**Table S1.** Isolate data for culture-confirmed MenB cases – England (2014/15 to 2017/18)

| LabNo | Acad year | No of doses before onset | GenosubtypeVR2 | fHbp | NHBApeptide | NadAAllele | NadAvariant | NadApeptide | SequenceType | clonal\_complex | fHbpMATSRP | NadAMATSRP | NHBAMATSRP | fHbpMATSPositive? | NadAMATSPositive? | NHBAMATSPositive? | PorAMATSPositive? |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| M14 240469 | 2014/15 | none | 9 | 1\_825 | 21 | 0 | 0 | 0 | 11308 | ST-269 complex | 0.023 | 0.000 | 0.173 | Yes | No | No | No |
| M14 240471 | 2014/15 | none | 14-6 | 1\_14 | 2 | 0 | 0 | 0 | 8054 | ST-41/44 complex | 0.043 | 0.000 | 0.409 | Yes | No | Yes | No |
| M14 240475 | 2014/15 | none | 4 | 1\_822 | 755 | 0 | 0 | 0 | 11309 | ST-41/44 complex | 0.089 | 0.000 | 0.110 | Yes | No | No | Yes |
| M14 240476 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.038 | 0.000 | 0.769 | Yes | No | Yes | Yes |
| M14 240477 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.028 | 0.000 | 0.596 | Yes | No | Yes | No |
| M14 240480 | 2014/15 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 11302 | ST-32 complex | 0.543 | 0.011 | 0.115 | Yes | Yes | No | No |
| M14 240481 | 2014/15 | none | 14 | 2\_21 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.001 | 0.000 | 0.508 | No | No | Yes | No |
| M14 240488 | 2014/15 | none | 23 | 2\_683 | 31 | 0 | 0 | 0 | 1423 | ST-41/44 complex | 0.002 | 0.000 | 0.152 | No | No | No | No |
| M14 240490 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.025 | 0.000 | 0.863 | Yes | No | Yes | Yes |
| M14 240503 | 2014/15 | none | 30-2 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.002 | 0.000 | 0.187 | No | No | No | No |
| M14 240507 | 2014/15 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.001 | 0.000 | 0.164 | No | No | No | No |
| M14 240508 | 2014/15 | none | 23 | 2\_19 | 31 | 0 | 0 | 0 | 1097 | ST-41/44 complex | 0.003 | 0.000 | 0.109 | No | No | No | No |
| M14 240510 | 2014/15 | none | 16 | 3\_85 | 18 | 12 | NadA-4/5 | 0 | 11465 | ST-213 complex | 0.001 | 0.000 | 0.081 | No | No | No | No |
| M14 240513 | 2014/15 | none | 16-26 | 1\_224 | 316 | 19 | NadA-1 | 100 | 2506 | ST-32 complex | 0.029 | 0.000 | 0.056 | Yes | No | No | No |
| M14 240514 | 2014/15 | none | 14 | 1\_309 | 20 | 0 | 0 | 0 | 10817 | ST-162 complex | 0.012 | 0.000 | 0.161 | No | No | No | No |
| M14 240516 | 2014/15 | none | 0 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.048 | 0.000 | 0.403 | Yes | No | Yes | No |
| M14 240518 | 2014/15 | none | 4 | 1\_4 | 25 | 0 | 0 | 0 | 3754 | ST-41/44 complex | 0.057 | 0.000 | 0.078 | Yes | No | No | Yes |
| M14 240520 | 2014/15 | none | 9 | 1\_61 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.108 | 0.000 | 0.121 | Yes | No | No | No |
| M14 240527 | 2014/15 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.017 | 0.199 | 0.092 | Yes | Yes | No | No |
| M14 240528 | 2014/15 | none | 16 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.785 | 0.002 | 0.179 | Yes | No | No | No |
| M14 240531 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.020 | 0.000 | 0.296 | Yes | No | Yes | No |
| M14 240533 | 2014/15 | none | 4 | 1\_4 | 25 | 0 | 0 | 0 | 3754 | ST-41/44 complex | 0.054 | 0.000 | 0.067 | Yes | No | No | Yes |
| M14 240535 | 2014/15 | none | 16-3 | 2\_24 | 10 | 0 | 0 | 0 | 136 | ST-41/44 complex | 0.001 | 0.000 | 0.382 | No | No | Yes | No |
| M14 240539 | 2014/15 | none | 9 | 1\_61 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.075 | 0.000 | 0.126 | Yes | No | No | No |
| M14 240541 | 2014/15 | none | 13 | 1\_14 | 800 | 0 | 0 | 0 | 1111 | unassigned | 0.023 | 0.000 | 0.114 | Yes | No | No | No |
| M14 240542 | 2014/15 | none | 30 | 1\_15 | 21 | 0 | 0 | 0 | 11466 | ST-269 complex | 0.024 | 0.000 | 0.336 | Yes | No | Yes | No |
| M14 240543 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 154 | ST-41/44 complex | 0.043 | 0.000 | 0.325 | Yes | No | Yes | Yes |
| M14 240551 | 2014/15 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 11467 | ST-41/44 complex | 0.055 | 0.000 | 0.467 | Yes | No | Yes | No |
| M14 240554 | 2014/15 | none | 10-26 | 2\_25 | 24 | 0 | 0 | 0 | 1754 | ST-60 complex | 0.002 | 0.000 | 0.112 | No | No | No | No |
| M14 240557 | 2014/15 | none | 1 | 1\_4 | 2 | 0 | 0 | 0 | 46 | ST-41/44 complex | 0.047 | 0.000 | 0.423 | Yes | No | Yes | No |
| M14 240558 | 2014/15 | none | 23 | 2\_19 | 31 | 0 | 0 | 0 | 1097 | ST-41/44 complex | 0.004 | 0.000 | 0.173 | No | No | No | No |
| M14 240560 | 2014/15 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 0.931 | 0.009 | 0.052 | Yes | No | No | No |
| M14 240563 | 2014/15 | none | 2 | 1\_13 | 24 | 0 | 0 | 0 | 60 | ST-60 complex | 0.018 | 0.000 | 0.114 | Yes | No | No | No |
| M14 240564 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.028 | 0.000 | 0.538 | Yes | No | Yes | Yes |
| M14 240565 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.047 | 0.000 | 0.879 | Yes | No | Yes | No |
| M14 240566 | 2014/15 | none | 14 | 1\_13 | 18 | 0 | 0 | 0 | 3635 | ST-213 complex | 0.014 | 0.000 | 0.067 | Yes | No | No | No |
| M14 240567 | 2014/15 | none | 34 | 1\_887 | 2 | 0 | 0 | 0 | 6058 | ST-41/44 complex | 0.104 | 0.000 | 0.520 | Yes | No | Yes | No |
| M14 240575 | 2014/15 | none | 4 | 3\_45 | 29 | 52 | NadA-4/5 | 79 | 9881 | ST-213 complex | 0.001 | 0.000 | 0.149 | No | No | No | Yes |
| M14 240576 | 2014/15 | none | 16 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.612 | 0.005 | 0.482 | Yes | No | Yes | No |
| M14 240580 | 2014/15 | none | 23 | 3\_316 | 669 | 0 | 0 | 0 | 3200 | ST-4821 complex | 0.001 | 0.000 | 0.123 | No | No | No | No |
| M14 240582 | 2014/15 | none | 34 | 2\_19 | 2 | 0 | 0 | 0 | 409 | ST-41/44 complex | 0.000 | 0.000 | 0.933 | No | No | Yes | No |
| M14 240591 | 2014/15 | none | 14-6 | 1\_1 | 3 | 218 | NadA-1 | 158 | 5342 | ST-32 complex | 0.830 | 0.002 | 0.602 | Yes | No | Yes | No |
| M14 240595 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.780 | Yes | No | Yes | Yes |
| M14 240596 | 2014/15 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 11469 | unassigned | 0.001 | 0.000 | 0.169 | No | No | No | No |
| M14 240598 | 2014/15 | none | 15 | 3\_888 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.000 | 0.006 | 0.037 | No | No | No | No |
| M14 240606 | 2014/15 | none | 13-4 | 1\_1 | 3 | 309 | NK | 0 | 290 | ST-32 complex | 0.891 | 0.000 | 0.371 | Yes | No | Yes | No |
| M14 240617 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1214 | ST-269 complex | 0.016 | 0.000 | 0.297 | Yes | No | Yes | No |
| M14 240619 | 2014/15 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.002 | 0.000 | 0.150 | No | No | No | No |
| M14 240620 | 2014/15 | none | 16-26 | 1\_224 | 3 | 19 | NadA-1 | 100 | 32 | ST-32 complex | 0.059 | 0.001 | 0.158 | Yes | No | No | No |
| M14 240623 | 2014/15 | none | 1 | 1\_1 | 3 | 111 | NadA-1 | 118 | 639 | ST-32 complex | 0.986 | 0.000 | 0.167 | Yes | No | No | No |
| M14 240625 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.053 | 0.000 | 0.785 | Yes | No | Yes | Yes |
| M14 240626 | 2014/15 | none | 16 | 1\_15 | 21 | 0 | 0 | 0 | 11470 | ST-269 complex | 0.017 | 0.000 | 0.258 | Yes | No | No | No |
| M14 240630 | 2014/15 | none | 9 | 3\_170 | 17 | 0 | 0 | 0 | 11471 | ST-269 complex | 0.002 | 0.000 | 0.141 | No | No | No | No |
| M14 240631 | 2014/15 | none | 4 | 1\_4 | 761 | 0 | 0 | 0 | 8380 | ST-41/44 complex | 0.050 | 0.000 | 0.218 | Yes | No | No | Yes |
| M14 240636 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.045 | 0.000 | 0.687 | Yes | No | Yes | No |
| M14 240637 | 2014/15 | none | 10-1 | 1\_37 | 6 | 0 | 0 | 0 | 18 | ST-18 complex | 0.054 | 0.000 | 0.093 | Yes | No | No | No |
| M14 240639 | 2014/15 | none | 10-1 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.052 | 0.000 | 0.910 | Yes | No | Yes | No |
| M14 240640 | 2014/15 | none | 9 | 3\_31 | 17 | 0 | 0 | 0 | 11473 | ST-269 complex | 0.000 | 0.000 | 0.105 | No | No | No | No |
| M14 240641 | 2014/15 | none | 16 | 1\_13 | 114 | 20 | NadA-2/3 | 0 | 1157 | ST-1157 complex | 0.012 | 0.000 | 0.064 | No | No | No | No |
| M14 240643 | 2014/15 | none | 9 | 1\_889 | 2 | 0 | 0 | 0 | 11869 | ST-41/44 complex | 0.033 | 0.000 | 0.717 | Yes | No | Yes | No |
| M14 240645 | 2014/15 | none | 13-2 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.000 | 0.000 | 0.125 | No | No | No | No |
| M14 240646 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.219 | No | No | No | No |
| M14 240647 | 2014/15 | none | 23 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.012 | 0.000 | 0.141 | No | No | No | No |
| M14 240648 | 2014/15 | none | 13-1 | 2\_24 | 21 | 0 | 0 | 0 | 278 | ST-35 complex | 0.003 | 0.000 | 0.400 | No | No | Yes | No |
| M14 240650 | 2014/15 | none | 16-3 | 3\_555 | 10 | 0 | 0 | 0 | 3989 | unassigned | 0.001 | 0.000 | 0.647 | No | No | Yes | No |
| M14 240653 | 2014/15 | none | 14 | 3\_45 | 18 | 0 | 0 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.030 | No | No | No | No |
| M15 240001 | 2014/15 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 0.993 | 0.013 | 0.146 | Yes | Yes | No | No |
| M15 240002 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.013 | 0.000 | 0.118 | Yes | No | No | No |
| M15 240003 | 2014/15 | none | 15-11 | 2\_19 | 21 | 80 | NadA-2/3 | 8 | 1354 | ST-269 complex | 0.001 | 0.003 | 0.202 | No | No | No | No |
| M15 240004 | 2014/15 | none | 16 | 2\_19 | 114 | 20 | NadA-2/3 | 0 | 1157 | ST-1157 complex | 0.001 | 0.000 | 0.064 | No | No | No | No |
| M15 240014 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.017 | 0.000 | 0.182 | Yes | No | No | No |
| M15 240016 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.035 | 0.000 | 0.487 | Yes | No | Yes | No |
| M15 240017 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.040 | 0.000 | 0.739 | Yes | No | Yes | No |
| M15 240020 | 2014/15 | none | 16-29 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.394 | 0.001 | 0.135 | Yes | No | No | No |
| M15 240024 | 2014/15 | none | 14 | 2\_21 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.001 | 0.000 | 0.321 | No | No | Yes | No |
| M15 240032 | 2014/15 | none | 34 | 2\_19 | 2 | 0 | 0 | 0 | 409 | ST-41/44 complex | 0.001 | 0.000 | 0.369 | No | No | Yes | No |
| M15 240034 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.043 | 0.000 | 0.428 | Yes | No | Yes | No |
| M15 240037 | 2014/15 | none | 10-7 | 1\_890 | 6 | 0 | 0 | 0 | 11475 | unassigned | 0.022 | 0.000 | 0.058 | Yes | No | No | No |
| M15 240038 | 2014/15 | none | 14 | 1\_650 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.305 | 0.000 | 0.023 | Yes | No | No | No |
| M15 240039 | 2014/15 | none | 16-3 | 3\_143 | 21 | 0 | 0 | 0 | 1774 | ST-269 complex | 0.000 | 0.000 | 0.325 | No | No | Yes | No |
| M15 240043 | 2014/15 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 11302 | ST-32 complex | 1.034 | 0.005 | 0.081 | Yes | No | No | No |
| M15 240044 | 2014/15 | none | 14 | 3\_45 | 18 | 0 | 0 | 0 | 9176 | ST-213 complex | 0.002 | 0.000 | 0.077 | No | No | No | No |
| M15 240050 | 2014/15 | none | 9-13 | 3\_30 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.001 | 0.000 | 0.077 | No | No | No | No |
| M15 240051 | 2014/15 | none | 30-3 | 1\_249 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.221 | 0.000 | 0.177 | Yes | No | No | No |
| M15 240053 | 2014/15 | none | 0 | 2\_25 | 13 | 0 | 0 | 0 | 103 | ST-103 complex | 0.000 | 0.000 | 0.072 | No | No | No | No |
| M15 240056 | 2014/15 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.001 | 0.000 | 0.147 | No | No | No | No |
| M15 240060 | 2014/15 | none | 10 | 1\_13 | 24 | 0 | 0 | 0 | 11476 | unassigned | 0.018 | 0.000 | 0.142 | Yes | No | No | No |
| M15 240063 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.022 | 0.000 | 0.407 | Yes | No | Yes | Yes |
| M15 240065 | 2014/15 | none | 16 | 2\_21 | 3 | 19 | NadA-1 | 100 | 1096 | ST-32 complex | 0.000 | 0.001 | 0.666 | No | No | Yes | No |
| M15 240067 | 2014/15 | none | 14 | 1\_4 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.077 | 0.000 | 0.063 | Yes | No | No | No |
| M15 240069 | 2014/15 | none | 16 | 1\_13 | 3 | 19 | NadA-1 | 100 | 1096 | ST-32 complex | 0.029 | 0.001 | 0.231 | Yes | No | No | No |
| M15 240071 | 2014/15 | none | 4 | 1\_13 | 2 | 0 | 0 | 0 | 11477 | ST-41/44 complex | 0.010 | 0.000 | 0.574 | No | No | Yes | Yes |
| M15 240075 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.060 | 0.000 | 0.690 | Yes | No | Yes | Yes |
| M15 240084 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.119 | No | No | No | No |
| M15 240087 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.037 | 0.000 | 0.411 | Yes | No | Yes | No |
| M15 240088 | 2014/15 | none | 23 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.022 | 0.000 | 0.305 | Yes | No | Yes | No |
| M15 240090 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.010 | 0.000 | 0.075 | No | No | No | No |
| M15 240092 | 2014/15 | none | 14 | 3\_45 | 810 | 12 | NadA-4/5 | 0 | 11488 | ST-213 complex | 0.001 | 0.000 | 0.009 | No | No | No | No |
| M15 240096 | 2014/15 | none | 4 | 1\_4 | 190 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.059 | 0.000 | 0.093 | Yes | No | No | Yes |
| M15 240103 | 2014/15 | none | 13-9 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.002 | 0.000 | 0.075 | No | No | No | No |
| M15 240106 | 2014/15 | none | 1 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.042 | 0.000 | 0.133 | Yes | No | No | No |
| M15 240109 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.016 | 0.000 | 0.258 | Yes | No | No | No |
| M15 240110 | 2014/15 | none | 4 | 2\_21 | 20 | 0 | 0 | 0 | 11478 | ST-162 complex | 0.002 | 0.000 | 0.376 | No | No | Yes | Yes |
| M15 240111 | 2014/15 | none | 14 | 1\_256 | 18 | 34 | NadA-4/5 | 0 | 11479 | ST-213 complex | 0.057 | 0.000 | 0.033 | Yes | No | No | No |
| M15 240113 | 2014/15 | none | 15 | 1\_1 | 463 | 1 | NadA-1 | 1 | 8956 | ST-32 complex | 0.840 | 0.006 | 0.252 | Yes | No | No | No |
| M15 240118 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.059 | 0.000 | 0.337 | Yes | No | Yes | Yes |
| M15 240120 | 2014/15 | none | 14 | 3\_45 | 18 | 12 | NadA-4/5 | 0 | 2100 | ST-213 complex | 0.002 | 0.000 | 0.012 | No | No | No | No |
| M15 240121 | 2014/15 | none | 23-2 | 3\_141 | 801 | 0 | 0 | 0 | 1052 | unassigned | 0.004 | 0.000 | 0.103 | No | No | No | No |
| M15 240122 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.015 | 0.000 | 0.271 | Yes | No | No | No |
| M15 240133 | 2014/15 | none | 2 | 1\_13 | 24 | 0 | 0 | 0 | 60 | ST-60 complex | 0.017 | 0.000 | 0.190 | Yes | No | No | No |
| M15 240135 | 2014/15 | none | 16-28 | 2\_24 | 10 | 0 | 0 | 0 | 6135 | ST-41/44 complex | 0.001 | 0.000 | 0.182 | No | No | No | No |
| M15 240139 | 2014/15 | none | 16-20 | 1\_456 | 29 | 0 | 0 | 0 | 863 | unassigned | 0.012 | 0.000 | 0.138 | No | No | No | No |
| M15 240140 | 2014/15 | none | 14 | 3\_45 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.000 | 0.070 | No | No | No | No |
| M15 240142 | 2014/15 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 1.005 | 0.005 | 0.041 | Yes | No | No | No |
| M15 240145 | 2014/15 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.000 | 0.115 | No | No | No | No |
| M15 240149 | 2014/15 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.002 | 0.000 | 0.180 | No | No | No | No |
| M15 240150 | 2014/15 | none | 14-32 | 3\_45 | 807 | 34 | NadA-4/5 | 0 | 3282 | ST-213 complex | 0.001 | 0.000 | 0.034 | No | No | No | No |
| M15 240154 | 2014/15 | none | 30 | 1\_220 | 21 | 0 | 0 | 0 | 1764 | ST-35 complex | 0.026 | 0.000 | 0.368 | Yes | No | Yes | No |
| M15 240155 | 2014/15 | none | 30-5 | 1\_4 | 7 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.060 | 0.000 | 0.086 | Yes | No | No | No |
| M15 240159 | 2014/15 | none | 4 | 1\_4 | 111 | 0 | 0 | 0 | 4971 | ST-41/44 complex | 0.044 | 0.000 | 0.106 | Yes | No | No | Yes |
| M15 240168 | 2014/15 | none | 14-6 | 1\_215 | 122 | 0 | 0 | 0 | 11480 | unassigned | 0.073 | 0.000 | 0.049 | Yes | No | No | No |
| M15 240169 | 2014/15 | none | 2-2 | 3\_30 | 21 | 0 | 0 | 0 | 1214 | ST-269 complex | 0.000 | 0.000 | 0.229 | No | No | No | No |
| M15 240171 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.035 | 0.000 | 0.836 | Yes | No | Yes | Yes |
| M15 240175 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.026 | 0.000 | 0.149 | Yes | No | No | No |
| M15 240176 | 2014/15 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.407 | Yes | No | Yes | No |
| M15 240178 | 2014/15 | none | 28 | 2\_24 | 29 | 0 | 0 | 0 | 11481 | ST-35 complex | 0.002 | 0.000 | 0.142 | No | No | No | No |
| M15 240180 | 2014/15 | none | 14 | 1\_700 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.026 | 0.000 | 0.287 | Yes | No | No | No |
| M15 240182 | 2014/15 | none | 23 | 1\_15 | 21 | 0 | 0 | 0 | 467 | ST-269 complex | 0.015 | 0.000 | 0.196 | Yes | No | No | No |
| M15 240183 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.015 | 0.000 | 0.254 | Yes | No | No | Yes |
| M15 240196 | 2014/15 | none | 25-1 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.012 | 0.000 | 0.270 | No | No | No | No |
| M15 240201 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 154 | ST-41/44 complex | 0.054 | 0.000 | 0.494 | Yes | No | Yes | Yes |
| M15 240203 | 2014/15 | none | 34 | 2\_101 | 367 | 0 | 0 | 0 | 11482 | ST-364 complex | 0.000 | 0.000 | 0.096 | No | No | No | No |
| M15 240206 | 2014/15 | none | 14 | 2\_19 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.000 | 0.000 | 0.037 | No | No | No | No |
| M15 240208 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1991 | ST-269 complex | 0.017 | 0.000 | 0.110 | Yes | No | No | No |
| M15 240209 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.044 | 0.000 | 0.598 | Yes | No | Yes | No |
| M15 240213 | 2014/15 | none | 14 | 3\_45 | 18 | broken | NadA-4/5 | NK | 213 | ST-213 complex | 0.000 | 0.000 | 0.035 | No | No | No | No |
| M15 240215 | 2014/15 | none | 14 | 3\_354 | 18 | 38 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.000 | 0.000 | 0.012 | No | No | No | No |
| M15 240219 | 2014/15 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.000 | 0.000 | 0.140 | No | No | No | No |
| M15 240220 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.056 | 0.000 | 0.671 | Yes | No | Yes | Yes |
| M15 240226 | 2014/15 | none | 14 | 2\_16 | 21 | 0 | 0 | 0 | 35 | ST-35 complex | 0.002 | 0.000 | 0.192 | No | No | No | No |
| M15 240229 | 2014/15 | none | 14 | 2\_16 | 21 | 0 | 0 | 0 | 5815 | ST-35 complex | 0.002 | 0.000 | 0.462 | No | No | Yes | No |
| M15 240231 | 2014/15 | none | 14 | 3\_59 | 18 | 34 | NadA-4/5 | 0 | 11871 | ST-213 complex | 0.001 | 0.000 | 0.059 | No | No | No | No |
| M15 240232 | 2014/15 | none | 4 | 1\_4 | 190 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.040 | 0.000 | 0.143 | Yes | No | No | Yes |
| M15 240233 | 2014/15 | none | 15 | 1\_1 | 120 | 0 | 0 | 0 | 749 | ST-32 complex | 1.066 | 0.000 | 0.040 | Yes | No | No | No |
| M15 240236 | 2014/15 | none | 2-2 | 2/3\_891 | 21 | 0 | 0 | 0 | 457 | ST-35 complex | 0.001 | 0.000 | 0.158 | No | No | No | No |
| M15 240240 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.020 | 0.000 | 0.158 | Yes | No | No | No |
| M15 240241 | 2014/15 | none | 3-5 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.017 | 0.000 | 0.320 | Yes | No | Yes | No |
| M15 240252 | 2014/15 | none | 2 | 2\_16 | 802 | 0 | 0 | 0 | 11872 | ST-35 complex | 0.002 | 0.000 | 0.194 | No | No | No | No |
| M15 240253 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.015 | 0.000 | 0.110 | Yes | No | No | No |
| M15 240259 | 2014/15 | none | 10-8 | 1\_2 | 21 | 0 | 0 | 0 | 479 | ST-269 complex | 0.337 | 0.000 | 0.288 | Yes | No | No | No |
| M15 240262 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.060 | 0.000 | 0.770 | Yes | No | Yes | Yes |
| M15 240270 | 2014/15 | none | 9 | 1\_13 | 24 | 0 | 0 | 0 | 11483 | unassigned | 0.018 | 0.000 | 0.097 | Yes | No | No | No |
| M15 240273 | 2014/15 | none | 14-6 | 1\_318 | 122 | 0 | 0 | 0 | 11889 | unassigned | 0.073 | 0.000 | 0.088 | Yes | No | No | No |
| M15 240276 | 2014/15 | none | 14 | 3\_499 | 18 | broken | NadA-4/5 | NK | 213 | ST-213 complex | 0.002 | 0.000 | 0.081 | No | No | No | No |
| M15 240279 | 2014/15 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 1.017 | 0.006 | 0.043 | Yes | No | No | No |
| M15 240281 | 2014/15 | none | 14 | 1\_13 | 101 | 186 | NadA-2/3 | 146 | 7622 | unassigned | 0.013 | 0.079 | 0.109 | Yes | Yes | No | No |
| M15 240286 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.148 | No | No | No | No |
| M15 240289 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.030 | 0.000 | 0.789 | Yes | No | Yes | Yes |
| M15 240296 | 2014/15 | none | 1 | 1\_14 | 30 | 109 | NadA-4/5 | 21 | 1345 | unassigned | 0.028 | 0.000 | 0.070 | Yes | No | No | No |
| M15 240297 | 2014/15 | none | 9 | 1\_327 | 17 | 0 | 0 | 0 | 11484 | ST-269 complex | 0.017 | 0.000 | 0.198 | Yes | No | No | No |
| M15 240302 | 2014/15 | none | 14 | 1\_125 | 18 | 138 | NadA-4/5 | 0 | 11485 | ST-213 complex | 0.026 | 0.000 | 0.032 | Yes | No | No | No |
| M15 240304 | 2014/15 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 1.078 | 0.007 | 0.039 | Yes | No | No | No |
| M15 240307 | 2014/15 | none | 14 | 1\_37 | 6 | 0 | 0 | 0 | 11486 | unassigned | 0.049 | 0.000 | 0.111 | Yes | No | No | No |
| M15 240312 | 2014/15 | none | 34 | 2\_19 | 2 | 0 | 0 | 0 | 11873 | ST-41/44 complex | 0.002 | 0.000 | 0.451 | No | No | Yes | No |
| M15 240313 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 10696 | ST-41/44 complex | 0.034 | 0.000 | 0.696 | Yes | No | Yes | Yes |
| M15 240321 | 2014/15 | none | 9 | 1\_110 | 17 | 0 | 0 | 0 | 8616 | ST-269 complex | 0.402 | 0.000 | 0.202 | Yes | No | No | No |
| M15 240322 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.033 | 0.000 | 0.822 | Yes | No | Yes | No |
| M15 240323 | 2014/15 | none | 28 | 2\_95 | 29 | 0 | 0 | 0 | 2380 | ST-35 complex | 0.001 | 0.000 | 0.113 | No | No | No | No |
| M15 240325 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.009 | 0.000 | 0.068 | No | No | No | No |
| M15 240328 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 8511 | ST-41/44 complex | 0.038 | 0.000 | 0.659 | Yes | No | Yes | Yes |
| M15 240333 | 2014/15 | none | 9-5 | 1\_4 | 2 | 0 | 0 | 0 | 11874 | ST-41/44 complex | 0.048 | 0.000 | 0.496 | Yes | No | Yes | No |
| M15 240335 | 2014/15 | none | 14 | 3\_31 | 18 | 34 | NadA-4/5 | 0 | 11489 | ST-213 complex | 0.001 | 0.000 | 0.055 | No | No | No | No |
| M15 240337 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 154 | ST-41/44 complex | 0.048 | 0.000 | 0.848 | Yes | No | Yes | Yes |
| M15 240356 | 2014/15 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.022 | 0.000 | 0.657 | Yes | No | Yes | Yes |
| M15 240357 | 2014/15 | none | 4 | 1\_4 | 762 | 0 | 0 | 0 | 11893 | ST-41/44 complex | 0.051 | 0.000 | 0.170 | Yes | No | No | Yes |
| M15 240373 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.181 | No | No | No | No |
| M15 240379 | 2014/15 | none | 13 | 1\_291 | 21 | 0 | 0 | 0 | 1575 | unassigned | 0.035 | 0.000 | 0.472 | Yes | No | Yes | No |
| M15 240385 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 3529 | ST-269 complex | 0.015 | 0.000 | 0.259 | Yes | No | No | No |
| M15 240386 | 2014/15 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.000 | 0.000 | 0.210 | No | No | No | No |
| M15 240388 | 2014/15 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 11876 | ST-461 complex | 0.002 | 0.000 | 0.187 | No | No | No | No |
| M15 240423 | 2014/15 | none | 14 | 3\_536 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.000 | 0.000 | 0.373 | No | No | Yes | No |
| M15 240424 | 2014/15 | none | 2-2 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.012 | 0.000 | 0.259 | No | No | No | No |
| M15 240425 | 2014/15 | none | 15 | 2\_16 | 3 | 1 | NadA-1 | 1 | 8758 | ST-32 complex | 0.002 | 0.005 | 0.129 | No | No | No | No |
| M15 240437 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.202 | No | No | No | No |
| M15 240439 | 2014/15 | none | 1 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.042 | 0.000 | 0.469 | Yes | No | Yes | No |
| M15 240443 | 2014/15 | none | 13-29 | 1\_13 | 803 | 0 | 0 | 0 | 3192 | unassigned | 0.011 | 0.000 | 0.167 | No | No | No | No |
| M15 240446 | 2014/15 | none | 14 | 2\_16 | 21 | 0 | 0 | 0 | 35 | ST-35 complex | 0.000 | 0.000 | 0.169 | No | No | No | No |
| M15 240459 | 2014/15 | none | 14 | 3\_45 | 2 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.098 | No | No | No | No |
| M15 240460 | 2014/15 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.046 | No | No | No | No |
| M15 240463 | 2014/15 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.000 | 0.000 | 0.146 | No | No | No | No |
| M15 240466 | 2014/15 | none | 15-11 | 1\_622 | 191 | 0 | 0 | 0 | 1791 | ST-269 complex | 0.009 | 0.000 | 0.038 | No | No | No | No |
| M15 240468 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 4713 | unassigned | 0.007 | 0.000 | 0.143 | No | No | No | No |
| M15 240472 | 2014/15 | none | 9 | 2\_19 | 112 | 0 | 0 | 0 | 7746 | ST-41/44 complex | 0.000 | 0.000 | 0.080 | No | No | No | No |
| M15 240474 | 2014/15 | none | 4 | 1\_14 | 173 | 0 | 0 | 0 | 2203 | ST-41/44 complex | 0.021 | 0.000 | 0.082 | Yes | No | No | Yes |
| M15 240476 | 2014/15 | none | 26 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.012 | 0.000 | 0.166 | No | No | No | No |
| M15 240497 | 2014/15 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.050 | 0.000 | 1.008 | Yes | No | Yes | No |
| M15 240499 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 11227 | ST-41/44 complex | 0.059 | 0.000 | 1.573 | Yes | No | Yes | Yes |
| M15 240514 | 2014/15 | none | 3 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.044 | 0.000 | 0.786 | Yes | No | Yes | No |
| M15 240541 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.014 | 0.000 | 0.172 | Yes | No | No | No |
| M15 240552 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.060 | 0.000 | 0.835 | Yes | No | Yes | Yes |
| M15 240570 | 2014/15 | none | 14 | 1\_15 | 21 | 0 | 0 | 0 | 11492 | ST-269 complex | 0.014 | 0.000 | 0.340 | Yes | No | Yes | No |
| M15 240573 | 2014/15 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.037 | 0.000 | 1.019 | Yes | No | Yes | No |
| M15 240574 | 2014/15 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 0.860 | 0.005 | 0.065 | Yes | No | No | No |
| M15 240602 | 2014/15 | none | 4 | 3\_894 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.002 | 0.000 | 0.503 | No | No | Yes | Yes |
| M15 240625 | 2014/15 | none | 16 | 1\_4 | 558 | 0 | 0 | 0 | 11752 | unassigned | 0.063 | 0.000 | 0.027 | Yes | No | No | No |
| M15 240634 | 2014/15 | none | 2-2 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.010 | 0.000 | 0.329 | No | No | Yes | No |
| M15 240636 | 2014/15 | none | 15 | 2\_19 | 2 | 0 | 0 | 0 | 11753 | ST-41/44 complex | 0.003 | 0.000 | 0.810 | No | No | Yes | No |
| M15 240637 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.059 | 0.000 | 0.528 | Yes | No | Yes | Yes |
| M15 240641 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 4713 | unassigned | 0.012 | 0.000 | 0.158 | No | No | No | No |
| M15 240650 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1049 | ST-269 complex | 0.016 | 0.000 | 0.224 | Yes | No | No | No |
| M15 240652 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 5357 | ST-41/44 complex | 0.058 | 0.000 | 1.129 | Yes | No | Yes | Yes |
| M15 240698 | 2014/15 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.013 | 0.000 | 0.093 | Yes | No | No | No |
| M15 240701 | 2014/15 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.017 | 0.000 | 0.363 | Yes | No | Yes | No |
| M15 240703 | 2014/15 | none | 9 | 2\_19 | 2 | 0 | 0 | 0 | 11755 | ST-269 complex | 0.002 | 0.000 | 0.670 | No | No | Yes | No |
| M15 240717 | 2014/15 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 0.790 | 0.006 | 0.037 | Yes | No | No | No |
| M15 240719 | 2014/15 | none | 15 | 1\_1 | 3 | 1 | NadA-1 | 1 | 5682 | ST-32 complex | 0.105 | 0.005 | 0.156 | Yes | No | No | No |
| M15 240724 | 2014/15 | none | 1 | 2\_19 | 1 | 0 | 0 | 0 | 337 | ST-41/44 complex | 0.001 | 0.000 | 0.417 | No | No | Yes | No |
| M15 240727 | 2014/15 | none | 4 | 1\_4 | 865 | 0 | 0 | 0 | 303 | ST-41/44 complex | 0.119 | 0.000 | 0.219 | Yes | No | No | Yes |
| M15 240729 | 2014/15 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 1788 | ST-41/44 complex | 0.041 | 0.000 | 0.251 | Yes | No | No | Yes |
| M15 240737 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.043 | 0.000 | 0.550 | Yes | No | Yes | No |
| M15 240738 | 2015/16 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.002 | 0.000 | 0.140 | No | No | No | No |
| M15 240743 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.083 | 0.000 | 0.869 | Yes | No | Yes | Yes |
| M15 240744 | 2015/16 | none | 25-1 | 1\_2 | 10 | 0 | 0 | 0 | 479 | ST-269 complex | 0.405 | 0.000 | 0.521 | Yes | No | Yes | No |
| M15 240745 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 9544 | ST-41/44 complex | 0.062 | 0.000 | 0.465 | Yes | No | Yes | Yes |
| M15 240747 | 2015/16 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 1.146 | 0.008 | 0.041 | Yes | No | No | No |
| M15 240748 | 2015/16 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.530 | Yes | No | Yes | No |
| M15 240757 | 2015/16 | none | 3 | 2\_16 | 20 | 0 | 0 | 0 | 1617 | ST-22 complex | 0.001 | 0.000 | 0.382 | No | No | Yes | No |
| M15 240758 | 2015/16 | none | 1 | 1\_14 | 30 | 109 | NadA-4/5 | 21 | 1345 | unassigned | 0.039 | 0.000 | 0.074 | Yes | No | No | No |
| M15 240760 | 2015/16 | none | 4 | 1\_15 | 21 | 0 | 0 | 0 | 11238 | ST-269 complex | 0.018 | 0.000 | 0.233 | Yes | No | No | Yes |
| M15 240763 | 2015/16 | none | 2-2 | 2\_16 | 306 | 0 | 0 | 0 | 9088 | unassigned | 0.000 | 0.000 | 0.053 | No | No | No | No |
| M15 240767 | 2015/16 | none | 16-26 | 2\_21 | 47 | 0 | 0 | 0 | 11756 | ST-32 complex | 0.004 | 0.000 | 0.179 | No | No | No | No |
| M15 240770 | 2015/16 | none | 4 | 1\_510 | 29 | 310 | NK | 0 | 32 | ST-32 complex | 0.039 | 0.000 | 0.134 | Yes | No | No | Yes |
| M15 240772 | 2015/16 | none | 14 | 3\_740 | 18 | 34 | NadA-4/5 | 0 | 8955 | ST-213 complex | 0.001 | 0.000 | 0.049 | No | No | No | No |
| M15 240773 | 2015/16 | none | 14 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.012 | 0.000 | 0.188 | No | No | No | No |
| M15 240775 | 2015/16 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.066 | 0.000 | 0.501 | Yes | No | Yes | No |
| M15 240781 | 2015/16 | none | 10-26 | 1\_1 | 24 | 0 | 0 | 0 | 11757 | unassigned | 0.891 | 0.000 | 0.138 | Yes | No | No | No |
| M15 240783 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.040 | No | No | No | No |
| M15 240784 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.048 | 0.000 | 0.277 | Yes | No | No | Yes |
| M15 240786 | 2015/16 | none | 4 | 2\_25 | 760 | 0 | 0 | 0 | 10269 | ST-41/44 complex | 0.001 | 0.000 | 0.188 | No | No | No | Yes |
| M15 240793 | 2015/16 | none | 34 | 2\_19 | 2 | 0 | 0 | 0 | 409 | ST-41/44 complex | 0.000 | 0.000 | 0.435 | No | No | Yes | No |
| M15 240799 | 2015/16 | none | 16 | 1\_4 | 558 | 0 | 0 | 0 | 4051 | unassigned | 0.063 | 0.000 | 0.034 | Yes | No | No | No |
| M15 240802 | 2015/16 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.128 | 0.003 | 0.064 | Yes | No | No | No |
| M15 240805 | 2015/16 | none | 14 | 3\_185 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.074 | No | No | No | No |
| M15 240806 | 2015/16 | none | 3 | 1\_245 | 12 | 0 | 0 | 0 | 11758 | unassigned | 0.670 | 0.000 | 0.142 | Yes | No | No | No |
| M15 240821 | 2015/16 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.001 | 0.000 | 0.123 | No | No | No | No |
| M15 240835 | 2015/16 | none | 23 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.016 | 0.000 | 0.274 | Yes | No | No | No |
| M15 240846 | 2015/16 | none | 16 | 2\_21 | 3 | 19 | NadA-1 | 100 | 1096 | ST-32 complex | 0.003 | 0.000 | 0.540 | No | No | Yes | No |
| M15 240849 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 5440 | ST-41/44 complex | 0.090 | 0.000 | 0.568 | Yes | No | Yes | Yes |
| M15 240853 | 2015/16 | none | 14 | 3\_45 | 18 | broken | NadA-4/5 | NK | 9194 | ST-213 complex | 0.001 | 0.000 | 0.054 | No | No | No | No |
| M15 240854 | 2015/16 | none | 14 | 1\_13 | 18 | 34 | NadA-4/5 | 0 | 11880 | ST-213 complex | 0.019 | 0.000 | 0.042 | Yes | No | No | No |
| M15 240855 | 2015/16 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.690 | 0.007 | 0.043 | Yes | No | No | No |
| M15 240857 | 2015/16 | none | 13-1 | 3\_316 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.002 | 0.000 | 0.164 | No | No | No | No |
| M15 240859 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.011 | 0.000 | 0.148 | No | No | No | No |
| M15 240861 | 2015/16 | none | 2 | 2\_22 | 29 | 5 | NadA-2/3 | 6 | 10651 | ST-11 complex | 0.000 | 0.950 | 0.095 | No | Yes | No | No |
| M15 240863 | 2015/16 | none | 15 | 2\_16 | 145 | 0 | 0 | 0 | 457 | ST-35 complex | 0.001 | 0.000 | 0.178 | No | No | No | No |
| M15 240868 | 2015/16 | none | 4 | 1\_4 | 58 | 0 | 0 | 0 | 303 | ST-41/44 complex | 0.042 | 0.000 | 0.032 | Yes | No | No | Yes |
| M15 240869 | 2015/16 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.028 | 0.000 | 0.323 | Yes | No | Yes | No |
| M15 240877 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.039 | 0.000 | 0.583 | Yes | No | Yes | No |
| M15 240881 | 2015/16 | 1 | 34 | 2\_19 | 2 | 0 | 0 | 0 | 6058 | ST-41/44 complex | 0.001 | 0.000 | 0.410 | No | No | Yes | No |
| M15 240883 | 2015/16 | none | 16 | 1\_4 | 884 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.030 | 0.000 | 0.053 | Yes | No | No | No |
| M15 240886 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 4713 | unassigned | 0.010 | 0.000 | 0.136 | No | No | No | No |
| M15 240892 | 2015/16 | none | 10-4 | 3\_401 | 3 | 19 | NadA-1 | 100 | 11917 | ST-32 complex | 0.000 | 0.000 | 0.341 | No | No | Yes | No |
| M15 240897 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.015 | 0.000 | 0.119 | Yes | No | No | No |
| M15 240899 | 2015/16 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 4224 | ST-213 complex | 0.002 | 0.000 | 0.063 | No | No | No | No |
| M15 240901 | 2015/16 | none | 4 | 1\_13 | 17 | 0 | 0 | 0 | 5849 | unassigned | 0.013 | 0.000 | 0.232 | Yes | No | No | Yes |
| M15 240902 | 2015/16 | none | 4 | 1\_4 | 10 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.058 | 0.000 | 0.303 | Yes | No | Yes | Yes |
| M15 240912 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.153 | No | No | No | No |
| M15 240917 | 2015/16 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.051 | No | No | No | No |
| M15 240920 | 2015/16 | none | 13-9 | 1\_110 | 2 | 0 | 0 | 0 | 2713 | ST-41/44 complex | 0.275 | 0.000 | 0.582 | Yes | No | Yes | No |
| M15 240923 | 2015/16 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.059 | 0.000 | 0.930 | Yes | No | Yes | No |
| M15 240924 | 2015/16 | 1 | 9 | 2\_19 | 2 | 0 | 0 | 0 | 11755 | ST-269 complex | 0.001 | 0.000 | 0.568 | No | No | Yes | No |
| M15 240925 | 2015/16 | none | 4 | 1\_14 | 471 | 0 | 0 | 0 | 482 | ST-41/44 complex | 0.015 | 0.000 | 0.144 | Yes | No | No | Yes |
| M15 240929 | 2015/16 | none | 1 | 1\_510 | 29 | 1 | NadA-1 | 1 | 7460 | ST-32 complex | 0.015 | 0.003 | 0.109 | Yes | No | No | No |
| M15 240930 | 2015/16 | none | 1 | 1\_510 | 29 | 1 | NadA-1 | 1 | 7460 | ST-32 complex | 0.021 | 0.007 | 0.137 | Yes | No | No | No |
| M15 240931 | 2015/16 | none | 34 | 3\_339 | 2 | 0 | 0 | 0 | 6058 | ST-41/44 complex | 0.001 | 0.000 | 0.480 | No | No | Yes | No |
| M15 240933 | 2015/16 | none | 25 | 1\_100 | 649 | 0 | 0 | 0 | 6359 | ST-41/44 complex | 0.191 | 0.000 | 0.177 | Yes | No | No | No |
| M15 240934 | 2015/16 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1049 | ST-269 complex | 0.014 | 0.000 | 0.249 | Yes | No | No | No |
| M15 240939 | 2015/16 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 5534 | ST-41/44 complex | 0.035 | 0.000 | 0.371 | Yes | No | Yes | No |
| M15 240947 | 2015/16 | none | 13-2 | 3\_47 | 197 | 0 | 0 | 0 | 461 | ST-461 complex | 0.002 | 0.000 | 0.065 | No | No | No | No |
| M15 240969 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.038 | 0.000 | 0.067 | Yes | No | No | No |
| M15 240973 | 2015/16 | none | 4 | 1\_4 | 607 | 0 | 0 | 0 | 154 | ST-41/44 complex | 0.058 | 0.000 | 0.399 | Yes | No | Yes | Yes |
| M15 240977 | 2015/16 | none | 14 | 3\_930 | 18 | 34 | NadA-4/5 | 0 | 2101 | ST-213 complex | 0.001 | 0.000 | 0.080 | No | No | No | No |
| M15 240979 | 2015/16 | none | 2 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.039 | 0.000 | 0.781 | Yes | No | Yes | No |
| M15 240980 | 2015/16 | none | 4 | 2\_21 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.001 | 0.000 | 0.215 | No | No | No | Yes |
| M15 240984 | 2015/16 | none | 16 | 1\_13 | 25 | 0 | 0 | 0 | 11919 | ST-60 complex | 0.013 | 0.000 | 0.060 | Yes | No | No | No |
| M15 240986 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.063 | 0.000 | 0.935 | Yes | No | Yes | Yes |
| M15 240990 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.029 | 0.000 | 0.533 | Yes | No | Yes | No |
| M15 240991 | 2015/16 | none | 2 | 3\_160 | 24 | 0 | 0 | 0 | 60 | ST-60 complex | 0.002 | 0.000 | 0.123 | No | No | No | No |
| M15 240996 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.053 | 0.000 | 0.639 | Yes | No | Yes | No |
| M16 240007 | 2015/16 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 12173 | ST-41/44 complex | 0.053 | 0.000 | 0.749 | Yes | No | Yes | No |
| M16 240019 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.013 | 0.000 | 0.106 | Yes | No | No | No |
| M16 240033 | 2015/16 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1791 | ST-269 complex | 0.015 | 0.000 | 0.277 | Yes | No | No | No |
| M16 240036 | 2015/16 | none | 13-1 | 1\_215 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.078 | 0.000 | 0.144 | Yes | No | No | No |
| M16 240042 | 2015/16 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 1.092 | 0.010 | 0.030 | Yes | Yes | No | No |
| M16 240044 | 2015/16 | none | 13-1 | 1\_1 | 3 | 1 | NadA-1 | 1 | 1098 | ST-32 complex | 1.056 | 0.007 | 0.158 | Yes | No | No | No |
| M16 240045 | 2015/16 | none | 9 | 1\_13 | 58 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.014 | 0.000 | 0.023 | Yes | No | No | No |
| M16 240046 | 2015/16 | none | 4 | 1\_4 | 29 | 0 | 0 | 0 | 303 | ST-41/44 complex | 0.042 | 0.000 | 0.100 | Yes | No | No | Yes |
| M16 240049 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.039 | 0.000 | 0.476 | Yes | No | Yes | No |
| M16 240056 | 2015/16 | none | 9 | 1\_14 | 17 | 0 | 0 | 0 | 12017 | unassigned | 0.021 | 0.000 | 0.130 | Yes | No | No | No |
| M16 240058 | 2015/16 | none | 14 | 1\_13 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.018 | 0.000 | 0.072 | Yes | No | No | No |
| M16 240059 | 2015/16 | none | 10-1 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.050 | 0.000 | 0.087 | Yes | No | No | No |
| M16 240061 | 2015/16 | none | 15-11 | 1\_622 | 191 | 0 | 0 | 0 | 1791 | ST-269 complex | 0.010 | 0.000 | 0.029 | No | No | No | No |
| M16 240071 | 2015/16 | none | 30 | 1\_15 | 21 | 0 | 0 | 0 | 11466 | ST-269 complex | 0.022 | 0.000 | 0.327 | Yes | No | Yes | No |
| M16 240076 | 2015/16 | none | 25-1 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.014 | 0.000 | 0.323 | Yes | No | Yes | No |
| M16 240085 | 2015/16 | 1 | 14 | 3\_30 | 29 | 39 | NadA-4/5 | 0 | 9194 | ST-213 complex | 0.002 | 0.000 | 0.102 | No | No | No | No |
| M16 240087 | 2015/16 | none | 4 | 1\_86 | 2 | 0 | 0 | 0 | 8988 | unassigned | 0.003 | 0.000 | 0.523 | No | No | Yes | Yes |
| M16 240089 | 2015/16 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.067 | No | No | No | No |
| M16 240091 | 2015/16 | 1 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.016 | 0.000 | 0.183 | Yes | No | No | No |
| M16 240113 | 2015/16 | none | 30 | 1\_15 | 21 | 0 | 0 | 0 | 2166 | ST-269 complex | 0.019 | 0.000 | 0.335 | Yes | No | Yes | No |
| M16 240119 | 2015/16 | none | 16 | 2\_19 | 47 | 0 | 0 | 0 | 8273 | unassigned | 0.001 | 0.000 | 0.100 | No | No | No | No |
| M16 240121 | 2015/16 | 1 | 9 | 1\_13 | 184 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.013 | 0.000 | 0.079 | Yes | No | No | No |
| M16 240124 | 2015/16 | none | 16 | 1\_456 | 3 | 19 | NadA-1 | 100 | 1096 | ST-32 complex | 0.011 | 0.000 | 0.203 | No | No | No | No |
| M16 240125 | 2015/16 | none | 13-1 | 1\_110 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.422 | 0.000 | 0.135 | Yes | No | No | No |
| M16 240127 | 2015/16 | none | 34 | 2\_19 | 2 | 0 | 0 | 0 | 6058 | ST-41/44 complex | 0.000 | 0.000 | 0.663 | No | No | Yes | No |
| M16 240130 | 2015/16 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 12011 | ST-213 complex | 0.001 | 0.000 | 0.063 | No | No | No | No |
| M16 240135 | 2015/16 | none | 9 | 2\_19 | 112 | 0 | 0 | 0 | 571 | ST-41/44 complex | 0.002 | 0.000 | 0.084 | No | No | No | No |
| M16 240145 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.013 | 0.000 | 0.140 | Yes | No | No | No |
| M16 240146 | 2015/16 | 1 | 13-1 | 1\_14 | 24 | 0 | 0 | 0 | 1111 | unassigned | 0.020 | 0.000 | 0.162 | Yes | No | No | No |
| M16 240149 | 2015/16 | none | 14 | 1\_257 | 18 | 0 | 0 | 0 | 213 | ST-213 complex | 0.077 | 0.000 | 0.022 | Yes | No | No | No |
| M16 240150 | 2015/16 | 1 | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 12174 | ST-461 complex | 0.002 | 0.000 | 0.187 | No | No | No | No |
| M16 240156 | 2015/16 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.048 | 0.000 | 0.422 | Yes | No | Yes | No |
| M16 240157 | 2015/16 | none | 4 | 1\_215 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.052 | 0.000 | 0.156 | Yes | No | No | Yes |
| M16 240159 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.018 | 0.000 | 0.078 | Yes | No | No | No |
| M16 240162 | 2015/16 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.057 | 0.000 | 0.392 | Yes | No | Yes | No |
| M16 240175 | 2015/16 | 2 | 30-11 | 1\_510 | 29 | 1 | NadA-1 | 1 | 12177 | ST-32 complex | 0.024 | 0.008 | 0.173 | Yes | No | No | No |
| M16 240176 | 2015/16 | none | 14 | 2\_102 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.003 | 0.000 | 0.073 | No | No | No | No |
| M16 240178 | 2015/16 | none | 4-1 | 1\_14 | 251 | 0 | 0 | 0 | 1054 | unassigned | 0.020 | 0.000 | 0.043 | Yes | No | No | No |
| M16 240179 | 2015/16 | none | 14 | 1\_276 | 29 | 34 | NadA-4/5 | 0 | 12178 | ST-213 complex | 0.150 | 0.000 | 0.121 | Yes | No | No | No |
| M16 240187 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.042 | 0.000 | 0.660 | Yes | No | Yes | No |
| M16 240188 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.043 | 0.000 | 0.459 | Yes | No | Yes | No |
| M16 240199 | 2015/16 | none | 14 | 1\_13 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.025 | 0.000 | 0.085 | Yes | No | No | No |
| M16 240209 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.037 | 0.000 | 0.530 | Yes | No | Yes | No |
| M16 240210 | 2015/16 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.045 | 0.000 | 0.509 | Yes | No | Yes | No |
| M16 240211 | 2015/16 | none | 1 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.027 | 0.000 | 0.623 | Yes | No | Yes | No |
| M16 240212 | 2015/16 | 1 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.015 | 0.000 | 0.151 | Yes | No | No | No |
| M16 240215 | 2015/16 | none | 16-26 | 1\_224 | 3 | 19 | NadA-1 | 100 | 11395 | ST-32 complex | 0.055 | 0.001 | 0.540 | Yes | No | Yes | No |
| M16 240218 | 2015/16 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.988 | 0.010 | 0.046 | Yes | Yes | No | No |
| M16 240221 | 2015/16 | none | 30-31 | 1\_1 | 255 | 1 | NadA-1 | 1 | 12345 | ST-32 complex | 0.831 | 0.005 | 0.058 | Yes | No | No | No |
| M16 240222 | 2015/16 | 1 | 15-11 | 3\_31 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.005 | 0.000 | 0.603 | No | No | Yes | No |
| M16 240225 | 2015/16 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.842 | 0.012 | 0.066 | Yes | Yes | No | No |
| M16 240229 | 2015/16 | none | 25-1 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.071 | 0.000 | 0.800 | Yes | No | Yes | No |
| M16 240230 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.048 | 0.000 | 0.893 | Yes | No | Yes | Yes |
| M16 240235 | 2015/16 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.003 | 0.000 | 0.064 | No | No | No | No |
| M16 240244 | 2015/16 | none | 16 | 1\_13 | 114 | 20 | NadA-2/3 | 0 | 1157 | ST-1157 complex | 0.012 | 0.000 | 0.046 | No | No | No | No |
| M16 240251 | 2015/16 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 354 | ST-269 complex | 0.013 | 0.000 | 0.319 | Yes | No | Yes | No |
| M16 240256 | 2015/16 | none | 25-15 | 1\_321 | 243 | 109 | NadA-4/5 | 21 | 9316 | unassigned | 0.008 | 0.000 | 0.884 | No | No | Yes | No |
| M16 240257 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.041 | 0.000 | 0.931 | Yes | No | Yes | No |
| M16 240262 | 2015/16 | none | 23-6 | 2\_683 | 255 | 0 | 0 | 0 | 269 | ST-269 complex | 0.002 | 0.000 | 0.056 | No | No | No | No |
| M16 240272 | 2015/16 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.001 | 0.000 | 0.173 | No | No | No | No |
| M16 240275 | 2015/16 | none | 4 | 1\_4 | 29 | 0 | 0 | 0 | 12215 | ST-41/44 complex | 0.029 | 0.000 | 0.089 | Yes | No | No | Yes |
| M16 240276 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.027 | 0.000 | 0.330 | Yes | No | Yes | No |
| M16 240277 | 2015/16 | none | 4 | 1\_951 | 2 | 0 | 0 | 0 | 3446 | ST-41/44 complex | 0.035 | 0.000 | 0.469 | Yes | No | Yes | Yes |
| M16 240282 | 2015/16 | 1 | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 12011 | ST-213 complex | 0.002 | 0.001 | 0.030 | No | No | No | No |
| M16 240288 | 2015/16 | none | 14 | 1\_4 | 7 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.057 | Yes | No | No | No |
| M16 240289 | 2015/16 | 2 | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.046 | 0.000 | 0.765 | Yes | No | Yes | Yes |
| M16 240292 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.086 | No | No | No | No |
| M16 240297 | 2015/16 | 1 | 14 | 3\_952 | 18 | 40 | NadA-4/5 | 0 | 2660 | ST-213 complex | 0.001 | 0.000 | 0.030 | No | No | No | No |
| M16 240299 | 2015/16 | 1 | 14 | 1\_13 | 18 | 38 | NadA-4/5 | 0 | 575 | ST-213 complex | 0.019 | 0.000 | 0.066 | Yes | No | No | No |
| M16 240301 | 2015/16 | none | 3 | 2\_16 | 20 | 0 | 0 | 0 | 12224 | ST-22 complex | 0.003 | 0.000 | 0.346 | No | No | Yes | No |
| M16 240367 | 2015/16 | 2 | 14 | 3\_953 | 29 | 0 | 0 | 0 | 8021 | ST-213 complex | 0.003 | 0.000 | 0.132 | No | No | No | No |
| M16 240369 | 2015/16 | none | 9 | 2\_19 | 942 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.002 | 0.000 | 0.125 | No | No | No | No |
| M16 240384 | 2015/16 | none | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.003 | 0.000 | 0.227 | No | No | No | No |
| M16 240385 | 2015/16 | none | 4 | 2\_21 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.002 | 0.000 | 0.587 | No | No | Yes | Yes |
| M16 240387 | 2015/16 | none | 9 | 1\_90 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.152 | 0.000 | 0.203 | Yes | No | No | No |
| M16 240390 | 2015/16 | 2 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.018 | 0.000 | 0.188 | Yes | No | No | No |
| M16 240394 | 2015/16 | none | 13 | 3\_47 | 118 | 0 | 0 | 0 | 12226 | ST-461 complex | 0.002 | 0.000 | 0.235 | No | No | No | No |
| M16 240396 | 2015/16 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1195 | ST-269 complex | 0.016 | 0.000 | 0.326 | Yes | No | Yes | No |
| M16 240398 | 2015/16 | none | 10-4 | 1\_4 | 943 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.049 | 0.000 | 0.147 | Yes | No | No | No |
| M16 240410 | 2015/16 | 2 | 10-4 | 1\_13 | 24 | 0 | 0 | 0 | 60 | ST-60 complex | 0.017 | 0.000 | 0.189 | Yes | No | No | No |
| M16 240414 | 2015/16 | none | 14 | 1\_4 | 7 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.050 | 0.000 | 0.063 | Yes | No | No | No |
| M16 240418 | 2015/16 | none | 14-6 | 1\_1 | 3 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.039 | 0.043 | 1.103 | Yes | Yes | Yes | No |
| M16 240422 | 2015/16 | 2 | 9 | 1\_954 | 17 | 0 | 0 | 0 | 4447 | ST-269 complex | 0.014 | 0.000 | 0.228 | Yes | No | No | No |
| M16 240423 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.037 | 0.000 | 0.661 | Yes | No | Yes | No |
| M16 240426 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.017 | 0.000 | 0.154 | Yes | No | No | No |
| M16 240432 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.036 | 0.000 | 0.519 | Yes | No | Yes | Yes |
| M16 240433 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.035 | 0.000 | 0.442 | Yes | No | Yes | Yes |
| M16 240436 | 2015/16 | 2 | 30 | NEG | 21 | 0 | 0 | 0 | 1867 | unassigned | N/A | 0.000 | 0.793 | No | No | Yes | No |
| M16 240437 | 2015/16 | 1 | 14 | 3\_45 | 29 | 220 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.173 | No | No | No | No |
| M16 240438 | 2015/16 | none | 4 | 1\_15 | 21 | 0 | 0 | 0 | 11238 | ST-269 complex | 0.015 | 0.000 | 0.284 | Yes | No | No | Yes |
| M16 240441 | 2015/16 | none | 16 | NEG | 21 | 0 | 0 | 0 | 1867 | unassigned | 0.005 | 0.000 | 0.594 | No | No | Yes | No |
| M16 240443 | 2015/16 | none | 9-5 | 1\_13 | 17 | 0 | 0 | 0 | 12237 | unassigned | 0.019 | 0.000 | 0.128 | Yes | No | No | No |
| M16 240450 | 2015/16 | none | 13-1 | 1\_110 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.397 | 0.000 | 0.125 | Yes | No | No | No |
| M16 240452 | 2015/16 | none | 9 | 1\_14 | 17 | 0 | 0 | 0 | 1159 | unassigned | 0.031 | 0.000 | 0.167 | Yes | No | No | No |
| M16 240493 | 2015/16 | none | 3 | 1\_260 | 17 | 0 | 0 | 0 | 5849 | unassigned | 0.020 | 0.000 | 0.145 | Yes | No | No | No |
| M16 240494 | 2015/16 | none | 10-8 | 1\_13 | 20 | 308 | NK | 0 | 11 | ST-11 complex | 0.014 | 0.000 | 0.352 | Yes | No | Yes | No |
| M16 240495 | 2015/16 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.002 | 0.000 | 0.121 | No | No | No | No |
| M16 240496 | 2015/16 | none | 14 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.014 | 0.000 | 0.301 | Yes | No | Yes | No |
| M16 240497 | 2015/16 | none | 14 | 3\_955 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.000 | 0.036 | No | No | No | No |
| M16 240501 | 2015/16 | none | 10-3 | 2\_956 | 945 | 0 | 0 | 0 | 12346 | unassigned | 0.005 | 0.000 | 0.114 | No | No | No | No |
| M16 240507 | 2015/16 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.050 | 0.000 | 0.959 | Yes | No | Yes | No |
| M16 240512 | 2015/16 | none | 4 | 1\_14 | 160 | 0 | 0 | 0 | 1403 | ST-41/44 complex | 0.024 | 0.000 | 0.079 | Yes | No | No | Yes |
| M16 240519 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.017 | 0.000 | 0.104 | Yes | No | No | No |
| M16 240520 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.014 | 0.000 | 0.209 | Yes | No | No | No |
| M16 240521 | 2015/16 | none | 4 | 3\_341 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.003 | 0.000 | 0.162 | No | No | No | Yes |
| M16 240524 | 2015/16 | none | 4 | 2\_21 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.002 | 0.000 | 0.210 | No | No | No | Yes |
| M16 240530 | 2015/16 | 2 | 4 | 1\_14 | 2 | 0 | 0 | 0 | 1788 | ST-41/44 complex | 0.016 | 0.000 | 0.808 | Yes | No | Yes | Yes |
| M16 240534 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.049 | 0.000 | 0.463 | Yes | No | Yes | Yes |
| M16 240540 | 2015/16 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.163 | No | No | No | No |
| M16 240541 | 2015/16 | none | 9 | 1\_15 | 21 | 0 | 0 | 0 | 1195 | ST-269 complex | 0.016 | 0.000 | 0.426 | Yes | No | Yes | No |
| M16 240548 | 2015/16 | none | 15 | 2\_16 | 3 | 1 | NadA-1 | 1 | 12509 | ST-32 complex | 0.003 | 0.005 | 0.389 | No | No | Yes | No |
| M16 240549 | 2015/16 | none | 13-2 | 1\_13 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.027 | 0.000 | 0.243 | Yes | No | No | No |
| M16 240566 | 2015/16 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.213 | 0.006 | 0.118 | Yes | No | No | No |
| M16 240628 | 2015/16 | none | 28 | 1\_785 | 29 | 0 | 0 | 0 | 2380 | ST-35 complex | 0.287 | 0.000 | 0.125 | Yes | No | No | No |
| M16 240631 | 2015/16 | none | 13 | 1\_1 | 3 | 1 | NadA-1 | 1 | 1098 | ST-32 complex | 1.208 | 0.008 | 0.662 | Yes | No | Yes | No |
| M16 240635 | 2015/16 | none | 23 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.003 | 0.000 | 0.105 | No | No | No | No |
| M16 240636 | 2015/16 | 1 | 16 | 3\_31 | 122 | 0 | 0 | 0 | 336 | unassigned | 0.000 | 0.000 | 0.061 | No | No | No | No |
| M16 240638 | 2015/16 | none | 14 | 1\_297 | 18 | 225 | NadA-4/5 | 0 | 3641 | ST-213 complex | 0.002 | 0.000 | 0.061 | No | No | No | No |
| M16 240640 | 2015/16 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.050 | 0.000 | 0.609 | Yes | No | Yes | Yes |
| M16 240645 | 2015/16 | none | 4 | 1\_14 | 173 | 0 | 0 | 0 | 2203 | ST-41/44 complex | 0.027 | 0.000 | 0.055 | Yes | No | No | Yes |
| M16 240647 | 2015/16 | none | 13 | 1\_110 | Ins | 0 | 0 | 0 | 1111 | unassigned | 0.415 | 0.000 | 0.005 | Yes | No | No | No |
| M16 240653 | 2015/16 | 1 | 9 | 2\_19 | 112 | 0 | 0 | 0 | 571 | ST-41/44 complex | 0.001 | 0.000 | 0.079 | No | No | No | No |
| M16 240669 | 2015/16 | none | 13-13 | 1\_979 | 949 | broken | NadA-6 | NK | 12510 | unassigned | 0.088 | 0.000 | 0.211 | Yes | No | No | No |
| M16 240670 | 2015/16 | none | 13-13 | 1\_979 | 949 | broken | NadA-6 | NK | 12510 | unassigned | 0.002 | 0.001 | 0.217 | No | No | No | No |
| M16 240671 | 2015/16 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 12512 | ST-41/44 complex | 0.000 | 0.000 | 0.424 | No | No | Yes | No |
| M16 240702 | 2016/17 | none | 10-1 | 1\_321 | 243 | 109 | NadA-4/5 | 21 | 9316 | unassigned | 0.022 | 0.000 | 1.150 | Yes | No | Yes | No |
| M16 240703 | 2016/17 | none | 30 | 1\_15 | 21 | 0 | 0 | 0 | 11466 | ST-269 complex | 0.022 | 0.000 | 0.342 | Yes | No | Yes | No |
| M16 240711 | 2016/17 | none | 4 | 1\_86 | 2 | 0 | 0 | 0 | 8988 | unassigned | 0.004 | 0.000 | 0.835 | No | No | Yes | Yes |
| M16 240713 | 2016/17 | none | 4 | 1\_14 | 1173 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.023 | 0.000 | 0.614 | Yes | No | Yes | Yes |
| M16 240720 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.029 | 0.000 | 0.594 | Yes | No | Yes | Yes |
| M16 240722 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.051 | 0.000 | 1.149 | Yes | No | Yes | No |
| M16 240728 | 2016/17 | 2 | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 12985 | ST-213 complex | 0.002 | 0.000 | 0.136 | No | No | No | No |
| M16 240730 | 2016/17 | none | 30 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.040 | 0.001 | 0.583 | Yes | No | Yes | No |
| M16 240735 | 2016/17 | none | 16 | 1\_13 | 25 | 0 | 0 | 0 | 13091 | ST-60 complex | 0.023 | 0.000 | 0.065 | Yes | No | No | No |
| M16 240737 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.259 | No | No | No | No |
| M16 240739 | 2016/17 | none | 3 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.011 | 0.000 | 0.306 | No | No | Yes | No |
| M16 240746 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.013 | 0.000 | 0.394 | Yes | No | Yes | No |
| M16 240759 | 2016/17 | none | 2 | 1\_13 | 21 | 0 | 0 | 0 | 457 | ST-35 complex | 0.014 | 0.000 | 0.207 | Yes | No | No | No |
| M16 240763 | 2016/17 | none | 16-3 | 3\_143 | 21 | 0 | 0 | 0 | 1774 | ST-269 complex | 0.000 | 0.000 | 0.393 | No | No | Yes | No |
| M16 240768 | 2016/17 | none | 1 | 1\_510 | 29 | 1 | NadA-1 | 1 | 13095 | ST-32 complex | 0.017 | 0.006 | 0.163 | Yes | No | No | No |
| M16 240770 | 2016/17 | none | 14 | 1\_90 | 29 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.038 | 0.000 | 0.289 | Yes | No | No | No |
| M16 240772 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 1475 | ST-41/44 complex | 0.015 | 0.000 | 0.530 | Yes | No | Yes | Yes |
| M16 240774 | 2016/17 | none | Deleted | 2\_16 | 24 | 307 | NK | 0 | 1162 | unassigned | 0.001 | 0.001 | 0.232 | No | No | No | No |
| M16 240778 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.040 | 0.000 | 0.582 | Yes | No | Yes | No |
| M16 240780 | 2016/17 | 1 | 30-2 | 2\_16 | 593 | 0 | 0 | 0 | 10266 | unassigned | 0.001 | 0.000 | 0.380 | No | No | Yes | No |
| M16 240782 | 2016/17 | none | 23 | 2\_19 | 31 | 0 | 0 | 0 | 1423 | ST-41/44 complex | 0.001 | 0.000 | 0.140 | No | No | No | No |
| M16 240786 | 2016/17 | none | 16 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.993 | 0.002 | 1.087 | Yes | No | Yes | No |
| M16 240788 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 1992 | ST-41/44 complex | 0.014 | 0.000 | 0.521 | Yes | No | Yes | Yes |
| M16 240789 | 2016/17 | none | 2 | 1\_13 | 24 | 0 | 0 | 0 | 4146 | ST-60 complex | 0.022 | 0.000 | 0.210 | Yes | No | No | No |
| M16 240790 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 1475 | ST-41/44 complex | 0.014 | 0.000 | 0.520 | Yes | No | Yes | Yes |
| M16 240793 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.009 | 0.000 | 0.159 | No | No | No | No |
| M16 240804 | 2016/17 | none | 10-1 | 1\_14 | 2 | 0 | 0 | 0 | 3754 | ST-41/44 complex | 0.016 | 0.000 | 0.588 | Yes | No | Yes | No |
| M16 240805 | 2016/17 | none | 15 | 3\_186 | 2 | 0 | 0 | 0 | 409 | ST-41/44 complex | 0.001 | 0.000 | 0.555 | No | No | Yes | No |
| M16 240806 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.044 | 0.000 | 0.786 | Yes | No | Yes | No |
| M16 240807 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 13094 | ST-41/44 complex | 0.047 | 0.000 | 0.571 | Yes | No | Yes | Yes |
| M16 240808 | 2016/17 | none | 30-5 | 1\_15 | 21 | 0 | 0 | 0 | 283 | ST-269 complex | 0.013 | 0.000 | 0.377 | Yes | No | Yes | No |
| M16 240810 | 2016/17 | none | 2 | 2\_22 | 29 | 140 | NadA-2/3 | 127 | 11 | ST-11 complex | 0.001 | 0.000 | 0.165 | No | No | No | No |
| M16 240815 | 2016/17 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.143 | 0.009 | 0.241 | Yes | No | No | No |
| M16 240818 | 2016/17 | none | 30-2 | 1\_1 | 3 | 1 | NadA-1 | 1 | 13096 | ST-32 complex | 1.090 | 0.011 | 0.667 | Yes | Yes | Yes | No |
| M16 240822 | 2016/17 | 1 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 12988 | unassigned | 0.007 | 0.000 | 0.216 | No | No | No | No |
| M16 240823 | 2016/17 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.224 | 0.192 | 0.185 | Yes | Yes | No | No |
| M16 240826 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1049 | ST-269 complex | 0.013 | 0.000 | 0.345 | Yes | No | Yes | No |
| M16 240832 | 2016/17 | none | 4 | 1\_86 | 2 | 0 | 0 | 0 | 8988 | unassigned | 0.005 | 0.000 | 0.591 | No | No | Yes | Yes |
| M16 240841 | 2016/17 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.037 | 0.000 | 1.122 | Yes | No | Yes | No |
| M16 240845 | 2016/17 | none | 14 | 3\_31 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.000 | 0.177 | No | No | No | No |
| M16 240846 | 2016/17 | none | 16-26 | 1\_13 | 3 | 19 | NadA-1 | 100 | 32 | ST-32 complex | 0.013 | 0.000 | 0.781 | Yes | No | Yes | No |
| M16 240848 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 8511 | ST-41/44 complex | 0.028 | 0.000 | 0.695 | Yes | No | Yes | Yes |
| M16 240852 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.023 | 0.000 | 0.598 | Yes | No | Yes | Yes |
| M16 240857 | 2016/17 | none | 3 | 2\_25 | 192 | 0 | 0 | 0 | 3482 | unassigned | 0.001 | 0.000 | 0.171 | No | No | No | No |
| M16 240859 | 2016/17 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 1.208 | 0.007 | 0.075 | Yes | No | No | No |
| M16 240868 | 2016/17 | 1 | 15-11 | 3\_30 | 21 | 0 | 0 | 0 | 1049 | ST-269 complex | 0.001 | 0.000 | 0.432 | No | No | Yes | No |
| M16 240874 | 2016/17 | none | 10-1 | 1\_37 | 6 | 0 | 0 | 0 | 18 | ST-18 complex | 0.028 | 0.000 | 0.154 | Yes | No | No | No |
| M16 240876 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.023 | 0.000 | 1.152 | Yes | No | Yes | No |
| M16 240878 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1049 | ST-269 complex | 0.015 | 0.000 | 0.399 | Yes | No | Yes | No |
| M16 240883 | 2016/17 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 0.845 | 0.006 | 0.194 | Yes | No | No | No |
| M16 240884 | 2016/17 | none | 14 | 1\_62 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.063 | 0.000 | 0.272 | Yes | No | No | No |
| M16 240886 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.033 | 0.000 | 0.807 | Yes | No | Yes | No |
| M16 240887 | 2016/17 | 1 | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.034 | 0.000 | 0.860 | Yes | No | Yes | Yes |
| M16 240888 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.012 | 0.000 | 0.432 | No | No | Yes | No |
| M16 240889 | 2016/17 | 1 | 14 | 2\_21 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.000 | 0.000 | 0.246 | No | No | No | No |
| M16 240892 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.008 | 0.000 | 0.213 | No | No | No | No |
| M16 240894 | 2016/17 | none | 10-26 | 1\_13 | 24 | 0 | 0 | 0 | 12990 | unassigned | 0.012 | 0.000 | 0.179 | No | No | No | No |
| M16 240903 | 2016/17 | none | 10-7 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.039 | 0.000 | 0.160 | Yes | No | No | No |
| M17 240002 | 2016/17 | none | 4 | 2\_21 | 119 | 0 | 0 | 0 | 162 | ST-162 complex | 0.001 | 0.000 | 0.549 | No | No | Yes | Yes |
| M17 240004 | 2016/17 | 2 | 14 | 3\_364 | 29 | 248 | NadA-4/5 | 0 | 1721 | ST-213 complex | 0.001 | 0.000 | 0.186 | No | No | No | No |
| M17 240007 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.022 | 0.000 | 0.810 | Yes | No | Yes | Yes |
| M17 240008 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.019 | 0.000 | 0.826 | Yes | No | Yes | Yes |
| M17 240014 | 2016/17 | none | 14 | 3\_558 | 18 | 40 | NadA-4/5 | 0 | 13098 | ST-213 complex | 0.000 | 0.000 | 0.098 | No | No | No | No |
| M17 240017 | 2016/17 | 1 | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.000 | 0.000 | 0.246 | No | No | No | No |
| M17 240023 | 2016/17 | none | 14 | 3\_31 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.000 | 0.000 | 0.168 | No | No | No | No |
| M17 240027 | 2016/17 | 2 | 13-7 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.001 | 0.000 | 0.239 | No | No | No | No |
| M17 240028 | 2016/17 | none | 15-11 | 1\_210 | 21 | 0 | 0 | 0 | 5266 | ST-269 complex | 0.002 | 0.000 | 0.327 | No | No | Yes | No |
| M17 240033 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 467 | ST-269 complex | 0.015 | 0.000 | 0.582 | Yes | No | Yes | No |
| M17 240034 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.044 | 0.000 | 1.213 | Yes | No | Yes | Yes |
| M17 240037 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.261 | No | No | No | No |
| M17 240039 | 2016/17 | none | 14 | 3\_45 | 18 | 38 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.028 | No | No | No | No |
| M17 240040 | 2016/17 | none | 4 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.037 | 0.000 | 0.138 | Yes | No | No | Yes |
| M17 240041 | 2016/17 | 2 | 10-4 | 1\_144 | 29 | 1 | NadA-1 | 1 | 33 | ST-32 complex | 0.232 | 0.009 | 0.118 | Yes | No | No | No |
| M17 240042 | 2016/17 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.000 | 0.000 | 0.139 | No | No | No | No |
| M17 240047 | 2016/17 | none | 9 | 1\_69 | 17 | 0 | 0 | 0 | 2561 | ST-269 complex | 0.044 | 0.000 | 0.126 | Yes | No | No | No |
| M17 240048 | 2016/17 | none | 14-13 | 1\_4 | 2 | 0 | 0 | 0 | 11766 | ST-41/44 complex | 0.032 | 0.000 | 0.259 | Yes | No | No | No |
| M17 240055 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 467 | ST-269 complex | 0.013 | 0.000 | 0.470 | Yes | No | Yes | No |
| M17 240064 | 2016/17 | none | 14 | 3\_1064 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.002 | 0.000 | 0.568 | No | No | Yes | No |
| M17 240067 | 2016/17 | 2 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.242 | No | No | No | No |
| M17 240069 | 2016/17 | none | 10-1 | 1\_14 | 2 | 0 | 0 | 0 | 3754 | ST-41/44 complex | 0.013 | 0.000 | 0.583 | Yes | No | Yes | No |
| M17 240070 | 2016/17 | none | 14-6 | 1\_249 | 122 | 0 | 0 | 0 | 11480 | unassigned | 0.067 | 0.000 | 0.136 | Yes | No | No | No |
| M17 240077 | 2016/17 | none | 9 | 1\_15 | 112 | 0 | 0 | 0 | 7746 | ST-41/44 complex | 0.012 | 0.000 | 0.163 | No | No | No | No |
| M17 240080 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.035 | 0.000 | 0.744 | Yes | No | Yes | No |
| M17 240096 | 2016/17 | none | 16-29 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.364 | 0.003 | 0.271 | Yes | No | No | No |
| M17 240097 | 2016/17 | none | 16 | 1\_4 | 21 | 0 | 0 | 0 | 1867 | unassigned | 0.061 | 0.000 | 0.160 | Yes | No | No | No |
| M17 240101 | 2016/17 | 1 | 15 | 2\_16 | 3 | 1 | NadA-1 | 1 | 12509 | ST-32 complex | 0.001 | 0.007 | 0.559 | No | No | Yes | No |
| M17 240102 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 12991 | ST-269 complex | 0.048 | 0.000 | 0.215 | Yes | No | No | No |
| M17 240104 | 2016/17 | none | 10-7 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.037 | 0.000 | 0.096 | Yes | No | No | No |
| M17 240105 | 2016/17 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.339 | Yes | No | Yes | Yes |
| M17 240119 | 2016/17 | none | 10-8 | 2\_109 | 20 | 308 | NK | 0 | 12227 | ST-11 complex | 0.002 | 0.000 | 0.118 | No | No | No | No |
| M17 240124 | 2016/17 | none | 30-2 | 1\_15 | 21 | 0 | 0 | 0 | 11466 | ST-269 complex | 0.023 | 0.000 | 0.411 | Yes | No | Yes | No |
| M17 240126 | 2016/17 | none | 14 | 3\_45 | 18 | 12 | NadA-4/5 | 0 | 4562 | ST-213 complex | 0.001 | 0.000 | 0.087 | No | No | No | No |
| M17 240128 | 2016/17 | none | 16 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.919 | 0.002 | 0.345 | Yes | No | Yes | No |
| M17 240130 | 2016/17 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.002 | 0.000 | 0.146 | No | No | No | No |
| M17 240131 | 2016/17 | none | 16 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.727 | 0.002 | 0.296 | Yes | No | Yes | No |
| M17 240143 | 2016/17 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.001 | 0.000 | 0.150 | No | No | No | No |
| M17 240144 | 2016/17 | none | 14 | 3\_45 | 18 | 251 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.035 | No | No | No | No |
| M17 240147 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 9180 | ST-269 complex | 0.011 | 0.000 | 0.248 | No | No | No | No |
| M17 240148 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 9180 | ST-269 complex | 0.011 | 0.000 | 0.179 | No | No | No | No |
| M17 240156 | 2016/17 | 3 | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.001 | 0.199 | No | No | No | No |
| M17 240157 | 2016/17 | none | 4 | 1\_4 | 24 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.027 | 0.000 | 0.178 | Yes | No | No | Yes |
| M17 240159 | 2016/17 | none | 23 | 1\_510 | 29 | 1 | NadA-1 | 1 | 7460 | ST-32 complex | 0.017 | 0.050 | 0.207 | Yes | Yes | No | No |
| M17 240168 | 2016/17 | 1 | 14 | 3\_364 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.137 | No | No | No | No |
| M17 240170 | 2016/17 | none | 4 | 2\_25 | 760 | 0 | 0 | 0 | 10269 | ST-41/44 complex | 0.000 | 0.000 | 0.400 | No | No | Yes | Yes |
| M17 240171 | 2016/17 | 2 | 14 | 1\_13 | 117 | 34 | NadA-4/5 | 0 | 575 | ST-213 complex | 0.017 | 0.000 | 0.057 | Yes | No | No | No |
| M17 240173 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1791 | ST-269 complex | 0.013 | 0.000 | 0.327 | Yes | No | Yes | No |
| M17 240176 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.055 | 0.000 | 0.553 | Yes | No | Yes | Yes |
| M17 240177 | 2016/17 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.966 | 0.009 | 0.056 | Yes | No | No | No |
| M17 240183 | 2016/17 | none | 14 | 1\_13 | 20 | 0 | 0 | 0 | 1572 | ST-1572 complex | 0.012 | 0.000 | 0.393 | No | No | Yes | No |
| M17 240190 | 2016/17 | none | 14 | 3\_45 | 18 | 252 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.117 | No | No | No | No |
| M17 240194 | 2016/17 | none | 4 | 1\_4 | 190 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.036 | 0.000 | 0.117 | Yes | No | No | Yes |
| M17 240195 | 2016/17 | none | 23 | 1\_15 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.018 | 0.000 | 0.248 | Yes | No | No | No |
| M17 240197 | 2016/17 | 2 | 16 | 3\_1082 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.000 | 0.000 | 0.037 | No | No | No | No |
| M17 240203 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 3818 | ST-41/44 complex | 0.045 | 0.000 | 1.049 | Yes | No | Yes | Yes |
| M17 240206 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.013 | 0.000 | 0.164 | Yes | No | No | No |
| M17 240208 | 2016/17 | none | 4 | 1\_4 | 805 | 0 | 0 | 0 | 11487 | ST-41/44 complex | 0.022 | 0.000 | 1.039 | Yes | No | Yes | Yes |
| M17 240212 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.041 | 0.000 | 0.997 | Yes | No | Yes | Yes |
| M17 240213 | 2016/17 | none | 14-6 | 1\_13 | 114 | 0 | 0 | 0 | 1157 | ST-1157 complex | 0.013 | 0.000 | 0.129 | Yes | No | No | No |
| M17 240216 | 2016/17 | none | 14 | 1\_318 | 18 | 34 | NadA-4/5 | 0 | 12993 | ST-213 complex | 0.033 | 0.000 | 0.051 | Yes | No | No | No |
| M17 240223 | 2016/17 | none | 16 | 3\_152 | 47 | 0 | 0 | 0 | 839 | ST-41/44 complex | 0.001 | 0.000 | 0.222 | No | No | No | No |
| M17 240228 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.023 | 0.000 | 0.969 | Yes | No | Yes | Yes |
| M17 240241 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.012 | 0.000 | 0.455 | No | No | Yes | No |
| M17 240254 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.013 | 0.000 | 0.241 | Yes | No | No | No |
| M17 240273 | 2016/17 | none | 14-6 | 1\_13 | 114 | 20 | NadA-2/3 | 0 | 1157 | ST-1157 complex | 0.013 | 0.000 | 0.140 | Yes | No | No | No |
| M17 240309 | 2016/17 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 4033 | ST-41/44 complex | 0.040 | 0.000 | 0.583 | Yes | No | Yes | No |
| M17 240310 | 2016/17 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.054 | 0.000 | 0.586 | Yes | No | Yes | Yes |
| M17 240314 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 13715 | unassigned | 0.011 | 0.000 | 0.274 | No | No | No | No |
| M17 240316 | 2016/17 | none | 25-1 | 3\_499 | 2 | 0 | 0 | 0 | 13716 | ST-41/44 complex | 0.001 | 0.000 | 1.008 | No | No | Yes | No |
| M17 240317 | 2016/17 | none | 10-4 | 1\_4 | 29 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.037 | 0.000 | 0.113 | Yes | No | No | No |
| M17 240370 | 2016/17 | 2 | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.001 | 0.000 | 0.252 | No | No | No | No |
| M17 240377 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.039 | 0.000 | 0.810 | Yes | No | Yes | Yes |
| M17 240378 | 2016/17 | none | 15 | 3\_1165 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 0.001 | 0.011 | 0.051 | No | Yes | No | No |
| M17 240381 | 2016/17 | none | 23 | 2\_19 | 31 | 0 | 0 | 0 | 1097 | ST-41/44 complex | 0.001 | 0.000 | 0.155 | No | No | No | No |
| M17 240385 | 2016/17 | none | 14 | 1\_483 | 1318 | broken | NadA-4/5 | NK | 213 | ST-213 complex | 0.119 | 0.000 | 0.059 | Yes | No | No | No |
| M17 240388 | 2016/17 | 3 | 23-2 | 3\_494 | 31 | 0 | 0 | 0 | 1097 | ST-41/44 complex | 0.003 | 0.000 | 0.196 | No | No | No | No |
| M17 240389 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.035 | 0.000 | 0.433 | Yes | No | Yes | Yes |
| M17 240390 | 2016/17 | none | 16-165 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.042 | 0.000 | 0.638 | Yes | No | Yes | No |
| M17 240391 | 2016/17 | none | 1 | 1\_4 | 2 | 0 | 0 | 0 | 46 | ST-41/44 complex | 0.052 | 0.000 | 0.847 | Yes | No | Yes | No |
| M17 240404 | 2016/17 | none | 9 | 1\_14 | 17 | 0 | 0 | 0 | 1159 | unassigned | 0.014 | 0.000 | 0.293 | Yes | No | No | No |
| M17 240406 | 2014/15 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 2362 | ST-41/44 complex | 0.044 | 0.000 | 0.560 | Yes | No | Yes | No |
| M17 240407 | 2016/17 | none | 14 | 3\_45 | 18 | 38 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.000 | 0.049 | No | No | No | No |
| M17 240412 | 2016/17 | none | 1 | 2\_19 | 2 | 0 | 0 | 0 | 43 | ST-41/44 complex | 0.001 | 0.000 | 0.765 | No | No | Yes | No |
| M17 240414 | 2016/17 | none | 1 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.021 | 0.001 | 0.153 | Yes | No | No | No |
| M17 240415 | 2016/17 | none | 14 | 3\_45 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.133 | No | No | No | No |
| M17 240421 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 154 | ST-41/44 complex | 0.048 | 0.000 | 0.601 | Yes | No | Yes | No |
| M17 240428 | 2016/17 | none | 9 | 1\_61 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.085 | 0.000 | 0.156 | Yes | No | No | No |
| M17 240432 | 2016/17 | none | 30 | 2\_16 | 21 | 0 | 0 | 0 | 457 | ST-35 complex | 0.002 | 0.000 | 0.236 | No | No | No | No |
| M17 240434 | 2016/17 | 1 | 4 | 3\_494 | 47 | 0 | 0 | 0 | 13707 | unassigned | 0.001 | 0.000 | 0.085 | No | No | No | Yes |
| M17 240435 | 2016/17 | none | 14 | 3\_45 | 18 | 269 | NadA-4/5 | 0 | 8750 | ST-213 complex | 0.001 | 0.000 | 0.166 | No | No | No | No |
| M17 240438 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.009 | 0.000 | 0.134 | No | No | No | No |
| M17 240441 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.014 | 0.000 | 0.553 | Yes | No | Yes | No |
| M17 240443 | 2016/17 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.001 | 0.000 | 0.333 | No | No | Yes | No |
| M17 240446 | 2016/17 | 1 | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.031 | 0.000 | 0.647 | Yes | No | Yes | No |
| M17 240447 | 2016/17 | none | 14 | 1\_218 | 2 | 0 | 0 | 0 | 13709 | ST-41/44 complex | 0.009 | 0.000 | 1.040 | No | No | Yes | No |
| M17 240448 | 2016/17 | 3 | Deleted | 2\_25 | 24 | 307 | NK | 0 | 1162 | unassigned | 0.002 | 0.001 | 0.295 | No | No | Yes | No |
| M17 240451 | 2016/17 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.038 | 0.000 | 0.583 | Yes | No | Yes | No |
| M17 240452 | 2016/17 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 0.238 | 0.007 | 0.077 | Yes | No | No | No |
| M17 240453 | 2016/17 | 2 | 9 | 2\_19 | 17 | 0 | 0 | 0 | 13712 | unassigned | 0.001 | 0.000 | 0.286 | No | No | No | No |
| M17 240457 | 2016/17 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 3754 | ST-41/44 complex | 0.043 | 0.000 | 0.583 | Yes | No | Yes | No |
| M17 240458 | 2016/17 | none | 9 | 2\_24 | 312 | 0 | 0 | 0 | 8597 | unassigned | 0.002 | 0.000 | 0.406 | No | No | Yes | No |
| M17 240464 | 2016/17 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.045 | 0.000 | 0.772 | Yes | No | Yes | Yes |
| M17 240475 | 2016/17 | none | 16 | 2\_19 | 47 | 0 | 0 | 0 | 839 | ST-41/44 complex | 0.001 | 0.000 | 0.092 | No | No | No | No |
| M17 240478 | 2016/17 | none | 4 | 3\_30 | 18 | 0 | 0 | 0 | 7670 | ST-41/44 complex | 0.001 | 0.000 | 0.079 | No | No | No | Yes |
| M17 240479 | 2016/17 | 2 | 14 | 3\_45 | 18 | 38 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.046 | No | No | No | No |
| M17 240487 | 2016/17 | none | 4 | 2\_21 | 119 | 0 | 0 | 0 | 162 | ST-162 complex | 0.001 | 0.000 | 0.506 | No | No | Yes | Yes |
| M17 240491 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.012 | 0.000 | 0.757 | No | No | Yes | Yes |
| M17 240494 | 2016/17 | none | 10-7 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.048 | 0.000 | 0.288 | Yes | No | No | No |
| M17 240496 | 2016/17 | none | 4 | 1\_1160 | 20 | 0 | 0 | 0 | 13718 | ST-162 complex | 0.557 | 0.000 | 0.703 | Yes | No | Yes | Yes |
| M17 240497 | 2016/17 | none | 14 | 1\_37 | 6 | 0 | 0 | 0 | 18 | ST-18 complex | 0.022 | 0.000 | 0.160 | Yes | No | No | No |
| M17 240499 | 2016/17 | none | 10-1 | 1\_4 | 943 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.037 | 0.000 | 0.129 | Yes | No | No | No |
| M17 240500 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.040 | 0.000 | 0.555 | Yes | No | Yes | No |
| M17 240502 | 2016/17 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.022 | 0.000 | 1.069 | Yes | No | Yes | Yes |
| M17 240510 | 2016/17 | none | 10-1 | 1\_236 | 17 | 0 | 0 | 0 | 1159 | unassigned | 0.133 | 0.000 | 0.243 | Yes | No | No | No |
| M17 240518 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 154 | ST-41/44 complex | 0.053 | 0.000 | 0.541 | Yes | No | Yes | Yes |
| M17 240531 | 2016/17 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.048 | 0.000 | 0.723 | Yes | No | Yes | No |
| M17 240532 | 2016/17 | 1 | 15-11 | 3\_185 | 18 | 274 | NadA-4/5 | 182 | 7193 | ST-213 complex | 0.000 | 0.000 | 0.196 | No | No | No | No |
| M17 240534 | 2016/17 | none | 9 | 3\_47 | 118 | 0 | 0 | 0 | 13723 | ST-461 complex | 0.001 | 0.000 | 0.290 | No | No | No | No |
| M17 240537 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.000 | 0.156 | No | No | No | No |
| M17 240550 | 2016/17 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 1049 | ST-269 complex | 0.012 | 0.000 | 0.495 | No | No | Yes | No |
| M17 240559 | 2016/17 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.011 | 0.001 | 0.091 | No | No | No | No |
| M17 240565 | 2016/17 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 1.066 | 0.007 | 0.047 | Yes | No | No | No |
| M17 240568 | 2016/17 | none | 14 | 1\_4 | 7 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.039 | 0.000 | 0.102 | Yes | No | No | No |
| M17 240576 | 2016/17 | 1 | 15-1 | 2\_19 | 2 | 0 | 0 | 0 | 43 | ST-41/44 complex | 0.000 | 0.000 | 1.167 | No | No | Yes | No |
| M17 240577 | 2016/17 | 3 | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.068 | 0.000 | 0.635 | Yes | No | Yes | No |
| M17 240578 | 2016/17 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.765 | Yes | No | Yes | Yes |
| M17 240606 | 2016/17 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.141 | 0.001 | 0.133 | Yes | No | No | No |
| M17 240622 | 2016/17 | 2 | 9 | 1\_15 | 21 | 0 | 0 | 0 | 1195 | ST-269 complex | 0.012 | 0.000 | 0.376 | No | No | Yes | No |
| M17 240623 | 2016/17 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.023 | 0.001 | 0.214 | Yes | No | No | No |
| M17 240627 | 2017/18 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.017 | 0.000 | 0.476 | Yes | No | Yes | No |
| M17 240628 | 2017/18 | 1 | 25 | 1\_14 | 212 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.007 | 0.000 | 0.540 | No | No | Yes | No |
| M17 240660 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.041 | 0.000 | 0.665 | Yes | No | Yes | No |
| M17 240661 | 2016/17 | none | 4 | 1\_4 | 24 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.041 | 0.000 | 0.224 | Yes | No | No | Yes |
| M17 240664 | 2017/18 | none | 2-2 | 2\_19 | 17 | 0 | 0 | 0 | 7981 | ST-269 complex | 0.002 | 0.000 | 0.088 | No | No | No | No |
| M17 240665 | 2017/18 | 1 | 3 | 3\_47 | 118 | 0 | 0 | 0 | 1946 | ST-461 complex | 0.001 | 0.000 | 0.210 | No | No | No | No |
| M17 240669 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.056 | 0.000 | 0.554 | Yes | No | Yes | Yes |
| M17 240671 | 2017/18 | none | 14 | 1\_483 | 18 | broken | NadA-4/5 | NK | 213 | ST-213 complex | 0.156 | 0.000 | 0.038 | Yes | No | No | No |
| M17 240672 | 2017/18 | none | 14 | 1\_483 | 18 | 281 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.152 | 0.000 | 0.041 | Yes | No | No | No |
| M17 240678 | 2017/18 | none | 15 | 1\_1157 | 3 | 1 | NadA-1 | 1 | 33 | ST-32 complex | 0.075 | 0.006 | 0.625 | Yes | No | Yes | No |
| M17 240680 | 2017/18 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.002 | 0.000 | 0.292 | No | No | No | No |
| M17 240718 | 2017/18 | none | 14 | 1\_390 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.021 | 0.001 | 0.582 | Yes | No | Yes | No |
| M17 240750 | 2017/18 | none | 4 | 1\_4 | 25 | 0 | 0 | 0 | 3754 | ST-41/44 complex | 0.042 | 0.000 | 0.156 | Yes | No | No | Yes |
| M17 240754 | 2017/18 | none | 1 | 1\_4 | 943 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.040 | 0.000 | 0.141 | Yes | No | No | No |
| M17 240756 | 2017/18 | none | 4 | 2\_21 | 1315 | 0 | 0 | 0 | 13717 | unassigned | 0.001 | 0.000 | 0.352 | No | No | Yes | Yes |
| M17 240763 | 2017/18 | none | 14 | 3\_737 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.240 | No | No | No | No |
| M17 240764 | 2017/18 | none | 14 | 3\_294 | 18 | 38 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.002 | 0.000 | 0.150 | No | No | No | No |
| M17 240768 | 2017/18 | none | 9 | 2\_19 | 112 | 0 | 0 | 0 | 571 | ST-41/44 complex | 0.001 | 0.000 | 0.263 | No | No | No | No |
| M17 240769 | 2017/18 | none | 14 | 1\_218 | 18 | 34 | NadA-4/5 | 0 | 9193 | ST-213 complex | 0.027 | 0.000 | 0.089 | Yes | No | No | No |
| M17 240771 | 2017/18 | none | 10-26 | 1\_1059 | 24 | 0 | 0 | 0 | 2477 | ST-60 complex | 0.086 | 0.000 | 0.264 | Yes | No | No | No |
| M17 240781 | 2017/18 | 3 | 14 | 3\_955 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.043 | No | No | No | No |
| M17 240783 | 2017/18 | none | 10-26 | 1\_13 | 24 | 0 | 0 | 0 | 13724 | ST-60 complex | 0.013 | 0.000 | 0.204 | Yes | No | No | No |
| M17 240789 | 2017/18 | none | 14 | 1\_1161 | 18 | broken | NadA-4/5 | NK | 213 | ST-213 complex | 0.079 | 0.000 | 0.087 | Yes | No | No | No |
| M17 240799 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 13727 | ST-41/44 complex | 0.043 | 0.000 | 0.973 | Yes | No | Yes | Yes |
| M17 240802 | 2017/18 | none | 4 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.042 | 0.000 | 0.212 | Yes | No | No | Yes |
| M17 240803 | 2017/18 | none | 10-7 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.041 | 0.000 | 0.204 | Yes | No | No | No |
| M17 240805 | 2017/18 | 2 | 4 | 1\_14 | 173 | 0 | 0 | 0 | 2203 | ST-41/44 complex | 0.021 | 0.000 | 0.138 | Yes | No | No | Yes |
| M17 240806 | 2017/18 | none | 1 | 2\_19 | 29 | 0 | 0 | 0 | 13730 | ST-41/44 complex | 0.001 | 0.000 | 0.151 | No | No | No | No |
| M17 240807 | 2017/18 | none | 15 | 2\_24 | 29 | 0 | 0 | 0 | 2380 | ST-35 complex | 0.001 | 0.000 | 0.270 | No | No | No | No |
| M17 240809 | 2017/18 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.933 | 0.067 | 0.094 | Yes | Yes | No | No |
| M17 240814 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.069 | 0.000 | 0.691 | Yes | No | Yes | No |
| M17 240832 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.046 | 0.000 | 0.723 | Yes | No | Yes | Yes |
| M17 240833 | 2017/18 | none | 25 | 1\_13 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.025 | 0.000 | 0.353 | Yes | No | Yes | No |
| M17 240836 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.072 | 0.000 | 0.925 | Yes | No | Yes | Yes |
| M17 240839 | 2017/18 | 1 | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1341 | ST-41/44 complex | 0.049 | 0.000 | 0.510 | Yes | No | Yes | No |
| M17 240841 | 2017/18 | none | 4 | 1\_86 | 2 | 0 | 0 | 0 | 8988 | unassigned | 0.005 | 0.000 | 0.566 | No | No | Yes | Yes |
| M17 240842 | 2017/18 | none | 13-1 | 3\_555 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.002 | 0.000 | 0.219 | No | No | No | No |
| M17 240846 | 2017/18 | none | 16-29 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.518 | 0.002 | 0.378 | Yes | No | Yes | No |
| M17 240847 | 2017/18 | none | 16-29 | 1\_1 | 3 | 1 | NadA-1 | 1 | 32 | ST-32 complex | 0.499 | 0.002 | 0.367 | Yes | No | Yes | No |
| M17 240850 | 2017/18 | none | 4 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.048 | 0.000 | 0.174 | Yes | No | No | Yes |
| M17 240853 | 2017/18 | none | 14 | 1\_13 | 20 | 0 | 0 | 0 | 7152 | ST-1572 complex | 0.011 | 0.000 | 0.526 | No | No | Yes | No |
| M17 240857 | 2017/18 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.046 | 0.000 | 0.768 | Yes | No | Yes | No |
| M17 240871 | 2017/18 | none | 9 | 1\_15 | 21 | 0 | 0 | 0 | 1195 | ST-269 complex | 0.016 | 0.000 | 0.433 | Yes | No | Yes | No |
| M17 240875 | 2017/18 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.062 | 0.000 | 0.228 | Yes | No | No | Yes |
| M17 240876 | 2017/18 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.061 | 0.000 | 0.214 | Yes | No | No | Yes |
| M17 240882 | 2017/18 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 4531 | ST-213 complex | 0.001 | 0.000 | 0.110 | No | No | No | No |
| M18 240003 | 2017/18 | 2 | 4 | 1\_4 | 805 | 0 | 0 | 0 | 11487 | ST-41/44 complex | 0.024 | 0.000 | 0.740 | Yes | No | Yes | Yes |
| M18 240007 | 2017/18 | none | 15 | 1\_1 | 3 | 144 | NadA-1 | 0 | 33 | ST-32 complex | 1.050 | 0.000 | 0.262 | Yes | No | No | No |
| M18 240009 | 2017/18 | none | 14 | 1\_483 | 18 | 281 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.147 | 0.000 | 0.063 | Yes | No | No | No |
| M18 240010 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.049 | 0.000 | 0.524 | Yes | No | Yes | No |
| M18 240017 | 2017/18 | none | 15 | 1\_1 | 3 | 144 | NadA-1 | 0 | 33 | ST-32 complex | 1.130 | 0.000 | 0.709 | Yes | No | Yes | No |
| M18 240018 | 2017/18 | 1 | 14 | 3\_45 | 29 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.259 | No | No | No | No |
| M18 240020 | 2017/18 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.057 | 0.000 | 0.666 | Yes | No | Yes | No |
| M18 240023 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.051 | 0.000 | 0.716 | Yes | No | Yes | Yes |
| M18 240027 | 2017/18 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 1831 | unassigned | 0.002 | 0.000 | 0.302 | No | No | Yes | No |
| M18 240031 | 2016/17 | none | 10-4 | 1\_61 | 130 | 0 | 0 | 0 | 13725 | ST-865 complex | 0.097 | 0.000 | 0.333 | Yes | No | Yes | No |
| M18 240032 | 2017/18 | none | 9 | 2\_1166 | 17 | 0 | 0 | 0 | 1163 | ST-269 complex | 0.001 | 0.001 | 0.162 | No | No | No | No |
| M18 240037 | 2017/18 | none | 9 | 1\_14 | 17 | 0 | 0 | 0 | 9199 | unassigned | 0.034 | 0.001 | 0.339 | Yes | No | Yes | No |
| M18 240040 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.039 | 0.000 | 0.524 | Yes | No | Yes | No |
| M18 240041 | 2017/18 | none | 10-4 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.049 | 0.000 | 0.610 | Yes | No | Yes | No |
| M18 240042 | 2017/18 | none | 14 | 1\_15 | 21 | 0 | 0 | 0 | 13726 | ST-269 complex | 0.019 | 0.000 | 0.572 | Yes | No | Yes | No |
| M18 240043 | 2017/18 | 1 | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.014 | 0.000 | 0.350 | Yes | No | Yes | No |
| M18 240047 | 2017/18 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.029 | 0.000 | 0.635 | Yes | No | Yes | Yes |
| M18 240052 | 2017/18 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 13728 | ST-269 complex | 0.001 | 0.001 | 0.226 | No | No | No | No |
| M18 240059 | 2017/18 | none | 16-26 | 1\_69 | 286 | 19 | NadA-1 | 100 | 9989 | ST-32 complex | 0.035 | 0.002 | 0.507 | Yes | No | Yes | No |
| M18 240063 | 2017/18 | none | 14 | 1\_1150 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.207 | 0.000 | 0.221 | Yes | No | No | No |
| M18 240064 | 2017/18 | none | 15-11 | 1\_4 | 21 | 0 | 0 | 0 | 1354 | ST-269 complex | 0.060 | 0.001 | 0.373 | Yes | No | Yes | No |
| M18 240065 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 13703 | ST-41/44 complex | 0.040 | 0.001 | 0.659 | Yes | No | Yes | No |
| M18 240067 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 13705 | ST-41/44 complex | 0.041 | 0.000 | 0.469 | Yes | No | Yes | No |
| M18 240068 | 2017/18 | 2 | 14 | 3\_1502 | 18 | 34 | NadA-4/5 | 0 | 13706 | ST-213 complex | 0.001 | 0.000 | 0.028 | No | No | No | No |
| M18 240069 | 2017/18 | none | 14 | 1\_483 | 18 | broken | NadA-4/5 | NK | 213 | ST-213 complex | 0.181 | 0.000 | 0.093 | Yes | No | No | No |
| M18 240073 | 2017/18 | 2 | 14 | 1\_69 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.018 | 0.000 | 0.402 | Yes | No | Yes | No |
| M18 240075 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.017 | 0.000 | 0.346 | Yes | No | Yes | No |
| M18 240076 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.045 | 0.000 | 1.169 | Yes | No | Yes | Yes |
| M18 240077 | 2017/18 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 0.926 | 0.008 | 0.043 | Yes | No | No | No |
| M18 240080 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.046 | 0.000 | 0.712 | Yes | No | Yes | No |
| M18 240084 | 2017/18 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.127 | No | No | No | No |
| M18 240086 | 2017/18 | none | 13-1 | 2\_83 | 21 | 0 | 0 | 0 | 13711 | unassigned | 0.002 | 0.000 | 0.248 | No | No | No | No |
| M18 240093 | 2017/18 | none | 14 | 1\_13 | 117 | 34 | NadA-4/5 | 0 | 6607 | ST-213 complex | 0.020 | 0.000 | 0.155 | Yes | No | No | No |
| M18 240096 | 2017/18 | none | 15 | 2\_302 | 31 | 0 | 0 | 0 | 9200 | ST-41/44 complex | 0.002 | 0.000 | 0.233 | No | No | No | No |
| M18 240102 | 2017/18 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.058 | 0.000 | 0.674 | Yes | No | Yes | Yes |
| M18 240104 | 2017/18 | none | 14 | 3\_45 | 18 | 38 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.001 | 0.000 | 0.238 | No | No | No | No |
| M18 240105 | 2017/18 | 2 | 2-2 | 3\_30 | 21 | 0 | 0 | 0 | 1214 | ST-269 complex | 0.001 | 0.000 | 0.452 | No | No | Yes | No |
| M18 240106 | 2017/18 | none | 16-3 | 2\_24 | 10 | 0 | 0 | 0 | 136 | ST-41/44 complex | 0.000 | 0.000 | 0.178 | No | No | No | No |
| M18 240107 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.042 | 0.000 | 0.314 | Yes | No | Yes | No |
| M18 240110 | 2017/18 | 1 | 30 | 1\_4 | 2 | 0 | 0 | 0 | 13714 | ST-41/44 complex | 0.056 | 0.000 | 0.207 | Yes | No | No | No |
| M18 240126 | 2017/18 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 12173 | ST-41/44 complex | 0.045 | 0.000 | 0.794 | Yes | No | Yes | No |
| M18 240127 | 2017/18 | 2 | 14 | 1\_13 | 117 | 34 | NadA-4/5 | 0 | 6607 | ST-213 complex | 0.013 | 0.000 | 0.090 | Yes | No | No | No |
| M18 240132 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.047 | 0.000 | 0.888 | Yes | No | Yes | Yes |
| M18 240143 | 2017/18 | none | 16 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.003 | 0.001 | 0.319 | No | No | Yes | No |
| M18 240147 | 2017/18 | none | 14 | 3\_45 | 29 | 331 | NadA-4/5 | 0 | 15562 | ST-213 complex | 0.001 | 0.000 | 0.254 | No | No | No | No |
| M18 240150 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.049 | 0.000 | 0.951 | Yes | No | Yes | No |
| M18 240151 | 2017/18 | none | 4 | 1\_14 | 2 | 0 | 0 | 0 | 340 | ST-41/44 complex | 0.031 | 0.000 | 1.045 | Yes | No | Yes | Yes |
| M18 240156 | 2017/18 | none | 10-1 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.001 | 0.000 | 0.239 | No | No | No | No |
| M18 240157 | 2017/18 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 5151 | unassigned | 0.997 | 0.009 | 0.080 | Yes | No | No | No |
| M18 240159 | 2017/18 | none | 1 | 1\_1 | 3 | 111 | NadA-1 | 118 | 639 | ST-32 complex | 1.066 | 0.000 | 0.279 | Yes | No | No | No |
| M18 240165 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 9180 | ST-269 complex | 0.015 | 0.000 | 0.347 | Yes | No | Yes | No |
| M18 240167 | 2017/18 | none | 4 | 1\_1322 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.008 | 0.000 | 0.969 | No | No | Yes | Yes |
| M18 240168 | 2017/18 | none | 30-13 | 1\_1 | 255 | 1 | NadA-1 | 1 | 12345 | ST-32 complex | 1.033 | 0.007 | 0.150 | Yes | No | No | No |
| M18 240169 | 2017/18 | 1 | 10-4 | 2\_202 | 47 | 0 | 0 | 0 | 282 | ST-282 complex | 0.001 | 0.000 | 0.161 | No | No | No | No |
| M18 240181 | 2017/18 | none | 14 | 2\_19 | 18 | 39 | NadA-4/5 | 0 | 3117 | ST-213 complex | 0.001 | 0.000 | 0.203 | No | No | No | No |
| M18 240191 | 2017/18 | none | 4 | 1\_86 | 2 | 0 | 0 | 0 | 8988 | unassigned | 0.005 | 0.000 | 0.707 | No | No | Yes | Yes |
| M18 240192 | 2017/18 | none | 16 | 1\_4 | 1381 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.039 | 0.000 | 0.782 | Yes | No | Yes | No |
| M18 240193 | 2017/18 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.001 | 0.000 | 0.097 | No | No | No | No |
| M18 240196 | 2017/18 | none | 14 | 3\_685 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.004 | 0.000 | 0.532 | No | No | Yes | No |
| M18 240198 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.344 | No | No | Yes | No |
| M18 240199 | 2017/18 | 1 | 13-2 | 2\_106 | 122 | 0 | 0 | 0 | 2738 | ST-269 complex | 0.002 | 0.000 | 0.219 | No | No | No | No |
| M18 240202 | 2017/18 | none | 14 | 1\_4 | 7 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.043 | 0.000 | 0.215 | Yes | No | No | No |
| M18 240209 | 2017/18 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 0.855 | 0.006 | 1.197 | Yes | No | Yes | No |
| M18 240214 | 2017/18 | none | 23 | 2\_24 | 1595 | 0 | 0 | 0 | 136 | ST-41/44 complex | 0.001 | 0.000 | 0.232 | No | No | No | No |
| M18 240215 | 2017/18 | none | 1 | 1\_13 | 20 | 0 | 0 | 0 | 14357 | unassigned | 0.022 | 0.000 | 0.451 | Yes | No | Yes | No |
| M18 240220 | 2017/18 | 3 | 9 | 1\_69 | 21 | 0 | 0 | 0 | 14358 | ST-269 complex | 0.015 | 0.000 | 0.350 | Yes | No | Yes | No |
| M18 240223 | 2017/18 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 15560 | ST-213 complex | 0.000 | 0.000 | 0.167 | No | No | No | No |
| M18 240225 | 2017/18 | none | 30 | 1\_510 | 29 | 341 | NadA-1 | 0 | 7460 | ST-32 complex | 0.025 | 0.009 | 0.143 | Yes | No | No | No |
| M18 240226 | 2017/18 | none | 10-4 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.062 | 0.000 | 0.475 | Yes | No | Yes | No |
| M18 240227 | 2017/18 | none | 14 | 3\_85 | 18 | 12 | NadA-4/5 | 0 | 213 | ST-213 complex | 0.000 | 0.000 | 0.061 | No | No | No | No |
| M18 240232 | 2017/18 | none | 14 | 3\_364 | 29 | 248 | NadA-4/5 | 0 | 1721 | ST-213 complex | 0.000 | 0.001 | 0.269 | No | No | No | No |
| M18 240238 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.101 | No | No | No | No |
| M18 240239 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.108 | No | No | No | No |
| M18 240241 | 2017/18 | none | 15 | 1\_297 | 18 | 1 | NadA-1 | 1 | 4224 | ST-213 complex | 0.001 | 0.119 | 0.168 | No | Yes | No | No |
| M18 240242 | 2017/18 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.016 | 0.000 | 0.445 | Yes | No | Yes | No |
| M18 240245 | 2017/18 | 2 | 14 | 1\_218 | 18 | broken | NadA-4/5 | NK | 9193 | ST-213 complex | 0.030 | 0.000 | 0.106 | Yes | No | No | No |
| M18 240247 | 2017/18 | none | 10-4 | 2\_21 | 1383 | 0 | 0 | 0 | 14359 | ST-865 complex | 0.000 | 0.000 | 0.115 | No | No | No | No |
| M18 240250 | 2017/18 | none | 4 | 1\_4 | 643 | 0 | 0 | 0 | 3526 | ST-41/44 complex | 0.031 | 0.000 | 0.255 | Yes | No | No | Yes |
| M18 240256 | 2017/18 | none | 3 | 2\_16 | 20 | 0 | 0 | 0 | 1617 | ST-22 complex | 0.002 | 0.000 | 0.600 | No | No | Yes | No |
| M18 240257 | 2017/18 | 3 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.001 | 0.283 | No | No | No | No |
| M18 240259 | 2017/18 | none | 15 | 2\_19 | 2 | 0 | 0 | 0 | 12656 | ST-41/44 complex | 0.000 | 0.000 | 0.624 | No | No | Yes | No |
| M18 240262 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.049 | 0.001 | 0.452 | Yes | No | Yes | No |
| M18 240266 | 2017/18 | none | 16-26 | 1\_69 | 286 | 19 | NadA-1 | 100 | 9989 | ST-32 complex | 0.036 | 0.000 | 0.252 | Yes | No | No | No |
| M18 240267 | 2017/18 | none | 14 | 2\_16 | 21 | 0 | 0 | 0 | 35 | ST-35 complex | 0.001 | 0.000 | 0.298 | No | No | Yes | No |
| M18 240268 | 2017/18 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.050 | 0.000 | 0.582 | Yes | No | Yes | No |
| M18 240269 | 2017/18 | 1 | 13-1 | 2\_24 | 21 | 0 | 0 | 0 | 14360 | ST-35 complex | 0.001 | 0.000 | 0.778 | No | No | Yes | No |
| M18 240270 | 2017/18 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 34 | ST-32 complex | 1.049 | 0.006 | 0.255 | Yes | No | No | No |
| M18 240275 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.048 | 0.000 | 0.482 | Yes | No | Yes | No |
| M18 240278 | 2017/18 | 3 | 13-1 | 3\_47 | 118 | 0 | 0 | 0 | 461 | ST-461 complex | 0.003 | 0.000 | 0.314 | No | No | Yes | No |
| M18 240287 | 2017/18 | none | 25-14 | 1\_4 | 0 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.056 | 0.000 | 0.027 | Yes | No | No | No |
| M18 240290 | 2017/18 | 3 | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 354 | ST-269 complex | 0.014 | 0.000 | 0.508 | Yes | No | Yes | No |
| M18 240292 | 2017/18 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.035 | 0.000 | 0.763 | Yes | No | Yes | No |
| M18 240301 | 2017/18 | 1 | 4-1 | 3\_47 | 197 | 3 | NadA-2/3 | 3 | 14361 | ST-461 complex | 0.001 | 0.023 | 0.332 | No | Yes | Yes | No |
| M18 240308 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.051 | 0.000 | 1.015 | Yes | No | Yes | Yes |
| M18 240316 | 2017/18 | none | 15-11 | 1\_4 | 21 | 0 | 0 | 0 | 1354 | ST-269 complex | 0.069 | 0.000 | 0.340 | Yes | No | Yes | No |
| M18 240319 | 2017/18 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.051 | 0.000 | 0.919 | Yes | No | Yes | No |
| M18 240320 | 2017/18 | none | 14 | 2\_24 | 18 | 34 | NadA-4/5 | 0 | 3496 | ST-213 complex | 0.001 | 0.000 | 0.182 | No | No | No | No |
| M18 240322 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.052 | 0.000 | 1.022 | Yes | No | Yes | No |
| M18 240326 | 2017/18 | 1 | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.037 | 0.000 | 0.725 | Yes | No | Yes | No |
| M18 240328 | 2017/18 | 2 | 13-2 | 3\_47 | 118 | 0 | 0 | 0 | 14362 | ST-461 complex | 0.001 | 0.000 | 0.388 | No | No | Yes | No |
| M18 240329 | 2017/18 | none | 9 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.030 | 0.000 | 0.544 | Yes | No | Yes | No |
| M18 240333 | 2017/18 | none | 9 | 2\_19 | 17 | 0 | 0 | 0 | 275 | ST-269 complex | 0.001 | 0.000 | 0.311 | No | No | Yes | No |
| M18 240334 | 2017/18 | none | 14 | 1\_14 | 20 | 0 | 0 | 0 | 162 | ST-162 complex | 0.040 | 0.000 | 0.267 | Yes | No | No | No |
| M18 240337 | 2017/18 | none | 4 | 1\_4 | 2 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.049 | 0.001 | 1.054 | Yes | No | Yes | Yes |
| M18 240339 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 14363 | unassigned | 0.012 | 0.000 | 0.130 | No | No | No | No |
| M18 240342 | 2017/18 | 1 | 1 | 1\_510 | 29 | 1 | NadA-1 | 1 | 13095 | ST-32 complex | 0.017 | 0.002 | 0.277 | Yes | No | No | No |
| M18 240349 | 2017/18 | none | 10-7 | 1\_4 | 31 | 0 | 0 | 0 | 2314 | ST-41/44 complex | 0.057 | 0.000 | 0.254 | Yes | No | No | No |
| M18 240352 | 2017/18 | 2 | 10-26 | 1\_13 | 24 | 0 | 0 | 0 | 6798 | unassigned | 0.013 | 0.001 | 0.230 | Yes | No | No | No |
| M18 240353 | 2017/18 | none | 16 | 1\_4 | 47 | 0 | 0 | 0 | 839 | ST-41/44 complex | 0.046 | 0.000 | 0.257 | Yes | No | No | No |
| M18 240358 | 2017/18 | none | 4 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.015 | 0.000 | 0.307 | Yes | No | Yes | Yes |
| M18 240362 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.012 | 0.001 | 0.214 | No | No | No | No |
| M18 240363 | 2017/18 | none | 16 | 2\_24 | 21 | 0 | 0 | 0 | 11621 | unassigned | 0.002 | 0.001 | 0.086 | No | No | No | No |
| M18 240365 | 2017/18 | none | 9 | 2\_16 | 1070 | 0 | 0 | 0 | 22 | ST-22 complex | 0.003 | 0.001 | 0.982 | No | No | Yes | No |
| M18 240367 | 2017/18 | none | 14 | 3\_45 | 18 | 34 | NadA-4/5 | 0 | 3635 | ST-213 complex | 0.001 | 0.000 | 0.052 | No | No | No | No |
| M18 240368 | 2017/18 | none | 10-1 | 3\_84 | 47 | 0 | 0 | 0 | 8068 | ST-282 complex | 0.001 | 0.000 | 0.197 | No | No | No | No |
| M18 240372 | 2017/18 | none | 15 | 1\_1 | 187 | 1 | NadA-1 | 1 | 9775 | ST-32 complex | 1.306 | 0.002 | 0.296 | Yes | No | Yes | No |
| M18 240380 | 2017/18 | none | 15-11 | 1\_15 | 21 | 0 | 0 | 0 | 4124 | ST-269 complex | 0.015 | 0.000 | 0.371 | Yes | No | Yes | No |
| M18 240387 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.056 | 0.000 | 0.802 | Yes | No | Yes | No |
| M18 240401 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 4713 | unassigned | 0.010 | 0.000 | 0.227 | No | No | No | No |
| M18 240402 | 2017/18 | none | 15 | 1\_1 | 120 | 1 | NadA-1 | 1 | 749 | ST-32 complex | 1.143 | 0.009 | 0.046 | Yes | No | No | No |
| M18 240403 | 2017/18 | 3 | 14-6 | 1\_13 | 114 | 20 | NadA-2/3 | 0 | 1157 | ST-1157 complex | 0.012 | 0.000 | 0.134 | No | No | No | No |
| M18 240415 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.042 | 0.000 | 1.141 | Yes | No | Yes | No |
| M18 240416 | 2017/18 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.073 | 0.000 | 0.737 | Yes | No | Yes | Yes |
| M18 240417 | 2017/18 | 2 | 16-26 | 3\_499 | 316 | 19 | NadA-1 | 100 | 2506 | ST-32 complex | 0.001 | 0.000 | 0.070 | No | No | No | No |
| M18 240421 | 2017/18 | 1 | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.033 | 0.000 | 0.610 | Yes | No | Yes | No |
| M18 240422 | 2017/18 | 3 | 15-11 | 3\_31 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.003 | 0.000 | 0.452 | No | No | Yes | No |
| M18 240423 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.018 | 0.000 | 0.387 | Yes | No | Yes | No |
| M18 240429 | 2017/18 | none | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.011 | 0.000 | 0.185 | No | No | No | No |
| M18 240434 | 2017/18 | 1 | 9 | 1\_13 | 17 | 0 | 0 | 0 | 1161 | ST-269 complex | 0.019 | 0.000 | 0.300 | Yes | No | Yes | No |
| M18 240435 | 2017/18 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 15214 | ST-41/44 complex | 0.070 | 0.000 | 0.455 | Yes | No | Yes | No |
| M18 240436 | 2017/18 | 3 | 15-11 | 3\_1323 | 21 | 0 | 0 | 0 | 269 | ST-269 complex | 0.002 | 0.000 | 0.575 | No | No | Yes | No |
| M18 240437 | 2017/18 | 2 | 16 | 3\_1217 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.001 | 0.000 | 0.623 | No | No | Yes | No |
| M18 240441 | 2017/18 | none | 14 | 1\_4 | 2 | 0 | 0 | 0 | 1194 | ST-41/44 complex | 0.066 | 0.000 | 0.917 | Yes | No | Yes | No |
| M18 240442 | 2017/18 | none | 4 | 1\_4 | 1175 | 0 | 0 | 0 | 41 | ST-41/44 complex | 0.064 | 0.000 | 0.697 | Yes | No | Yes | Yes |
| M18 240448 | 2017/18 | none | 16-50 | 3\_740 | 112 | 0 | 0 | 0 | 571 | ST-41/44 complex | 0.000 | 0.000 | 0.249 | No | No | No | No |
| M18 240454 | 2017/18 | none | 16 | 1\_4 | 2 | 0 | 0 | 0 | 485 | ST-41/44 complex | 0.032 | 0.000 | 0.282 | Yes | No | No | No |

Broken = allele broken between two contigs in homopolymeric tract region in draft genome assembly. NK = not known.

**Table S2.** 4CMenB genotypic and phenotypic data for invasive MenB isolates, and corresponding SBA titres, for three-dose vaccinees in England, 2015/16 to 2017/18, inclusive.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Isolate | 4CMenB peptide (SBA) | | | | ST | CC | MATS RP (SBA) | | |
| PorA VR2 | fHbp | NHBA | NadA | fHbp | NadA | NHBA |
| M18 240257 | 9 (4a) | 1.13 | 17 | 0**b** | 1161 | cc269 | 0.011 (2a) | 0.001 (64a) | 0.283 |
| M17 240156 | 14 | 3.45 | 18 | 0 | 213 | cc213 | 0.002 | 0.001 | 0.199 |
| M17 240781 | 14 | 3.955 | 18 | 0 | 213 | cc213 | 0.001 | 0.000 | 0.043 |
| M17 240388 | 23-2 | 3.494 | 31 | 0 | 1097 | cc41/44 | 0.003 | 0.000 | 0.196 |
| M18 240403 | 14-6 | 1.13 | 114 | 0 | 1157 | cc1157 | 0.012 | 0.000 | 0.134 |
| M18 240278 | 13-1 (4c) | 3.47 | 118 | 0 | 461 | cc461 | 0.003 (64c) | 0.000 (32c) | 0.314 |
| M18 240422 | 15-11 | 3.31 | 21 | 0 | 269 | cc269 | 0.003 | 0.000 | 0.452 |
| M18 240436 | 15-11 | 3.1323 | 21 | 0 | 269 | cc269 | 0.002 | 0.000 | 0.575 |
| M17 240448 | Deletedd | 2.25 | 24 | 0 | 1162 | unassigned | 0.002 | 0.001 | 0.295 |
| M18 240220 | 9 (2e) | 1.69 | 21 | 0 | 14358 | cc269 | 0.015 (2e) | 0.000 (2e) | 0.350 |
| M17 240577 | 16 (64c) | 1.4 | 2 | 0 | 485 | cc41/44 | 0.068 (16c) | 0.000 (16c) | 0.635 |
| M18 240290 | 15-11 | 1.15 | 21 | 0 | 354 | cc269 | 0.014 | 0.000 | 0.508 |

VR2 = variable region 2, ST = Sequence type, CC = clonal complex, RP = relative potency, SBA = serum bactericidal antibody assay titre. Grey shading = MATS positive. a>4 months following disease. b0 = *nadA* gene is lacking, disrupted or switched OFF. c>1 month following disease. dPorA gene is absent. e>3 months following disease.

**Table S3.** 4CMenB genotypic and phenotypic data for invasive MenB isolates from two-dose vaccinees in England, 2015/16 to 2017/18, inclusive.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Isolate | PorA | fHbp | NHBA | NadA | ST | CC | MATS RP | | |
| fHbp | NadA | NHBA |
| M17 240067 | 9 | 1.13 | 17 | 0 | 1161 | CC269 | 0.012 | 0.000 | 0.242 |
| M17 240370 | 9 | 2.19 | 17 | 0 | 1163 | CC269 | 0.001 | 0.000 | 0.252 |
| M17 240453 | 9 | 2.19 | 17 | 0 | 13712 | UA | 0.001 | 0.000 | 0.286 |
| M16 240367 | 14 | 3.953 | 29 | 0 | 8021 | CC213 | 0.003 | 0.000 | 0.132 |
| M16 240728 | 14 | 3.45 | 18 | 0 | 12985 | CC213 | 0.002 | 0.000 | 0.136 |
| M17 240004 | 14 | 3.364 | 29 | 0 | 1721 | CC213 | 0.001 | 0.000 | 0.186 |
| M17 240479 | 14 | 3.45 | 18 | 0 | 213 | CC213 | 0.001 | 0.000 | 0.046 |
| M18 240068 | 14 | 3.1502 | 18 | 0 | 13706 | CC213 | 0.001 | 0.000 | 0.028 |
| M17 240197 | 16 | 3.1082 | 18 | 0 | 213 | CC213 | 0.000 | 0.000 | 0.037 |
| M17 240027 | 13-7 | 3.47 | 118 | 0 | 1946 | CC461 | 0.001 | 0.000 | 0.239 |
| M18 240417 | 16-26 | 3.499 | 316 | 100 | 2506 | CC32 | 0.001 | 0.000 | 0.070 |
| M17 240622 | 9 | 1.15 | 21 | 0 | 1195 | CC269 | 0.012 | 0.000 | 0.376 |
| M18 240437 | 16 | 3.1217 | 2 | 0 | 485 | CC41/44 | 0.001 | 0.000 | 0.623 |
| M18 240105 | 2-2 | 3.30 | 21 | 0 | 1214 | CC269 | 0.001 | 0.000 | 0.452 |
| M18 240328 | 13-2 | 3.47 | 118 | 0 | 14362 | CC461 | 0.001 | 0.000 | 0.388 |
| M16 240436 | 30 | Neg | 21 | 0 | 1867 | UA | n/a | 0.000 | 0.793 |
| M16 240390 | 9 | 1.13 | 17 | 0 | 1161 | CC269 | 0.018 | 0.000 | 0.188 |
| M16 240422 | 9 | 1.954 | 17 | 0 | 4447 | CC269 | 0.014 | 0.000 | 0.228 |
| M17 240171 | 14 | 1.13 | 117 | 0 | 575 | CC213 | 0.017 | 0.000 | 0.057 |
| M18 240127 | 14 | 1.13 | 117 | 0 | 6607 | CC213 | 0.013 | 0.000 | 0.090 |
| M18 240245 | 14 | 1.218 | 18 | NK | 9193 | CC213 | 0.030 | 0.000 | 0.106 |
| M16 240410 | 10-4 | 1.13 | 24 | 0 | 60 | CC60 | 0.017 | 0.000 | 0.189 |
| M17 240041 | 10-4 | 1.144 | 29 | 1 | 33 | CC32 | 0.232 | 0.009 | 0.118 |
| M16 240175 | 30-11 | 1.510 | 29 | 1 | 12177 | CC32 | 0.024 | 0.008 | 0.173 |
| M18 240352 | 10-26 | 1.13 | 24 | 0 | 6798 | UA | 0.013 | 0.001 | 0.230 |
| M17 240805 | 4 | 1.14 | 173 | 0 | 2203 | CC41/44 | 0.021 | 0.000 | 0.138 |
| M18 240073 | 14 | 1.69 | 20 | 0 | 162 | CC162 | 0.018 | 0.000 | 0.402 |
| M16 240289 | 4 | 1.4 | 2 | 0 | 41 | CC41/44 | 0.046 | 0.000 | 0.765 |
| M16 240530 | 4 | 1.14 | 2 | 0 | 1788 | CC41/44 | 0.016 | 0.000 | 0.808 |
| M18 240003 | 4 | 1.4 | 805 | 0 | 11487 | CC41/44 | 0.024 | 0.000 | 0.740 |

ST = Sequence type, CC = clonal complex, RP = relative potency, Neg = lacking the corresponding gene, UA = unassigned, n/a = not applicable, NK = not known (nadA allele broken at intragenic homopolymeric tract. Grey shading = MATS positive.

**Table S4.** 4CMenB genotypic and phenotypic data for invasive MenB isolates from one-dose vaccinees in England, 2015/16 to 2017/18, inclusive.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Isolate | PorA | fHbp | NHBA | NadA | ST | CC | MATS RP | | |
| fHbp | NadA | NHBA |
| M17 240665 | 3 | 3.47 | 118 | 0 | 1946 | CC461 | 0.001 | 0.000 | 0.210 |
| M16 240653 | 9 | 2.19 | 112 | 0 | 571 | CC41/44 | 0.001 | 0.000 | 0.079 |
| M16 240822 | 9 | 1.13 | 17 | 0 | 12988 | UA | 0.007 | 0.000 | 0.216 |
| M16 240085 | 14 | 3.30 | 29 | 0 | 9194 | CC213 | 0.002 | 0.000 | 0.102 |
| M16 240282 | 14 | 3.45 | 18 | 0 | 12011 | CC213 | 0.002 | 0.001 | 0.030 |
| M16 240297 | 14 | 3.952 | 18 | 0 | 2660 | CC213 | 0.001 | 0.000 | 0.030 |
| M16 240437 | 14 | 3.45 | 29 | 0 | 213 | CC213 | 0.001 | 0.000 | 0.173 |
| M16 240889 | 14 | 2.21 | 20 | 0 | 162 | CC162 | 0.000 | 0.000 | 0.246 |
| M17 240168 | 14 | 3.364 | 18 | 0 | 213 | CC213 | 0.001 | 0.000 | 0.137 |
| M18 240018 | 14 | 3.45 | 29 | 0 | 213 | CC213 | 0.001 | 0.000 | 0.259 |
| M16 240636 | 16 | 3.31 | 122 | 0 | 336 | UA | 0.000 | 0.000 | 0.061 |
| M16 240150 | 13-1 | 3.47 | 118 | 0 | 12174 | CC461 | 0.002 | 0.000 | 0.187 |
| M17 240017 | 13-1 | 3.47 | 118 | 0 | 461 | CC461 | 0.000 | 0.000 | 0.246 |
| M18 240199 | 13-2 | 2.106 | 122 | 0 | 2738 | CC269 | 0.002 | 0.000 | 0.219 |
| M18 240169 | 10-4 | 2.202 | 47 | 0 | 282 | CC282 | 0.001 | 0.000 | 0.161 |
| M17 240532 | 15-11 | 3.185 | 18 | 182a | 7193 | CC213 | 0.000 | 0.000 | 0.196 |
| M16 240299 | 14 | 1.13 | 18 | 0 | 575 | CC213 | 0.019 | 0.000 | 0.066 |
| M16 240091 | 9 | 1.13 | 17 | 0 | 1161 | CC269 | 0.016 | 0.000 | 0.183 |
| M16 240121 | 9 | 1.13 | 184 | 0 | 1161 | CC269 | 0.013 | 0.000 | 0.079 |
| M16 240212 | 9 | 1.13 | 17 | 0 | 1161 | CC269 | 0.015 | 0.000 | 0.151 |
| M18 240342 | 1 | 1.510 | 29 | 1 | 13095 | CC32 | 0.017 | 0.002 | 0.277 |
| M18 240110 | 30 | 1.4 | 2 | 0 | 13714 | CC41/44 | 0.056 | 0.000 | 0.207 |
| M16 240146 | 13-1 | 1.14 | 24 | 0 | 1111 | UA | 0.020 | 0.000 | 0.162 |
| M15 240924 | 9 | 2.19 | 2 | 0 | 11755 | CC269 | 0.001 | 0.000 | 0.568 |
| M16 240222 | 15-11 | 3.31 | 21 | 0 | 269 | CC269 | 0.005 | 0.000 | 0.603 |
| M16 240868 | 15-11 | 3.30 | 21 | 0 | 1049 | CC269 | 0.001 | 0.000 | 0.432 |
| M17 240101 | 15 | 2.16 | 3 | 1 | 12509 | CC32 | 0.001 | 0.007 | 0.559 |
| M18 240269 | 13-1 | 2.24 | 21 | 0 | 14360 | CC35 | 0.001 | 0.000 | 0.778 |
| M17 240628 | 25 | 1.14 | 212 | 0 | 41 | CC41/44 | 0.007 | 0.000 | 0.540 |
| M15 240881 | 34 | 2.19 | 2 | 0 | 6058 | CC41/44 | 0.001 | 0.000 | 0.410 |
| M17 240576 | 15-1 | 2.19 | 2 | 0 | 43 | CC41/44 | 0.000 | 0.000 | 1.167 |
| M16 240780 | 30-2 | 2.16 | 593 | 0 | 10266 | UA | 0.001 | 0.000 | 0.380 |
| M17 240434 | 4 | 3.494 | 47 | 0 | 13707 | UA | 0.001 | 0.000 | 0.085 |
| M18 240434 | 9 | 1.13 | 17 | 0 | 1161 | CC269 | 0.019 | 0.000 | 0.300 |
| M18 240043 | 15-11 | 1.15 | 21 | 0 | 269 | CC269 | 0.014 | 0.000 | 0.350 |
| M17 240839 | 14 | 1.4 | 2 | 0 | 1341 | CC41/44 | 0.049 | 0.000 | 0.510 |
| M17 240446 | 16 | 1.4 | 2 | 0 | 485 | CC41/44 | 0.031 | 0.000 | 0.647 |
| M18 240326 | 16 | 1.4 | 2 | 0 | 485 | CC41/44 | 0.037 | 0.000 | 0.725 |
| M18 240421 | 16 | 1.4 | 2 | 0 | 485 | CC41/44 | 0.033 | 0.000 | 0.610 |
| M18 240301 | 4-1 | 3.47 | 197 | 3 | 14361 | CC461 | 0.001 | 0.023 | 0.332 |
| M16 240887 | 4 | 1.4 | 2 | 0 | 41 | CC41/44 | 0.034 | 0.000 | 0.860 |

ST = Sequence type, CC = clonal complex, RP = relative potency, UA = unassigned. apeptide 182 belongs to variant NadA-4/5. Grey shading = MATS positive.