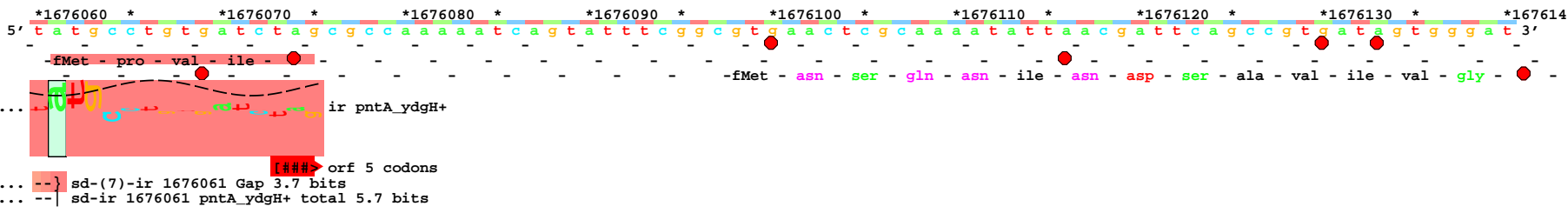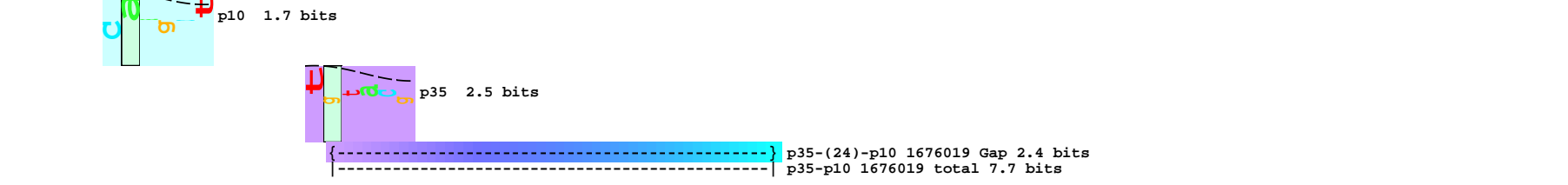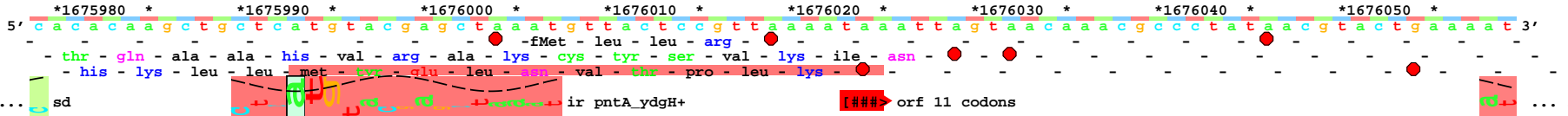piece 1, NC_000913, pntA_ydgH+, config: linear, direction: +, begin: 1675898, end: 1676470

```
         *1675900  *        *1675910  *        *1675920  *        *1675930  *        *1675940  *        *1675950  *        *1675960  *        *1675970  *
5' t a a c c g t t c t c t t g g t a t g c c a a t t c g c a t g a t a t t c c c t t c c a t c g g t t t t a t t g a t g a t g g t t t g c c t g t g t c a g g a g c 3'
    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
    asn - arg - ser - leu - gly - met - pro - ile - arg - met - ile - phe - pro - ser - ile - gly - phe - ile - asp - asp - gly - leu - pro - val - ser - gly - ala -
      - thr - val - leu - leu - val - cys - gln - phe - ala -           -    -    -    -    -    -   -fMet - met - met - val - cys - leu - cys - gln - glu - pro -
... -----------------------------------------------------] NC_000913.pntA                                                                              ... sd

                                                          p35   6.2 bits {------- ... sd-(18)-ir 1675993 Gap

                                                                         |------- ... sd-ir 1675993 pntA_ydgH+
                                                                         {-------------------------------- ... p35-(21)-p10 1675984 Gap
                                                                         |-------------------------------- ... p35-p10 1675984 total 4.6
```

```
         *1675980  *        *1675990  *        *1676000  *        *1676010  *        *1676020  *        *1676030  *        *1676040  *        *1676050  *
5' c a c a c a a g c t g c t c a t g t a c g a g c t a a a t g t t a c t c c g t t a a a a t a a a t t a g t a a c a a c g c c c t a t a a c g t a c t g a a a t 3'
    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
                                                  -fMet - leu - leu - arg -          -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
    - thr - gln - ala - ala - his - val - arg - ala - lys - cys - tyr - ser - val - lys - ile - asn -                -    -    -    -    -    -    -    -    -
      - his - lys - leu - leu - met - tyr - glu - leu - asn - val - thr - pro - leu - lys -            -    -    -    -    -    -    -    -    -    -    -    -
... |  sd                          ir pntA_ydgH+                                  [###> orf 11 codons                                                  ... ir
                                                                                                                                                        sd

... {------------------------} sd-(18)-ir 1675993 Gap 6.9 bits            p10   7.6 bits                             {----------- ... sd-(7)-ir 1676061 Gap

... ----------------------| sd-ir 1675993 pntA_ydgH+ total 5.8 bits                                                 |----------- ... sd-ir 1676061 pntA_ydgH+
... ---------} p35-(21)-p10 1675984 Gap 3.3 bits
... ---------| p35-p10 1675984 total 4.6 bits
            p10   1.7 bits

            p35   2.5 bits

            {------------------------------------------} p35-(24)-p10 1676019 Gap 2.4 bits
            |------------------------------------------| p35-p10 1676019 total 7.7 bits
```

```
         *1676060  *        *1676070  *        *1676080  *        *1676090  *        *1676100  *        *1676110  *        *1676120  *        *1676130  *        *1676140
5' t a t g c c t g t g a t c t a g c g c c a a a a a t c a g t a t t t c g g c g t g a a c t c g c a a a a t a t t a a c g a t t c a g c c g t g a t a g t g g g a t 3'
    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
   -fMet - pro - val - ile -          -    -    -    -    -    -    -    -   -fMet - asn - ser - gln - asn - ile - asn - asp - ser - ala - val - ile - val - gly -     -
...               ir pntA_ydgH+

                              [###> orf 5 codons
... --} sd-(7)-ir 1676061 Gap 3.7 bits
... --| sd-ir 1676061 pntA_ydgH+ total 5.7 bits
```

```
              *        *1676150  *        *1676160  *        *1676170  *        *1676180  *        *1676190  *        *1676200  *        *1676210  *        *1676220
5' a a a c a c c t t a g a a c g c c g g a t a a a g a c t g a t a a t t g t c t t c g a c g g t c g g g t a a a a c g a g a c a t c g c c c c g g c a c g a a t c a 3'
    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
                                                          -fMet - ser - ser - thr - val - gly -          -    -    -    -    -    -    -    -    -    -    -    -
```

```
              *        *1676230  *        *1676240  *        *1676250  *        *1676260  *        *1676270  *        *1676280  *        *1676290  *        *1676300
5' c t a c t t a a c a t t a a a t t a a c t t a t a c a a t t c a g t t g c t t c a g t a a t g a t g c t g a t a c g g c t g t t t t t a a g c a t a g a c 3'
    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
                                                          -fMet - leu - gln -          -    -    -    -    -    -    -    -    -    -    -    -    -    -    -
                                                        -fMet - met - leu - ile - arg - leu - phe - phe - lys - his - arg - arg -
                                                                                                                              ... p35
```
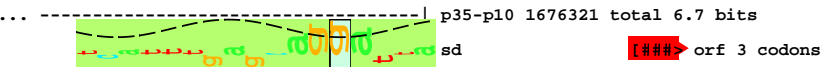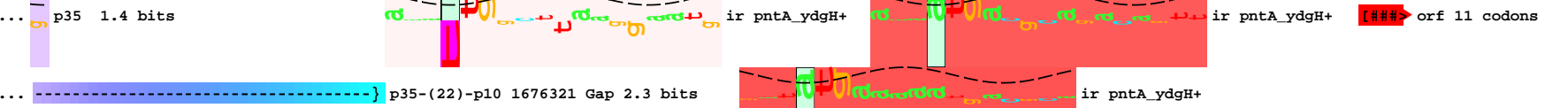
{------- ... p35-(22)-p10 1676321 Gap
|------- ... p35-p10 1676321 total 6.7

```
        *      *1676310  *       *1676320  *       *1676330  *       *1676340  *       *1676350  *       *1676360  *       *1676370  *       *1676380
5' ggtcatttgagcaggattaaaaattggcttaaggaatgtgatatgaaaaatgacgcagacagttacaccgttaaatgcaat 3'
```
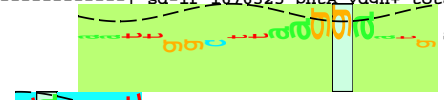
... p35  1.4 bits                                                            ir pntA_ydgH+                          ir pntA_ydgH+   [###> orf 11 codons

... {----------------------------} p35-(22)-p10 1676321 Gap 2.3 bits                                                ir pntA_ydgH+

... |----------------------------| p35-p10 1676321 total 6.7 bits

                                                                     sd        [###> orf 3 codons

                              {---------------} sd-(8)-ir 1676325 Gap 2.4 bits
                              |---------------| sd-ir 1676325 pntA_ydgH+ total 5.6 bits

                                                           sd

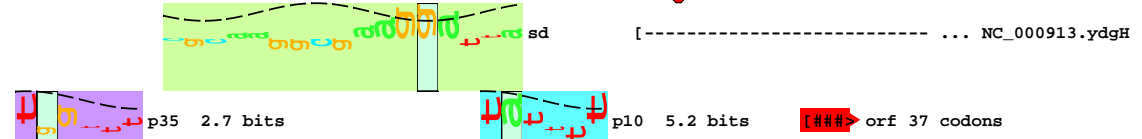                                   p10  7.6 bits        {----------------} sd-(9)-ir 1676344 Gap 2.3 bits

                                       |----------------| sd-ir 1676344 pntA_ydgH+ total 14.2 bits
                                       {----------------------} sd-(16)-ir 1676351 Gap 6.4 bits
                                       |----------------------| sd-ir 1676351 pntA_ydgH+ total 9.7 bits

```
        *      *1676390  *       *1676400  *       *1676410  *       *1676420  *       *1676430  *       *1676440  *       *1676450  *       *1676460
5' aatcagccacgtttctcgttaataacaataccagtacctggtttgcgcaaggcgaaggattatttttatgaagcttaagaa 3'
```

                                                                                sd        [-------------------------- ... NC_000913.ydgH

                              p35  2.7 bits                         p10  5.2 bits    [###> orf 37 codons

                                                                                                   ... ir

                                                      {----------------} sd-(10)-ir 1676451 Gap 2.7 bits
                                                      |----------------| sd-ir 1676451 pntA_ydgH+ total 10.0 bits
                              {--------------------------------} p35-(22)-p10 1676445 Gap 2.3 bits
                              |--------------------------------| p35-p10 1676445 total 5.6 bits

```
        *      *1676470
5' caccct 3'
```
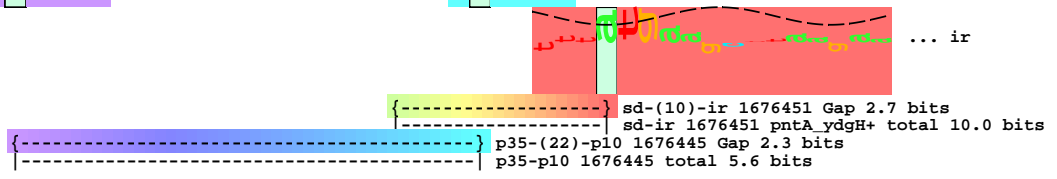
... ----------- ... NC_000913.ydgH

... ir pntA_ydgH+