

SUPPLEMENTAL MATERIAL

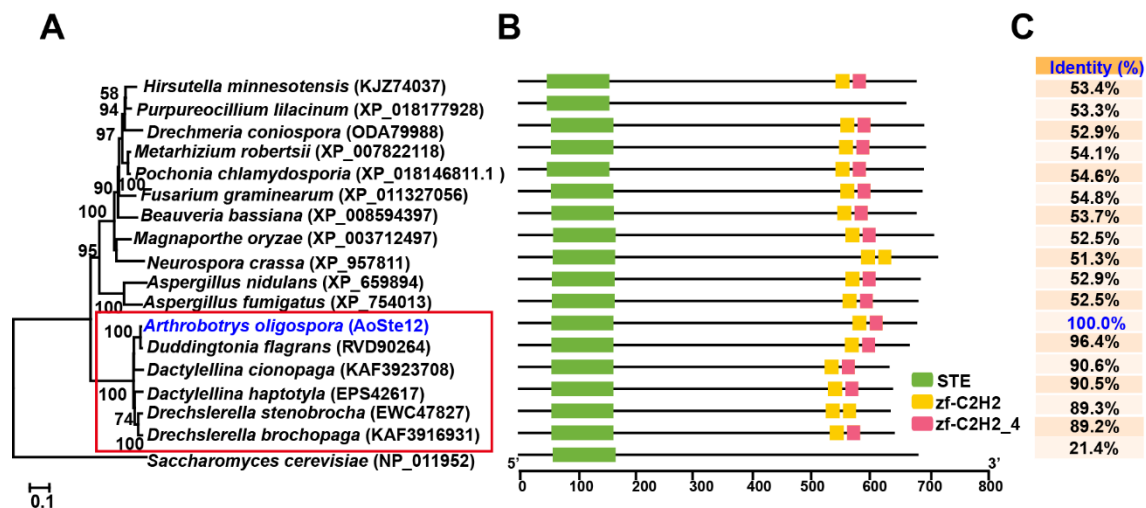


Fig. S1 Phylogenetic analysis, conserved domain, and sequence similarity comparison of Ste12 homologues from different fungi. (A) Phylogenetic tree of Ste12 orthologs from diverse fungi. Phylogenetic tree was constructed using MEGA7.0 software; *A. oligospora* is shown in blue. The nematode-trapping fungi were highlighted with a red frame. (B) Conserved domain of Ste12 homologous proteins. The structural domains of these sequences were analyzed using the Pfam website (<http://pfam.xfam.org/>). (C) Comparison of sequence similarity between AoSte12 and other homologous proteins. The sequence similarity between AoSte12 and other homologous proteins was analyzed using DNAMAN software.

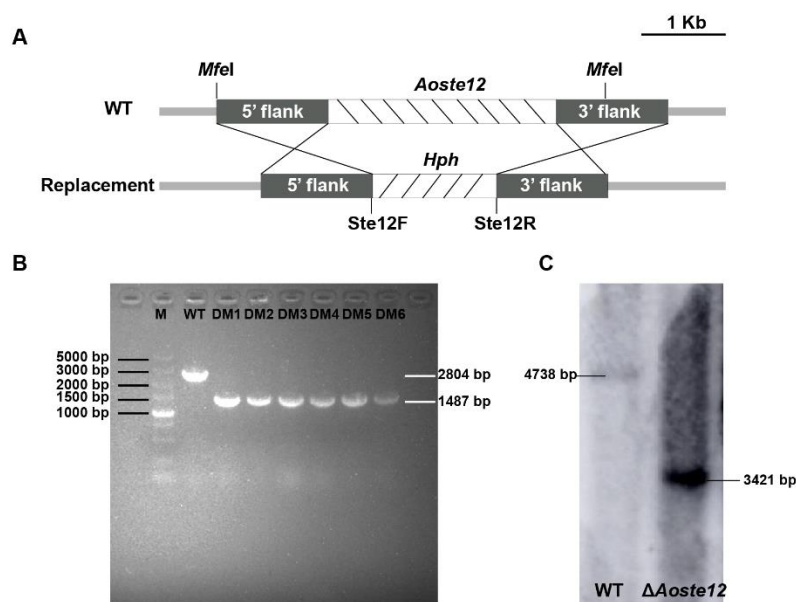


Fig. S2 Aoste12 disruption and verification of transformants. (A) The homologous

recombination pattern of *Aoste12*. Restriction enzyme cutting site is *Mfe*I. Bar = 1 kb. (B) *Aoste12* disruption transformants were confirmed via PCR amplification. M, DNA marker. WT, wild-type strain. DM1-DM6, $\Delta Aoste12$ transformants. (C) Southern blotting analysis of wild-type strain (WT) and $\Delta Aoste12$ transformants.

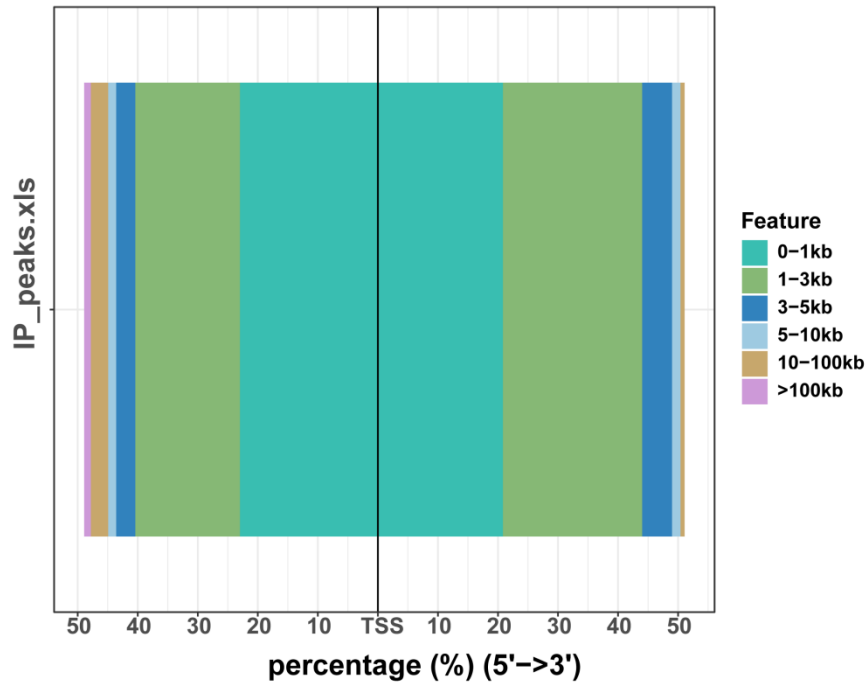


Fig. S3 Distribution ratio of peak to transcriptional start site (TSS) distance of each sample.

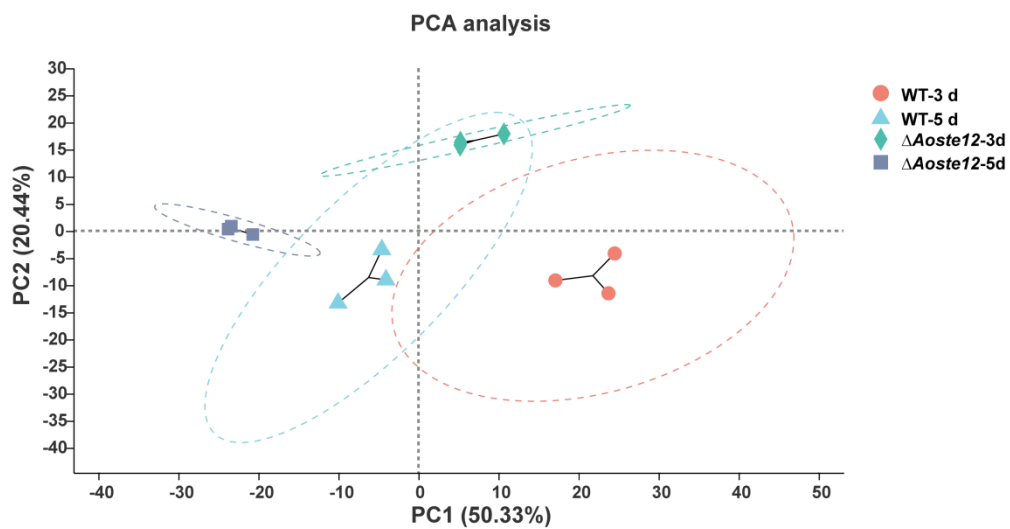


Fig. S4 Principal component analysis (PCA). PCA analysis between the wild-type (WT)

and $\Delta Aoste12$ mutant samples in the transcriptome.

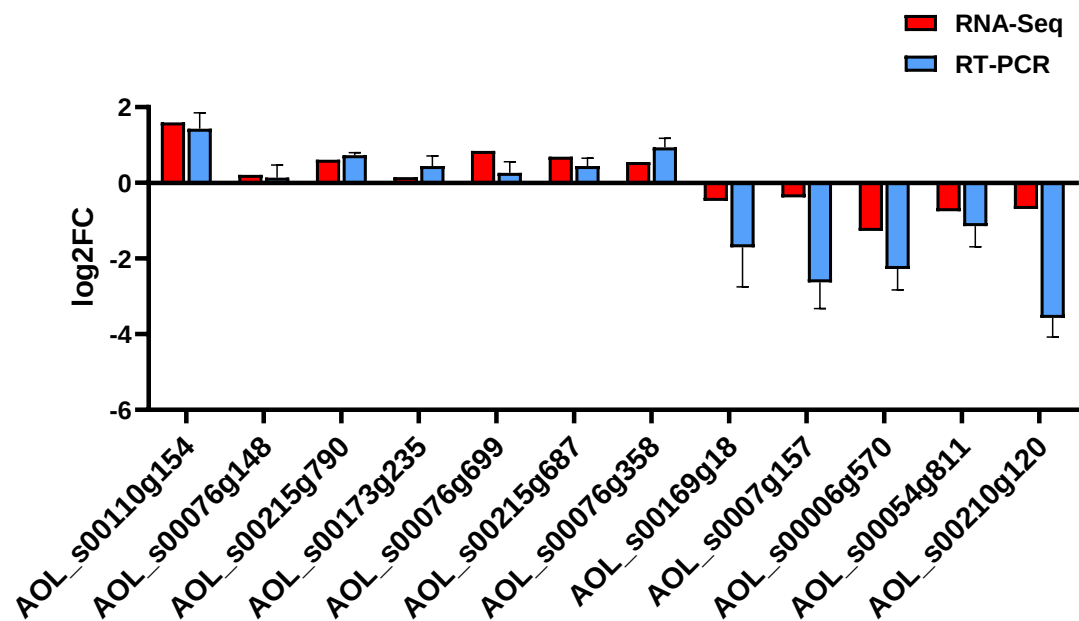


Fig. S5 Verification of transcriptome data using real-time quantitative polymerase chain reaction (RT-qPCR) analysis.

Table S1 List of primers used in this study.

Primers for gene disruption			
Primers	Sequence (5'-3')	Description	
Ste12LF1	GTAACGCCAGGGTTTTCCAGTCACGACGAAGCTGTTGTCTGTCT CGGG	Amplify the <i>Ste12</i> gene 5' flank	
Ste12LR1	ATCCACTTAACGTTACTGAAATCTCCAACGTGTGTGAAAGTGTGCG ACC		
Ste12RF2	CTCCTTCAATATCATCTTCTGTCTCCGACGTACTTTGGGATGCGGC TTG	Amplify the <i>Ste12</i> gene 3' flank	
Ste12RR2	GCGGATAACAATTTCACACAGGAAACAGCGCTATCCACCGTTACCC CTC		
hphF	GTCGGAGACAGAAGATGATATTGAAGGAGC	Amplify the hph cassette	
hphR	GTTGGAGATTTCAGTAACGTTAAGTGGAT		
Ste12F	GGTCGCACACTTTCACACAC	Verify the transformants	
Ste12R	CAAGCCGCATCCCAAAGTAC		
Ste12TZF	CTCGGGCGCTCTTCTACTTT	Make Southern blotting probe	
Ste12TZR	GTACCCAAGGAGCGATGTGA		
Primers for real-time quantitative polymerase chain reaction (RT-qPCR) analysis			
Genes	Primers (5'-3')	Genes	Primers (5'-3')

AOL_s00210g120 (<i>medA</i>)	120F-TCCGGCCCAATGATTCAGAA 120R-AGATCGCAGGAACATGGTGA	AOL_s00054g811 (<i>velB</i>)	811F-ATTCGCAACTTCTCCCTCA 811R-GGCATGTTTGGATTCTGGGG
AOL_s00007g157 (<i>flbC</i>)	157F-CTCTCCGGCAAAGACAATCG 157R-GTCGACTGAGGATAGTAGCT	AOL_s00215g516 (<i>flbA</i>)	516F-TTCAAACGCAGCTCCTTCAC 516R-TTCAAACGCAGCTCCTTCAC
AOL_s00080g93 (<i>lreB</i>)	93F-CCAGGGTCGTCAGTATCTT 93R-CAGCATCTCCAGGTCAA	AOL_s00083g25 (<i>stuA</i>)	25F-AGCTCCCGAAACGAGTCTAA 25R-ATTGATCATGTGATTATCCT
AOL_s00169g18 (<i>veA</i>)	18F-AAGCTACACCCAATCAACGC 18R-TTGCGATGCTGACGATCTTG	AOL_s00080g63 (<i>abaA</i>)	63F-AACTTTATGCGCCTTGTCTGT 63R-TTGGCTAGGTGGTCTGTACG
AOL_s00083g487 (<i>lreA</i>)	487F-TTCTCTTCGTCCTCAAGCCAC 487R-ACCGGTTGAGTGAGTCTA	AOL_s00043g361 (<i>fluG</i>)	361F-GATTCCAGTCCCGTGAATTC 361R-GCTAAGGAGAGGATGGGCAT
AOL_s00173g221 (<i>wetA</i>)	221F-TTACATGCCACCCCAAGTCC 221R-CAATTGCAACTGCGTCCACA	AOL_s00006g570 (<i>hyp1</i>)	570F-GCGGATCCAACATGAAGCTT 570R-GGTTGACAACTGGGATGCTG
AOL_s00075g211 (<i>nsdD</i>)	211F-ATTACGGCCGCTAGTAGTC 211R-CTCGTTTGGACCTGGTTGTG	AOL_s00097g514 (<i>brlA</i>)	514F-TTGAGGCCTCGATCCGTAGA 514R-AGGTAGATGGCGCTGTTACG
AOL_s00054g700 (<i>vosA</i>)	700F-CAAACCACCCACCACCAAAT 700R-GGATGGACAGGAGAAGGAC C	AOL_s00076g640 (β -tubulin gene)	640F-CCACCTTCGTGCGTAACTC 640R-TCGTCCATACCCTCACCAG
AOL_s00110g154 (<i>fus3</i>)	154F-GGACCTCTCAGACGACCATT G 154R-AGCACGGTACCATCTGGTTG	AOL_s00076g148	148F-TGTTGTGGTGCAGGTCTTGT 148R-ATCCGTGCCAAAGAGCTCAA
AOL_s00215g790	790F-CCCCTAAGCGCTCTCAACAA 790R-GGAGATGTGTTCTTTGCGGC	AOL_s00173g235 (<i>slt2</i>)	235F-ACAGAGATCTCAAGCCCGGA 235R-GCCAGAATACATCCGACCGA
AOL_s00076g699 (<i>mkk2</i>)	699F-AACAGATCCAACCCAGCGA 699R-CCTCGGCGATTTTCCCTAGA	AOL_s00215g687 (<i>ste11</i>)	687F-ATCCATCGCGACATCAAGGG 687R-GGTCTCCCGTGAACATCTCC
AOL_s00076g358 (<i>far11</i>)	358F-TCGAACTTGACGGTGTTGCT 358R-TGTCAGATATCAGCGCGACC		

Primers for vector construction in yeast two-hybrid analysis

Primers	Sequence (5'-3')
BD-AOL_s00007g203 F	TGCATATGGCCATGGAGGCCATGCCGAACCATCGCCCATC
BD-AOL_s00007g203 R	GCAGGTCGACGGATCCCCGGTAAGTTTTCTGTAGAGTCTT
BD-AOL_s00215g688 F	TGCATATGGCCATGGAGGCCATGGCGTTCAACCCAGACGA
BD-AOL_s00215g688 R	GCAGGTCGACGGATCCCCGGAACAGCCCACTCGCTCTTAT
BD-AOL_s00215g705 F	TGCATATGGCCATGGAGGCCATGTCTTCCTCAAACGAAAA
BD-AOL_s00215g705 R	GCAGGTCGACGGATCCCCGGTTCGTCTTCCCCAGTCCTT
BD-AOL_s00215g489 F	TGCATATGGCCATGGAGGCCATGGACAATATTCGCGAGGA
BD-AOL_s00215g489 R	GCAGGTCGACGGATCCCCGGGCTTTCAATATCAACCATGA
BD-AOL_s00054g134 F	TGCATATGGCCATGGAGGCCATGGCAGCTCCGACGACTGT
BD-AOL_s00054g134 R	GCAGGTCGACGGATCCCCGGTTAGCGCCCCATAGTCCTT
BD-AOL_s00110g154 F	TGCATATGGCCATGGAGGCCATGTCTCGCCAGAACTCGAG
BD-AOL_s00110g154 R	GCAGGTCGACGGATCCCCGGCCGATGATTCTTCGAAGA
AD-AOL_s00079g294 F	ATATGGCCATGGAGGCCAGTATGTATTACACAACGCCCT
AD-AOL_s00079g294 R	GCAGGTCGACGGATCCCCGGCATCTGGGGTATCAGTTGCG

Table S2 Statistical sequencing data of transcriptome.

Sample	Total reads	Total mapped	Multiple mapped	Uniquely mapped	Raw reads
WT_5_1	46642548	45155026(96.81%)	174999(0.38%)	44980027(96.44%)	46987920
WT_5_2	48016092	46468497(96.78%)	168177(0.35%)	46300320(96.43%)	48415728
WT_5_3	44695480	43206852(96.67%)	196719(0.44%)	43010133(96.23%)	45068496
WT_7_1	43716240	42292286(96.74%)	165975(0.38%)	42126311(96.36%)	44088204
WT_7_2	42222520	40782732(96.59%)	145438(0.34%)	40637294(96.25%)	42614272
WT_7_3	42706532	41220257(96.52%)	142077(0.33%)	41078180(96.19%)	43132588
Δ Aoste12_5_1	42543314	41149610(96.72%)	159095(0.37%)	40990515(96.35%)	42845232
Δ Aoste12_5_2	42283656	40918775(96.77%)	152686(0.36%)	40766089(96.41%)	42612150
Δ Aoste12_5_3	40777528	39436684(96.71%)	156251(0.38%)	39280433(96.33%)	41128590
Δ Aoste12_7_1	42072704	40680645(96.69%)	147780(0.35%)	40532865(96.34%)	42464108
Δ Aoste12_7_2	45055222	43517034(96.59%)	136581(0.3%)	43380453(96.28%)	45410612
Δ Aoste12_7_3	41361094	40065821(96.87%)	112608(0.27%)	39953213(96.6%)	41703496
Clean reads	Clean bases	Error rate(%)	Q20(%)	Q30(%)	GC content(%)
46642548	6941988390	0.0251	97.99	94.04	48.43
48016092	7142904635	0.0252	97.93	93.92	48.29
44695480	6659282335	0.0254	97.87	93.78	48.31
43716240	6512413572	0.0251	98	94.08	48.21
42222520	6281450334	0.0252	97.93	93.96	48.21
42706532	6362163100	0.0255	97.81	93.65	48.15
42543314	6336524768	0.0249	98.06	94.21	47.82
42283656	6294217582	0.0252	97.97	93.99	47.94
40777528	6067336113	0.0253	97.9	93.86	47.9
42072704	6261458043	0.0257	97.75	93.49	48.21
45055222	6701074624	0.0252	97.95	93.98	48.19
41361094	6176791513	0.0252	97.94	93.94	48.36

Table S3 The interacting protein network nodes prediction of AoSte12 by String.

[illegible]

[illegible]

		WYK7	X6C3									
G1WYK7	MCM7	756982.G1	756982.G1	0	0	0	0	0.14	0	0	0.391	0.456
		WYK7	X7C5					3				
G1WYK7	G1XE09	756982.G1	756982.G1	0	0	0	0	0.18	0	0.601	0.881	0.958
		WYK7	XE09					3				
G1WYK7	G1XFS2	756982.G1	756982.G1	0	0	0	0	0.18	0	0.893	0.512	0.954
		WYK7	XFS2					6				
G1WYK7	G1XGS2	756982.G1	756982.G1	0	0	0	0	0.28	0.518	0	0.248	0.718
		WYK7	XGS2					4				
G1WYK7	G1XLV9	756982.G1	756982.G1	0	0	0	0	0	0.587	0	0	0.587
		WYK7	XLV9									
G1WYQ0	G1X286	756982.G1	756982.G1	0	0	0	0	0	0.481	0	0.133	0.531
		WYQ0	X286									
G1WYQ0	G1X496	756982.G1	756982.G1	0	0	0	0	0.50	0.688	0	0.352	0.891
		WYQ0	X496					2				
G1WYQ0	G1X645	756982.G1	756982.G1	0	0	0	0	0.25	0	0	0.344	0.49
		WYQ0	X645					5				
G1WYQ0	G1X7V0	756982.G1	756982.G1	0	0	0	0	0.35	0.495	0	0	0.66
		WYQ0	X7V0					5				
G1WYQ0	G1XB71	756982.G1	756982.G1	0	0	0	0	0.40	0.672	0.993	0.779	0.999
		WYQ0	XB71					6				
G1WYQ0	G1XCI8	756982.G1	756982.G1	0	0	0	0	0.19	0.518	0	0	0.595
		WYQ0	XCI8					5				
G1WYQ0	G1XLK0	756982.G1	756982.G1	0	0	0	0	0	0.508	0	0	0.508
		WYQ0	XLK0									
G1WYS7	G1X2E4	756982.G1	756982.G1	0	0	0	0	0	0.936	0	0.142	0.943
		WYS7	X2E4									
G1WYS7	G1X2N7	756982.G1	756982.G1	0	0	0	0	0	0	0.502	0.173	0.571
		WYS7	X2N7									
G1WYS7	G1X6W7	756982.G1	756982.G1	0	0	0	0	0.14	0.152	0.601	0	0.684
		WYS7	X6W7					2				
G1WYS7	G1X7E7	756982.G1	756982.G1	0	0	0	0.37	0	0	0.385	0.097	0.407
		WYS7	X7E7				4					
G1WYS7	G1XBE9	756982.G1	756982.G1	0	0	0	0	0	0.456	0	0.128	0.505
		WYS7	XBE9									
G1WYS7	G1XCX4	756982.G1	756982.G1	0	0	0	0	0.45	0	0	0	0.459
		WYS7	XCX4					9				
G1WYS7	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0	0.611	0.492	0.415	0.874
		WYS7	XJZ4									
G1WYS7	G1XKY4	756982.G1	756982.G1	0	0	0	0	0.22	0.692	0.492	0.775	0.969
		WYS7	XKY4					2				
G1WYS7	G1XLU8	756982.G1	756982.G1	0	0	0	0	0	0.505	0	0.258	0.617

		WYS7	XLU8									
G1WYS7	G1XRF2	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.361	0.564
		WYS7	XRF2					5				
G1WZ64	G1WZY0	756982.G1	756982.G1	0	0	0	0	0.23	0.495	0	0.444	0.766
		WZ64	WZY0					5				
G1WZ64	G1X344	756982.G1	756982.G1	0	0	0	0	0.35	0.15	0	0.41	0.648
		WZ64	X344					5				
G1WZ64	G1X370	756982.G1	756982.G1	0	0	0	0	0	0.503	0	0.411	0.695
		WZ64	X370									
G1WZ64	G1X4I9	756982.G1	756982.G1	0	0	0	0	0.43	0	0	0.398	0.646
		WZ64	X4I9					6				
G1WZ64	G1X8N2	756982.G1	756982.G1	0	0	0	0	0	0	0	0.654	0.654
		WZ64	X8N2									
G1WZ64	G1XAJ0	756982.G1	756982.G1	0	0	0	0	0.51	0.699	0.993	0.961	0.999
		WZ64	XAJ0					9				
G1WZ64	G1XFG1	756982.G1	756982.G1	0	0	0	0	0	0	0.856	0	0.856
		WZ64	XFG1									
G1WZ64	G1XFQ1	756982.G1	756982.G1	0	0	0	0	0	0	0	0.431	0.431
		WZ64	XFQ1									
G1WZ64	G1XI99	756982.G1	756982.G1	0	0	0	0	0	0	0.989	0	0.989
		WZ64	XI99									
G1WZ64	G1XIF7	756982.G1	756982.G1	0	0	0	0	0	0.482	0	0	0.482
		WZ64	XIF7									
G1WZ64	G1XKT9	756982.G1	756982.G1	0	0	0	0	0.20	0	0	0.365	0.476
		WZ64	XKT9					9				
G1WZ64	G1XLK2	756982.G1	756982.G1	0	0	0	0	0	0.505	0.624	0.431	0.885
		WZ64	XLK2									
G1WZ64	G1XSV0	756982.G1	756982.G1	0	0	0	0	0	0.505	0	0.446	0.714
		WZ64	XSV0									
G1WZ64	G1XTA1	756982.G1	756982.G1	0	0	0	0	0	0	0.993	0	0.993
		WZ64	XTA1									
G1WZ64	G1XV29	756982.G1	756982.G1	0	0	0	0	0	0.225	0	0.642	0.711
		WZ64	XV29									
G1WZI7	G1X496	756982.G1	756982.G1	0	0	0	0.37	0.18	0.505	0	0.88	0.809
		WZI7	X496				6	6				
G1WZI7	G1X7V0	756982.G1	756982.G1	0	0	0	0	0	0	0	0.507	0.507
		WZI7	X7V0									
G1WZQ4	G1X2X4	756982.G1	756982.G1	0	0	0	0	0	0.609	0	0	0.609
		WZQ4	X2X4									
G1WZQ4	G1X8N6	756982.G1	756982.G1	0	0	0	0	0	0.222	0	0.606	0.68
		WZQ4	X8N6									
G1WZQ4	G1XJZ4	756982.G1	756982.G1	0	0	0	0.29	0	0.505	0	0.401	0.637

		WZQ4	XJZ4									
G1WZQ4	G1XLU8	756982.G1 WZQ4	756982.G1 XLU8	0	0	0	0	0	0.526	0	0.243	0.626
G1WZV7	G1X4H2	756982.G1 WZV7	756982.G1 X4H2	0	0	0	0	0.18 3	0.607	0	0.262	0.742
G1WZV7	G1X645	756982.G1 WZV7	756982.G1 X645	0	0	0	0	0.19 5	0	0	0.634	0.693
G1WZV7	G1XGS2	756982.G1 WZV7	756982.G1 XGS2	0	0	0	0	0.19 8	0	0	0.491	0.574
G1WZY0	G1X2E4	756982.G1 WZY0	756982.G1 X2E4	0.461	0	0	0	0.10 6	0	0	0.259	0.612
G1WZY0	G1X4K4	756982.G1 WZY0	756982.G1 X4K4	0	0	0	0	0.44 1	0.533	0	0.235	0.783
G1WZY0	G1X4S9	756982.G1 WZY0	756982.G1 X4S9	0.126	0	0	0	0.11 1	0	0	0.817	0.845
G1WZY0	G1X7V7	756982.G1 WZY0	756982.G1 X7V7	0.131	0	0	0	0	0	0.816	0.232	0.866
G1WZY0	G1X8N2	756982.G1 WZY0	756982.G1 X8N2	0	0	0	0	0.12 4	0	0	0.411	0.462
G1WZY0	G1XAJ0	756982.G1 WZY0	756982.G1 XAJ0	0	0	0	0	0.27 8	0.431	0	0.549	0.799
G1WZY0	G1XBB2	756982.G1 WZY0	756982.G1 XBB2	0.081	0	0	0	0.28	0	0	0.345	0.529
G1WZY0	G1XD36	756982.G1 WZY0	756982.G1 XD36	0.065	0	0	0	0	0.225	0	0.726	0.784
G1WZY0	G1XI36	756982.G1 WZY0	756982.G1 XI36	0.076	0	0	0	0	0	0	0.382	0.405
G1WZY0	G1XKT9	756982.G1 WZY0	756982.G1 XKT9	0.112	0	0	0	0.52 3	0.495	0.993	0.78	0.999
G1WZY0	G1XLU8	756982.G1 WZY0	756982.G1 XLU8	0	0	0	0	0	0	0	0.475	0.475
G1WZY0	G1XLV4	756982.G1 WZY0	756982.G1 XLV4	0	0	0	0	0.10 3	0.356	0	0.095	0.432
G1WZY0	G1XNH2	756982.G1 WZY0	756982.G1 XNH2	0	0	0	0	0	0	0	0.427	0.427
G1WZY0	G1XTC2	756982.G1 WZY0	756982.G1 XTC2	0	0	0	0	0.44 9	0	0	0.347	0.625
G1WZY0	G1XTD6	756982.G1 WZY0	756982.G1 XTD6	0.09	0	0	0	0	0	0	0.541	0.564
G1WZY0	G1XUH5	756982.G1 WZY0	756982.G1 XUH5	0	0	0	0	0	0.5	0	0.26	0.614
G1WZZ5	G1X0E4	756982.G1	756982.G1	0	0	0	0	0	0.236	0.599	0.153	0.718

		WZZ5	X0E4									
G1WZZ5	G1X4S9	756982.G1 WZZ5	756982.G1 X4S9	0	0	0	0	0	0.621	0.599	0.314	0.887
G1WZZ5	G1XER5	756982.G1 WZZ5	756982.G1 XER5	0	0	0	0	0.10 5	0.259	0	0.858	0.898
G1WZZ5	G1XFS2	756982.G1 WZZ5	756982.G1 XFS2	0	0	0	0	0.13 8	0	0.599	0.119	0.669
G1X070	G1XBB2	756982.G1 X070	756982.G1 XBB2	0	0	0	0	0.35 5	0	0	0.292	0.524
G1X070	G1XV10	756982.G1 X070	756982.G1 XV10	0	0	0	0	0	0	0.718	0.262	0.783
G1X0A0	G1X0E4	756982.G1 X0A0	756982.G1 X0E4	0	0	0	0	0.62 6	0.275	0.917	0.481	0.987
G1X0A0	G1X1H4	756982.G1 X0A0	756982.G1 X1H4	0	0	0	0	0.15 8	0.544	0	0.368	0.736
G1X0A0	G1X286	756982.G1 X0A0	756982.G1 X286	0	0	0	0.46 9	0.91 5	0.998	0.972	0.96	0.999
G1X0A0	G1X4S9	756982.G1 X0A0	756982.G1 X4S9	0	0	0	0	0.93 1	0	0	0.795	0.985
G1X0A0	G1X4X7	756982.G1 X0A0	756982.G1 X4X7	0	0	0	0	0.67 9	0.968	0.946	0.938	0.999
G1X0A0	G1X6C3	756982.G1 X0A0	756982.G1 X6C3	0	0	0	0	0	0	0.744	0	0.744
G1X0A0	G1X6W7	756982.G1 X0A0	756982.G1 X6W7	0	0	0.216	0	0.20 2	0	0	0.174	0.438
G1X0A0	MCM7	756982.G1 X0A0	756982.G1 X7C5	0	0	0	0.47 9	0.91 4	0.998	0.599	0.96	0.999
G1X0A0	G1XE09	756982.G1 X0A0	756982.G1 XE09	0	0	0	0	0.40 8	0.275	0.6	0.473	0.897
G1X0A0	G1XFS2	756982.G1 X0A0	756982.G1 XFS2	0	0	0.209	0	0.85 3	0.514	0	0.722	0.982
G1X0A0	G1XG07	756982.G1 X0A0	756982.G1 XG07	0	0	0	0	0.40 2	0	0	0	0.402
G1X0A0	G1XGS2	756982.G1 X0A0	756982.G1 XGS2	0	0	0	0	0.65 4	0	0.599	0.326	0.898
G1X0A0	G1XHC4	756982.G1 X0A0	756982.G1 XHC4	0	0	0	0	0.3	0.259	0	0.13	0.509
G1X0A0	G1XIF7	756982.G1 X0A0	756982.G1 XIF7	0	0	0.263	0	0.23 9	0	0	0	0.415
G1X0A0	G1XLU8	756982.G1 X0A0	756982.G1 XLU8	0	0	0	0	0	0.472	0	0.443	0.693
G1X0A0	G1XLV4	756982.G1	756982.G1	0	0	0	0	0.10	0.628	0.702	0.173	0.907

		X0A0	XLV4					3				
G1X0A0	G1XT19	756982.G1	756982.G1	0	0	0	0	0.59	0.869	0.993	0.906	0.999
		X0A0	XT19					6				
G1X0B0	G1X4I9	756982.G1	756982.G1	0	0	0	0	0	0.495	0	0.168	0.562
		X0B0	X4I9									
G1X0B0	G1X4K4	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.978	0.985
		X0B0	X4K4					9				
G1X0B0	G1X7E7	756982.G1	756982.G1	0	0	0	0	0.38	0	0	0.261	0.529
		X0B0	X7E7					9				
G1X0B0	G1X8L2	756982.G1	756982.G1	0	0	0	0	0	0	0.4	0.095	0.434
		X0B0	X8L2									
G1X0B0	G1XJL2	756982.G1	756982.G1	0	0	0	0	0.24	0	0	0.72	0.778
		X0B0	XJL2									
G1X0E4	G1X1H4	756982.G1	756982.G1	0	0	0	0	0.14	0.639	0.918	0.693	0.991
		X0E4	X1H4					3				
G1X0E4	G1X286	756982.G1	756982.G1	0	0	0	0	0.22	0.227	0.802	0.426	0.923
		X0E4	X286					2				
G1X0E4	G1X4S9	756982.G1	756982.G1	0	0	0	0	0.94	0.275	0.893	0.653	0.998
		X0E4	X4S9					6				
G1X0E4	G1X4X7	756982.G1	756982.G1	0	0	0	0	0.62	0.415	0	0.31	0.833
		X0E4	X4X7									
G1X0E4	G1X6C3	756982.G1	756982.G1	0	0	0	0	0	0	0.993	0.845	0.999
		X0E4	X6C3									
G1X0E4	MCM7	756982.G1	756982.G1	0	0	0	0	0.70	0.378	0.917	0.581	0.993
		X0E4	X7C5					5				
G1X0E4	G1XE09	756982.G1	756982.G1	0	0	0	0	0.32	0.238	0.606	0.674	0.926
		X0E4	XE09					9				
G1X0E4	G1XER5	756982.G1	756982.G1	0	0	0	0	0.11	0	0.893	0.17	0.915
		X0E4	XER5					5				
G1X0E4	G1XFS2	756982.G1	756982.G1	0	0	0	0	0.60	0.565	0.923	0.411	0.991
		X0E4	XFS2					1				
G1X0E4	G1XG07	756982.G1	756982.G1	0	0	0	0	0.42	0	0	0	0.425
		X0E4	XG07					5				
G1X0E4	G1XGS2	756982.G1	756982.G1	0	0	0	0	0.36	0.436	0.6	0.265	0.881
		X0E4	XGS2					6				
G1X0E4	G1XIG5	756982.G1	756982.G1	0	0	0	0	0.11	0	0	0.392	0.439
		X0E4	XIG5					5				
G1X0E4	G1XLV4	756982.G1	756982.G1	0	0	0	0	0.10	0.577	0	0.097	0.629
		X0E4	XLV4					6				
G1X0E4	G1XLV9	756982.G1	756982.G1	0	0	0	0	0	0	0	0.422	0.422
		X0E4	XLV9									
G1X0E4	G1XMH7	756982.G1	756982.G1	0	0	0	0	0.28	0.196	0	0.415	0.635

		X0E4	XMH7					7				
G1X0E4	G1XT19	756982.G1	756982.G1	0	0	0	0	0.18	0.225	0.802	0.13	0.877
		X0E4	XT19					8				
G1X1H4	G1X286	756982.G1	756982.G1	0	0	0	0	0.39	0.533	0	0.325	0.791
		X1H4	X286					1				
G1X1H4	G1X4S9	756982.G1	756982.G1	0.063	0	0	0	0.14	0.631	0	0.165	0.719
		X1H4	X4S9					3				
G1X1H4	G1X4X7	756982.G1	756982.G1	0	0	0	0	0	0.545	0	0.299	0.667
		X1H4	X4X7									
G1X1H4	G1X6C3	756982.G1	756982.G1	0	0	0	0	0	0.224	0.744	0.261	0.84
		X1H4	X6C3									
G1X1H4	MCM7	756982.G1	756982.G1	0	0	0	0	0.18	0.621	0.599	0.764	0.967
		X1H4	X7C5					3				
G1X1H4	G1X8N3	756982.G1	756982.G1	0	0	0	0	0.19	0	0	0.347	0.453
		X1H4	X8N3					7				
G1X1H4	G1XE09	756982.G1	756982.G1	0	0	0	0	0.27	0.648	0.601	0.945	0.994
		X1H4	XE09					8				
G1X1H4	G1XER5	756982.G1	756982.G1	0	0	0	0	0.12	0	0	0.468	0.516
		X1H4	XER5					8				
G1X1H4	G1XFS2	756982.G1	756982.G1	0	0	0	0.15	0.19	0.941	0.955	0.815	0.999
		X1H4	XFS2				6	1				
G1X1H4	G1XGS2	756982.G1	756982.G1	0	0	0	0	0.30	0.58	0	0.386	0.806
		X1H4	XGS2					7				
G1X1H4	G1XHC4	756982.G1	756982.G1	0	0	0	0	0.41	0	0	0	0.416
		X1H4	XHC4					6				
G1X1H4	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0	0.505	0	0	0.505
		X1H4	XJZ4									
G1X1H4	G1XT19	756982.G1	756982.G1	0	0	0	0	0.26	0.553	0	0.252	0.731
		X1H4	XT19					1				
G1X1Q9	G1X344	756982.G1	756982.G1	0	0	0	0	0.47	0	0	0	0.475
		X1Q9	X344					5				
G1X1Q9	G1X4I9	756982.G1	756982.G1	0	0	0	0	0.35	0	0.621	0.308	0.815
		X1Q9	X4I9					3				
G1X1Q9	G1XNK0	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.473	0.642
		X1Q9	XNK0					9				
G1X286	G1X4I9	756982.G1	756982.G1	0	0	0	0	0.12	0.431	0	0.283	0.611
		X286	X4I9					4				
G1X286	G1X4S9	756982.G1	756982.G1	0	0	0	0	0.92	0	0	0.658	0.973
		X286	X4S9					3				
G1X286	G1X4X7	756982.G1	756982.G1	0	0	0	0	0.63	0.978	0.946	0.898	0.999
		X286	X4X7					5				
G1X286	G1X6C3	756982.G1	756982.G1	0	0	0	0	0	0	0.744	0	0.744

		X286	X6C3									
G1X286	G1X6W7	756982.G1 X286	756982.G1 X6W7	0	0	0.261	0	0.26 9	0	0	0.212	0.537
G1X286	MCM7	756982.G1 X286	756982.G1 X7C5	0	0	0	0.49 8	0.94 9	0.998	0.972	0.967	0.999
G1X286	G1XB71	756982.G1 X286	756982.G1 XB71	0	0	0	0	0	0.508	0	0	0.508
G1X286	G1XCI8	756982.G1 X286	756982.G1 XCi8	0	0	0	0	0.09 6	0.55	0	0	0.576
G1X286	G1XE09	756982.G1 X286	756982.G1 XE09	0	0	0	0	0.42	0.275	0.6	0.424	0.89
G1X286	G1XFS2	756982.G1 X286	756982.G1 XFS2	0	0	0	0	0.86 1	0.51	0	0.561	0.967
G1X286	G1XGS2	756982.G1 X286	756982.G1 XGS2	0	0	0	0	0.90 9	0.498	0.599	0.173	0.983
G1X286	G1XHC4	756982.G1 X286	756982.G1 XHC4	0	0	0	0	0.40 2	0	0	0.128	0.456
G1X286	G1XLU8	756982.G1 X286	756982.G1 XLU8	0	0	0	0	0	0.511	0	0.536	0.763
G1X286	G1XLV4	756982.G1 X286	756982.G1 XLV4	0	0	0	0	0.10 4	0.538	0.702	0.218	0.891
G1X286	G1XT19	756982.G1 X286	756982.G1 XT19	0	0	0	0	0.51 2	0.736	0.993	0.916	0.999
G1X2E4	G1X4I9	756982.G1 X2E4	756982.G1 X4I9	0.056	0	0	0	0.13	0	0.608	0.178	0.7
G1X2E4	G1X4S9	756982.G1 X2E4	756982.G1 X4S9	0.063	0	0	0	0.12	0.227	0	0.421	0.582
G1X2E4	G1X6W7	756982.G1 X2E4	756982.G1 X6W7	0	0	0	0	0.25 8	0.206	0	0.089	0.416
G1X2E4	G1X7A4	756982.G1 X2E4	756982.G1 X7A4	0.461	0	0	0	0.07 6	0	0	0.627	0.798
G1X2E4	G1XBB2	756982.G1 X2E4	756982.G1 XBB2	0.084	0	0	0	0.09 6	0	0	0.405	0.464
G1X2E4	G1XFS2	756982.G1 X2E4	756982.G1 XFS2	0.06	0	0	0	0.12 3	0	0.361	0.264	0.56
G1X2E4	G1XGS2	756982.G1 X2E4	756982.G1 XGS2	0	0	0	0	0.12 7	0	0	0.383	0.438
G1X2E4	G1XJZ4	756982.G1 X2E4	756982.G1 XJZ4	0	0	0	0	0	0.304	0.455	0.084	0.622
G1X2E4	G1XKY4	756982.G1 X2E4	756982.G1 XKY4	0	0	0	0	0	0.304	0.455	0.309	0.715
G1X2E4	G1XLV4	756982.G1	756982.G1	0	0	0	0	0	0.491	0	0.114	0.53

		X2E4	XLV4									
G1X2E4	G1XNK0	756982.G1 X2E4	756982.G1 XNK0	0.081	0	0	0	0.2	0.388	0	0.345	0.666
G1X2E4	G1XNU1	756982.G1 X2E4	756982.G1 XNU1	0	0	0	0	0.09 5	0	0.441	0.135	0.524
G1X2E4	G1XTD6	756982.G1 X2E4	756982.G1 XTD6	0.112	0	0	0	0.34 9	0	0	0.127	0.451
G1X2E4	G1XUH5	756982.G1 X2E4	756982.G1 XUH5	0	0	0	0	0.11 5	0	0.993	0.127	0.994
G1X2N7	G1X4I9	756982.G1 X2N7	756982.G1 X4I9	0	0	0	0	0	0.495	0	0.209	0.583
G1X2N7	G1XJZ4	756982.G1 X2N7	756982.G1 XJZ4	0	0	0	0	0	0.505	0	0.101	0.536
G1X2N7	G1XLK0	756982.G1 X2N7	756982.G1 XLK0	0	0	0	0	0	0	0.993	0	0.993
G1X2N7	G1XQ38	756982.G1 X2N7	756982.G1 XQ38	0	0	0	0	0	0.505	0	0	0.505
G1X2X4	G1X591	756982.G1 X2X4	756982.G1 X591	0	0	0	0	0	0.505	0	0.362	0.671
G1X2X4	G1XJZ4	756982.G1 X2X4	756982.G1 XJZ4	0	0	0	0	0	0.514	0	0.329	0.66
G1X2X4	G1XKY4	756982.G1 X2X4	756982.G1 XKY4	0	0	0	0	0	0	0	0.401	0.401
G1X2X4	G1XUH5	756982.G1 X2X4	756982.G1 XUH5	0	0	0	0	0	0	0.437	0	0.437
G1X344	G1X4I9	756982.G1 X344	756982.G1 X4I9	0.112	0	0	0	0.57 1	0.53	0.993	0.366	0.999
G1X344	G1X4K4	756982.G1 X344	756982.G1 X4K4	0.097	0	0	0	0.20 5	0	0.478	0.303	0.704
G1X344	G1X8N2	756982.G1 X344	756982.G1 X8N2	0.063	0	0	0	0.33 5	0	0	0.539	0.688
G1X344	G1XAJ0	756982.G1 X344	756982.G1 XAJ0	0	0	0	0	0.32 6	0	0	0.551	0.684
G1X344	G1XHA0	756982.G1 X344	756982.G1 XHA0	0	0	0	0	0	0	0.804	0	0.804
G1X344	G1XKT9	756982.G1 X344	756982.G1 XKT9	0.047	0	0	0	0.35 4	0	0	0.31	0.538
G1X344	G1XLK2	756982.G1 X344	756982.G1 XLK2	0	0	0	0	0.23 6	0	0	0.519	0.617
G1X344	G1XNK0	756982.G1 X344	756982.G1 XNK0	0.059	0	0	0	0.34 4	0	0	0.255	0.5
G1X344	G1XNK1	756982.G1	756982.G1	0.059	0	0	0	0.35	0	0	0.459	0.642

		X344	XNK1					4				
G1X344	G1XSV0	756982.G1 X344	756982.G1 XSV0	0	0	0	0	0	0	0	0.574	0.574
G1X344	G1XV29	756982.G1 X344	756982.G1 XV29	0	0	0	0	0.23 9	0	0	0.259	0.412
G1X370	G1X4I9	756982.G1 X370	756982.G1 X4I9	0	0	0	0	0	0	0.498	0	0.498
G1X370	G1X4R4	756982.G1 X370	756982.G1 X4R4	0	0	0	0	0	0	0	0.411	0.411
G1X370	G1X645	756982.G1 X370	756982.G1 X645	0	0	0	0	0.41	0	0	0	0.41
G1X370	G1X8N2	756982.G1 X370	756982.G1 X8N2	0.042	0	0	0	0	0	0	0.419	0.42
G1X370	G1XAJ0	756982.G1 X370	756982.G1 XAJ0	0	0	0	0	0	0.505	0	0.406	0.693
G1X370	G1XBB2	756982.G1 X370	756982.G1 XBB2	0.064	0	0	0	0	0	0.412	0.145	0.488
G1X370	G1XEY1	756982.G1 X370	756982.G1 XEY1	0	0	0	0	0	0	0.456	0	0.456
G1X370	G1XIV2	756982.G1 X370	756982.G1 XIV2	0	0	0	0	0	0	0.718	0.334	0.804
G1X370	G1XKX3	756982.G1 X370	756982.G1 XKX3	0	0	0	0	0	0	0.993	0	0.993
G1X370	G1XKX4	756982.G1 X370	756982.G1 XKX4	0	0	0	0	0.25 7	0	0	0.259	0.426
G1X370	G1XLK2	756982.G1 X370	756982.G1 XLK2	0	0	0	0	0	0	0.869	0.617	0.948
G1X370	G1XQ38	756982.G1 X370	756982.G1 XQ38	0.054	0	0	0	0.23 1	0	0.456	0.105	0.598
G1X370	G1XSV0	756982.G1 X370	756982.G1 XSV0	0	0	0	0	0	0	0	0.431	0.431
G1X370	G1XV29	756982.G1 X370	756982.G1 XV29	0	0	0	0	0	0	0	0.4	0.4
G1X496	G1X645	756982.G1 X496	756982.G1 X645	0	0	0	0	0	0	0	0.41	0.41
G1X496	G1X7V0	756982.G1 X496	756982.G1 X7V0	0	0	0	0	0.25 1	0	0	0.583	0.674
G1X496	G1XB71	756982.G1 X496	756982.G1 XB71	0	0	0	0	0.14	0.204	0	0.208	0.41
G1X4B7	G1X4I9	756982.G1 X4B7	756982.G1 X4I9	0	0	0	0	0.56	0.204	0	0.132	0.669
G1X4B7	G1X5K1	756982.G1	756982.G1	0	0	0	0	0.10	0	0	0.365	0.408

		X4B7	X5K1					6				
G1X4B7	G1X7E7	756982.G1	756982.G1	0	0	0	0	0.10	0.279	0	0.216	0.448
		X4B7	X7E7					2				
G1X4B7	G1X9L3	756982.G1	756982.G1	0	0	0	0	0	0	0	0.601	0.601
		X4B7	X9L3					0				
G1X4B7	G1XLV4	756982.G1	756982.G1	0	0	0	0	0	0.534	0	0.222	0.622
		X4B7	XLV4					0				
G1X4B7	G1XLV9	756982.G1	756982.G1	0	0	0	0	0.87	0	0	0	0.876
		X4B7	XLV9					6				
G1X4B7	G1XR79	756982.G1	756982.G1	0	0	0	0	0.44	0	0	0	0.441
		X4B7	XR79					1				
G1X4B7	G1XTC2	756982.G1	756982.G1	0	0	0	0	0.51	0	0	0	0.518
		X4B7	XTC2					8				
G1X4H2	G1X7V0	756982.G1	756982.G1	0	0	0	0	0.19	0.496	0	0.259	0.674
		X4H2	X7V0					8				
G1X4H2	G1XAL6	756982.G1	756982.G1	0	0	0	0	0.38	0.516	0	0.664	0.892
		X4H2	XAL6					9				
G1X4H2	G1XV70	756982.G1	756982.G1	0	0	0	0.28	0	0.487	0.6	0.432	0.849
		X4H2	XV70				3					
G1X4I9	G1X4K4	756982.G1	756982.G1	0.087	0	0	0	0.13	0	0	0.37	0.459
		X4I9	X4K4					5				
G1X4I9	G1X4X7	756982.G1	756982.G1	0	0	0	0	0	0.489	0	0	0.489
		X4I9	X4X7					0				
G1X4I9	G1X5K5	756982.G1	756982.G1	0.059	0	0	0	0	0	0.455	0.118	0.508
		X4I9	X5K5					0				
G1X4I9	G1X8N2	756982.G1	756982.G1	0	0	0	0	0	0.495	0	0.477	0.725
		X4I9	X8N2					0				
G1X4I9	G1XAJ0	756982.G1	756982.G1	0	0	0	0	0.51	0	0	0.547	0.769
		X4I9	XAJ0					2				
G1X4I9	G1XJL2	756982.G1	756982.G1	0	0	0	0	0	0	0.596	0	0.596
		X4I9	XJL2					0				
G1X4I9	G1XLK2	756982.G1	756982.G1	0	0	0	0	0	0	0	0.432	0.432
		X4I9	XLK2					0				
G1X4I9	G1XNK0	756982.G1	756982.G1	0.056	0	0	0	0.70	0	0.993	0.665	0.999
		X4I9	XNK0					3				
G1X4I9	G1XNK1	756982.G1	756982.G1	0.056	0	0	0	0.52	0	0.993	0.433	0.998
		X4I9	XNK1					0				
G1X4I9	G1XSV0	756982.G1	756982.G1	0	0	0	0	0.14	0	0	0.799	0.82
		X4I9	XSV0					1				
G1X4I9	G1XT67	756982.G1	756982.G1	0.063	0	0	0	0	0	0.449	0.126	0.509
		X4I9	XT67					0				
G1X4I9	G1XV10	756982.G1	756982.G1	0	0	0	0	0	0.485	0	0.371	0.662

		X4I9	XV10									
G1X4K4	G1X5K5	756982.G1 X4K4	756982.G1 X5K5	0.063	0	0	0	0	0.346	0.993	0.128	0.996
G1X4K4	G1X6W7	756982.G1 X4K4	756982.G1 X6W7	0	0	0	0	0.20 5	0	0	0.42	0.519
G1X4K4	G1XFQ1	756982.G1 X4K4	756982.G1 XFQ1	0	0	0	0	0	0	0	0.41	0.41
G1X4K4	G1XIG5	756982.G1 X4K4	756982.G1 XIG5	0	0	0	0	0	0.709	0	0	0.709
G1X4K4	G1XJL2	756982.G1 X4K4	756982.G1 XJL2	0	0	0	0	0.54 8	0.16	0	0.787	0.912
G1X4K4	G1XJZ4	756982.G1 X4K4	756982.G1 XJZ4	0	0	0	0	0.19 8	0	0	0.303	0.417
G1X4K4	G1XMG3	756982.G1 X4K4	756982.G1 XMG3	0	0	0	0	0.18 3	0	0	0.391	0.481
G1X4K4	G1XNK0	756982.G1 X4K4	756982.G1 XNK0	0	0	0	0	0.31 6	0	0.993	0.363	0.997
G1X4K4	G1XNK1	756982.G1 X4K4	756982.G1 XNK1	0	0	0	0	0.23 6	0	0.993	0	0.994
G1X4K4	G1XNU1	756982.G1 X4K4	756982.G1 XNU1	0	0	0	0	0.13 9	0	0.441	0.107	0.533
G1X4K4	G1XV10	756982.G1 X4K4	756982.G1 XV10	0	0	0	0	0.13 7	0	0.499	0.261	0.653
G1X4R4	G1XLK2	756982.G1 X4R4	756982.G1 XLK2	0	0	0	0	0	0	0.463	0.471	0.704
G1X4R4	G1XSV0	756982.G1 X4R4	756982.G1 XSV0	0	0	0	0	0	0	0	0.479	0.479
G1X4R4	G1XV29	756982.G1 X4R4	756982.G1 XV29	0	0	0	0	0	0.494	0	0.423	0.696
G1X4S9	G1X4X7	756982.G1 X4S9	756982.G1 X4X7	0	0	0	0	0.52	0	0	0.486	0.743
G1X4S9	G1X6C3	756982.G1 X4S9	756982.G1 X6C3	0	0	0	0	0	0	0.744	0.257	0.802
G1X4S9	G1X7A4	756982.G1 X4S9	756982.G1 X7A4	0.461	0	0	0	0	0	0	0	0.461
G1X4S9	MCM7	756982.G1 X4S9	756982.G1 X7C5	0	0	0	0	0.94 6	0.275	0	0.714	0.988
G1X4S9	G1XAK8	756982.G1 X4S9	756982.G1 XAK8	0	0	0	0	0.4	0	0	0	0.4
G1X4S9	G1XE09	756982.G1 X4S9	756982.G1 XE09	0	0	0	0	0.41 1	0.759	0	0.334	0.897
G1X4S9	G1XER5	756982.G1	756982.G1	0	0	0	0	0.16	0.932	0.893	0.828	0.999

[illegible]

		X5B3	XED5									
G1X5B3	G1XG07	756982.G1 X5B3	756982.G1 XG07	0	0	0	0	0.41 7	0	0	0	0.417
G1X5B3	G1XHC4	756982.G1 X5B3	756982.G1 XHC4	0	0	0	0	0.31 1	0	0	0.468	0.618
G1X5B3	G1XV10	756982.G1 X5B3	756982.G1 XV10	0	0	0	0	0	0.428	0	0	0.428
G1X5K1	G1X7G3	756982.G1 X5K1	756982.G1 X7G3	0	0	0	0	0	0	0	0.408	0.408
G1X5K1	G1XG07	756982.G1 X5K1	756982.G1 XG07	0	0	0	0	0.31 8	0.496	0	0.447	0.793
G1X5K1	G1XJZ4	756982.G1 X5K1	756982.G1 XJZ4	0	0	0	0	0.33 1	0.194	0	0	0.438
G1X5K1	G1XLU8	756982.G1 X5K1	756982.G1 XLU8	0	0	0	0	0	0.648	0	0.173	0.696
G1X5K1	G1XLV4	756982.G1 X5K1	756982.G1 XLV4	0	0	0	0	0	0.363	0	0.252	0.503
G1X5K1	G1XTY2	756982.G1 X5K1	756982.G1 XTY2	0	0	0	0	0	0.669	0	0.172	0.714
G1X5K1	G1XUH5	756982.G1 X5K1	756982.G1 XUH5	0	0	0	0	0.12 4	0	0.599	0.166	0.681
G1X5K5	G1XNK0	756982.G1 X5K5	756982.G1 XNK0	0	0	0	0	0.12 7	0	0.993	0.348	0.996
G1X5K5	G1XNK1	756982.G1 X5K5	756982.G1 XNK1	0	0	0	0	0	0	0.993	0.348	0.995
G1X5K5	G1XV10	756982.G1 X5K5	756982.G1 XV10	0	0	0	0	0	0	0.398	0.097	0.433
G1X5Y6	G1XJL2	756982.G1 X5Y6	756982.G1 XJL2	0	0	0	0	0	0.51	0	0.397	0.692
G1X618	G1X6W7	756982.G1 X618	756982.G1 X6W7	0	0	0	0	0.39 4	0	0	0.21	0.501
G1X618	G1XEP6	756982.G1 X618	756982.G1 XEP6	0.056	0	0	0	0.65	0	0	0.524	0.829
G1X618	G1XLV9	756982.G1 X618	756982.G1 XLV9	0	0	0	0	0.39	0	0	0.286	0.546
G1X645	G1X7A4	756982.G1 X645	756982.G1 X7A4	0	0	0	0	0.13 9	0	0	0.393	0.455
G1X645	G1X7V7	756982.G1 X645	756982.G1 X7V7	0	0	0	0	0	0	0	0.425	0.425
G1X6C3	MCM7	756982.G1 X6C3	756982.G1 X7C5	0	0	0	0	0.18 8	0	0.744	0	0.783
G1X6C3	G1XE09	756982.G1	756982.G1	0	0	0	0	0	0.518	0	0.259	0.628

		X6C3	XE09									
G1X6C3	G1XER5	756982.G1 X6C3	756982.G1 XER5	0	0	0	0	0	0	0.744	0.26	0.802
G1X6C3	G1XFS2	756982.G1 X6C3	756982.G1 XFS2	0	0	0	0	0	0	0.774	0	0.774
G1X6C3	G1XGS2	756982.G1 X6C3	756982.G1 XGS2	0	0	0	0	0	0	0.744	0	0.744
G1X6C3	G1XT19	756982.G1 X6C3	756982.G1 XT19	0	0	0	0	0	0	0.744	0	0.744
G1X6W7	G1XBE9	756982.G1 X6W7	756982.G1 XBE9	0	0	0	0	0.64 1	0	0	0	0.641
G1X6W7	G1XCI8	756982.G1 X6W7	756982.G1 XCI8	0	0	0	0	0	0	0	0.447	0.447
G1X6W7	G1XEP6	756982.G1 X6W7	756982.G1 XEP6	0	0	0	0	0.34 9	0	0	0.174	0.439
G1X6W7	G1XEY1	756982.G1 X6W7	756982.G1 XEY1	0	0	0	0	0	0	0.824	0	0.824
G1X6W7	G1XHC4	756982.G1 X6W7	756982.G1 XHC4	0	0	0	0	0.14 3	0.517	0	0.117	0.603
G1X6W7	G1XIG5	756982.G1 X6W7	756982.G1 XIG5	0	0	0	0	0.39 2	0.665	0	0	0.788
G1X6W7	G1XQ67	756982.G1 X6W7	756982.G1 XQ67	0	0	0	0	0	0	0.824	0	0.824
G1X6W7	G1XUH5	756982.G1 X6W7	756982.G1 XUH5	0.042	0	0	0	0.32 6	0	0	0.525	0.667
G1X6Y5	G1XCX4	756982.G1 X6Y5	756982.G1 XCX4	0	0	0	0	0	0	0	0.443	0.443
G1X6Y5	G1XRF2	756982.G1 X6Y5	756982.G1 XRF2	0	0	0	0	0	0	0	0.442	0.442
G1X6Y5	G1XT84	756982.G1 X6Y5	756982.G1 XT84	0	0	0	0	0	0	0.993	0	0.993
G1X7A4	G1X7V7	756982.G1 X7A4	756982.G1 X7V7	0	0	0	0	0	0	0	0.494	0.494
G1X7A4	G1XJZ4	756982.G1 X7A4	756982.G1 XJZ4	0	0	0	0	0	0.629	0	0.448	0.786
G1X7A4	G1XKX4	756982.G1 X7A4	756982.G1 XKX4	0	0	0	0	0.56 9	0.156	0	0.422	0.771
G1X7A4	G1XNK0	756982.G1 X7A4	756982.G1 XNK0	0.064	0	0	0	0.33 3	0	0	0.273	0.506
G1X7A4	G1XQ38	756982.G1 X7A4	756982.G1 XQ38	0.061	0	0	0	0	0	0.449	0.166	0.531
G1X7A4	G1XT67	756982.G1	756982.G1	0.076	0	0	0	0.22	0.19	0	0.168	0.451

		X7A4	XT67					2				
G1X7A4	G1XV10	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.323	0.539
		X7A4	XV10					7				
G1X7A4	G1XV29	756982.G1	756982.G1	0	0	0	0	0.28	0.526	0	0.423	0.788
		X7A4	XV29					8				
G1X7E7	G1XBB2	756982.G1	756982.G1	0	0	0	0	0.33	0	0	0.263	0.489
		X7E7	XBB2					5				
G1X7E7	G1XH20	756982.G1	756982.G1	0	0	0	0	0	0	0.715	0	0.715
		X7E7	XH20									
G1X7E7	G1XLV9	756982.G1	756982.G1	0	0	0	0	0.58	0	0	0.269	0.687
		X7E7	XLV9					9				
G1X7E7	G1XQ38	756982.G1	756982.G1	0	0	0	0	0	0	0.718	0	0.718
		X7E7	XQ38									
G1X7E7	G1XR79	756982.G1	756982.G1	0	0	0	0	0.14	0	0	0.337	0.407
		X7E7	XR79					2				
G1X7E7	G1XTC2	756982.G1	756982.G1	0	0	0	0	0.54	0	0	0	0.549
		X7E7	XTC2					9				
G1X7G3	MCM7	756982.G1	756982.G1	0	0	0.323	0	0.13	0	0	0.101	0.428
		X7G3	X7C5					6				
G1X7G3	G1XB71	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.132	0.411
		X7G3	XB71					9				
G1X7G3	G1XBE9	756982.G1	756982.G1	0	0	0	0	0.7	0.987	0.945	0.646	0.999
		X7G3	XBE9									
G1X7G3	G1XIG5	756982.G1	756982.G1	0	0	0	0	0.09	0	0.599	0	0.622
		X7G3	XIG5					7				
G1X7G3	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0	0	0.475	0	0.475
		X7G3	XJZ4									
G1X7G3	G1XKY4	756982.G1	756982.G1	0	0	0	0	0	0	0.475	0	0.475
		X7G3	XKY4									
G1X7V0	G1XCI8	756982.G1	756982.G1	0	0	0	0	0.23	0	0	0.545	0.639
		X7V0	XCI8					9				
G1X7V7	G1XI36	756982.G1	756982.G1	0	0	0	0	0	0	0	0.42	0.42
		X7V7	XI36									
G1X8L2	G1XCX4	756982.G1	756982.G1	0	0	0	0	0	0	0	0.421	0.421
		X8L2	XCX4									
G1X8L2	G1XUH5	756982.G1	756982.G1	0	0	0	0	0	0	0.455	0	0.455
		X8L2	XUH5									
G1X8N2	G1XAJ0	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.78	0.85
		X8N2	XAJ0					7				
G1X8N2	G1XCI8	756982.G1	756982.G1	0	0	0	0	0.09	0	0	0.415	0.449
		X8N2	XCI8					6				
G1X8N2	G1XG07	756982.G1	756982.G1	0	0	0	0	0.20	0	0	0.468	0.557

		X8N2	XG07					1				
G1X8N2	G1XLK0	756982.G1	756982.G1	0	0	0	0	0	0	0	0.406	0.406
		X8N2	XLK0									
G1X8N3	G1XAK8	756982.G1	756982.G1	0	0	0	0	0.14	0.534	0.598	0.875	0.977
		X8N3	XAK8					3				
G1X8N3	G1XG07	756982.G1	756982.G1	0	0	0	0	0	0.505	0	0.174	0.574
		X8N3	XG07									
G1X8N3	G1XHC4	756982.G1	756982.G1	0	0	0	0	0.34	0	0	0.173	0.436
		X8N3	XHC4					6				
G1X8N3	G1XIG5	756982.G1	756982.G1	0	0	0	0	0.14	0.345	0.601	0.268	0.814
		X8N3	XIG5					2				
G1X8N3	G1XTC2	756982.G1	756982.G1	0	0	0	0	0.26	0	0	0.233	0.41
		X8N3	XTC2					2				
G1X8N6	G1XIG5	756982.G1	756982.G1	0	0	0	0	0	0.495	0	0.269	0.615
		X8N6	XIG5									
G1X9L3	G1XLV4	756982.G1	756982.G1	0	0	0	0	0.19	0.5	0	0.406	0.739
		X9L3	XLV4					2				
G1XAJ0	G1XFG1	756982.G1	756982.G1	0	0	0	0	0.07	0	0.856	0	0.861
		XAJ0	XFG1					5				
G1XAJ0	G1XFQ1	756982.G1	756982.G1	0	0	0	0	0	0.212	0	0.448	0.546
		XAJ0	XFQ1									
G1XAJ0	G1XI99	756982.G1	756982.G1	0	0	0	0	0.07	0	0.993	0	0.993
		XAJ0	XI99					5				
G1XAJ0	G1XIF7	756982.G1	756982.G1	0	0	0	0	0	0.473	0	0	0.473
		XAJ0	XIF7									
G1XAJ0	G1XJL2	756982.G1	756982.G1	0	0	0	0	0.11	0.16	0	0.259	0.4
		XAJ0	XJL2					4				
G1XAJ0	G1XKT9	756982.G1	756982.G1	0	0	0	0	0.20	0.162	0	0.394	0.56
		XAJ0	XKT9					3				
G1XAJ0	G1XLK2	756982.G1	756982.G1	0	0	0	0	0	0.609	0	0.473	0.785
		XAJ0	XLK2									
G1XAJ0	G1XNK0	756982.G1	756982.G1	0	0	0	0	0.35	0	0	0.133	0.417
		XAJ0	XNK0					5				
G1XAJ0	G1XSV0	756982.G1	756982.G1	0	0	0	0	0.11	0	0	0.551	0.585
		XAJ0	XSV0					4				
G1XAJ0	G1XTA1	756982.G1	756982.G1	0	0	0	0	0	0	0.993	0.135	0.994
		XAJ0	XTA1									
G1XAJ0	G1XV29	756982.G1	756982.G1	0	0	0	0	0.19	0.229	0	0.635	0.755
		XAJ0	XV29					9				
G1XAK8	G1XB71	756982.G1	756982.G1	0	0	0	0	0	0.269	0	0.236	0.418
		XAK8	XB71									
G1XAK8	G1XHC4	756982.G1	756982.G1	0	0	0	0	0.13	0	0	0.47	0.522

		XAK8	XHC4					5				
G1XAK8	G1XR79	756982.G1	756982.G1	0	0	0	0	0.13	0	0	0.339	0.404
		XAK8	XR79					5				
G1XAL6	MCM7	756982.G1	756982.G1	0	0	0	0	0.14	0.557	0	0	0.603
		XAL6	X7C5					1				
G1XB71	G1XCi8	756982.G1	756982.G1	0	0	0	0	0.20	0.62	0	0	0.684
		XB71	XCi8					2				
G1XBB2	G1XD36	756982.G1	756982.G1	0.06	0	0	0	0	0	0	0.617	0.625
		XBB2	XD36									
G1XBB2	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0.23	0	0	0.611	0.689
		XBB2	XJZ4					4				
G1XBB2	G1XKT9	756982.G1	756982.G1	0.06	0	0	0	0.35	0	0	0.413	0.612
		XBB2	XKT9					4				
G1XBB2	G1XNK0	756982.G1	756982.G1	0.056	0	0	0	0	0	0.356	0.259	0.51
		XBB2	XNK0									
G1XBB2	G1XNK1	756982.G1	756982.G1	0.056	0	0	0	0	0	0.356	0.259	0.51
		XBB2	XNK1									
G1XBB2	G1XTD6	756982.G1	756982.G1	0.062	0	0	0	0.32	0.226	0.366	0.155	0.691
		XBB2	XTD6					7				
G1XBE9	G1XE09	756982.G1	756982.G1	0	0	0	0	0	0	0	0.4	0.4
		XBE9	XE09									
G1XBE9	G1XHC4	756982.G1	756982.G1	0	0	0	0	0.21	0.263	0	0.235	0.518
		XBE9	XHC4					3				
G1XBE9	G1XIG5	756982.G1	756982.G1	0	0	0	0	0.28	0	0.599	0	0.702
		XBE9	XIG5					8				
G1XBE9	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0.23	0	0.475	0.236	0.668
		XBE9	XJZ4					9				
G1XBE9	G1XKY4	756982.G1	756982.G1	0	0	0	0	0	0	0.475	0	0.475
		XBE9	XKY4									
G1XBE9	G1XTY2	756982.G1	756982.G1	0	0	0	0	0	0.512	0	0.242	0.614
		XBE9	XTY2									
G1XCB0	G1XLK2	756982.G1	756982.G1	0	0	0	0	0.09	0	0	0.687	0.704
		XCB0	XLK2					3				
G1XCB0	G1XRV7	756982.G1	756982.G1	0	0	0	0	0	0	0.912	0	0.912
		XCB0	XRV7									
G1XCi8	G1XLK2	756982.G1	756982.G1	0	0	0	0	0	0	0.426	0	0.426
		XCi8	XLK2									
G1XCX4	G1XIF7	756982.G1	756982.G1	0	0	0	0	0	0	0	0.423	0.423
		CX4	XIF7									
G1XCX4	G1XIG5	756982.G1	756982.G1	0	0	0	0	0.23	0	0	0.263	0.412
		CX4	XIG5					5				
G1XCX4	G1XKY4	756982.G1	756982.G1	0	0	0	0	0.19	0.615	0.993	0.454	0.999

		XCX4	XKY4									
G1XCX4	G1XLU8	756982.G1 XCX4	756982.G1 XLU8	0	0	0	0	0	0	0.993	0.294	0.995
G1XCX4	G1XR79	756982.G1 XCX4	756982.G1 XR79	0	0	0	0	0	0	0.794	0	0.794
G1XCX4	G1XRF2	756982.G1 XCX4	756982.G1 XRF2	0	0	0	0	0.35 4	0	0	0.408	0.601
G1XCX4	G1XT84	756982.G1 XCX4	756982.G1 XT84	0	0	0	0	0	0	0	0.443	0.443
G1XD36	G1XG07	756982.G1 XD36	756982.G1 XG07	0	0	0	0	0	0.218	0	0.354	0.473
G1XD36	G1XKT9	756982.G1 XD36	756982.G1 XKT9	0.044	0	0	0	0.30 8	0	0	0.721	0.799
G1XE09	MCM7	756982.G1 XE09	756982.G1 X7C5	0	0	0	0	0.40 6	0.635	0.599	0.854	0.986
G1XE09	G1XER5	756982.G1 XE09	756982.G1 XER5	0	0	0	0	0	0.176	0	0.648	0.698
G1XE09	G1XFS2	756982.G1 XE09	756982.G1 XFS2	0	0	0	0	0.40 2	0	0.606	0.538	0.882
G1XE09	G1XGS2	756982.G1 XE09	756982.G1 XGS2	0	0	0	0	0.19 7	0.518	0	0.303	0.707
G1XE09	G1XHC4	756982.G1 XE09	756982.G1 XHC4	0	0	0	0	0.18 3	0	0	0.356	0.451
G1XE09	G1XIG5	756982.G1 XE09	756982.G1 XIG5	0	0	0	0	0	0.217	0.597	0.266	0.748
G1XE09	G1XJZ4	756982.G1 XE09	756982.G1 XJZ4	0	0	0	0.36 9	0	0.196	0	0.46	0.418
G1XE09	G1XLV9	756982.G1 XE09	756982.G1 XLV9	0	0	0	0	0.13 5	0.509	0	0.215	0.637
G1XE09	G1XMH7	756982.G1 XE09	756982.G1 XMH7	0	0	0	0	0.26 7	0	0	0.57	0.671
G1XE09	G1XT19	756982.G1 XE09	756982.G1 XT19	0	0	0	0	0.18 6	0	0.601	0.4	0.788
G1XER5	G1XFS2	756982.G1 XER5	756982.G1 XFS2	0	0	0	0	0.11	0	0.744	0.123	0.783
G1XER5	G1XGS2	756982.G1 XER5	756982.G1 XGS2	0	0	0	0	0.22 2	0	0	0.503	0.597
G1XER5	G1XMH7	756982.G1 XER5	756982.G1 XMH7	0	0	0	0	0.18 8	0.505	0	0.388	0.733
G1XEY1	G1XI36	756982.G1 XEY1	756982.G1 XI36	0	0	0	0	0	0	0	0.549	0.549
G1XEY1	G1XNU1	756982.G1	756982.G1	0	0	0	0	0	0	0.401	0	0.401

		XEY1	XNU1									
G1XEY1	G1XQ38	756982.G1 XEY1	756982.G1 XQ38	0	0	0	0.11 3	0.35 4	0	0	0.642	0.713
G1XEY1	G1XQ67	756982.G1 XEY1	756982.G1 XQ67	0	0	0	0.84 1	0.54 8	0.512	0.824	0.909	0.964
G1XFG1	G1XI36	756982.G1 XFG1	756982.G1 XI36	0	0	0	0	0	0	0.975	0	0.975
G1XFG1	G1XLK2	756982.G1 XFG1	756982.G1 XLK2	0	0	0	0	0	0	0.456	0	0.456
G1XFG1	G1XTA1	756982.G1 XFG1	756982.G1 XTA1	0	0	0	0	0	0	0.856	0	0.856
G1XFQ1	G1XNH2	756982.G1 XFQ1	756982.G1 XNH2	0	0	0	0	0	0	0	0.754	0.754
G1XFS2	MCM7	756982.G1 XFS2	756982.G1 X7C5	0	0	0	0	0.81 8	0	0.599	0.492	0.96
G1XFS2	G1XG07	756982.G1 XFS2	756982.G1 XG07	0	0	0	0	0.57 2	0	0	0	0.572
G1XFS2	G1XGS2	756982.G1 XFS2	756982.G1 XGS2	0	0	0	0	0.61 3	0.513	0.601	0.491	0.957
G1XFS2	G1XMH7	756982.G1 XFS2	756982.G1 XMH7	0	0	0	0	0.14 3	0	0	0.338	0.408
G1XFS2	G1XT19	756982.G1 XFS2	756982.G1 XT19	0	0	0	0	0.19 5	0.512	0	0.717	0.879
G1XG07	MCM7	756982.G1 XG07	756982.G1 X7C5	0	0	0	0	0.39 6	0	0	0.113	0.441
G1XG07	G1XHC4	756982.G1 XG07	756982.G1 XHC4	0	0	0	0	0.14 2	0.263	0	0.147	0.414
G1XG07	G1XIG5	756982.G1 XG07	756982.G1 XIG5	0	0	0	0	0.14 2	0.42	0	0.1	0.513
G1XG07	G1XLV4	756982.G1 XG07	756982.G1 XLV4	0	0	0	0	0	0.356	0	0.395	0.594
G1XGS2	MCM7	756982.G1 XGS2	756982.G1 X7C5	0	0	0	0	0.79 2	0.221	0.972	0.558	0.998
G1XGS2	G1XT19	756982.G1 XGS2	756982.G1 XT19	0	0	0	0	0.18 8	0.229	0.933	0.442	0.973
G1XH20	G1XQ38	756982.G1 XH20	756982.G1 XQ38	0	0	0	0	0	0	0.718	0	0.718
G1XHC4	MCM7	756982.G1 XHC4	756982.G1 X7C5	0	0	0	0	0.39	0	0	0.139	0.452
G1XHC4	G1XJZ4	756982.G1 XHC4	756982.G1 XJZ4	0	0	0	0	0.19 3	0.571	0	0.097	0.66
G1XHC4	G1XLV4	756982.G1	756982.G1	0	0	0	0	0.08	0.475	0	0.097	0.528

		XHC4	XLV4					5				
G1XHC4	G1XLV9	756982.G1	756982.G1	0	0	0	0	0.10	0.571	0	0	0.6
		XHC4	XLV9					6				
G1XHC4	G1XNK0	756982.G1	756982.G1	0	0	0	0	0.13	0.509	0	0.15	0.609
		XHC4	XNK0					8				
G1XHC4	G1XT19	756982.G1	756982.G1	0	0	0	0	0.14	0	0	0.332	0.403
		XHC4	XT19					3				
G1XHC4	G1XTC2	756982.G1	756982.G1	0	0	0	0	0.19	0.151	0	0.771	0.831
		XHC4	XTC2					9				
G1XI36	G1XI99	756982.G1	756982.G1	0	0	0	0	0	0	0.993	0	0.993
		XI36	XI99									
G1XI99	G1XLK2	756982.G1	756982.G1	0	0	0	0	0	0	0.456	0	0.456
		XI99	XLK2									
G1XI99	G1XTA1	756982.G1	756982.G1	0	0	0	0	0	0	0.985	0	0.985
		XI99	XTA1									
G1XIG5	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0.19	0.597	0.491	0.12	0.835
		XIG5	XJZ4					5				
G1XIG5	G1XKY4	756982.G1	756982.G1	0	0	0	0	0	0.162	0.804	0.261	0.868
		XIG5	XKY4									
G1XIV2	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0	0	0.713	0.234	0.771
		XIV2	XJZ4									
G1XIV2	G1XKX3	756982.G1	756982.G1	0	0	0	0	0	0	0.718	0	0.718
		XIV2	XKX3									
G1XIV2	G1XKY4	756982.G1	756982.G1	0	0	0	0	0	0	0.711	0	0.711
		XIV2	XKY4									
G1XJL2	G1XJZ4	756982.G1	756982.G1	0	0	0	0	0	0.211	0	0.278	0.406
		XJL2	XJZ4									
G1XJL2	G1XMG3	756982.G1	756982.G1	0	0	0	0	0.49	0.425	0	0.41	0.814
		XJL2	XMG3					7				
G1XJZ4	G1XKY4	756982.G1	756982.G1	0	0	0	0.85	0	0.669	0.774	0.868	0.932
		XJZ4	XKY4				6					
G1XJZ4	G1XLU8	756982.G1	756982.G1	0	0	0	0	0	0.588	0.473	0.472	0.875
		XJZ4	XLU8									
G1XKH1	G1XTD6	756982.G1	756982.G1	0	0	0	0	0.41	0.664	0	0.163	0.82
		XKH1	XTD6					1				
G1XKT9	G1XNK0	756982.G1	756982.G1	0.058	0	0	0	0.40	0	0	0.138	0.474
		XKT9	XNK0					4				
G1XKT9	G1XT67	756982.G1	756982.G1	0.047	0	0	0	0.19	0	0	0.284	0.405
		XKT9	XT67					8				
G1XKX3	G1XNU1	756982.G1	756982.G1	0	0	0	0	0	0	0.993	0	0.993
		XKX3	XNU1									
G1XKX4	G1XMX9	756982.G1	756982.G1	0.05	0	0	0	0	0	0.278	0.26	0.448

		XKX4	XMx9									
G1XKX4	G1XN30	756982.G1 XKX4	756982.G1 XN30	0.049	0	0	0	0	0	0.77	0.099	0.786
G1XKX4	G1XV10	756982.G1 XKX4	756982.G1 XV10	0	0	0	0	0.35 5	0.224	0	0.256	0.595
G1XKY4	G1XLU8	756982.G1 XKY4	756982.G1 XLU8	0	0	0	0	0.52 5	0.639	0.473	0.461	0.945
G1XKY4	G1XNK0	756982.G1 XKY4	756982.G1 XNK0	0	0	0	0	0	0	0.677	0.097	0.696
G1XLK2	G1XSV0	756982.G1 XLK2	756982.G1 XSV0	0	0	0	0	0.19 9	0.862	0.993	0.96	0.999
G1XLK2	G1XTA1	756982.G1 XLK2	756982.G1 XTA1	0	0	0	0	0	0	0.491	0.101	0.523
G1XLK2	G1XV29	756982.G1 XLK2	756982.G1 XV29	0	0	0	0	0	0	0	0.767	0.767
G1XLU8	MCM7	756982.G1 XLU8	756982.G1 X7C5	0	0	0	0	0	0.512	0	0.746	0.871
G1XLU8	G1XLV4	756982.G1 XLU8	756982.G1 XLV4	0	0	0	0	0	0.459	0	0.172	0.533
G1XLU8	G1XTY2	756982.G1 XLU8	756982.G1 XTY2	0	0	0	0	0	0	0	0.419	0.419
G1XLV4	MCM7	756982.G1 XLV4	756982.G1 X7C5	0	0	0	0	0.07 6	0.272	0.702	0.3	0.841
G1XLV4	G1XT19	756982.G1 XLV4	756982.G1 XT19	0	0	0	0	0	0.371	0	0.312	0.549
G1XLV4	G1XTC2	756982.G1 XLV4	756982.G1 XTC2	0	0	0	0	0.07 5	0.538	0	0.331	0.689
G1XLV9	G1XRF2	756982.G1 XLV9	756982.G1 XRF2	0	0	0	0	0	0.525	0	0	0.525
G1XLV9	G1XTC2	756982.G1 XLV9	756982.G1 XTC2	0	0	0	0	0.82 8	0	0	0	0.828
G1XMX9	G1XN30	756982.G1 XMx9	756982.G1 XN30	0.044	0	0	0	0	0	0.667	0.21	0.727
G1XNH2	G1XT67	756982.G1 XNH2	756982.G1 XT67	0	0	0	0	0	0	0	0.428	0.428
G1XNK0	G1XNK1	756982.G1 XNK0	756982.G1 XNK1	0	0	0.476	0	0.56 5	0	0.993	0.713	0.999
G1XNK0	G1XT67	756982.G1 XNK0	756982.G1 XT67	0.054	0	0	0	0.11 2	0	0.993	0.266	0.995
G1XNK1	G1XT67	756982.G1 XNK1	756982.G1 XT67	0.054	0	0	0	0.07 5	0	0.993	0	0.993
G1XNU1	G1XQ38	756982.G1	756982.G1	0.046	0	0	0	0	0	0.401	0	0.404

		XNU1	XQ38									
G1XQ38	G1XQ67	756982.G1	756982.G1	0	0	0	0	0.33	0	0	0.458	0.626
		XQ38	XQ67					8				
G1XRF2	G1XT84	756982.G1	756982.G1	0	0	0	0	0	0	0	0.442	0.442
		XRF2	XT84									
G1XSV0	G1XV29	756982.G1	756982.G1	0	0	0	0	0.10	0	0	0.759	0.775
		XSV0	XV29					5				
G1XT19	MCM7	756982.G1	756982.G1	0	0	0	0	0.57	0.872	0.993	0.856	0.999
		XT19	X7C5					9				
G1XT67	G1XV10	756982.G1	756982.G1	0	0	0	0	0.2	0.495	0	0.456	0.761
		XT67	XV10									
G1XTC2	G1XUH5	756982.G1	756982.G1	0	0	0	0	0	0.512	0	0.4	0.695
		XTC2	XUH5									
G1XV29	MCM7	756982.G1	756982.G1	0	0	0	0	0	0	0	0.412	0.412
		XV29	X7C5									

Table S4 Reads and base filter information statistics for DAP-Seq.

Sample	Clean_Reads_Num	HQ_Clean_Reads_Num(%)	Read_length	adapter(%)	low_quality(%)	polyA(%)	N(%)
IP*	82230778	82006654(99.73%)	150 + 150	81210(0.1%)	285204(0.17%)	0(0.0%)	624 (0.0%)
input	78182218	77980050(99.74%)	150 + 150	55538(0.07%)	293180(0.19%)	0(0.0%)	80 (0.0%)

Sample	Clean_Data(bp)	Q20(%)	Q30(%)	N(%)	GC(%)	HQ_Clean_Data(bp)	HQ_Q20(%)	HQ_Q30(%)	HQ_N(%)	HQ_GC(%)
IP	12334616700	12108684146 (98.17%)	11685889178 (94.74%)	182029 (0.0%)	5314321787 (43.08%)	11643736417	11452448708 (98.36%)	11070092028 (95.07%)	166042 (0.0%)	4950787686 (42.52%)
Input	11727332700	11409434184 (97.29%)	10888301186 (92.85%)	35600 (0.0%)	5204902863 (44.38%)	11149500511	10867813275 (97.47%)	10386963540 (93.16%)	33357 (0.0%)	4904224535 (43.98%)

*IP indicates the experimental group; Input indicates the negative control in DAP-Seq analysis.

Table S5 Annotation of metabolites of the $\Delta Aoste12$ mutant vs. WT strains.