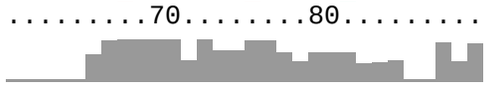
```
                          (((((((..((((.........)))).(((((.......)))))).............((
chr-5.trna141-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CUG 51
chr-7.trna47-Asn-GTT      UCCUCGGUAGCUCAGU--GGUAGAGCGGUCGGCUGUUUUCGGAC--------UGGU-CGU 49
chr-6.trna76-Asn-GTT      UCCUCAGUAGCUCAGU--GGUAGAGCAGUCGGCUGUUAACUGAC--------UGGU-CGU 49
chr-3.trna92-Asn-GTT      UCCUCAGUAGCUCAGU--GGUAGAGUGGUCGGCUGUUAACUGAC--------UGGU-CGU 49
chr-7.trna42-Asn-GTT      UCCUCAGUAGCUCAGU--GGUAGAGCGGUCGACUGUUAACUGAC--------UGGU-CGU 49
chr-6.trna297-Asn-GTT     UCCUCAGUAGCUCAGU--GGUAAAGCGGUCGGCUGUUAACUGAC--------UGGU-CAU 49
chr-4.trna248-Asn-GTT     UCCUCGGUAGCUCAGU--GGUAGAGUAGUCAACUGUUAACUGAC--------UGGU-CGU 49
chr-4.trna72-Asn-GTT      UCCUCAAUAGCUCAGUUCGGUAGAGCGAUCGGCUGUUAACUGAU--------UGGU-CGU 51
chr-3.trna283-Asn-GTT     UCCUCAGUAGCUCAGU--GGUAGAGCGGUCGGCUGUUAACUGAC--------UGGU-CGU 49
chr-2.trna197-Asn-GTT     GCUGGAGUAGCUCAGUUGGUUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-2.trna201-Asn-GTT     GCUGGAGUAGCUCAGUUGGUUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-2.trna266-Asn-GTT     GCUGGAAUAGCUCAGUUGGUUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-1.trna64-Asn-GTT      GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-1.trna368-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-4.trna192-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-4.trna195-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-4.trna196-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-4.trna197-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-4.trna213-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-5.trna366-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-4.trna191-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCGCA--------AGGU-CGG 51
chr-1.trna493-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-6.trna234-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-1.trna34-Asn-GTT      GCUGGAAUAGCUCAGAUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-1.trna414-Asn-GTT     GCUGGAAUAGCUCAGAUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-2.trna54-Asn-GTT      GCUGGAAUAGCUCAGAUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-5.trna140-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCAUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-2.trna287-Asn-GTT     GCUGGAAUAGCUCAGUUGGCCAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-1.trna556-Asn-GTT     GCUGGAAUAGCUUAGUUGGCUAGAGCAUGUGGCUGUUAACCACA--------AUGU-CGG 51
chr-2.trna503-Asn-GTT     GCUGGAAUAGCUCAGUUGGCUAGAGCGUAUGGCUGUUCACCAC--------AGCU-CGG 51
chr-2.trna198-Asn-GTT     GUUGUAAUAGCUCAGUUGGCUAGAGCGUGUGGCUGUUAACCACA--------AGGU-CGG 51
chr-2.trna69-Asn-GTT      UCCUCAAUAGCUCAGUUCGGUAGAGCGAUCGGCUGUUAACUGAU--------UGGU-CGU 51
chr-7.trna258-Asn-GTT     UCCUCAGUAGCU-GCAGUGGUAGAGCGGUCGGCUGUUAACUGAC--------UGGUACGU 51
chr-5.trna203-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-1.trna505-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-5.trna144-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-2.trna233-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-4.trna168-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-2.trna391-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-3.trna449-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-3.trna575-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-3.trna481-Asn-GTT     UCC-ACU--ACUCAGUUGG-UAGGGUACAAAGUUGUUAACCUUG--------UGGA-CGU 47
chr-4.trna112-Asn-GTT     UCC-ACU--UCUCAGUUGG-UAGGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-1.trna220-Asn-GTT     UCC-ACU--ACUCAGUUGG-UACGGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-7.trna293-Asn-GTT     UCC-ACU--AUUCAGUUGG-UAGAGUACAAAGCUGUUAACCUUG--------UGGA-CGU 47
chr-5.trna220-Asn-GTT     -CC-ACU--GCUCAGUUGG-UAAAGCACAAAGCCGUUAACCUUG--------UGGA-CGU 46
chr-2.trna104-Asn-GTT     -----CU--ACUCAGUUGG-UAGAGUAUAAAGCUGUUAACCUUA--------UGGA-CGU 43
chr-4.trna163-Asn-GTT     -----CU--ACUCAGUUAG-UAGGGUACAAAGCUGUUAACCUUG--------UGAA-CGU 43
chr-4.trna63-Asn-GTT      GGAGAGAUGGCUGAGUGGACUAAAGAGGUAGAUUGUUAAUCUGUGUACAAUUUUUUUUGU 60
chr-3.trna620-Asn-GTT     -----AGUAGCUCAGU--GGUAGAGCGGUCGGCUGUUAACUAAC--------UGGU---- 41
                          .........10........20........30........40........50.........

                          .....(((.......)))))))))).)).
chr-5.trna141-Asn-GTT     ---------UCAUUUUCUUAUUUCA--ACA 70
chr-7.trna47-Asn-GTT      -----AGGUUCGAAUCCUACUUGGG--GAG 72
chr-6.trna76-Asn-GTT      -----AGGUUCAAAUCCUACUUGGG--GAG 72
chr-3.trna92-Asn-GTT      -----AGGUUCGAAUCCUACUUGGG--GAG 72
chr-7.trna42-Asn-GTT      -----AGGUUAGAAUCCUACUUGGG--GAG 72
chr-6.trna297-Asn-GTT     -----AGGUUCGAAUCCUACUUGGG--GAG 72
chr-4.trna248-Asn-GTT     -----ACGUGCCAAUACUACUUGGG--GAG 72
chr-4.trna72-Asn-GTT      -----AGGUUCGAAUCCUACUUGGGUAGAU 76
chr-3.trna283-Asn-GTT     -----AGGUUCGAAUCCUACUUGGGUAGAU 74
chr-2.trna197-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-2.trna201-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-2.trna266-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-1.trna64-Asn-GTT      -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-1.trna368-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-4.trna192-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-4.trna195-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-4.trna196-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-4.trna197-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-4.trna213-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-5.trna366-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-4.trna191-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-1.trna493-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-6.trna234-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-1.trna34-Asn-GTT      -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-1.trna414-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-2.trna54-Asn-GTT      -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-5.trna140-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-2.trna287-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-1.trna556-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-2.trna503-Asn-GTT     -----AGGUUCGAGCCCUCCUUCUA--GCG 74
chr-2.trna198-Asn-GTT     -----AGGUUCAAGCCCUCCUUCUA--GCG 74
chr-2.trna69-Asn-GTT      -----AGGUUCGAAUCCUGCUUGGG--GAG 74
chr-7.trna258-Asn-GTT     ---UAAGGUUCGAAUCCUACUUGGG-AGAU 77
chr-5.trna203-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-1.trna505-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-5.trna144-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-2.trna233-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-4.trna168-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-2.trna391-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-3.trna449-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-3.trna575-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-3.trna481-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-4.trna112-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-1.trna220-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-7.trna293-Asn-GTT     -----GGGUUCAAGCCCCAUGGU-G--GAG 69
chr-5.trna220-Asn-GTT     -----GGGUUCAAGCCCCAUGAUGG--GGG 69
chr-2.trna104-Asn-GTT     -----GGGUUCAAGCCCCAUGGUGA--GGG 66
chr-4.trna163-Asn-GTT     -----GGGUUCAAGCCCCAUGGUGG--AGA 66
chr-4.trna63-Asn-GTT      ACCGAGGGUUCGAAUCGCUCUCUUU--CCG 88
chr-3.trna620-Asn-GTT     -----CGGUUCAAAUCGUUCGUUCG--CUA 64
                          .........70........80.........
                          
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