piece 1, NC_000913, mdtM_yjiP-, config: linear, direction: -, begin: 4567050, end: 4566523

```
     *4567050   *        *4567040   *        *4567030   *        *4567020   *        *4567010   *        *4567000   *        *4566990   *        *4566980   *        *4566970
5' atgcggcgtgctggtcgtgaagtttgtcatggcgatccatcacctgttgaaaaagatggcctgactttagcgactaacaaa 3'
   -fMet - arg - arg - ala - gly - arg - glu - val - cys - his - gly - asp - pro - ser - pro - val - glu - lys - asp - gly - leu - thr - leu - ala - thr - asn - lys -
       - cys - gly - val - leu - val - val - lys - phe - val - met - ala - ile - his - his - leu - leu - lys - lys - met - ala -
       - ala - ala - cys - trp - ser -       -    -fMet - ser - trp - arg - ser - ile - thr - cys -      -     -     -     -     -     -     -     -     -     -
...                                                                                                                ] NC_000913.yjiP
```
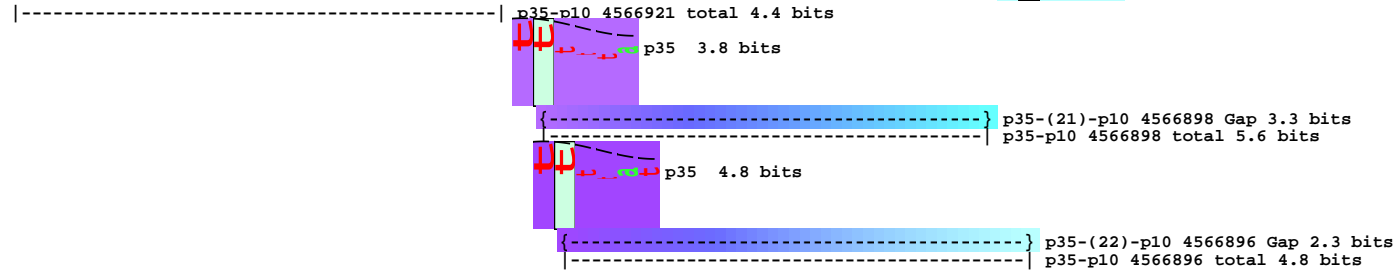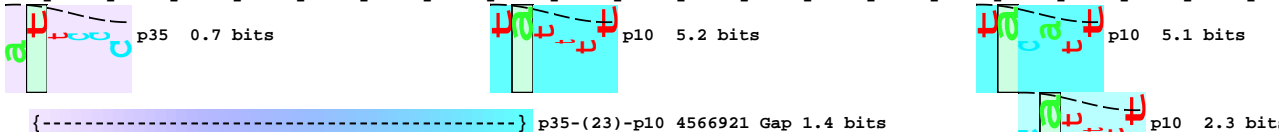
```
       *        *4566960   *        *4566950   *        *4566940   *        *4566930   *        *4566920   *        *4566910   *        *4566900   *        *4566890
5' accattctcaccggcaatttcccattccccgagggcgtttccaggctattttttattcttctgcaaacgatacattttcc 3'
   - thr - ile - leu - thr - arg - gln - phe - pro - ile - pro - arg - gly - ala - phe - gln - ala - ile - phe - ile - leu - leu - gln - thr - ile - his - phe - ser -
```
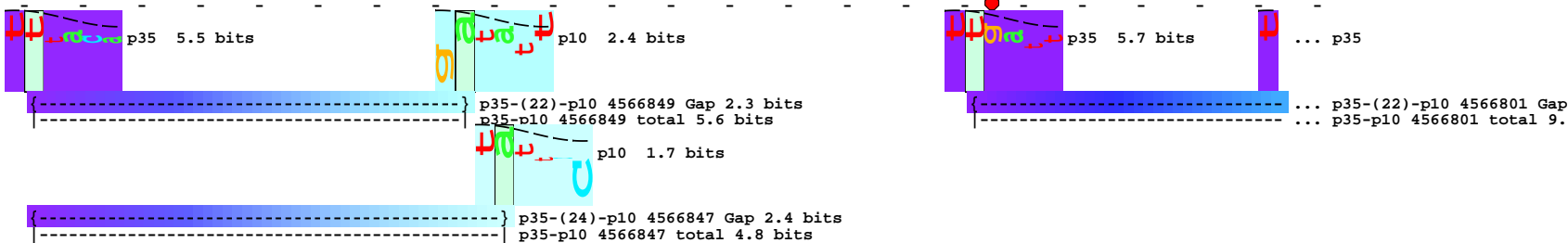
p35   0.7 bits

p10   5.2 bits

p10   5.1 bits

p10   2.3 bits

{----------------------------} p35-(23)-p10 4566921 Gap 1.4 bits

|------------------------------------| p35-p10 4566921 total 4.4 bits

p35   3.8 bits

{----------------------------------} p35-(21)-p10 4566898 Gap 3.3 bits
|--------------------------------------| p35-p10 4566898 total 5.6 bits

p35   4.8 bits

{----------------------------} p35-(22)-p10 4566896 Gap 2.3 bits
|------------------------------| p35-p10 4566896 total 4.8 bits

```
       *        *4566880   *        *4566870   *        *4566860   *        *4566850   *        *4566840   *        *4566830   *        *4566820   *        *4566810
5' ggaaacaagctcggtttttacatgtcctgtaccggcagatattcccctttccaccgcgctctttgattaaccgcaaatt 3'
   - gly - asn - lys - leu - ala - phe - tyr - met - ser - cys - thr - arg - gln - ile - phe - pro - phe - pro - pro - arg - ser - phe - asp -
                                                                                      -fMet - ile - asn - arg - lys - phe -
```
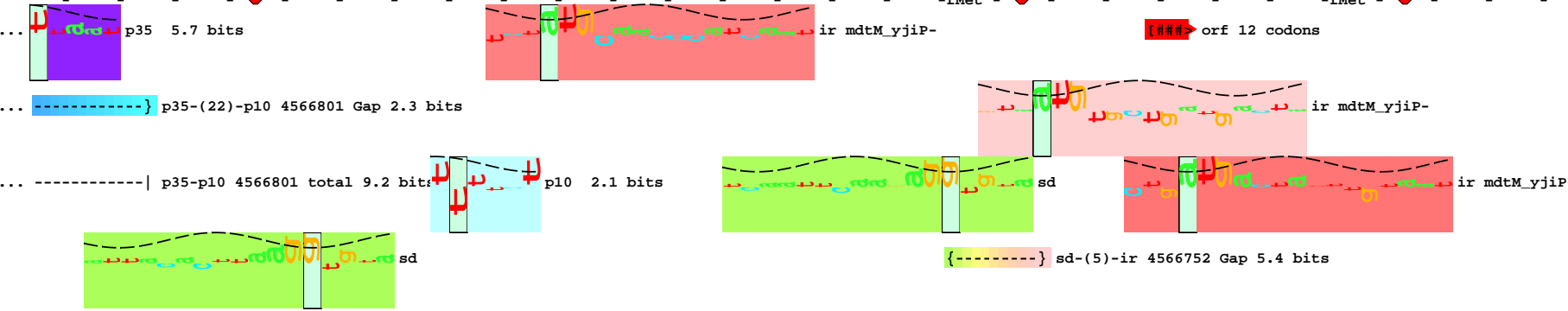
p35   5.5 bits

p10   2.4 bits

p35   5.7 bits

... p35

{----------------------------} p35-(22)-p10 4566849 Gap 2.3 bits
|------------------------------| p35-p10 4566849 total 5.6 bits

{------------------------------ ... p35-(22)-p10 4566801 Gap
|-------------------------------- ... p35-p10 4566801 total 9.2

p10   1.7 bits

{------------------------------} p35-(24)-p10 4566847 Gap 2.4 bits
|------------------------------| p35-p10 4566847 total 4.8 bits

```
       *        *4566800   *        *4566790   *        *4566780   *        *4566770   *        *4566760   *        *4566750   *        *4566740   *        *4566730
5' ttaattcacttaaggtgtatattttctatgcaaccatcaattcaagaggtgtaatgtgctgatgactatttgtaatcgt 3'
   -fMet - tyr - ile - phe - tyr - ala - thr - his - gln - phe - lys - arg - cys - asn - val - leu - met - thr - ile - cys - asn - arg -
                           -fMet - gln - pro - ile - asn - ser - arg - gly - val - met - cys -
                                                              -fMet -     -     -     -     -fMet -
```
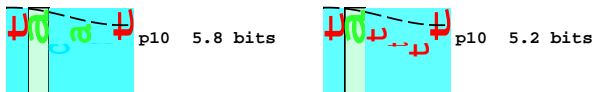
... p35   5.7 bits

ir mdtM_yjiP-

[###> orf 12 codons

... {------------} p35-(22)-p10 4566801 Gap 2.3 bits

ir mdtM_yjiP-

... ------------| p35-p10 4566801 total 9.2 bits

p10   2.1 bits

sd

ir mdtM_yjiP-

sd

{---------} sd-(5)-ir 4566752 Gap 5.4 bits

{------------------} sd-(13)-ir 4566779 Gap 4.6 bits

|----------| sd-ir 4566752 mdtM_yjiP- total 5.4 bits

|------------------------| sd-ir 4566779 mdtM_yjiP- total 10.7 bits

... ir mdtM_yjiP-

p10   5.8 bits

p10   5.2 bits

{--------------} sd-(7)-ir 4566750 Gap 3.7 bits

{-------------------------} p35-(21)-p10 4566786 Gap 3.3 bits

|--------------| sd-ir 4566750 mdtM_yjiP- total 8.6 bits

p35-p10 4566786 total 7.6 bits

{------------------} sd-(13)-ir 4566744 Gap 4.6 bits

{-------------------------} p35-(23)-p10 4566784 Gap 1.4 bits

|----------------------| sd-ir 4566744 mdtM_yjiP- total 11.1 bits

|--------------------------------| p35-p10 4566784 total 6.3 bits

p35   3.4 bits

{-------------------------------- ... p35-(22)-p10 4566721 Gap

-------------------------------- ... p35-p10 4566721 total 4.2

```
    *        *4566720   *         *4566710  *          *4566700  *          *4566690   *         *4566680   *         *4566670   *          *4566660   *         *4566650
5' tatacattctgacccgaagtcagaaagtatttctctgtctgtgttcacaggcagtgtggttgattacatgaaattcagt 3'
 - tyr - thr - phe -   -   -   -   -   -   -   -   -   -fMet- phe - thr - gly - ser - val - val - asp - tyr - met - lys - phe - ser -
 -   -   -   -   -   -   -   -   -   -   -   -fMet- cys - ser - gln - ala - val - trp - leu - ile - thr -   -   -   -
 -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -   -
```

[###> orf 12 codons

... ir

p10   3.1 bits

... sd

... p10
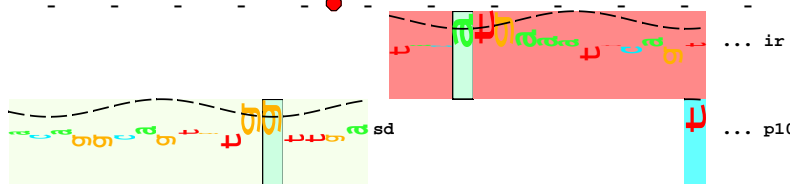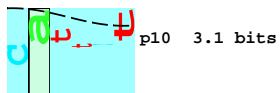
{------------------} sd-(9)-ir 4566657 Gap 2.3 bits

-------------------| sd-ir 4566657 mdtM_yjiP- total 5.1 bits

p35   1.7 bits

{----------------------------- ... p35-(22)-p10 4566645 Gap

----------------------------- ... p35-p10 4566645 total 4.4

... ----------} p35-(22)-p10 4566721 Gap 2.3 bits
... ----------| p35-p10 4566721 total 4.2 bits

```
    *        *4566640   *         *4566630   *         *4566620   *         *4566610   *         *4566600   *         *4566590   *         *4566580   *         *4566570   *
5' acatttgcagtcgtgccttctcacctgccttttcgtcattaccgacggtattgaatttcgtttcccgttgggttc 3'
 - thr - phe - ala - val - ser - leu - pro - phe - ser - pro - ala - phe - arg - his - tyr - arg - arg - tyr -   -   -   -   -fMet- gly - phe -
 -   -fMet- gln - ser - arg - cys - pro - ser - his - leu - pro - phe - val - ile - thr - asp - gly - ile - glu - phe -   - arg - phe - pro - arg - trp - gly - ser -
 -   -   -   -   -   -   -   -   -   -   -   -   -   -   -fMet- asn - phe - val - phe - pro - val - gly - val - leu -
```

... ir mdtM_yjiP-

[###> orf 23 codons

... sd

... p10   5.1 bits
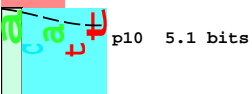
... } p35-(22)-p10 4566645 Gap 2.3 bits
... | p35-p10 4566645 total 4.4 bits

```
    *        *4566560   *         *4566550   *         *4566540   *         *4566530   *
5' tccggacaaggagttgtttgttatgccacgttttttacccg 3'
 - ser - gly - gln - gly - val - val - cys - tyr - ala - thr - phe - phe - tyr - pro -
 - pro - asp - lys - glu - leu - phe - val - met - pro - arg - phe - phe - thr -
```

- arg - thr - arg - ser - cys - leu - leu - cys - his - val - phe - leu - pro -

... sd ir mdtM_yjiP-

{------------------------} sd-(12)-ir 4566542 Gap 4.0 bits
|------------------------| sd-ir 4566542 mdtM_yjiP- total 9.5 bits