 0.601 .9987121 1.000746

sp75\_352\_pp\_c\_4lag | .9996637 .0002809 -1.20 0.231 .9991133 1.000214

sp75\_382\_pp\_c\_4lag | 1.00031 .0002846 1.09 0.276 .9997526 1.000868

sp75\_503\_pp\_c\_4lag | .9999859 .000016 -0.88 0.378 .9999545 1.000017

sp75\_504\_pp\_c\_4lag | .9995224 .0004601 -1.04 0.299 .9986211 1.000425

sp75\_505\_pp\_c\_4lag | 1.000884 .0006218 1.42 0.155 .9996658 1.002103

sp75\_506\_1\_pp\_c\_4lag | 1.001119 .000511 2.19 0.028 1.000118 1.002121

sp75\_506\_pp\_c\_4lag | .9998662 .0003765 -0.36 0.722 .9991286 1.000604

sp75\_507\_pp\_c\_4lag | .9998241 .0002281 -0.77 0.441 .9993772 1.000271

sp75\_511\_1\_pp\_c\_4lag | .9927767 .0025102 -2.87 0.004 .9878691 .9977087

sp75\_511\_pp\_c\_4lag | 1.000206 .0002415 0.85 0.394 .9997326 1.000679

sp75\_512\_1\_pp\_c\_4lag | 1.001139 .0015485 0.74 0.462 .9981087 1.004179

sp75\_512\_2\_pp\_c\_4lag | 1.000091 .0000804 1.13 0.259 .9999332 1.000248

sp75\_512\_pp\_c\_4lag | 1.000026 .0000229 1.14 0.253 .9999813 1.000071

sp75\_513\_1\_pp\_c\_4lag | 1.000165 .0007465 0.22 0.825 .9987029 1.001629

sp75\_513\_pp\_c\_4lag | .9999855 .0004049 -0.04 0.971 .9991923 1.000779

sp75\_514\_pp\_c\_4lag | 1.00005 .0000835 0.60 0.545 .9998868 1.000214

sp75\_515\_pp\_c\_4lag | .9998334 .0000546 -3.05 0.002 .9997263 .9999404

sp75\_516\_1\_pp\_c\_4lag | .9981363 .0010806 -1.72 0.085 .9960206 1.000256

sp75\_516\_2\_pp\_c\_4lag | .9998929 .0001679 -0.64 0.524 .9995638 1.000222

sp75\_516\_pp\_c\_4lag | .9999469 .0000861 -0.62 0.538 .9997781 1.000116

sp75\_517\_1\_pp\_c\_4lag | 1.000915 .0009149 1.00 0.317 .9991232 1.002709

sp75\_517\_pp\_c\_4lag | .999997 .0000154 -0.20 0.843 .9999667 1.000027

sp75\_518\_1\_pp\_c\_4lag | .9999779 .0000998 -0.22 0.825 .9997822 1.000174

sp75\_518\_pp\_c\_4lag | 1.000049 .0000716 0.69 0.493 .9999087 1.000189

sp75\_519\_pp\_c\_4lag | 1.000167 .0017418 0.10 0.924 .9967587 1.003586

sp75\_520\_pp\_c\_4lag | .9999939 .000158 -0.04 0.969 .9996843 1.000304

sp75\_523\_1\_pp\_c\_4lag | .9997648 .0001905 -1.23 0.217 .9993914 1.000138

sp75\_523\_2\_pp\_c\_4lag | 1.000221 .0001583 1.40 0.162 .9999109 1.000531

sp75\_523\_pp\_c\_4lag | .9997066 .0001848 -1.59 0.112 .9993445 1.000069

sp75\_600\_1\_pp\_c\_4lag | .9990998 .0012372 -0.73 0.467 .996678 1.001528

sp75\_600\_pp\_c\_4lag | 1.000844 .0020056 0.42 0.674 .9969205 1.004782

sp75\_601\_1\_pp\_c\_4lag | .9998852 .0000767 -1.50 0.135 .9997348 1.000036

sp75\_601\_2\_pp\_c\_4lag | .9995245 .0010345 -0.46 0.646 .997499 1.001554

sp75\_601\_3\_pp\_c\_4lag | .9993373 .0007816 -0.85 0.397 .9978065 1.00087

sp75\_601\_pp\_c\_4lag | 1.000159 .000091 1.74 0.081 .9999803 1.000337

sp75\_602\_pp\_c\_4lag | 1.000037 .000257 0.15 0.884 .9995339 1.000541

sp75\_603\_pp\_c\_4lag | .9998907 .0003581 -0.31 0.760 .9991891 1.000593

sp75\_604\_pp\_c\_4lag | 1.000052 .0000254 2.06 0.040 1.000002 1.000102

sp75\_605\_pp\_c\_4lag | 1.000139 .000113 1.23 0.217 .999918 1.000361

sp75\_606\_pp\_c\_4lag | .9999953 .0000434 -0.11 0.915 .9999102 1.00008

sp75\_607\_pp\_c\_4lag | 1.000133 .0002234 0.60 0.551 .9996954 1.000571

sp75\_700\_1\_pp\_c\_4lag | .9976526 .0007873 -2.98 0.003 .9961107 .9991968

sp75\_700\_pp\_c\_4lag | .9997354 .0003436 -0.77 0.441 .9990621 1.000409

sp75\_701\_1\_pp\_c\_4lag | 1.00008 .0003659 0.22 0.827 .9993632 1.000798

sp75\_701\_2\_pp\_c\_4lag | 1.000175 .0003209 0.55 0.585 .9995463 1.000804

sp75\_701\_3\_pp\_c\_4lag | 1.000403 .000338 1.19 0.233 .9997407 1.001066

sp75\_701\_4\_pp\_c\_4lag | 1.00264 .0010429 2.53 0.011 1.000598 1.004686

sp75\_701\_pp\_c\_4lag | 1.000065 .0000631 1.03 0.304 .9999412 1.000189

sp75\_702\_1\_pp\_c\_4lag | 1.000723 .0008129 0.89 0.374 .9991308 1.002317

sp75\_702\_pp\_c\_4lag | .999341 .0014824 -0.44 0.657 .9964397 1.002251

sp75\_703\_1\_pp\_c\_4lag | .999718 .0019117 -0.15 0.883 .995978 1.003472

sp75\_703\_2\_pp\_c\_4lag | 1.000051 .0012596 0.04 0.968 .9975855 1.002523

sp75\_703\_3\_pp\_c\_4lag | .9998897 .0004203 -0.26 0.793 .9990663 1.000714

sp75\_703\_4\_pp\_c\_4lag | .9934279 .0021252 -3.08 0.002 .9892713 .997602

sp75\_703\_pp\_c\_4lag | 1.000365 .0001665 2.19 0.028 1.000039 1.000691

sp75\_704\_pp\_c\_4lag | 1.000066 .0007299 0.09 0.928 .9986363 1.001497

sp75\_705\_1\_pp\_c\_4lag | .9996649 .0005199 -0.64 0.519 .9986464 1.000684

sp75\_705\_3\_pp\_c\_4lag | 1.003089 .0020872 1.48 0.138 .9990069 1.007189

sp75\_705\_8\_pp\_c\_4lag | .9993287 .0012875 -0.52 0.602 .9968084 1.001855

sp75\_705\_pp\_c\_4lag | 1.001903 .0006718 2.83 0.005 1.000587 1.00322

sp75\_706\_pp\_c\_4lag | 1.000331 .0004267 0.78 0.438 .9994949 1.001168

sp75\_800\_2\_pp\_c\_4lag | 1.008169 .0057695 1.42 0.155 .9969242 1.019541

sp75\_800\_3\_pp\_c\_4lag | 1.000566 .000552 1.03 0.305 .9994847 1.001648

sp75\_800\_4\_pp\_c\_4lag | 1.000125 .000604 0.21 0.836 .9989418 1.001309

sp75\_800\_pp\_c\_4lag | .9997155 .0004086 -0.70 0.486 .9989151 1.000517

sp75\_801\_pp\_c\_4lag | .9989991 .0013025 -0.77 0.442 .9964496 1.001555

sp75\_802\_pp\_c\_4lag | .9997566 .0007998 -0.30 0.761 .9981903 1.001325

sp75\_803\_2\_pp\_c\_4lag | 1.000907 .0013738 0.66 0.509 .9982184 1.003604

sp75\_803\_pp\_c\_4lag | 1.000566 .000418 1.36 0.175 .9997473 1.001386

sp75\_804\_pp\_c\_4lag | 1.000414 .0003723 1.11 0.266 .999685 1.001144

sp75\_805\_pp\_c\_4lag | 1.000133 .0005977 0.22 0.824 .9989621 1.001305

sp75\_806\_pp\_c\_4lag | 1.002723 .0009394 2.90 0.004 1.000883 1.004566

sp75\_807\_pp\_c\_4lag | 1.000101 .0000504 2.01 0.044 1.000003 1.0002

sp75\_808\_pp\_c\_4lag | .99987 .0004066 -0.32 0.749 .9990734 1.000667

sp75\_809\_pp\_c\_4lag | 1.00011 .0002 0.55 0.583 .9997179 1.000502

sp75\_810\_pp\_c\_4lag | 1.000091 .0002623 0.35 0.730 .9995766 1.000605

sp75\_811\_pp\_c\_4lag | 1.000287 .0002067 1.39 0.165 .999882 1.000692

sp75\_812\_pp\_c\_4lag | .9999591 .0008895 -0.05 0.963 .9982172 1.001704

sp75\_814\_pp\_c\_4lag | .9999574 .0006382 -0.07 0.947 .9987074 1.001209

sp75\_815\_pp\_c\_4lag | 1.001164 .0004952 2.35 0.019 1.000194 1.002135

sp75\_816\_pp\_c\_4lag | .999856 .0001582 -0.91 0.363 .9995461 1.000166

sp75\_818\_pp\_c\_4lag | .9993138 .0008571 -0.80 0.424 .9976353 1.000995

sp75\_820\_pp\_c\_4lag | 1.000785 .0006295 1.25 0.212 .9995521 1.00202

sp75\_821\_pp\_c\_4lag | 1.000448 .0002363 1.90 0.058 .9999854 1.000912

sp75\_825\_pp\_c\_4lag | 1.000066 .0007559 0.09 0.931 .9985854 1.001548

sp75\_827\_pp\_c\_4lag | 1.000485 .0007595 0.64 0.523 .9989972 1.001974

sp75\_831\_pp\_c\_4lag | .9989333 .001105 -0.96 0.335 .9967698 1.001101

sp75\_832\_pp\_c\_4lag | .9975138 .0031115 -0.80 0.425 .991434 1.003631

sp75\_834\_pp\_c\_4lag | .812321 .0149933 -11.26 0.000 .7834599 .8422453

sp75\_900\_2\_pp\_c\_4lag | .9986082 .0011555 -1.20 0.229 .996346 1.000876

sp75\_900\_3\_pp\_c\_4lag | .9998506 .0004668 -0.32 0.749 .9989361 1.000766

sp75\_900\_4\_pp\_c\_4lag | .9999333 .000154 -0.43 0.665 .9996315 1.000235

sp75\_900\_pp\_c\_4lag | .9998788 .0001168 -1.04 0.299 .99965 1.000108

sp75\_901\_pp\_c\_4lag | .9997357 .0005236 -0.50 0.614 .9987099 1.000763

sp75\_902\_1\_pp\_c\_4lag | 1.000825 .0009792 0.84 0.400 .9989073 1.002746

sp75\_902\_2\_pp\_c\_4lag | 1.000492 .0005918 0.83 0.406 .9993328 1.001653

sp75\_902\_4\_pp\_c\_4lag | 1.000041 .0002364 0.17 0.861 .9995781 1.000505

sp75\_902\_pp\_c\_4lag | 1.000177 .0001187 1.49 0.136 .9999441 1.00041

sp75\_903\_pp\_c\_4lag | 1.000153 .0001965 0.78 0.436 .9997678 1.000538

sp75\_904\_pp\_c\_4lag | 1.000042 .0000566 0.75 0.454 .9999314 1.000153

sp75\_905\_pp\_c\_4lag | .9991535 .0011244 -0.75 0.452 .9969521 1.00136

sp75\_907\_pp\_c\_4lag | 1.000484 .0003587 1.35 0.177 .9997815 1.001188

sp77\_103\_pp\_c\_4lag | 1.000381 .0005537 0.69 0.491 .9992967 1.001467

sp77\_104\_pp\_c\_4lag | .9992291 .0014199 -0.54 0.587 .9964499 1.002016

sp77\_1103\_pp\_c\_4lag | .9999636 .0001371 -0.27 0.791 .9996949 1.000232

sp77\_1104\_pp\_c\_4lag | 1.000013 .0000442 0.29 0.770 .9999263 1.0001

sp77\_1106\_pp\_c\_4lag | 1.001288 .0042984 0.30 0.764 .9928985 1.009748

sp77\_1111\_pp\_c\_4lag | .9988172 .001632 -0.72 0.469 .9956236 1.002021

sp77\_1112\_pp\_c\_4lag | 1.000178 .0004214 0.42 0.672 .9993526 1.001005

sp77\_1403\_pp\_c\_4lag | 1.000195 .0006023 0.32 0.746 .9990152 1.001376

sp77\_1432\_pp\_c\_4lag | .9998003 .0015239 -0.13 0.896 .9968179 1.002792

sp77\_1433\_pp\_c\_4lag | .9986303 .0006451 -2.12 0.034 .9973668 .9998955

sp77\_1434\_pp\_c\_4lag | 1.000422 .0007563 0.56 0.577 .9989408 1.001905

sp77\_1437\_pp\_c\_4lag | .9987799 .0006064 -2.01 0.044 .997592 .9999692

sp77\_1438\_pp\_c\_4lag | .9944811 .0027342 -2.01 0.044 .9891367 .9998544

sp77\_1605\_pp\_c\_4lag | .9999738 .0000621 -0.42 0.673 .9998521 1.000096

sp77\_1606\_pp\_c\_4lag | 1.000095 .0000858 1.11 0.267 .9999271 1.000264

sp77\_1710\_pp\_c\_4lag | .9998373 .0001519 -1.07 0.284 .9995397 1.000135

sp77\_1802\_pp\_c\_4lag | .9984216 .0014756 -1.07 0.285 .9955338 1.001318

sp77\_1906\_pp\_c\_4lag | 1.001429 .0015241 0.94 0.348 .9984459 1.00442

sp77\_1915\_pp\_c\_4lag | 1.000222 .0005837 0.38 0.703 .9990789 1.001367

sp77\_1916\_pp\_c\_4lag | 1.000064 .0012895 0.05 0.960 .9975401 1.002595

sp77\_200\_pp\_c\_4lag | .9999908 .0000641 -0.14 0.886 .9998652 1.000116

sp77\_202\_pp\_c\_4lag | .999752 .0001046 -2.37 0.018 .9995471 .999957

sp77\_203\_pp\_c\_4lag | 1.000035 .0007511 0.05 0.963 .9985642 1.001509

sp77\_204\_pp\_c\_4lag | .999725 .0001619 -1.70 0.089 .9994076 1.000042

sp77\_205\_pp\_c\_4lag | 1.000051 .0000471 1.08 0.281 .9999585 1.000143

sp77\_206\_pp\_c\_4lag | 1.000083 .000256 0.33 0.745 .9995816 1.000585

sp77\_207\_pp\_c\_4lag | 1.000029 .0002085 0.14 0.891 .9996202 1.000437

sp77\_208\_pp\_c\_4lag | 1.000127 .0000905 1.40 0.161 .9999497 1.000304

sp77\_210\_pp\_c\_4lag | .9997565 .0004574 -0.53 0.595 .9988605 1.000653

sp77\_216\_pp\_c\_4lag | 1.000371 .0002392 1.55 0.121 .9999024 1.00084

sp77\_305\_pp\_c\_4lag | 1.00672 .0026463 2.55 0.011 1.001547 1.01192

sp77\_309\_pp\_c\_4lag | .9977052 .0022203 -1.03 0.302 .993363 1.002066

sp77\_314\_pp\_c\_4lag | .9910503 .0035338 -2.52 0.012 .9841483 .9980006

sp77\_315\_pp\_c\_4lag | .9969875 .0035534 -0.85 0.397 .9900472 1.003976

sp77\_400\_pp\_c\_4lag | 1.000027 .000053 0.50 0.615 .9999227 1.000131

sp77\_401\_pp\_c\_4lag | .9997548 .0003979 -0.62 0.538 .9989753 1.000535

sp77\_402\_pp\_c\_4lag | .9999823 .0002886 -0.06 0.951 .9994167 1.000548

sp77\_403\_1\_pp\_c\_4lag | 1.000485 .0005632 0.86 0.389 .9993814 1.001589

sp77\_403\_2\_pp\_c\_4lag | 1.00722 .0042054 1.72 0.085 .9990111 1.015496

sp77\_403\_pp\_c\_4lag | 1.002081 .0014414 1.45 0.148 .9992599 1.00491

sp77\_404\_pp\_c\_4lag | .9999834 .000049 -0.34 0.735 .9998874 1.000079

sp77\_405\_pp\_c\_4lag | 1.000601 .0005294 1.13 0.257 .9995635 1.001639

sp77\_408\_pp\_c\_4lag | .9995314 .0006023 -0.78 0.437 .9983516 1.000713

sp77\_409\_pp\_c\_4lag | .9959721 .0017673 -2.27 0.023 .9925142 .999442

sp77\_410\_pp\_c\_4lag | 1.000081 .0000938 0.86 0.390 .9998968 1.000264

sp77\_411\_pp\_c\_4lag | .9979038 .0015481 -1.35 0.176 .9948743 1.000943

sp77\_412\_pp\_c\_4lag | 1.00049 .0004633 1.06 0.290 .9995823 1.001398

sp77\_413\_pp\_c\_4lag | .9945741 .0008778 -6.16 0.000 .9928551 .9962962

sp77\_500\_pp\_c\_4lag | .9997204 .0005068 -0.55 0.581 .9987276 1.000714

sp77\_501\_pp\_c\_4lag | .9997065 .0006121 -0.48 0.632 .9985075 1.000907

sp77\_502\_1\_pp\_c\_4lag | 1.004539 .0028373 1.60 0.109 .998993 1.010115

sp77\_502\_2\_pp\_c\_4lag | 1.000199 .0003421 0.58 0.561 .9995287 1.00087

sp77\_502\_pp\_c\_4lag | 1.000003 .0000589 0.05 0.957 .9998876 1.000119

sp77\_503\_1\_pp\_c\_4lag | 1.001451 .0021428 0.68 0.498 .9972604 1.00566

sp77\_503\_pp\_c\_4lag | .9995119 .0010978 -0.44 0.657 .9973625 1.001666

sp77\_504\_pp\_c\_4lag | .9996961 .0002423 -1.25 0.210 .9992213 1.000171

sp77\_505\_pp\_c\_4lag | .9999155 .0001325 -0.64 0.523 .9996559 1.000175

sp77\_506\_1\_pp\_c\_4lag | 1.000144 .0001918 0.75 0.453 .9997681 1.00052

sp77\_506\_pp\_c\_4lag | .9998923 .0001544 -0.70 0.485 .9995897 1.000195

sp77\_507\_pp\_c\_4lag | 1.000513 .00065 0.79 0.430 .99924 1.001788

sp77\_508\_1\_pp\_c\_4lag | .9995073 .0012277 -0.40 0.688 .997104 1.001916

sp77\_508\_pp\_c\_4lag | 1.000039 .0006258 0.06 0.950 .9988132 1.001266

sp77\_509\_pp\_c\_4lag | .9998516 .0003003 -0.49 0.621 .9992632 1.00044

sp77\_510\_pp\_c\_4lag | .9990418 .0014757 -0.65 0.516 .9961535 1.001938

sp77\_511\_pp\_c\_4lag | .9979464 .0008524 -2.41 0.016 .9962771 .9996186

sp77\_512\_pp\_c\_4lag | .999909 .0001275 -0.71 0.475 .9996592 1.000159

sp77\_513\_pp\_c\_4lag | .9999499 .0001898 -0.26 0.792 .9995779 1.000322

sp77\_514\_pp\_c\_4lag | .9979376 .0018402 -1.12 0.263 .9943373 1.001551

sp77\_515\_pp\_c\_4lag | 1.000081 .0033528 0.02 0.981 .9935316 1.006674

sp77\_516\_pp\_c\_4lag | .9999317 .0000742 -0.92 0.357 .9997863 1.000077

sp77\_600\_pp\_c\_4lag | 1.001994 .0007674 2.60 0.009 1.000491 1.003499

sp77\_601\_pp\_c\_4lag | .9994307 .001044 -0.55 0.586 .9973866 1.001479

sp77\_602\_pp\_c\_4lag | 1.00002 .0016757 0.01 0.991 .9967409 1.00331

sp77\_603\_pp\_c\_4lag | 1.003933 .00127 3.10 0.002 1.001447 1.006425

sp77\_604\_pp\_c\_4lag | 1.000391 .0006471 0.60 0.546 .9991235 1.00166

sp77\_605\_pp\_c\_4lag | .9975094 .0032267 -0.77 0.441 .9912052 1.003854

sp77\_606\_1\_pp\_c\_4lag | .996389 .0019819 -1.82 0.069 .9925121 1.000281

sp77\_606\_pp\_c\_4lag | 1 (omitted)

sp77\_700\_1\_pp\_c\_4lag | 1.001323 .0010151 1.30 0.192 .9993355 1.003314

sp77\_700\_pp\_c\_4lag | .9994373 .0006383 -0.88 0.378 .9981871 1.000689

sp77\_701\_1\_pp\_c\_4lag | 1.000463 .0009171 0.51 0.613 .9986673 1.002262

sp77\_701\_2\_pp\_c\_4lag | .9993205 .0009559 -0.71 0.477 .9974487 1.001196

sp77\_701\_3\_pp\_c\_4lag | 1.001932 .0013877 1.39 0.163 .999216 1.004656

sp77\_701\_4\_pp\_c\_4lag | 1.000391 .0006513 0.60 0.548 .9991154 1.001668

sp77\_701\_pp\_c\_4lag | .9998993 .0001996 -0.50 0.614 .9995083 1.000291

sp77\_703\_pp\_c\_4lag | 1.000478 .0027238 0.18 0.861 .9951535 1.00583

sp77\_704\_1\_pp\_c\_4lag | 1.000735 .0004913 1.50 0.134 .9997728 1.001699

sp77\_704\_8\_pp\_c\_4lag | .9994331 .0012691 -0.45 0.655 .9969488 1.001924

sp77\_704\_9\_pp\_c\_4lag | .9958303 .0021567 -1.93 0.054 .9916122 1.000066

sp77\_704\_pp\_c\_4lag | .9983794 .0012973 -1.25 0.212 .99584 1.000925

sp77\_705\_pp\_c\_4lag | 1.000384 .0004036 0.95 0.342 .999593 1.001175

sp77\_800\_1\_pp\_c\_4lag | 1.000425 .0012055 0.35 0.725 .9980649 1.00279

sp77\_800\_2\_pp\_c\_4lag | 1.000963 .000764 1.26 0.207 .9994665 1.002461

sp77\_800\_pp\_c\_4lag | 1.001163 .0026571 0.44 0.661 .995969 1.006385

sp77\_801\_pp\_c\_4lag | .9899931 .0037169 -2.68 0.007 .9827349 .997305

sp77\_802\_pp\_c\_4lag | .9979488 .0022331 -0.92 0.359 .9935816 1.002335

sp77\_803\_pp\_c\_4lag | 1.000161 .0015075 0.11 0.915 .9972113 1.00312

sp77\_804\_pp\_c\_4lag | .985967 .0061414 -2.27 0.023 .9740033 .9980776

sp77\_805\_pp\_c\_4lag | .9984603 .0008072 -1.91 0.057 .9968796 1.000044

sp77\_807\_1\_pp\_c\_4lag | .9995991 .001578 -0.25 0.799 .996511 1.002697

sp77\_807\_2\_pp\_c\_4lag | 1.00177 .001561 1.13 0.257 .9987146 1.004834

sp77\_807\_3\_pp\_c\_4lag | 1.0002 .0008033 0.25 0.803 .9986271 1.001776

sp77\_807\_pp\_c\_4lag | 1.000349 .0009977 0.35 0.726 .9983955 1.002306

sp77\_808\_pp\_c\_4lag | 1.004252 .0016801 2.54 0.011 1.000965 1.007551

sp77\_809\_pp\_c\_4lag | .9995087 .0003026 -1.62 0.105 .9989158 1.000102

sp77\_810\_pp\_c\_4lag | .9997348 .0007825 -0.34 0.735 .9982023 1.00127

sp77\_900\_1\_pp\_c\_4lag | 1.002267 .0016663 1.36 0.173 .9990069 1.005539

sp77\_900\_2\_pp\_c\_4lag | 1.001102 .000605 1.82 0.068 .999917 1.002289

sp77\_900\_pp\_c\_4lag | .9977436 .0009465 -2.38 0.017 .9958901 .9996005

sp77\_901\_1\_pp\_c\_4lag | .9991903 .0024859 -0.33 0.745 .99433 1.004074

sp77\_901\_pp\_c\_4lag | 1.000494 .0008562 0.58 0.564 .9988175 1.002174

sp77\_902\_2\_pp\_c\_4lag | 1.00221 .0023333 0.95 0.343 .9976476 1.006794

sp77\_902\_3\_pp\_c\_4lag | .9979058 .0021417 -0.98 0.329 .993717 1.002112

sp77\_902\_pp\_c\_4lag | 1.000151 .001031 0.15 0.883 .9981326 1.002174

sp77\_903\_pp\_c\_4lag | .9997988 .0006504 -0.31 0.757 .9985248 1.001074

sp77\_904\_pp\_c\_4lag | .9999697 .0001979 -0.15 0.878 .9995819 1.000358

mine\_time | .9986503 .0073173 -0.18 0.854 .9844111 1.013095

onsite\_insp\_hours | .9999376 .0000544 -1.15 0.251 .9998311 1.000044

|

state |

1 | 1.072994 .1357617 0.56 0.578 .8373333 1.374981

2 | 1.650352 .1911561 4.33 0.000 1.315177 2.070948

3 | .7677647 .1285456 -1.58 0.114 .5529843 1.065966

4 | 1.002964 .0952854 0.03 0.975 .8325643 1.208239

5 | .8517996 .1252471 -1.09 0.275 .6385255 1.13631

6 | .8574892 .0467644 -2.82 0.005 .7705613 .9542235

7 | .9381914 .2366749 -0.25 0.800 .5722176 1.538231

8 | 1.094016 .124021 0.79 0.428 .8760498 1.366213

9 | .9230108 .1219327 -0.61 0.544 .7124597 1.195785

10 | .8730022 .1528228 -0.78 0.438 .6194537 1.230331

11 | .8816264 .2368692 -0.47 0.639 .5207025 1.492724

12 | .9889492 .0896064 -0.12 0.902 .8280348 1.181134

13 | 1.400568 .24141 1.95 0.051 .9990473 1.963461

14 | .6311612 .0851694 -3.41 0.001 .4844829 .8222467

15 | .6612129 .0466181 -5.87 0.000 .575875 .7591967

17 | 1.377044 .217017 2.03 0.042 1.011118 1.875401

|

time |

2000 | 1.060509 .0717525 0.87 0.385 .9288021 1.210892

2002 | .9239799 .0628205 -1.16 0.245 .808705 1.055686

2003 | .8721842 .0674702 -1.77 0.077 .7494818 1.014975

2004 | .8266032 .0611271 -2.58 0.010 .715074 .9555275

2005 | .7154692 .0525385 -4.56 0.000 .6195629 .8262216

2006 | .7318804 .0574184 -3.98 0.000 .6275677 .8535317

2007 | .6571768 .0538558 -5.12 0.000 .5596623 .7716819

2008 | .5310279 .0493662 -6.81 0.000 .4425748 .6371592

2009 | .4342395 .042244 -8.57 0.000 .3588576 .5254563

2010 | .4811182 .0451513 -7.80 0.000 .400285 .5782747

2011 | .509369 .0487331 -7.05 0.000 .4222747 .6144264

2012 | .5052874 .0482181 -7.15 0.000 .4190933 .6092088

2013 | .428218 .0436652 -8.32 0.000 .3506455 .5229517

2014 | .3986123 .0430895 -8.51 0.000 .3225053 .4926795

2015 | .4402599 .0501218 -7.21 0.000 .3522114 .5503196

|

\_cons | .0000182 1.25e-06 -159.21 0.000 .0000159 .0000208

ln(hours) | 1 (exposure)

----------------------------------------------------------------------------------------

**. eststo: nbreg MR `subpart\_pp\_lag\_4\_vars' `covariates' ib(freq).state ib(freq).time if sample\_pp == 1, vce(cl mineid) exposure(hours) irr**

note: sp75\_1001\_pp\_c\_4lag omitted because of collinearity

note: sp75\_1106\_6\_pp\_c\_4lag omitted because of collinearity

note: sp75\_1431\_pp\_c\_4lag omitted because of collinearity

note: sp75\_511\_1\_pp\_c\_4lag omitted because of collinearity

note: sp75\_806\_pp\_c\_4lag omitted because of collinearity

note: sp77\_413\_pp\_c\_4lag omitted because of collinearity

note: sp77\_606\_pp\_c\_4lag omitted because of collinearity

note: sp77\_804\_pp\_c\_4lag omitted because of collinearity

Fitting Poisson model:

Iteration 0: log pseudolikelihood = -38334.498

Iteration 1: log pseudolikelihood = -20930.099 (backed up)

Iteration 2: log pseudolikelihood = -13052.083

Iteration 3: log pseudolikelihood = -8675.5095

Iteration 4: log pseudolikelihood = -4708.9333

Iteration 5: log pseudolikelihood = -4430.2031

Iteration 6: log pseudolikelihood = -4388.6707

Iteration 7: log pseudolikelihood = -4386.3468

Iteration 8: log pseudolikelihood = -4386.1891

Iteration 9: log pseudolikelihood = -4386.1867

Iteration 10: log pseudolikelihood = -4386.1867

Fitting constant-only model:

Iteration 0: log pseudolikelihood = -4833.1956

Iteration 1: log pseudolikelihood = -4642.8135

Iteration 2: log pseudolikelihood = -4639.576

Iteration 3: log pseudolikelihood = -4639.57

Iteration 4: log pseudolikelihood = -4639.57

Fitting full model:

Iteration 0: log pseudolikelihood = -4437.7327

Iteration 1: log pseudolikelihood = -4380.2754

Iteration 2: log pseudolikelihood = -4371.1932

Iteration 3: log pseudolikelihood = -4370.8543

Iteration 4: log pseudolikelihood = -4370.8536

Iteration 5: log pseudolikelihood = -4370.8536

Negative binomial regression Number of obs = 3,333

Wald chi2(312) = .

Dispersion = mean Prob > chi2 = .

Log pseudolikelihood = -4370.8536 Pseudo R2 = 0.0579

(Std. Err. adjusted for 727 clusters in mineid)

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| Robust

MR | IRR Std. Err. z P>|z| [95% Conf. Interval]

-----------------------+----------------------------------------------------------------

sp47\_41\_pp\_c\_4lag | .9997 .0002487 -1.21 0.228 .9992127 1.000188

sp47\_42\_pp\_c\_4lag | .9992915 .0008294 -0.85 0.393 .9976672 1.000918

sp47\_44\_pp\_c\_4lag | .9997955 .0004371 -0.47 0.640 .9989392 1.000653

sp48\_11\_pp\_c\_4lag | 1.000379 .0003242 1.17 0.243 .9997434 1.001014

sp48\_24\_pp\_c\_4lag | .9777416 .0009353 -23.53 0.000 .9759101 .9795765

sp48\_25\_pp\_c\_4lag | 1.000094 .0004112 0.23 0.819 .9992885 1.0009

sp48\_26\_pp\_c\_4lag | 1.000915 .0003529 2.59 0.010 1.000223 1.001606

sp48\_27\_pp\_c\_4lag | 1.000116 .0002542 0.46 0.649 .9996176 1.000614

sp48\_28\_pp\_c\_4lag | .9998068 .0005224 -0.37 0.711 .9987835 1.000831

sp48\_4\_pp\_c\_4lag | 1.004192 .0007087 5.93 0.000 1.002804 1.005582

sp48\_5\_pp\_c\_4lag | .9996704 .0007124 -0.46 0.644 .9982751 1.001068

sp48\_6\_pp\_c\_4lag | 1.000281 .000269 1.04 0.297 .9997535 1.000808

sp48\_7\_pp\_c\_4lag | 1.000069 .0002117 0.33 0.743 .9996544 1.000484

sp48\_8\_pp\_c\_4lag | 1.000314 .0003915 0.80 0.422 .9995475 1.001082

sp71\_701\_pp\_c\_4lag | 1.001259 .0016717 0.75 0.451 .997988 1.004541

sp72\_503\_pp\_c\_4lag | .9996893 .0002731 -1.14 0.255 .9991542 1.000225

sp72\_610\_pp\_c\_4lag | 1.001126 .0015455 0.73 0.466 .9981011 1.004159

sp72\_620\_pp\_c\_4lag | 1.001951 .0009807 1.99 0.046 1.00003 1.003874

sp72\_630\_pp\_c\_4lag | 1.000038 .0000335 1.15 0.252 .9999727 1.000104

sp75\_100\_pp\_c\_4lag | 1.000206 .0006049 0.34 0.734 .9990208 1.001392

sp75\_1001\_1\_pp\_c\_4lag | .9989273 .0011384 -0.94 0.346 .9966986 1.001161

sp75\_1001\_pp\_c\_4lag | 1 (omitted)

sp75\_1003\_1\_pp\_c\_4lag | .9972822 .000984 -2.76 0.006 .9953555 .9992126

sp75\_1100\_2\_pp\_c\_4lag | 1.000047 .0000321 1.45 0.146 .9999837 1.00011

sp75\_1101\_20\_pp\_c\_4lag | .9982473 .0009453 -1.85 0.064 .9963963 1.000102

sp75\_1102\_pp\_c\_4lag | .9998483 .000267 -0.57 0.570 .999325 1.000372

sp75\_1103\_4\_pp\_c\_4lag | 1.000062 .0000564 1.09 0.274 .9999512 1.000172

sp75\_1104\_pp\_c\_4lag | .9998841 .0001801 -0.64 0.520 .9995311 1.000237

sp75\_1106\_2\_pp\_c\_4lag | 1.000012 .0001904 0.06 0.951 .9996385 1.000385

sp75\_1106\_3\_pp\_c\_4lag | 1.000044 .0000646 0.68 0.497 .9999173 1.000171

sp75\_1106\_4\_pp\_c\_4lag | 1.000026 .0006382 0.04 0.967 .9987761 1.001278

sp75\_1106\_5\_pp\_c\_4lag | .9997872 .0002297 -0.93 0.354 .9993371 1.000237

sp75\_1106\_6\_pp\_c\_4lag | 1 (omitted)

sp75\_1106\_pp\_c\_4lag | 1.000505 .0005167 0.98 0.328 .999493 1.001518

sp75\_1107\_14\_pp\_c\_4lag | 1.000361 .0013358 0.27 0.787 .997746 1.002982

sp75\_1400\_1\_pp\_c\_4lag | .9992605 .0010572 -0.70 0.484 .9971905 1.001335

sp75\_1400\_2\_pp\_c\_4lag | 1.000369 .0011588 0.32 0.750 .9981005 1.002643

sp75\_1400\_3\_pp\_c\_4lag | 1.000029 .0002014 0.14 0.886 .9996342 1.000424

sp75\_1400\_4\_pp\_c\_4lag | .9995112 .0006171 -0.79 0.429 .9983024 1.000722

sp75\_1400\_pp\_c\_4lag | .9998524 .0002571 -0.57 0.566 .9993486 1.000356

sp75\_1401\_1\_pp\_c\_4lag | .9989884 .0040007 -0.25 0.800 .9911779 1.00686

sp75\_1401\_pp\_c\_4lag | 1.001316 .0009244 1.42 0.154 .9995058 1.003129

sp75\_1403\_10\_pp\_c\_4lag | 1.00006 .0000992 0.61 0.544 .9998658 1.000255

sp75\_1403\_11\_pp\_c\_4lag | .9997903 .0012111 -0.17 0.863 .9974194 1.002167

sp75\_1403\_3\_pp\_c\_4lag | .9984377 .0022395 -0.70 0.486 .994058 1.002837

sp75\_1403\_4\_pp\_c\_4lag | 1.000747 .0034695 0.22 0.829 .9939698 1.00757

sp75\_1403\_5\_pp\_c\_4lag | .999987 .0000524 -0.25 0.804 .9998843 1.00009

sp75\_1403\_6\_pp\_c\_4lag | .9999761 .000044 -0.54 0.587 .9998897 1.000062

sp75\_1403\_7\_pp\_c\_4lag | .9999545 .0002227 -0.20 0.838 .9995181 1.000391

sp75\_1403\_8\_pp\_c\_4lag | .9999972 .0000674 -0.04 0.966 .9998651 1.000129

sp75\_1403\_9\_pp\_c\_4lag | 1.00003 .0002449 0.12 0.904 .9995498 1.00051

sp75\_1404\_1\_pp\_c\_4lag | .9951424 .0033932 -1.43 0.153 .9885139 1.001815

sp75\_1404\_pp\_c\_4lag | .9990543 .0022385 -0.42 0.673 .9946766 1.003451

sp75\_1405\_1\_pp\_c\_4lag | 1.002012 .0014788 1.36 0.173 .9991177 1.004915

sp75\_1405\_pp\_c\_4lag | 1.000053 .0000786 0.67 0.502 .9998987 1.000207

sp75\_1431\_pp\_c\_4lag | 1 (omitted)

sp75\_1432\_pp\_c\_4lag | .9991948 .0007172 -1.12 0.262 .9977901 1.000602

sp75\_1433\_pp\_c\_4lag | 1.000191 .0004395 0.43 0.664 .9993299 1.001053

sp75\_1434\_pp\_c\_4lag | .9992427 .0004685 -1.62 0.106 .998325 1.000161

sp75\_1435\_pp\_c\_4lag | 1.000172 .0014195 0.12 0.904 .9973937 1.002958

sp75\_1437\_pp\_c\_4lag | 1.001275 .000943 1.35 0.176 .9994289 1.003126

sp75\_150\_pp\_c\_4lag | 1.001548 .0007933 1.95 0.051 .9999945 1.003104

sp75\_151\_pp\_c\_4lag | 1.00109 .0013497 0.81 0.419 .9984477 1.003739

sp75\_153\_pp\_c\_4lag | 1.000723 .0006129 1.18 0.238 .9995224 1.001925

sp75\_156\_pp\_c\_4lag | 1.001055 .0010202 1.03 0.301 .9990572 1.003056

sp75\_160\_pp\_c\_4lag | 1.001457 .0015677 0.93 0.352 .998389 1.004534

sp75\_1600\_2\_pp\_c\_4lag | .9998783 .0001135 -1.07 0.284 .9996558 1.000101

sp75\_1712\_10\_pp\_c\_4lag | .9994806 .0004266 -1.22 0.224 .9986448 1.000317

sp75\_1712\_6\_pp\_c\_4lag | .9999602 .0002167 -0.18 0.854 .9995356 1.000385

sp75\_1720\_pp\_c\_4lag | .9999777 .0001598 -0.14 0.889 .9996646 1.000291

sp75\_1721\_pp\_c\_4lag | 1.004477 .0016581 2.71 0.007 1.001232 1.007732

sp75\_1725\_pp\_c\_4lag | 1.000025 .0000176 1.42 0.156 .9999905 1.000059

sp75\_1726\_pp\_c\_4lag | 1.000337 .0004553 0.74 0.459 .999445 1.00123

sp75\_1727\_pp\_c\_4lag | .8408084 .0064721 -22.53 0.000 .8282185 .8535897

sp75\_1728\_pp\_c\_4lag | 1.000168 .0012888 0.13 0.896 .9976456 1.002698

sp75\_1729\_pp\_c\_4lag | 1.000261 .0005269 0.50 0.620 .9992291 1.001294

sp75\_1730\_pp\_c\_4lag | 1.001032 .0005688 1.81 0.070 .9999173 1.002147

sp75\_1731\_pp\_c\_4lag | 1.000002 .0000108 0.21 0.836 .9999811 1.000023

sp75\_1903\_pp\_c\_4lag | 1.000096 .0002115 0.46 0.649 .9996818 1.000511

sp75\_1909\_pp\_c\_4lag | .9999832 .0000325 -0.52 0.605 .9999194 1.000047

sp75\_1910\_pp\_c\_4lag | .9999888 .0000543 -0.21 0.836 .9998824 1.000095

sp75\_1911\_pp\_c\_4lag | .9999687 .0000619 -0.51 0.613 .9998474 1.00009

sp75\_1912\_pp\_c\_4lag | .999754 .0005307 -0.46 0.643 .9987144 1.000795

sp75\_1913\_pp\_c\_4lag | 1.000474 .000635 0.75 0.455 .9992305 1.00172

sp75\_1914\_pp\_c\_4lag | 1.000053 .0000379 1.40 0.162 .9999787 1.000127

sp75\_1915\_pp\_c\_4lag | 1.000805 .000603 1.34 0.182 .999624 1.001988

sp75\_202\_pp\_c\_4lag | .999985 9.36e-06 -1.61 0.108 .9999666 1.000003

sp75\_208\_pp\_c\_4lag | 1.000058 .0000752 0.77 0.438 .9999109 1.000206

sp75\_211\_pp\_c\_4lag | 1.000015 .0000742 0.20 0.838 .9998697 1.000161

sp75\_212\_pp\_c\_4lag | .9999199 .0001801 -0.44 0.657 .9995669 1.000273

sp75\_214\_pp\_c\_4lag | 1.000082 .0001464 0.56 0.574 .9997954 1.000369

sp75\_312\_pp\_c\_4lag | 1.000083 .000165 0.51 0.613 .99976 1.000407

sp75\_320\_pp\_c\_4lag | .99984 .000077 -2.08 0.038 .9996892 .9999909

sp75\_324\_pp\_c\_4lag | .9997358 .0003441 -0.77 0.443 .9990616 1.00041

sp75\_337\_pp\_c\_4lag | 1.000038 .0001353 0.28 0.781 .9997725 1.000303

sp75\_340\_pp\_c\_4lag | 1.00002 .0000548 0.37 0.713 .9999127 1.000128

sp75\_341\_pp\_c\_4lag | .9990194 .0023142 -0.42 0.672 .994494 1.003565

sp75\_342\_pp\_c\_4lag | 1.00001 .0000261 0.38 0.700 .9999589 1.000061

sp75\_344\_pp\_c\_4lag | .999864 .0005233 -0.26 0.795 .9988388 1.00089

sp75\_352\_pp\_c\_4lag | .9997656 .0002438 -0.96 0.336 .9992879 1.000243

sp75\_382\_pp\_c\_4lag | 1.000087 .000233 0.38 0.707 .999631 1.000544

sp75\_503\_pp\_c\_4lag | .9999911 .0000138 -0.65 0.516 .9999641 1.000018

sp75\_504\_pp\_c\_4lag | .9998957 .0004162 -0.25 0.802 .9990804 1.000712

sp75\_505\_pp\_c\_4lag | 1.001007 .0006407 1.57 0.116 .9997515 1.002263

sp75\_506\_1\_pp\_c\_4lag | 1.00112 .0004676 2.40 0.017 1.000204 1.002037

sp75\_506\_pp\_c\_4lag | .9994749 .0003524 -1.49 0.136 .9987846 1.000166

sp75\_507\_pp\_c\_4lag | .9997387 .0002085 -1.25 0.210 .9993301 1.000147

sp75\_511\_1\_pp\_c\_4lag | 1 (omitted)

sp75\_511\_pp\_c\_4lag | 1.000144 .0002471 0.58 0.559 .9996603 1.000629

sp75\_512\_1\_pp\_c\_4lag | .99917 .001505 -0.55 0.581 .9962246 1.002124

sp75\_512\_2\_pp\_c\_4lag | 1.000132 .0000702 1.88 0.060 .9999947 1.00027

sp75\_512\_pp\_c\_4lag | 1.000011 .0000226 0.48 0.632 .9999665 1.000055

sp75\_513\_1\_pp\_c\_4lag | 1.000131 .0007226 0.18 0.856 .9987156 1.001548

sp75\_513\_pp\_c\_4lag | .9999782 .0003227 -0.07 0.946 .9993458 1.000611

sp75\_514\_pp\_c\_4lag | 1.000034 .0000739 0.46 0.642 .9998896 1.000179

sp75\_515\_pp\_c\_4lag | .9998906 .0000514 -2.13 0.033 .9997899 .9999913

sp75\_516\_1\_pp\_c\_4lag | .9987623 .001174 -1.05 0.292 .9964639 1.001066

sp75\_516\_2\_pp\_c\_4lag | .9999372 .0001537 -0.41 0.683 .999636 1.000238

sp75\_516\_pp\_c\_4lag | .9999715 .0000818 -0.35 0.728 .9998112 1.000132

sp75\_517\_1\_pp\_c\_4lag | 1.001789 .0007345 2.44 0.015 1.000351 1.00323

sp75\_517\_pp\_c\_4lag | 1.000002 .000015 0.12 0.903 .9999723 1.000031

sp75\_518\_1\_pp\_c\_4lag | 1.000039 .000089 0.43 0.664 .9998642 1.000213

sp75\_518\_pp\_c\_4lag | .9999899 .0000629 -0.16 0.873 .9998667 1.000113

sp75\_519\_pp\_c\_4lag | 1.002771 .0019094 1.45 0.146 .9990361 1.006521

sp75\_520\_pp\_c\_4lag | 1.000163 .0001321 1.24 0.217 .9999044 1.000422

sp75\_523\_1\_pp\_c\_4lag | .9993724 .0001985 -3.16 0.002 .9989835 .9997616

sp75\_523\_2\_pp\_c\_4lag | .9999306 .0001487 -0.47 0.641 .9996392 1.000222

sp75\_523\_pp\_c\_4lag | .9998586 .0002125 -0.67 0.506 .9994423 1.000275

sp75\_600\_1\_pp\_c\_4lag | .9995354 .0010176 -0.46 0.648 .997543 1.001532

sp75\_600\_pp\_c\_4lag | 1.000541 .0012005 0.45 0.652 .9981905 1.002896

sp75\_601\_1\_pp\_c\_4lag | .9999477 .0000681 -0.77 0.443 .9998142 1.000081

sp75\_601\_2\_pp\_c\_4lag | .9997649 .0009913 -0.24 0.813 .9978238 1.00171

sp75\_601\_3\_pp\_c\_4lag | .9999938 .0007456 -0.01 0.993 .9985336 1.001456

sp75\_601\_pp\_c\_4lag | 1.000115 .0000792 1.45 0.147 .9999598 1.00027

sp75\_602\_pp\_c\_4lag | .9998395 .0002695 -0.60 0.552 .9993114 1.000368

sp75\_603\_pp\_c\_4lag | .9998129 .0002574 -0.73 0.467 .9993085 1.000318

sp75\_604\_pp\_c\_4lag | 1.000043 .0000224 1.92 0.055 .999999 1.000087

sp75\_605\_pp\_c\_4lag | 1.000167 .0000984 1.70 0.089 .9999746 1.00036

sp75\_606\_pp\_c\_4lag | .9999894 .0000379 -0.28 0.781 .9999151 1.000064

sp75\_607\_pp\_c\_4lag | 1.000078 .000225 0.35 0.728 .9996374 1.000519

sp75\_700\_1\_pp\_c\_4lag | .9989097 .0008637 -1.26 0.207 .9972183 1.000604

sp75\_700\_pp\_c\_4lag | .999569 .0003414 -1.26 0.207 .9989002 1.000238

sp75\_701\_1\_pp\_c\_4lag | .9997563 .0003095 -0.79 0.431 .9991498 1.000363

sp75\_701\_2\_pp\_c\_4lag | 1.000159 .000286 0.56 0.578 .9995986 1.00072

sp75\_701\_3\_pp\_c\_4lag | 1.000649 .0004162 1.56 0.119 .9998338 1.001465

sp75\_701\_4\_pp\_c\_4lag | 1.002241 .0007998 2.80 0.005 1.000674 1.00381

sp75\_701\_pp\_c\_4lag | 1.000006 .0000605 0.10 0.917 .9998878 1.000125

sp75\_702\_1\_pp\_c\_4lag | 1.000823 .0009033 0.91 0.362 .9990539 1.002595

sp75\_702\_pp\_c\_4lag | .9990924 .0014753 -0.61 0.539 .9962051 1.001988

sp75\_703\_1\_pp\_c\_4lag | .9992292 .0015259 -0.50 0.614 .996243 1.002224

sp75\_703\_2\_pp\_c\_4lag | 1.002399 .0021138 1.14 0.256 .9982648 1.006551

sp75\_703\_3\_pp\_c\_4lag | 1.000189 .0004055 0.47 0.641 .9993948 1.000984

sp75\_703\_4\_pp\_c\_4lag | .9947134 .0024628 -2.14 0.032 .9898981 .9995522

sp75\_703\_pp\_c\_4lag | 1.00033 .0001585 2.08 0.037 1.000019 1.00064

sp75\_704\_pp\_c\_4lag | .9993618 .0009604 -0.66 0.507 .9974813 1.001246

sp75\_705\_1\_pp\_c\_4lag | .9994665 .000422 -1.26 0.206 .9986396 1.000294

sp75\_705\_3\_pp\_c\_4lag | 1.004549 .0019489 2.34 0.019 1.000737 1.008377

sp75\_705\_8\_pp\_c\_4lag | .9992162 .0011473 -0.68 0.495 .9969701 1.001467

sp75\_705\_pp\_c\_4lag | 1.002468 .0009002 2.75 0.006 1.000705 1.004234

sp75\_706\_pp\_c\_4lag | 1.000371 .0003878 0.96 0.339 .9996111 1.001131

sp75\_800\_2\_pp\_c\_4lag | 1.011773 .0014597 8.11 0.000 1.008916 1.014638

sp75\_800\_3\_pp\_c\_4lag | .9999847 .0004647 -0.03 0.974 .9990742 1.000896

sp75\_800\_4\_pp\_c\_4lag | 1.00043 .0004627 0.93 0.352 .9995238 1.001337

sp75\_800\_pp\_c\_4lag | .9995591 .0003735 -1.18 0.238 .9988274 1.000291

sp75\_801\_pp\_c\_4lag | .9988304 .0010199 -1.15 0.252 .9968334 1.000831

sp75\_802\_pp\_c\_4lag | 1.0004 .0007467 0.54 0.592 .9989376 1.001865

sp75\_803\_2\_pp\_c\_4lag | 1.000203 .0012247 0.17 0.868 .9978059 1.002607

sp75\_803\_pp\_c\_4lag | 1.000345 .0003687 0.93 0.350 .9996223 1.001068

sp75\_804\_pp\_c\_4lag | 1.000642 .0005136 1.25 0.211 .9996361 1.001649

sp75\_805\_pp\_c\_4lag | 1.000438 .0005173 0.85 0.397 .9994252 1.001453

sp75\_806\_pp\_c\_4lag | 1 (omitted)

sp75\_807\_pp\_c\_4lag | 1.000104 .0000486 2.13 0.033 1.000008 1.000199

sp75\_808\_pp\_c\_4lag | .9995494 .0003861 -1.17 0.243 .998793 1.000306

sp75\_809\_pp\_c\_4lag | 1.000066 .000189 0.35 0.728 .9996954 1.000436

sp75\_810\_pp\_c\_4lag | 1.000231 .0002337 0.99 0.324 .9997725 1.000689

sp75\_811\_pp\_c\_4lag | 1.000221 .000154 1.43 0.152 .999919 1.000523

sp75\_812\_pp\_c\_4lag | 1.000413 .0007541 0.55 0.584 .998936 1.001892

sp75\_814\_pp\_c\_4lag | .9999117 .0005614 -0.16 0.875 .998812 1.001013

sp75\_815\_pp\_c\_4lag | 1.001267 .0004172 3.04 0.002 1.00045 1.002085

sp75\_816\_pp\_c\_4lag | .9998741 .0001402 -0.90 0.369 .9995993 1.000149

sp75\_818\_pp\_c\_4lag | .999806 .0006488 -0.30 0.765 .9985352 1.001078

sp75\_820\_pp\_c\_4lag | 1.00088 .0005437 1.62 0.105 .9998155 1.001947

sp75\_821\_pp\_c\_4lag | 1.000472 .0002754 1.71 0.086 .9999324 1.001012

sp75\_825\_pp\_c\_4lag | 1.000379 .0005897 0.64 0.521 .9992234 1.001535

sp75\_827\_pp\_c\_4lag | 1.000558 .0005861 0.95 0.341 .9994101 1.001708

sp75\_831\_pp\_c\_4lag | .9987926 .0009177 -1.31 0.189 .9969957 1.000593

sp75\_832\_pp\_c\_4lag | .9978418 .002696 -0.80 0.424 .9925717 1.00314

sp75\_834\_pp\_c\_4lag | .695387 .0124266 -20.33 0.000 .6714528 .7201742

sp75\_900\_2\_pp\_c\_4lag | .9994848 .0008424 -0.61 0.541 .9978351 1.001137

sp75\_900\_3\_pp\_c\_4lag | .999924 .0004063 -0.19 0.852 .999128 1.000721

sp75\_900\_4\_pp\_c\_4lag | .9999328 .0001093 -0.61 0.539 .9997187 1.000147

sp75\_900\_pp\_c\_4lag | .9998972 .0001094 -0.94 0.347 .9996827 1.000112

sp75\_901\_pp\_c\_4lag | .9998336 .000513 -0.32 0.746 .9988285 1.00084

sp75\_902\_1\_pp\_c\_4lag | .9998797 .0012278 -0.10 0.922 .9974762 1.002289

sp75\_902\_2\_pp\_c\_4lag | .9999923 .0002603 -0.03 0.976 .9994824 1.000503

sp75\_902\_4\_pp\_c\_4lag | 1.000028 .0002532 0.11 0.912 .9995319 1.000524

sp75\_902\_pp\_c\_4lag | 1.000182 .000117 1.55 0.121 .9999522 1.000411

sp75\_903\_pp\_c\_4lag | 1.000054 .0001893 0.29 0.774 .9996834 1.000425

sp75\_904\_pp\_c\_4lag | .9999889 .0000564 -0.20 0.844 .9998783 1.0001

sp75\_905\_pp\_c\_4lag | .9989902 .0005876 -1.72 0.086 .9978392 1.000143

sp75\_907\_pp\_c\_4lag | 1.0003 .0003221 0.93 0.352 .9996684 1.000931

sp77\_103\_pp\_c\_4lag | .9998596 .0005029 -0.28 0.780 .9988744 1.000846

sp77\_104\_pp\_c\_4lag | .9987694 .0019586 -0.63 0.530 .994938 1.002616

sp77\_1103\_pp\_c\_4lag | .9999097 .000126 -0.72 0.474 .9996627 1.000157

sp77\_1104\_pp\_c\_4lag | 1.000001 .0000402 0.02 0.988 .9999217 1.000079

sp77\_1106\_pp\_c\_4lag | .9996583 .002617 -0.13 0.896 .9945422 1.004801

sp77\_1111\_pp\_c\_4lag | .9974757 .0017034 -1.48 0.139 .9941426 1.00082

sp77\_1112\_pp\_c\_4lag | 1.000122 .0003562 0.34 0.733 .9994238 1.00082

sp77\_1403\_pp\_c\_4lag | 1.000564 .0005624 1.00 0.316 .9994618 1.001667

sp77\_1432\_pp\_c\_4lag | 1.000569 .0013724 0.41 0.679 .9978824 1.003262

sp77\_1433\_pp\_c\_4lag | .998995 .00067 -1.50 0.134 .9976827 1.000309

sp77\_1434\_pp\_c\_4lag | 1.000218 .000577 0.38 0.706 .9990874 1.001349

sp77\_1437\_pp\_c\_4lag | .9989977 .000581 -1.72 0.085 .9978596 1.000137

sp77\_1438\_pp\_c\_4lag | .9899449 .0047874 -2.09 0.037 .980606 .9993727

sp77\_1605\_pp\_c\_4lag | .9999865 .0000547 -0.25 0.805 .9998792 1.000094

sp77\_1606\_pp\_c\_4lag | 1.000098 .0000799 1.23 0.219 .9999417 1.000255

sp77\_1710\_pp\_c\_4lag | .9999131 .0001704 -0.51 0.610 .9995791 1.000247

sp77\_1802\_pp\_c\_4lag | .9820815 .0092191 -1.93 0.054 .9641777 1.000318

sp77\_1906\_pp\_c\_4lag | 1.002079 .0013748 1.51 0.130 .9993881 1.004777

sp77\_1915\_pp\_c\_4lag | 1.000594 .000579 1.03 0.305 .9994599 1.001729

sp77\_1916\_pp\_c\_4lag | 1.000524 .0012835 0.41 0.683 .9980118 1.003043

sp77\_200\_pp\_c\_4lag | 1.000077 .000104 0.74 0.459 .9998731 1.000281

sp77\_202\_pp\_c\_4lag | .999858 .0001132 -1.25 0.210 .9996362 1.00008

sp77\_203\_pp\_c\_4lag | 1.000311 .0007457 0.42 0.677 .9988503 1.001773

sp77\_204\_pp\_c\_4lag | 1.000101 .000166 0.61 0.544 .9997756 1.000426

sp77\_205\_pp\_c\_4lag | 1.000088 .0000507 1.74 0.083 .9999887 1.000187

sp77\_206\_pp\_c\_4lag | 1.000164 .000223 0.74 0.461 .9997275 1.000602

sp77\_207\_pp\_c\_4lag | 1.000026 .0001982 0.13 0.895 .9996377 1.000415

sp77\_208\_pp\_c\_4lag | 1.000122 .0000884 1.38 0.166 .9999492 1.000296

sp77\_210\_pp\_c\_4lag | .9997593 .0003822 -0.63 0.529 .9990106 1.000509

sp77\_216\_pp\_c\_4lag | 1.000243 .0002162 1.13 0.261 .9998196 1.000667

sp77\_305\_pp\_c\_4lag | 1.00393 .0027089 1.45 0.146 .9986346 1.009253

sp77\_309\_pp\_c\_4lag | .9986686 .002127 -0.63 0.532 .9945085 1.002846

sp77\_314\_pp\_c\_4lag | .9945865 .0033999 -1.59 0.112 .9879451 1.001272

sp77\_315\_pp\_c\_4lag | .9923576 .0036499 -2.09 0.037 .9852295 .9995371

sp77\_400\_pp\_c\_4lag | .9999927 .0000632 -0.12 0.908 .9998688 1.000117

sp77\_401\_pp\_c\_4lag | .9999673 .0004109 -0.08 0.937 .9991622 1.000773

sp77\_402\_pp\_c\_4lag | .9998238 .0002736 -0.64 0.520 .9992876 1.00036

sp77\_403\_1\_pp\_c\_4lag | 1.000481 .0003955 1.22 0.223 .9997065 1.001257

sp77\_403\_2\_pp\_c\_4lag | 1.005066 .003581 1.42 0.156 .9980722 1.01211

sp77\_403\_pp\_c\_4lag | 1.001404 .0011822 1.19 0.235 .9990892 1.003723

sp77\_404\_pp\_c\_4lag | .9999284 .0000522 -1.37 0.170 .9998261 1.000031

sp77\_405\_pp\_c\_4lag | 1.000273 .0004843 0.56 0.572 .9993247 1.001223

sp77\_408\_pp\_c\_4lag | .9998973 .0004988 -0.21 0.837 .9989202 1.000875

sp77\_409\_pp\_c\_4lag | .9958363 .0022739 -1.83 0.068 .9913896 1.000303

sp77\_410\_pp\_c\_4lag | 1.000085 .0000878 0.97 0.330 .9999134 1.000258

sp77\_411\_pp\_c\_4lag | .9982378 .0014354 -1.23 0.220 .9954284 1.001055

sp77\_412\_pp\_c\_4lag | 1.00059 .0003667 1.61 0.107 .9998718 1.001309

sp77\_413\_pp\_c\_4lag | 1 (omitted)

sp77\_500\_pp\_c\_4lag | 1.0001 .0004575 0.22 0.827 .9992034 1.000997

sp77\_501\_pp\_c\_4lag | .9997695 .0005982 -0.39 0.700 .9985977 1.000943

sp77\_502\_1\_pp\_c\_4lag | 1.002024 .0027649 0.73 0.464 .9966196 1.007458

sp77\_502\_2\_pp\_c\_4lag | .9999169 .0002977 -0.28 0.780 .9993336 1.0005

sp77\_502\_pp\_c\_4lag | .9999515 .0000507 -0.96 0.339 .9998522 1.000051

sp77\_503\_1\_pp\_c\_4lag | 1.000059 .0016204 0.04 0.971 .9968878 1.00324

sp77\_503\_pp\_c\_4lag | 1.000027 .000967 0.03 0.978 .9981335 1.001924

sp77\_504\_pp\_c\_4lag | .9998269 .000223 -0.78 0.438 .99939 1.000264

sp77\_505\_pp\_c\_4lag | .9998777 .0001375 -0.89 0.374 .9996082 1.000147

sp77\_506\_1\_pp\_c\_4lag | .9999796 .0001023 -0.20 0.842 .999779 1.00018

sp77\_506\_pp\_c\_4lag | .9999509 .0001665 -0.30 0.768 .9996247 1.000277

sp77\_507\_pp\_c\_4lag | 1.001301 .0006975 1.87 0.062 .9999352 1.002669

sp77\_508\_1\_pp\_c\_4lag | .9989861 .0010179 -1.00 0.319 .996993 1.000983

sp77\_508\_pp\_c\_4lag | .9994725 .0005493 -0.96 0.337 .9983965 1.00055

sp77\_509\_pp\_c\_4lag | 1.000153 .0002502 0.61 0.541 .9996629 1.000644

sp77\_510\_pp\_c\_4lag | 1.003707 .0036194 1.03 0.305 .9966383 1.010826

sp77\_511\_pp\_c\_4lag | .998951 .000814 -1.29 0.198 .9973568 1.000548

sp77\_512\_pp\_c\_4lag | .9999178 .000106 -0.78 0.438 .9997101 1.000126

sp77\_513\_pp\_c\_4lag | .9999897 .000179 -0.06 0.954 .999639 1.000341

sp77\_514\_pp\_c\_4lag | .9989015 .0015901 -0.69 0.490 .9957898 1.002023

sp77\_515\_pp\_c\_4lag | .9996525 .0034125 -0.10 0.919 .9929864 1.006363

sp77\_516\_pp\_c\_4lag | .9999058 .0000633 -1.49 0.137 .9997818 1.00003

sp77\_600\_pp\_c\_4lag | 1.001719 .0008556 2.01 0.044 1.000044 1.003398

sp77\_601\_pp\_c\_4lag | .9988412 .0010917 -1.06 0.289 .9967037 1.000983

sp77\_602\_pp\_c\_4lag | .9995278 .0016341 -0.29 0.773 .9963301 1.002736

sp77\_603\_pp\_c\_4lag | 1.002924 .0011473 2.55 0.011 1.000678 1.005175

sp77\_604\_pp\_c\_4lag | 1.000155 .000617 0.25 0.801 .9989467 1.001365

sp77\_605\_pp\_c\_4lag | .9969481 .0040195 -0.76 0.448 .9891011 1.004857

sp77\_606\_1\_pp\_c\_4lag | .9978075 .0019455 -1.13 0.260 .9940017 1.001628

sp77\_606\_pp\_c\_4lag | 1 (omitted)

sp77\_700\_1\_pp\_c\_4lag | 1.00118 .0009234 1.28 0.201 .9993723 1.002992

sp77\_700\_pp\_c\_4lag | .9995263 .0006926 -0.68 0.494 .9981698 1.000885

sp77\_701\_1\_pp\_c\_4lag | 1.000355 .0008177 0.43 0.664 .9987534 1.001959

sp77\_701\_2\_pp\_c\_4lag | .9995763 .0007139 -0.59 0.553 .9981781 1.000977

sp77\_701\_3\_pp\_c\_4lag | 1.001246 .0018292 0.68 0.495 .9976674 1.004838

sp77\_701\_4\_pp\_c\_4lag | 1.000196 .0006637 0.30 0.767 .9988964 1.001498

sp77\_701\_pp\_c\_4lag | .9999063 .0001629 -0.58 0.565 .9995871 1.000226

sp77\_703\_pp\_c\_4lag | .999367 .0020672 -0.31 0.759 .9953235 1.003427

sp77\_704\_1\_pp\_c\_4lag | 1.000537 .000416 1.29 0.197 .9997218 1.001353

sp77\_704\_8\_pp\_c\_4lag | 1.000107 .0009727 0.11 0.913 .9982022 1.002015

sp77\_704\_9\_pp\_c\_4lag | .9966934 .0019387 -1.70 0.089 .9929008 1.0005

sp77\_704\_pp\_c\_4lag | .998256 .0012578 -1.39 0.166 .9957938 1.000724

sp77\_705\_pp\_c\_4lag | 1.000313 .0003349 0.94 0.349 .9996573 1.00097

sp77\_800\_1\_pp\_c\_4lag | 1.000827 .0010468 0.79 0.430 .9987771 1.00288

sp77\_800\_2\_pp\_c\_4lag | 1.000915 .0007021 1.30 0.192 .9995397 1.002292

sp77\_800\_pp\_c\_4lag | 1.000097 .0027464 0.04 0.972 .9947284 1.005494

sp77\_801\_pp\_c\_4lag | .9899675 .0031761 -3.14 0.002 .9837621 .9962122

sp77\_802\_pp\_c\_4lag | .9987641 .0015326 -0.81 0.420 .9957647 1.001773

sp77\_803\_pp\_c\_4lag | .9991744 .0009631 -0.86 0.391 .9972886 1.001064

sp77\_804\_pp\_c\_4lag | 1 (omitted)

sp77\_805\_pp\_c\_4lag | .9983656 .0009879 -1.65 0.098 .9964313 1.000304

sp77\_807\_1\_pp\_c\_4lag | 1.000014 .0014873 0.01 0.992 .9971034 1.002933

sp77\_807\_2\_pp\_c\_4lag | 1.000858 .0011591 0.74 0.459 .9985887 1.003132

sp77\_807\_3\_pp\_c\_4lag | .9998379 .0007818 -0.21 0.836 .9983068 1.001371

sp77\_807\_pp\_c\_4lag | .9998357 .0010475 -0.16 0.875 .9977848 1.001891

sp77\_808\_pp\_c\_4lag | 1.003206 .0014897 2.16 0.031 1.000291 1.00613

sp77\_809\_pp\_c\_4lag | .9997257 .0002528 -1.08 0.278 .9992304 1.000221

sp77\_810\_pp\_c\_4lag | 1.00033 .000776 0.43 0.671 .9988102 1.001852

sp77\_900\_1\_pp\_c\_4lag | 1.001665 .0011792 1.41 0.158 .9993564 1.003979

sp77\_900\_2\_pp\_c\_4lag | 1.001481 .0006041 2.45 0.014 1.000298 1.002666

sp77\_900\_pp\_c\_4lag | .9981909 .0009692 -1.86 0.062 .9962932 1.000092

sp77\_901\_1\_pp\_c\_4lag | 1.000092 .0023336 0.04 0.969 .9955284 1.004676

sp77\_901\_pp\_c\_4lag | .9998784 .0007909 -0.15 0.878 .9983294 1.00143

sp77\_902\_2\_pp\_c\_4lag | 1.001628 .0021351 0.76 0.445 .9974521 1.005822

sp77\_902\_3\_pp\_c\_4lag | .996938 .002172 -1.41 0.159 .9926901 1.001204

sp77\_902\_pp\_c\_4lag | .9998284 .0008368 -0.21 0.838 .9981897 1.00147

sp77\_903\_pp\_c\_4lag | 1.000626 .0006009 1.04 0.297 .9994489 1.001804

sp77\_904\_pp\_c\_4lag | .9998154 .0001908 -0.97 0.333 .9994415 1.000189

mine\_time | .9901355 .0074961 -1.31 0.190 .975552 1.004937

onsite\_insp\_hours | .9998997 .0000579 -1.73 0.083 .9997862 1.000013

|

state |

1 | 1.379948 .2751761 1.61 0.106 .9335208 2.039864

2 | 2.258562 .2877508 6.39 0.000 1.759484 2.899205

3 | .7727978 .1541562 -1.29 0.196 .5227209 1.142515

4 | 1.081808 .1381026 0.62 0.538 .8423388 1.389357

5 | .9358306 .1831899 -0.34 0.735 .6376371 1.373476

6 | .9887824 .0694638 -0.16 0.872 .8615932 1.134747

7 | 1.197087 .2972508 0.72 0.469 .7358045 1.947552

8 | .7516001 .1355088 -1.58 0.113 .5278622 1.070171

9 | 1.023586 .1527843 0.16 0.876 .7639601 1.371443

10 | .9754811 .1797518 -0.13 0.893 .6797795 1.399812

11 | .7577581 .3522802 -0.60 0.551 .3046553 1.884744

12 | .9899723 .1381518 -0.07 0.942 .7530726 1.301395

13 | 1.36641 .2947434 1.45 0.148 .8953059 2.085406

14 | .678534 .1588294 -1.66 0.098 .428869 1.073541

15 | .7155382 .0644618 -3.72 0.000 .599721 .8537219

17 | 1.227203 .2698412 0.93 0.352 .797538 1.888344

|

time |

2007 | 1.177502 .0811614 2.37 0.018 1.028705 1.347821

2009 | .8945357 .0612104 -1.63 0.103 .7822625 1.022923

2010 | .8882984 .0683511 -1.54 0.124 .7639452 1.032893

2011 | .8998493 .0678878 -1.40 0.162 .7761616 1.043248

2012 | .8927263 .0729409 -1.39 0.165 .7606244 1.047771

2013 | .8179553 .0717051 -2.29 0.022 .6888267 .9712906

2014 | .7611061 .0686995 -3.02 0.002 .6376957 .9083997

2015 | .803037 .0826496 -2.13 0.033 .6563399 .9825219

|

\_cons | .0000102 7.96e-07 -146.74 0.000 8.71e-06 .0000118

ln(hours) | 1 (exposure)

-----------------------+----------------------------------------------------------------

/lnalpha | -2.651091 .3791728 -3.394256 -1.907926

-----------------------+----------------------------------------------------------------

alpha | .0705742 .0267598 .0335655 .1483879

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(est1 stored)

**. lrtest pois nbin, stats force**

Likelihood-ratio test LR chi2(2) = -8661.91

(Assumption: nbin nested in pois) Prob > chi2 = 1.0000

Akaike's information criterion and Bayesian information criterion

-----------------------------------------------------------------------------

Model | Obs ll(null) ll(model) df AIC BIC

-------------+---------------------------------------------------------------

nbin | 3,333 -4639.57 -4370.854 314 9369.707 11288.76

pois | 6,253 -9569.622 -8701.81 316 18035.62 20165.72

-----------------------------------------------------------------------------

Note: N=Obs used in calculating BIC; see [R] BIC note.

**. summ MR spcpp3\_yhat**

Variable | Obs Mean Std. Dev. Min Max

-------------+---------------------------------------------------------

MR | 6,253 1.881017 3.268911 0 37

spcpp3\_yhat | 6,253 1.900479 2.88442 1.88e-09 36.14489