

[FormatInfo]  
format\_ver=1

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adm=USA  
sat\_name=SkyTerra-1  
long\_nom=-95.000  
n\_diag=1

[COHeader]  
beam\_id=RU11  
emi\_rcp=R  
polar\_disc=C  
reason=C  
n\_bore=1  
n\_cont=9

[B1]  
gain=0.00  
p=-85.066;36.249

[C1]  
gain=-2  
n\_point=39  
p1=-83.622;40.202  
p2=-82.930;39.941  
p3=-82.259;39.473  
p4=-82.218;39.431  
p5=-81.676;38.650  
p6=-81.674;38.645  
p7=-81.449;37.872  
p8=-81.390;37.102  
p9=-81.483;36.339  
p10=-81.721;35.584  
p11=-82.101;34.836  
p12=-82.539;34.215  
p13=-82.640;34.094  
p14=-83.375;33.415  
p15=-83.460;33.356  
p16=-84.137;32.967  
p17=-84.863;32.705  
p18=-85.560;32.606  
p19=-86.236;32.666  
p20=-86.893;32.890  
p21=-87.519;33.279  
p22=-87.535;33.292  
p23=-88.125;33.986  
p24=-88.151;34.030  
p25=-88.447;34.707  
p26=-88.610;35.440  
p27=-88.625;36.186  
p28=-88.489;36.945  
p29=-88.192;37.719  
p30=-87.720;38.508  
p31=-87.673;38.567  
p32=-86.930;39.316  
p33=-86.823;39.403

p34=-85.997;39.894  
p35=-85.264;40.161  
p36=-85.189;40.185  
p37=-84.405;40.278  
p38=-83.648;40.210  
p39=-83.622;40.202

[C2]

gain=-4  
n\_point=55  
p1=-83.283;41.879  
p2=-82.553;41.701  
p3=-81.832;41.376  
p4=-81.421;41.094  
p5=-81.158;40.880  
p6=-80.642;40.292  
p7=-80.550;40.154  
p8=-80.214;39.494  
p9=-80.057;39.009  
p10=-79.979;38.704  
p11=-79.895;37.922  
p12=-79.924;37.148  
p13=-80.056;36.383  
p14=-80.285;35.626  
p15=-80.610;34.877  
p16=-81.032;34.136  
p17=-81.167;33.946  
p18=-81.587;33.402  
p19=-82.064;32.896  
p20=-82.306;32.674  
p21=-82.867;32.235  
p22=-83.324;31.950  
p23=-83.622;31.784  
p24=-84.344;31.487  
p25=-85.043;31.307  
p26=-85.724;31.238  
p27=-86.390;31.275  
p28=-87.045;31.422  
p29=-87.689;31.687  
p30=-87.985;31.866  
p31=-88.323;32.103  
p32=-88.803;32.554  
p33=-88.947;32.721  
p34=-89.316;33.255  
p35=-89.551;33.714  
p36=-89.662;33.967  
p37=-89.872;34.690  
p38=-89.978;35.424  
p39=-89.981;36.169  
p40=-89.881;36.927  
p41=-89.670;37.698  
p42=-89.339;38.483  
p43=-89.118;38.870  
p44=-88.852;39.285  
p45=-88.252;40.015  
p46=-88.166;40.104  
p47=-87.400;40.760

p48=-87.123;40.946  
p49=-86.556;41.282  
p50=-85.721;41.638  
p51=-84.974;41.834  
p52=-84.898;41.853  
p53=-84.092;41.931  
p54=-83.308;41.885  
p55=-83.283;41.879

[C3]

gain=-6  
n\_point=69  
p1=-81.703;42.787  
p2=-81.506;42.714  
p3=-80.795;42.314  
p4=-80.366;41.973  
p5=-80.133;41.758  
p6=-79.641;41.155  
p7=-79.537;40.994  
p8=-79.204;40.343  
p9=-79.045;39.892  
p10=-78.942;39.540  
p11=-78.816;38.745  
p12=-78.795;37.960  
p13=-78.800;37.905  
p14=-78.867;37.184  
p15=-79.021;36.417  
p16=-79.252;35.659  
p17=-79.484;35.094  
p18=-79.560;34.910  
p19=-79.949;34.168  
p20=-80.424;33.435  
p21=-80.601;33.204  
p22=-81.011;32.708  
p23=-81.485;32.221  
p24=-81.742;31.987  
p25=-82.289;31.550  
p26=-82.708;31.271  
p27=-83.047;31.065  
p28=-83.773;30.717  
p29=-84.241;30.554  
p30=-84.476;30.476  
p31=-85.162;30.330  
p32=-85.833;30.273  
p33=-86.492;30.301  
p34=-87.142;30.417  
p35=-87.405;30.500  
p36=-87.784;30.628  
p37=-88.419;30.947  
p38=-88.742;31.166  
p39=-89.048;31.400  
p40=-89.510;31.847  
p41=-89.670;32.032  
p42=-90.041;32.540  
p43=-90.282;32.962  
p44=-90.425;33.243  
p45=-90.693;33.956

p46=-90.864;34.663  
p47=-90.868;34.680  
p48=-90.954;35.414  
p49=-90.958;36.160  
p50=-90.876;36.917  
p51=-90.706;37.687  
p52=-90.668;37.801  
p53=-90.434;38.471  
p54=-90.049;39.269  
p55=-89.786;39.695  
p56=-89.522;40.084  
p57=-88.925;40.800  
p58=-88.812;40.917  
p59=-88.066;41.585  
p60=-87.810;41.774  
p61=-87.208;42.172  
p62=-86.353;42.606  
p63=-86.198;42.663  
p64=-85.504;42.908  
p65=-84.665;43.091  
p66=-83.841;43.164  
p67=-83.036;43.128  
p68=-82.256;42.980  
p69=-81.703;42.787

[C4]

gain=-8  
n\_point=77  
p1=-81.053;43.688  
p2=-80.496;43.422  
p3=-79.801;42.945  
p4=-79.704;42.858  
p5=-79.163;42.309  
p6=-78.946;42.026  
p7=-78.596;41.465  
p8=-78.461;41.200  
p9=-78.156;40.383  
p10=-78.136;40.297  
p11=-77.984;39.576  
p12=-77.917;38.779  
p13=-77.930;38.272  
p14=-77.937;37.991  
p15=-78.035;37.214  
p16=-78.204;36.445  
p17=-78.440;35.687  
p18=-78.743;34.936  
p19=-78.827;34.768  
p20=-79.112;34.194  
p21=-79.554;33.461  
p22=-79.953;32.905  
p23=-80.081;32.734  
p24=-80.711;32.015  
p25=-80.854;31.871  
p26=-81.483;31.301  
p27=-81.670;31.149  
p28=-82.437;30.613  
p29=-82.473;30.592

p30=-83.172;30.210  
p31=-83.881;29.913  
p32=-83.981;29.882  
p33=-84.573;29.703  
p34=-85.249;29.575  
p35=-85.914;29.524  
p36=-86.568;29.547  
p37=-87.214;29.648  
p38=-87.815;29.819  
p39=-87.853;29.830  
p40=-88.486;30.100  
p41=-89.115;30.474  
p42=-89.121;30.479  
p43=-89.740;30.979  
p44=-89.916;31.153  
p45=-90.361;31.661  
p46=-90.495;31.838  
p47=-90.927;32.532  
p48=-90.975;32.631  
p49=-91.251;33.236  
p50=-91.483;33.950  
p51=-91.569;34.351  
p52=-91.637;34.674  
p53=-91.718;35.408  
p54=-91.724;36.154  
p55=-91.656;36.911  
p56=-91.508;37.680  
p57=-91.372;38.138  
p58=-91.274;38.463  
p59=-90.945;39.260  
p60=-90.506;40.065  
p61=-90.502;40.072  
p62=-89.917;40.902  
p63=-89.649;41.222  
p64=-89.146;41.752  
p65=-88.786;42.085  
p66=-88.093;42.626  
p67=-87.919;42.751  
p68=-87.050;43.264  
p69=-86.450;43.534  
p70=-86.182;43.651  
p71=-85.319;43.926  
p72=-84.466;44.095  
p73=-83.625;44.164  
p74=-82.803;44.135  
p75=-82.003;44.006  
p76=-81.232;43.770  
p77=-81.053;43.688

[C5]

gain=-10  
n\_point=85  
p1=-80.881;44.594  
p2=-80.238;44.326  
p3=-79.521;43.895  
p4=-79.341;43.752  
p5=-78.853;43.331

p6=-78.479;42.906  
p7=-78.247;42.600  
p8=-77.923;42.067  
p9=-77.723;41.646  
p10=-77.559;41.236  
p11=-77.335;40.416  
p12=-77.322;40.334  
p13=-77.215;39.606  
p14=-77.188;38.807  
p15=-77.240;38.018  
p16=-77.255;37.917  
p17=-77.355;37.239  
p18=-77.536;36.470  
p19=-77.778;35.710  
p20=-77.989;35.187  
p21=-78.079;34.959  
p22=-78.436;34.216  
p23=-78.859;33.482  
p24=-79.239;32.922  
p25=-79.354;32.756  
p26=-79.931;32.036  
p27=-80.177;31.769  
p28=-80.617;31.324  
p29=-81.016;30.964  
p30=-81.450;30.616  
p31=-81.799;30.359  
p32=-82.517;29.913  
p33=-82.546;29.896  
p34=-83.266;29.538  
p35=-83.965;29.274  
p36=-84.202;29.208  
p37=-84.648;29.084  
p38=-85.318;28.967  
p39=-85.977;28.919  
p40=-86.627;28.940  
p41=-87.269;29.031  
p42=-87.735;29.151  
p43=-87.905;29.195  
p44=-88.537;29.434  
p45=-89.164;29.765  
p46=-89.221;29.803  
p47=-89.789;30.200  
p48=-90.100;30.469  
p49=-90.411;30.770  
p50=-90.744;31.146  
p51=-91.032;31.529  
p52=-91.236;31.832  
p53=-91.615;32.527  
p54=-91.649;32.605  
p55=-91.908;33.232  
p56=-92.119;33.946  
p57=-92.247;34.605  
p58=-92.259;34.670  
p59=-92.337;35.404  
p60=-92.348;36.150  
p61=-92.289;36.906  
p62=-92.157;37.675

p63=-92.112;37.844  
p64=-91.951;38.457  
p65=-91.659;39.253  
p66=-91.264;40.065  
p67=-91.256;40.079  
p68=-90.757;40.893  
p69=-90.404;41.367  
p70=-90.100;41.740  
p71=-89.542;42.330  
p72=-89.243;42.608  
p73=-88.671;43.085  
p74=-88.073;43.502  
p75=-87.794;43.685  
p76=-86.914;44.155  
p77=-86.225;44.435  
p78=-86.034;44.512  
p79=-85.158;44.772  
p80=-84.291;44.932  
p81=-83.436;45.000  
p82=-82.599;44.975  
p83=-81.783;44.857  
p84=-80.995;44.640  
p85=-80.881;44.594

[C6]

gain=-15  
n\_point=97  
p1=-81.324;46.442  
p2=-80.519;46.271  
p3=-79.725;46.003  
p4=-78.971;45.627  
p5=-78.915;45.592  
p6=-78.255;45.160  
p7=-77.761;44.719  
p8=-77.595;44.559  
p9=-77.025;43.850  
p10=-76.997;43.810  
p11=-76.531;42.990  
p12=-76.479;42.871  
p13=-76.196;42.141  
p14=-76.069;41.654  
p15=-75.983;41.304  
p16=-75.865;40.479  
p17=-75.842;39.916  
p18=-75.829;39.665  
p19=-75.853;38.862  
p20=-75.946;38.070  
p21=-76.098;37.289  
p22=-76.301;36.517  
p23=-76.553;35.755  
p24=-76.852;35.003  
p25=-77.203;34.259  
p26=-77.610;33.523  
p27=-77.698;33.384  
p28=-78.061;32.796  
p29=-78.580;32.077  
p30=-78.756;31.861

p31=-79.168;31.364  
p32=-79.659;30.847  
p33=-79.849;30.658  
p34=-80.485;30.088  
p35=-80.646;29.958  
p36=-81.263;29.493  
p37=-81.618;29.263  
p38=-82.008;29.020  
p39=-82.725;28.649  
p40=-82.909;28.571  
p41=-83.425;28.350  
p42=-84.107;28.126  
p43=-84.777;27.970  
p44=-85.435;27.874  
p45=-85.586;27.865  
p46=-86.085;27.831  
p47=-86.682;27.848  
p48=-86.728;27.849  
p49=-87.364;27.921  
p50=-87.995;28.053  
p51=-88.622;28.254  
p52=-89.118;28.474  
p53=-89.246;28.530  
p54=-89.868;28.877  
p55=-90.222;29.125  
p56=-90.489;29.321  
p57=-91.014;29.786  
p58=-91.110;29.880  
p59=-91.628;30.457  
p60=-91.732;30.591  
p61=-92.121;31.136  
p62=-92.356;31.538  
p63=-92.517;31.824  
p64=-92.833;32.521  
p65=-92.981;32.947  
p66=-93.081;33.226  
p67=-93.271;33.940  
p68=-93.399;34.665  
p69=-93.469;35.399  
p70=-93.485;36.144  
p71=-93.444;36.901  
p72=-93.344;37.669  
p73=-93.178;38.451  
p74=-92.935;39.245  
p75=-92.770;39.661  
p76=-92.616;40.055  
p77=-92.210;40.881  
p78=-91.941;41.327  
p79=-91.693;41.723  
p80=-91.092;42.526  
p81=-91.044;42.586  
p82=-90.226;43.470  
p83=-90.225;43.470  
p84=-89.344;44.241  
p85=-89.157;44.380  
p86=-88.450;44.876  
p87=-87.666;45.322



p88=-87.550;45.387  
p89=-86.644;45.808  
p90=-85.739;46.124  
p91=-84.925;46.327  
p92=-84.838;46.350  
p93=-83.941;46.503  
p94=-83.057;46.569  
p95=-82.190;46.551  
p96=-81.344;46.446  
p97=-81.324;46.442

[C7]

gain=-20  
n\_point=167  
p1=-73.248;55.614  
p2=-72.436;55.209  
p3=-71.544;54.823  
p4=-70.867;54.523  
p5=-70.693;54.393  
p6=-69.944;53.836  
p7=-69.353;53.430  
p8=-69.212;53.274  
p9=-68.594;52.572  
p10=-68.416;52.342  
p11=-68.094;51.726  
p12=-67.879;51.268  
p13=-67.712;50.732  
p14=-67.592;50.212  
p15=-67.476;49.540  
p16=-67.445;49.180  
p17=-67.350;48.185  
p18=-67.350;48.176  
p19=-67.408;47.188  
p20=-67.377;46.580  
p21=-67.401;46.231  
p22=-67.459;45.294  
p23=-67.452;44.856  
p24=-67.516;44.379  
p25=-67.640;43.479  
p26=-67.693;42.786  
p27=-67.731;42.601  
p28=-67.954;41.732  
p29=-68.175;40.881  
p30=-68.389;40.046  
p31=-68.574;39.306  
p32=-68.602;39.225  
p33=-68.899;38.414  
p34=-69.205;37.615  
p35=-69.522;36.829  
p36=-69.854;36.054  
p37=-70.202;35.290  
p38=-70.559;34.548  
p39=-70.565;34.536  
p40=-71.024;33.788  
p41=-71.465;33.051  
p42=-71.890;32.325  
p43=-72.304;31.608

p44=-72.309;31.600  
p45=-72.829;30.895  
p46=-73.298;30.193  
p47=-73.542;29.840  
p48=-73.821;29.498  
p49=-74.362;28.810  
p50=-74.583;28.538  
p51=-74.963;28.127  
p52=-75.516;27.502  
p53=-75.567;27.452  
p54=-76.263;26.782  
p55=-76.373;26.679  
p56=-77.024;26.116  
p57=-77.181;25.985  
p58=-77.854;25.457  
p59=-77.954;25.383  
p60=-78.697;24.870  
p61=-78.798;24.801  
p62=-79.414;24.444  
p63=-79.885;24.150  
p64=-80.120;24.028  
p65=-80.807;23.682  
p66=-81.131;23.503  
p67=-81.483;23.359  
p68=-82.145;23.095  
p69=-82.694;22.859  
p70=-82.801;22.826  
p71=-83.442;22.658  
p72=-84.076;22.508  
p73=-84.706;22.378  
p74=-85.329;22.275  
p75=-85.947;22.205  
p76=-86.073;22.199  
p77=-86.559;22.183  
p78=-87.048;22.187  
p79=-87.168;22.190  
p80=-87.772;22.244  
p81=-88.374;22.330  
p82=-88.975;22.439  
p83=-89.574;22.568  
p84=-90.173;22.716  
p85=-90.347;22.768  
p86=-90.770;22.953  
p87=-91.367;23.206  
p88=-91.744;23.372  
p89=-91.966;23.510  
p90=-92.565;23.861  
p91=-92.772;23.985  
p92=-93.167;24.283  
p93=-93.635;24.605  
p94=-93.773;24.721  
p95=-94.384;25.205  
p96=-94.413;25.230  
p97=-95.000;25.770  
p98=-95.095;25.861  
p99=-95.623;26.386  
p100=-95.726;26.498

p101=-96.256;27.082  
p102=-96.303;27.142  
p103=-96.790;27.792  
p104=-96.901;27.937  
p105=-97.208;28.448  
p106=-97.566;29.016  
p107=-97.614;29.111  
p108=-97.910;29.780  
p109=-98.233;30.456  
p110=-98.266;30.528  
p111=-98.465;31.140  
p112=-98.683;31.831  
p113=-98.906;32.531  
p114=-99.043;32.974  
p115=-99.101;33.239  
p116=-99.232;33.956  
p117=-99.341;34.682  
p118=-99.427;35.418  
p119=-99.487;36.164  
p120=-99.524;36.921  
p121=-99.538;37.689  
p122=-99.531;38.470  
p123=-99.503;39.264  
p124=-99.470;39.742  
p125=-99.421;40.072  
p126=-99.272;40.893  
p127=-99.110;41.731  
p128=-98.929;42.585  
p129=-98.916;42.634  
p130=-98.598;43.457  
p131=-98.292;44.349  
p132=-98.242;44.478  
p133=-97.837;45.261  
p134=-97.505;45.987  
p135=-97.374;46.198  
p136=-96.821;47.159  
p137=-96.717;47.334  
p138=-96.151;48.148  
p139=-95.881;48.534  
p140=-95.389;49.170  
p141=-95.000;49.633  
p142=-94.477;50.226  
p143=-94.076;50.619  
p144=-93.348;51.324  
p145=-93.112;51.514  
p146=-92.112;52.283  
p147=-91.871;52.470  
p148=-91.084;52.940  
p149=-90.017;53.601  
p150=-89.887;53.678  
p151=-88.937;54.098  
p152=-87.828;54.576  
p153=-86.910;54.979  
p154=-86.687;55.053  
p155=-85.553;55.367  
p156=-84.404;55.650  
p157=-83.242;55.902

p158=-82.071;56.116  
p159=-80.899;56.277  
p160=-79.739;56.372  
p161=-78.601;56.392  
p162=-77.491;56.340  
p163=-76.410;56.225  
p164=-75.354;56.063  
p165=-74.322;55.864  
p166=-73.312;55.633  
p167=-73.248;55.614

[C8]

gain=-20  
n\_point=145  
p1=-79.454;52.820  
p2=-79.136;52.810  
p3=-78.142;52.729  
p4=-77.175;52.583  
p5=-76.257;52.340  
p6=-75.436;51.912  
p7=-75.397;51.884  
p8=-74.570;51.592  
p9=-73.811;51.084  
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p11=-73.084;50.540  
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p15=-71.730;48.892  
p16=-71.336;48.258  
p17=-71.163;47.920  
p18=-70.906;47.265  
p19=-70.779;46.966  
p20=-70.592;46.073  
p21=-70.575;46.025  
p22=-70.373;45.107  
p23=-70.369;44.715  
p24=-70.269;44.205  
p25=-70.287;43.316  
p26=-70.320;43.001  
p27=-70.260;42.448  
p28=-70.327;41.592  
p29=-70.482;40.790  
p30=-70.479;40.748  
p31=-70.518;39.925  
p32=-70.686;39.110  
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p34=-71.181;37.512  
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p36=-71.780;35.960  
p37=-72.109;35.199  
p38=-72.465;34.449  
p39=-72.868;33.706  
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p41=-73.399;32.943  
p42=-73.787;32.246  
p43=-74.284;31.529

p44=-74.647;31.127  
p45=-74.857;30.818  
p46=-75.433;30.116  
p47=-75.675;29.875  
p48=-76.046;29.421  
p49=-76.602;28.873  
p50=-76.731;28.731  
p51=-77.445;28.049  
p52=-77.463;28.033  
p53=-78.164;27.375  
p54=-78.286;27.268  
p55=-78.971;26.706  
p56=-79.066;26.627  
p57=-79.814;26.085  
p58=-79.883;26.042  
p59=-80.542;25.589  
p60=-80.969;25.382  
p61=-81.242;25.213  
p62=-81.926;24.900  
p63=-82.500;24.722  
p64=-82.591;24.679  
p65=-83.254;24.429  
p66=-83.901;24.271  
p67=-84.540;24.161  
p68=-85.172;24.086  
p69=-85.683;24.046  
p70=-85.799;24.030  
p71=-86.423;23.990  
p72=-87.042;24.001  
p73=-87.271;24.026  
p74=-87.656;24.044  
p75=-88.269;24.103  
p76=-88.879;24.199  
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p79=-90.143;24.621  
p80=-90.698;24.798  
p81=-91.304;25.093  
p82=-91.528;25.239  
p83=-91.911;25.426  
p84=-92.506;25.866  
p85=-92.518;25.874  
p86=-93.131;26.314  
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p95=-95.644;29.442  
p96=-95.862;29.773  
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p114=-97.043;40.876  
p115=-96.792;41.714  
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p117=-96.464;42.569  
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p124=-94.153;46.730  
p125=-93.789;47.157  
p126=-93.270;47.697  
p127=-92.763;48.154  
p128=-92.357;48.519  
p129=-91.423;49.178  
p130=-91.408;49.188  
p131=-90.451;49.900  
p132=-89.755;50.266  
p133=-89.466;50.465  
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p135=-87.458;51.404  
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p137=-86.374;51.933  
p138=-85.323;52.267  
p139=-84.278;52.498  
p140=-83.237;52.660  
p141=-83.171;52.667  
p142=-82.173;52.848  
p143=-81.133;52.927  
p144=-80.121;52.907  
p145=-79.454;52.820

[C9]

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p3=-79.362;47.104  
p4=-78.581;46.765  
p5=-78.244;46.566  
p6=-77.840;46.334  
p7=-77.148;45.792  
p8=-77.030;45.675

p9=-76.512;45.131  
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p11=-75.947;44.310  
p12=-75.732;43.910  
p13=-75.470;43.293  
p14=-75.375;43.044  
p15=-75.141;42.190  
p16=-75.107;41.996  
p17=-74.990;41.349  
p18=-74.932;40.521  
p19=-74.937;40.181  
p20=-74.930;39.705  
p21=-74.988;38.900  
p22=-75.107;38.106  
p23=-75.278;37.323  
p24=-75.495;36.550  
p25=-75.755;35.786  
p26=-76.057;35.033  
p27=-76.404;34.288  
p28=-76.803;33.552  
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p31=-77.733;32.104  
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p33=-78.290;31.391  
p34=-78.914;30.685  
p35=-79.019;30.576  
p36=-79.620;29.986  
p37=-79.860;29.771  
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p39=-80.649;29.135  
p40=-81.401;28.626  
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p42=-82.128;28.203  
p43=-82.743;27.917  
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p46=-84.193;27.402  
p47=-84.855;27.263  
p48=-85.163;27.221  
p49=-85.508;27.170  
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p59=-90.525;28.461  
p60=-90.532;28.466  
p61=-91.152;28.941  
p62=-91.345;29.116  
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p65=-92.396;30.287

p66=-92.518;30.452  
p67=-92.949;31.132  
p68=-93.024;31.273  
p69=-93.311;31.821  
p70=-93.594;32.518  
p71=-93.658;32.720  
p72=-93.828;33.224  
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p76=-94.216;36.143  
p77=-94.187;36.899  
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p79=-93.961;38.448  
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p81=-93.508;39.915  
p82=-93.461;40.051  
p83=-93.111;40.875  
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p85=-92.653;41.717  
p86=-92.103;42.577  
p87=-91.853;42.909  
p88=-91.412;43.457  
p89=-90.989;43.920  
p90=-90.540;44.361  
p91=-90.106;44.753  
p92=-89.411;45.292  
p93=-89.209;45.442  
p94=-88.298;46.023  
p95=-87.842;46.260  
p96=-87.379;46.502  
p97=-86.454;46.892  
p98=-85.530;47.185  
p99=-85.072;47.290  
p100=-84.607;47.406  
p101=-83.690;47.554  
p102=-82.785;47.620  
p103=-81.896;47.606  
p104=-81.028;47.510  
p105=-80.675;47.436