

Feedback One	
Top 10 Positively Correlated Fluxes	
Subsystem	Correlation
'KP' "Tyrosine metabolism"	0.37807811
'EC' "Murein Biosynthesis"	0.35593737
'ECs' "Murein Recycling"	0.35549066
'ECs' "Murein Biosynthesis"	0.35531688
'ECs' "Threonine and Lysine Metabolism"	0.26658649
'ECs' "Glycine and Serine Metabolism"	0.26654447
'ECe' "Tyrosine Tryptophan and Phenylalanine Metabolism"	0.25188833
'STy' "Threonine and Lysine Metabolism"	0.24643722
'STy' "4 hydroxyphenylacetate catabolism"	0.23957028
'FP' "Unassigned"	0.22898343
Top 10 Negatively Correlated Fluxes	
Subsystem	Correlation
'BT' "Unassigned"	-0.2324472
'ECs' "Oxidative Phosphorylation"	-0.2197121
'LL' "Valine Leucine and Isoleucine Metabolism"	-0.217536
'HS' "Fatty Acid Synthesis"	-0.2046681
'FP' "Arginine and Proline Metabolism"	-0.1842717
'LP' "Alternate Carbon Metabolism"	-0.1819074
'STy' "Transport"	-0.1813692
'ECs' "Pyruvate Metabolism"	-0.1669255
'KP' "Butanoate Metabolism"	-0.1645353
'KP' "Oxidative Phosphorylation"	-0.1603565
Feedback Two	
Top 10 Positively Correlated Fluxes	
Subsystem	Correlation
'STy' "Folate Metabolism"	0.59036697
'STy' "Purine and Pyrimidine Biosynthesis"	0.56859907
'STy' "Glycine and Serine Metabolism"	0.30534423
'EC' "Murein Biosynthesis"	0.28610424
'HS' "Heme degradation"	0.26066047
'BT' "Folate Metabolism"	0.2356027
'ECs' "Murein Recycling"	0.22444353

'STy' "Glyoxylate Metabolism"	0.2131902
'HP' "ROS Detoxification"	0.20816944
'HS' "Arginine and Proline Metabolism"	0.2055416
Top 10 Negatively Correlated Fluxes	
Subsystem	Correlation
'HP' "dUTP Biosynthesis"	-0.2219613
'ECe' "Membrane Lipid Metabolism"	-0.2138996
'ECs' "Histidine Metabolism"	-0.20623
'ECs' "Citric Acid Cycle"	-0.1960893
'STy' "Exchange"	-0.1955515
'HP' "dTTP Biosynthesis"	-0.1829439
'EC' "Citric Acid Cycle"	-0.1774323
'ECe' "Inorganic Ion Transport and Metabolism"	-0.1770236
'ECs' "Alternate Carbon Metabolism"	-0.1741285
'HP' "Glycerolipid Synthesis"	-0.1558785
Feedback Three	
Top 10 Positively Correlated Fluxes	
Subsystem	Correlation
'LL' "Pentose Phosphate Cycle"	0.3745564
'LL' "Tyrosine Tryptophan and Phenylalanine Metabolism"	0.36899784
'EC' "Cysteine Metabolism"	0.32391016
'HS' "CoA catabolism"	0.32132078
'STy' "Methionine Metabolism"	0.30245529
'KP' "Riboflavin Metabolism"	0.28484411
'LL' "Lipid Cell Wall Metabolism"	0.20341677
'ECs' "Unassigned"	0.19387464
'ECs' "Glutamate Metabolism"	0.18582804
'LL' "Alternate Carbon Metabolism"	0.18162498
Top 10 Negatively Correlated Fluxes	
Subsystem	Correlation
'HS' "Cholesterol metabolism"	-0.32022295
'HS' "Aminosugar Metabolism"	-0.28879565
'BT' "Glycine, Serine and Threonine Metabolism"	-0.20810029
'BT' "Central Metabolism"	-0.19594971
'HS' "Transport, intercellular"	-0.19568761

'ECs' "Glycine and Serine Metabolism"	-0.18777028
'ECs' "Threonine and Lysine Metabolism"	-0.18035997
'HS' "C5-branched dibasic acid metabolism"	-0.17974225
'ECs' "Pyruvate Metabolism"	-0.17746382
'LL' "Methionine Metabolism"	-0.17189016
Feedback Four	
Top 10 Positively Correlated Fluxes	
Subsystem	Correlation
'EC' "Nitrogen Metabolism"	0.418806615
'ECs' "Glycerophospholipid Metabolism"	0.387722707
'ECe' "Glycerophospholipid Metabolism"	0.305090808
'KP' "Benzoate Degradation"	0.248625539
'KP' "Nitrogen Metabolism"	0.248442119
'KP' "Phenylalanine Metabolism"	0.246854193
'STy' "Anaplerotic Reactions"	0.226538326
'LL' "Cofactor and Prosthetic Group Biosynthesis"	0.216393231
'HS' "ROS Detoxification"	0.20917127
'ECe' "Threonine and Lysine Metabolism"	0.20755859
Top 10 Negatively Correlated Fluxes	
Subsystem	Correlation
'LL' "Arginine and Proline Metabolism"	-0.29882075
'KP' "Cell Envelope Biosynthesis"	-0.2401224
'ECs' "Tyrosine Tryptophan and Phenylalanine Metabolism"	-0.22149735
'KP' "Transport, Extracellular"	-0.21482511
'HS' "Transport, peroxisomal"	-0.20553729
'KP' "Transport Outer Membrane"	-0.19956758
'LL' "Valine Leucine and Isoleucine Metabolism"	-0.19853544
'EC' "Glycolysis/Gluconeogenesis"	-0.19484854
'EC' "Alternate Carbon Metabolism"	-0.19214115
'LL' "Central Metabolism"	-0.18940579