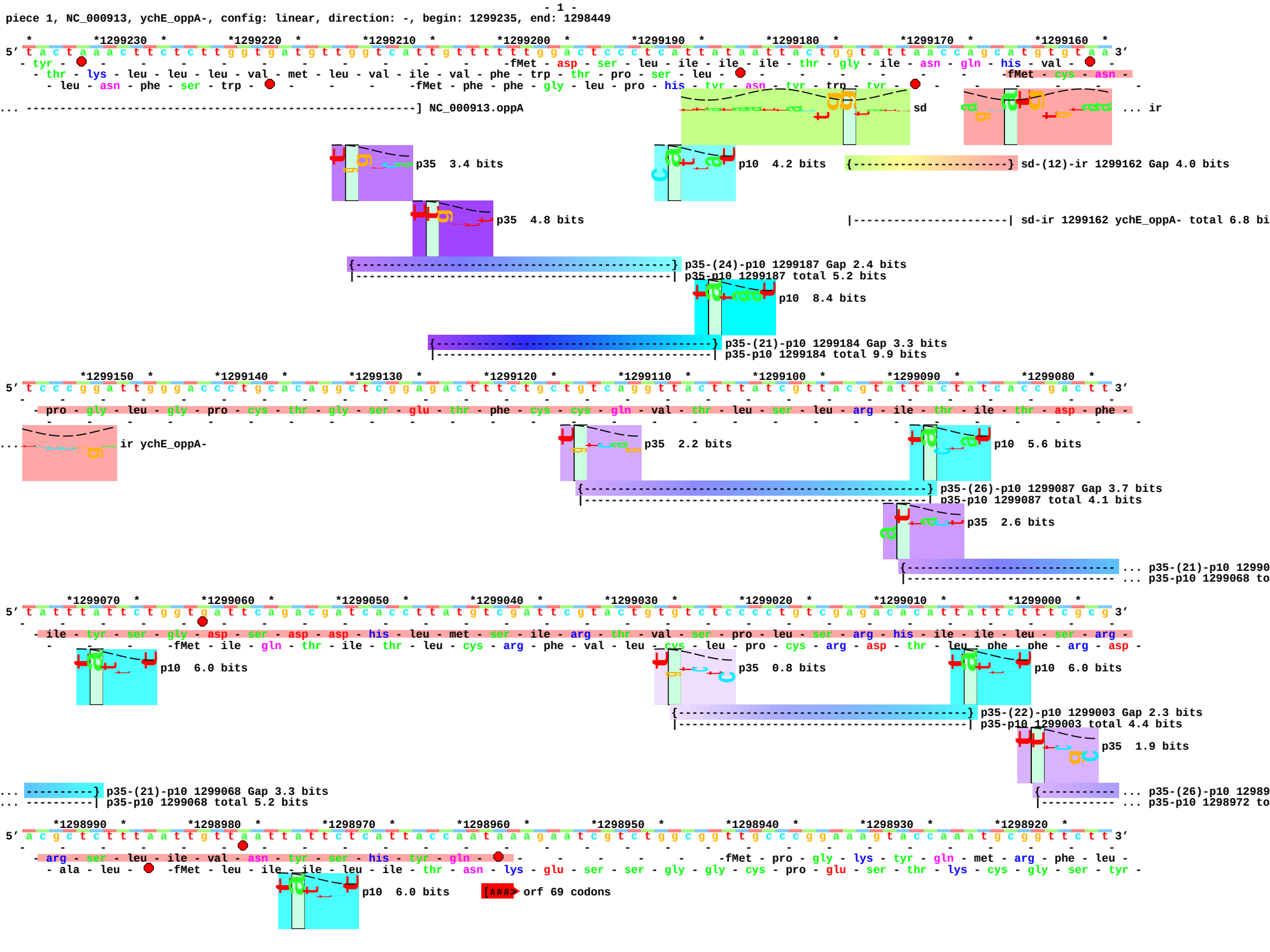
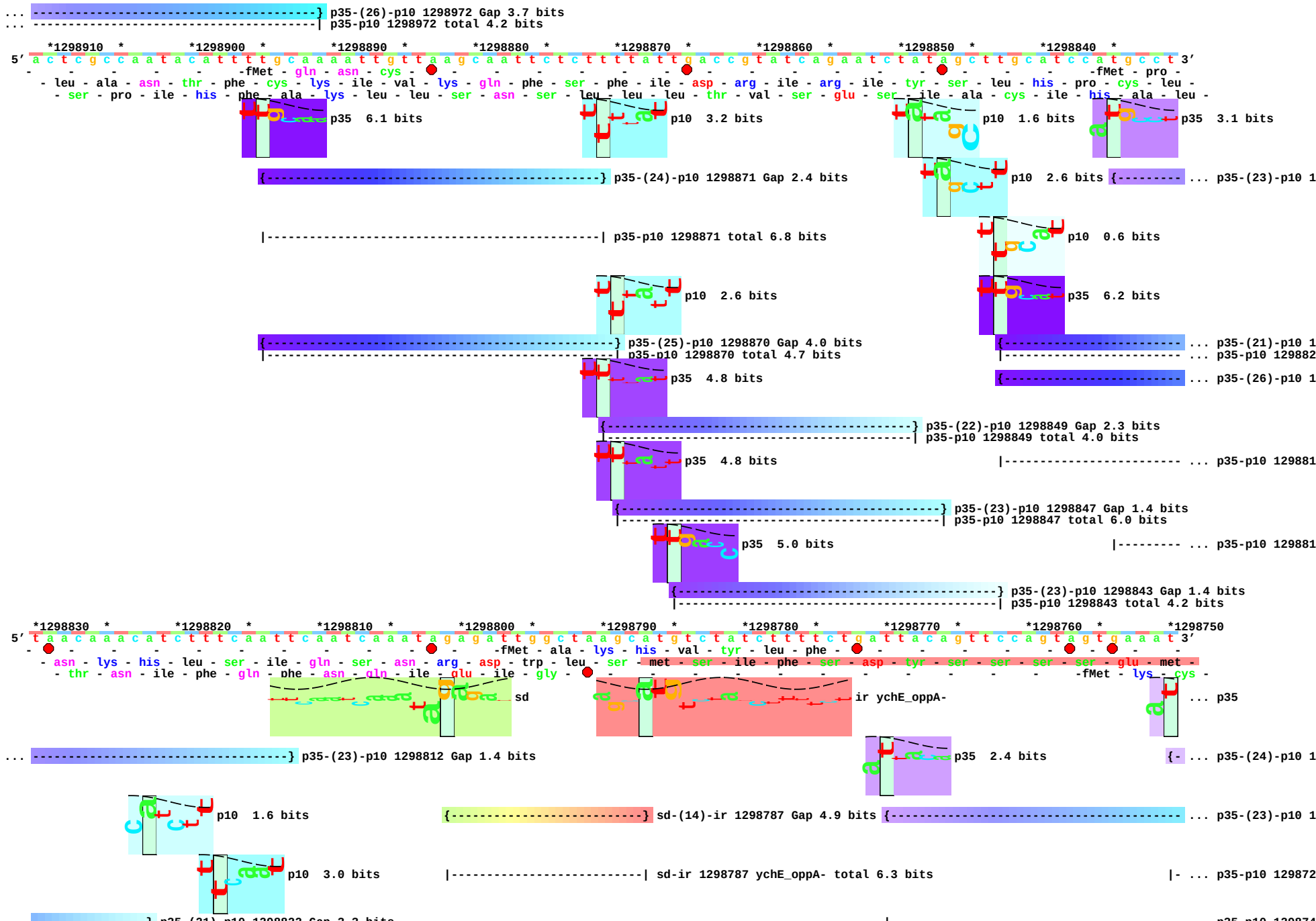
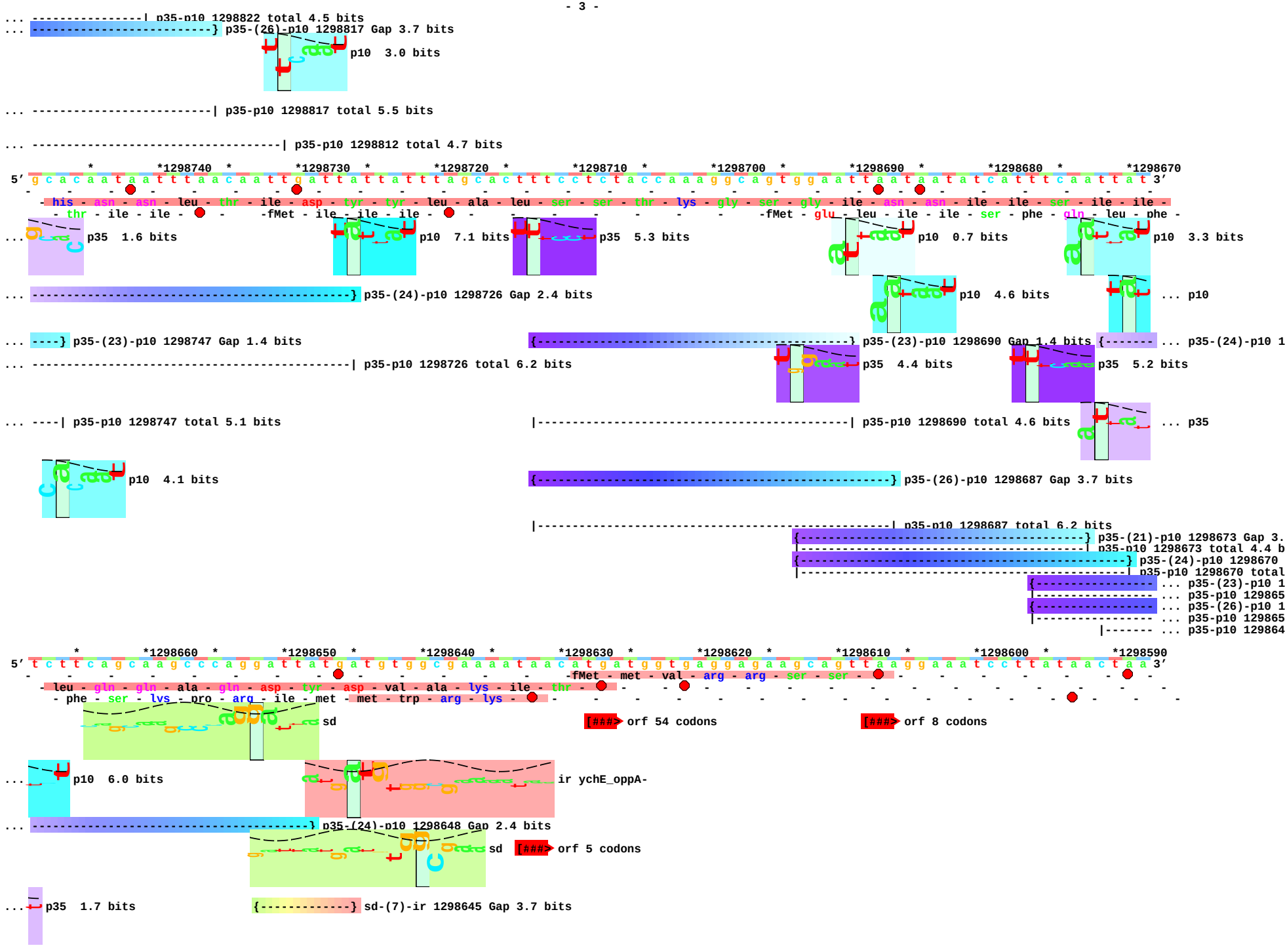
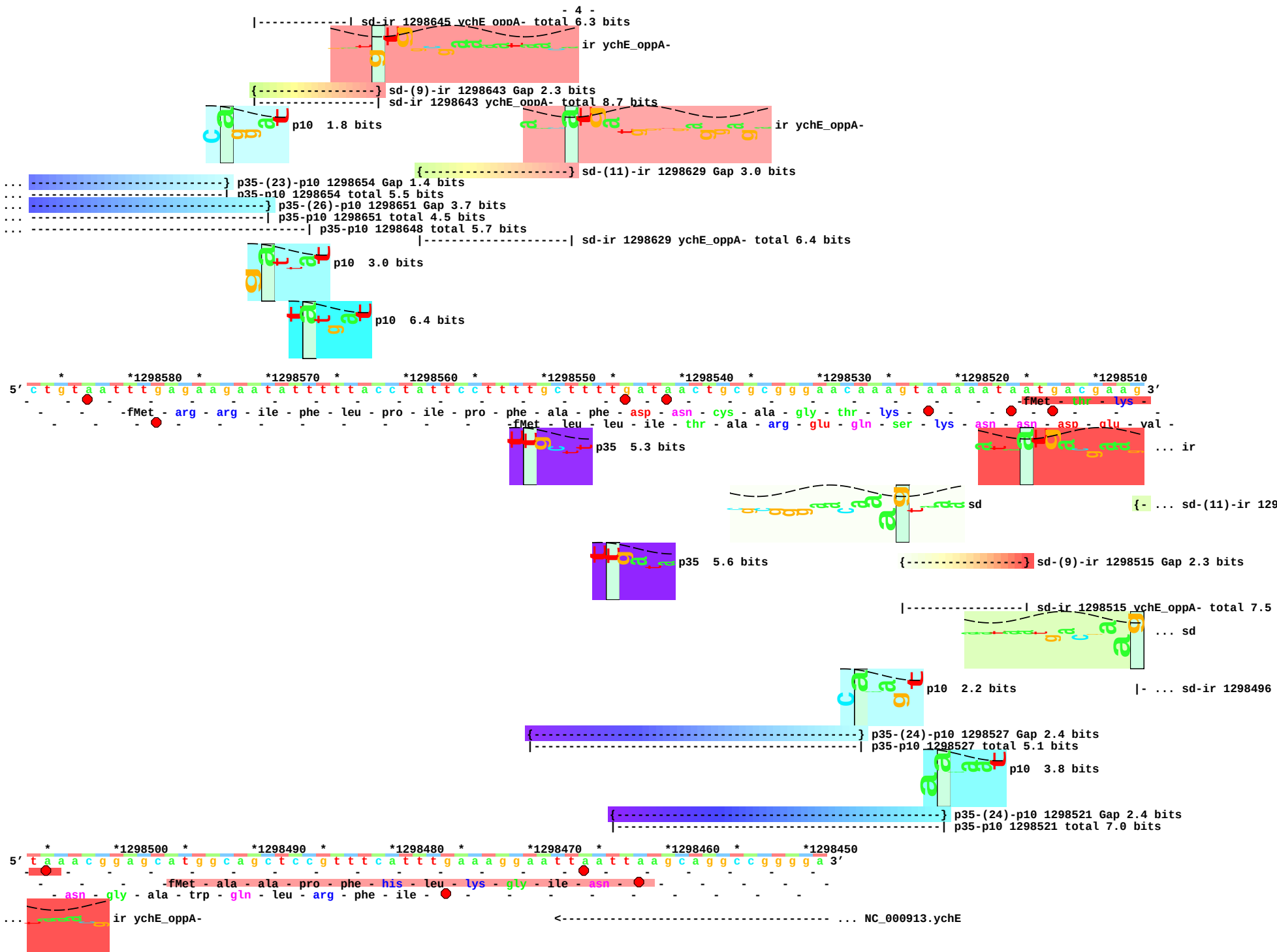
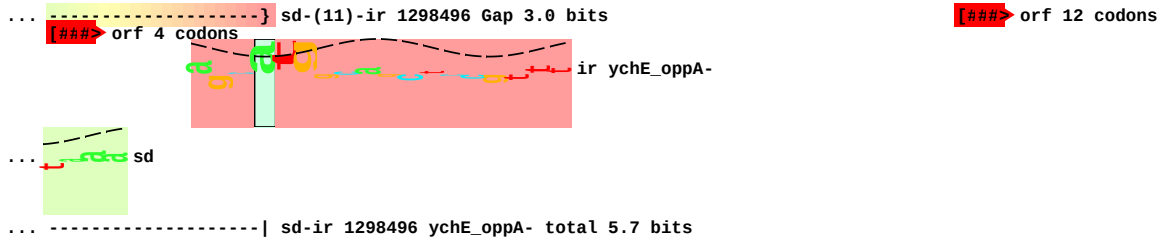

piece 1, NC_000913, ychE_oppA-, config: linear, direction: -, begin: 1299235, end: 1298449
*1299230 *1299220 *1299210 *1299200 *1299190 *1299180 *1299170 *1299160 *
5′ t a c t a a a c t t c t c t t g g t g a t g t t g g t c a t t g t t t t t t g g a c t c c c t c a t t a t a a t t a c t g g t a t t a a c c a g c a t g t g t a a 3′
- tyr - - - - - - - - - - - - - -fMet - asp - ser - leu - ile - ile - ile - thr - gly - ile - asn - gln - his - val - -
- thr - lys - leu - leu - leu - val - met - leu - val - ile - val - phe - trp - thr - pro - ser - leu - - - - - - - - - -fMet - cys - asn -
- leu - asn - phe - ser - trp - - - - -fMet - phe - phe - gly - leu - pro - his - tyr - asn - tyr - trp - tyr - - - - - - - - -
... ----------] NC_000913.oppA
sd
... ir
p35 3.4 bits
p10 4.2 bits
{----------} sd-(12)-ir 1299162 Gap 4.0 bits
p35 4.8 bits
|----------| sd-ir 1299162 ychE_oppA- total 6.8 bi
{----------} p35-(24)-p10 1299187 Gap 2.4 bits
|----------| p35-p10 1299187 total 5.2 bits
p10 8.4 bits
{----------} p35-(21)-p10 1299184 Gap 3.3 bits
|----------| p35-p10 1299184 total 9.9 bits
*1299150 *1299140 *1299130 *1299120 *1299110 *1299100 *1299090 *1299080 *
5′ t c c c g g a t t g g g a c c c t g c a c a g g c t c g g a g a c t t t c t g c t g t c a g g t t a c t t t a t c g t t a c g t a t t a c t a t c a c c g a c t t 3′
- pro - gly - leu - gly - pro - cys - thr - gly - ser - glu - thr - phe - cys - cys - gln - val - thr - leu - ser - leu - arg - ile - thr - ile - thr - asp - phe -
... ir ychE_oppA-
p35 2.2 bits
p10 5.6 bits
{----------} p35-(26)-p10 1299087 Gap 3.7 bits
|----------| p35-p10 1299087 total 4.1 bits
p35 2.6 bits
{---------- ... p35-(21)-p10 12990
|---------- ... p35-p10 1299068 to
*1299070 *1299060 *1299050 *1299040 *1299030 *1299020 *1299010 *1299000 *
5′ t a t t t a t t c t g g t g a t t c a g a c g a t c a c c t t a t g t c g a t t c g t a c t g t g t c t c c c c t g t c g a g a c a c a t t a t t c t t t c g c g 3′
- ile - tyr - ser - gly - asp - ser - asp - asp - his - leu - met - ser - ile - arg - thr - val - ser - pro - leu - ser - arg - his - ile - ile - leu - ser - arg -
-fMet - ile - gln - thr - ile - thr - leu - cys - arg - phe - val - leu - cys - leu - pro - cys - arg - asp - thr - leu - phe - phe - arg - asp -
p10 6.0 bits
p35 0.8 bits
p10 6.0 bits
{----------} p35-(22)-p10 1299003 Gap 2.3 bits
|----------| p35-p10 1299003 total 4.4 bits
p35 1.9 bits
... ----------} p35-(21)-p10 1299068 Gap 3.3 bits
... ----------| p35-p10 1299068 total 5.2 bits
{---------- ... p35-(26)-p10 12989
|---------- ... p35-p10 1298972 to
*1298990 *1298980 *1298970 *1298960 *1298950 *1298940 *1298930 *1298920 *
5′ a c g c t c t t t a a t t g t t a a t t a t t c t c a t t a c c a a t a a a g a a t c g t c t g g c g g t t g c c c g g a a a g t a c c a a a t g c g g t t c t t t 3′
- arg - ser - leu - ile - val - asn - tyr - ser - his - tyr - gln - - - - - - - - - -fMet - pro - gly - lys - tyr - gln - met - arg - phe - leu -
- ala - leu - -fMet - leu - ile - ile - leu - ile - thr - asn - lys - glu - ser - ser - gly - gly - cys - pro - glu - ser - thr - lys - cys - gly - ser - tyr -
p10 6.0 bits
[###> orf 69 codons


... } p35-(26)-p10 1298972 Gap 3.7 bits
... | p35-p10 1298972 total 4.2 bits
*1298910 *1298900 *1298890 *1298880 *1298870 *1298860 *1298850 *1298840 *
5' a c t c g c c a a t a c a t t t t g c a a a t t g t t a a g c a a t t c t c t t t t a t t g a c c g t a t c a g a a t c t a t a g c t t g c a t c c a t g c c t 3'
- - - - - -fMet - gln - asn - cys -fMet - pro -
- leu - ala - asn - thr - phe - cys - lys - ile - val - lys - gln - phe - ser - phe - ile - asp - arg - ile - arg - ile - tyr - ser - leu - his - pro - cys - leu -
- ser - pro - ile - his - phe - ala - lys - leu - leu - ser - asn - ser - leu - leu - leu - thr - val - ser - glu - ser - ile - ala - cys - ile - his - ala - leu -
p35 6.1 bits
p10 3.2 bits
p10 1.6 bits
p35 3.1 bits
} p35-(24)-p10 1298871 Gap 2.4 bits
p10 2.6 bits
... p35-(23)-p10 1
| p35-p10 1298871 total 6.8 bits
p10 0.6 bits
p10 2.6 bits
p35 6.2 bits
} p35-(25)-p10 1298870 Gap 4.0 bits
... p35-(21)-p10 1
| p35-p10 1298870 total 4.7 bits
... p35-p10 129882
p35 4.8 bits
... p35-(26)-p10 1
} p35-(22)-p10 1298849 Gap 2.3 bits
| p35-p10 1298849 total 4.0 bits
p35 4.8 bits
... p35-p10 129881
} p35-(23)-p10 1298847 Gap 1.4 bits
| p35-p10 1298847 total 6.0 bits
p35 5.0 bits
... p35-p10 129881
} p35-(23)-p10 1298843 Gap 1.4 bits
| p35-p10 1298843 total 4.2 bits
*1298830 *1298820 *1298810 *1298800 *1298790 *1298780 *1298770 *1298760 *1298750
5' t a a c a a a c a t c t t t c a a t t c a a t c a a a t a g a g a t t g g c t a a g c a t g t c t a t c t t t t c t g a t t a c a g t t c c a g t a g t g a a a t 3'
- - - - - - - - - - - - - - - - - - - -


... ----------| p35-p10 1298822 total 4.5 bits
... ----------} p35-(26)-p10 1298817 Gap 3.7 bits
p10 3.0 bits
... ----------| p35-p10 1298817 total 5.5 bits
... ----------| p35-p10 1298812 total 4.7 bits
*1298740 *1298730 *1298720 *1298710 *1298700 *1298690 *1298680 *1298670
5' g c a c a a t a a t t t a a c a a t t g a t t a t t a t t t a g c a c t t t c c t c t a c c a a a g g c a g t g g a a t t a a t a a t a t c a t t t c a a t t a t 3'
- his - asn - asn - leu - thr - ile - asp - tyr - tyr - leu - ala - leu - ser - ser - thr - lys - gly - ser - gly - ile - asn - asn - ile - ile - ser - ile - ile -
- thr - ile - ile - -fMet - ile - ile - ile - -fMet - glu - leu - ile - ile - ser - phe - gln - leu - phe -
... p35 1.6 bits
p10 7.1 bits
p35 5.3 bits
p10 0.7 bits
p10 3.3 bits
... ----------} p35-(24)-p10 1298726 Gap 2.4 bits
p10 4.6 bits
... p10
... ----} p35-(23)-p10 1298747 Gap 1.4 bits
{----------} p35-(23)-p10 1298690 Gap 1.4 bits
{------- ... p35-(24)-p10 1
... ----------| p35-p10 1298726 total 6.2 bits
p35 4.4 bits
p35 5.2 bits
... ----| p35-p10 1298747 total 5.1 bits
|----------| p35-p10 1298690 total 4.6 bits
... p35
p10 4.1 bits
{----------} p35-(26)-p10 1298687 Gap 3.7 bits
|----------| p35-p10 1298687 total 6.2 bits
{----------} p35-(21)-p10 1298673 Gap 3.
|----------| p35-p10 1298673 total 4.4 b
{----------} p35-(24)-p10 1298670
|----------| p35-p10 1298670 total
{---------- ... p35-(23)-p10 1
|---------- ... p35-p10 129865
{---------- ... p35-(26)-p10 1
|---------- ... p35-p10 129865
|------- ... p35-p10 129864
*1298660 *1298650 *1298640 *1298630 *1298620 *1298610 *1298600 *1298590
5' t c t t c a g c a a g c c c a g g a t t a t g a t g t g g c g a a a a t a a c a t g a t g g t g a g g a g a a g c a g t t a a g g a a a t c c t t a t a a c t a a 3'
- leu - gln - gln - ala - gln - asp - tyr - asp - val - ala - lys - ile - thr - -fMet - met - val - arg - arg - ser - ser -
- phe - ser - lys - pro - arg - ile - met - met - trp - arg - lys -
sd
[###> orf 54 codons
[###> orf 8 codons
... p10 6.0 bits
ir ychE_oppA-
... ----------} p35-(24)-p10 1298648 Gap 2.4 bits
sd [###> orf 5 codons
... p35 1.7 bits
{----------} sd-(7)-ir 1298645 Gap 3.7 bits


- 4 -
|----------| sd-ir 1298645 ychE_oppA- total 6.3 bits
ir ychE_oppA-
{----------} sd-(9)-ir 1298643 Gap 2.3 bits
|----------| sd-ir 1298643 ychE_oppA- total 8.7 bits
p10 1.8 bits
ir ychE_oppA-
{----------} sd-(11)-ir 1298629 Gap 3.0 bits
... ----------} p35-(23)-p10 1298654 Gap 1.4 bits
... ----------| p35-p10 1298654 total 5.5 bits
... ----------} p35-(26)-p10 1298651 Gap 3.7 bits
... ----------| p35-p10 1298651 total 4.5 bits
... ----------| p35-p10 1298648 total 5.7 bits
|----------| sd-ir 1298629 ychE_oppA- total 6.4 bits
p10 3.0 bits
p10 6.4 bits
*1298580 *1298570 *1298560 *1298550 *1298540 *1298530 *1298520 *1298510
5′ c t g t a a t t t g a g a a g a a t a t t t t t a c c t a t t c c t t t t g c t t t t g a t a a c t g c g c g g g a a c a a a g t a a a a a t a a t g a c g a a g 3′
-fMet - thr - lys -
-fMet - arg - arg - ile - phe - leu - pro - ile - pro - phe - ala - phe - asp - asn - cys - ala - gly - thr - lys -
-fMet - leu - leu - ile - thr - ala - arg - glu - gln - ser - lys - asn - asn - asp - glu - val -
p35 5.3 bits
... ir
sd
{- ... sd-(11)-ir 129
p35 5.6 bits
{----------} sd-(9)-ir 1298515 Gap 2.3 bits
|----------| sd-ir 1298515 ychE_oppA- total 7.5
... sd
p10 2.2 bits
|- ... sd-ir 1298496
{----------} p35-(24)-p10 1298527 Gap 2.4 bits
|----------| p35-p10 1298527 total 5.1 bits
p10 3.8 bits
{----------} p35-(24)-p10 1298521 Gap 2.4 bits
|----------| p35-p10 1298521 total 7.0 bits
*1298500 *1298490 *1298480 *1298470 *1298460 *1298450
5′ t a a a c g g a g c a t g g c a g c t c c g t t t c a t t t g a a a g g a a t t a a t t a a g c a g g c c g g g g a 3′
-fMet - ala - ala - pro - phe - his - leu - lys - gly - ile - asn -
- asn - gly - ala - trp - gln - leu - arg - phe - ile -
... ir ychE_oppA-
<---------- ... NC_000913.ychE


... ------------------} sd-(11)-ir 1298496 Gap 3.0 bits
[###> orf 4 codons
[###> orf 12 codons
ir ychE_oppA-
... sd
... --------------------| sd-ir 1298496 ychE_oppA- total 5.7 bits