



51: Pnshy_8



A series of horizontal lines for writing, starting from the top of the page and extending to the bottom. The lines are evenly spaced and cover most of the page area.

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 311396 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311396 has 114 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Pharaoh_3
- Track 2 : Refuge_3
- Track 3 : Steamy_3
- Track 4 : DarthPhader_3
- Track 5 : Zimmer_3
- Track 6 : Anon_3, Elle_3
- Track 7 : PainterBoy_3, Lucyedi_3
- Track 8 : EagleEye_3
- Track 9 : 40AC_4
- Track 10 : Landor_3, Bactobuster_3
- Track 11 : Adzzy_3
- Track 12 : Iwokeuplikedis_4
- Track 13 : Phaded_3
- Track 14 : Pukovnik_3
- Track 15 : Acolyte_3
- Track 16 : Trooper_4
- Track 17 : NothingSpecial_3
- Track 18 : GaugeLDP_3
- Track 19 : Superchunk_3, Caraxes_3
- Track 20 : IronMan_3
- Track 21 : SwirlSquare_3
- Track 22 : Tristan_3
- Track 23 : Ph8s_3
- Track 24 : BabyBack_3
- Track 25 : Odin_2
- Track 26 : Che12_3
- Track 27 : Jaan_3
- Track 28 : Roksolana_3, BABullseye_3, Hexamo_3, Zaka_3, Koko_3, VohminGhazi_3, Zulu_3, Tucker_3, Hoot_3, BlessJoy_3, Dorothea_3, McFly_3, Jeffabunny_3, Priamo_3, ToneTone_3, SuperAwesome_3, Kazan_3, SuperCallie99_3, Newrala_3, Kipper29_3, Isiphiwo_3, SmellyB_3, Indra_3, DaVinci_3, DelvinSonDorr_3, CloudWang3_3, Candra_3, Lilbunny_3, Garak_3, GreedyLawyer_3, BennyP_3, JewelBug_3, Wiks_3, Blinn1_3, Yokurt_3, Chartreuse_3, Helmet_3, Jordennis_3, EricB_3, Temprado_3, Cookiedough_3, Pmask_3, WunderPhul_3, Polyphemus_3, Neeharika16_3, Artemis2UCLA_3
- Track 29 : Hammer_3
- Track 30 : Gladiator_3, Blue7_3, Rifter_3, Gruunaga_3

- Track 31 : Minispark_3, CogOmlette_3, Bellris_3, Rahalelujah_3
- Track 32 : Darrell_3
- Track 33 : LoneWolf_3
- Track 34 : Maminiaina_3, BogosyJay_3
- Track 35 : Vanisoa_3
- Track 36 : Elephantoan_3
- Track 37 : Klodlith_3, Charm_3
- Track 38 : DreamTeam1_3
- Track 39 : Yecey3_3
- Track 40 : Arissanae_3
- Track 41 : SheaKeira_3
- Track 42 : Keziacharles14_3
- Track 43 : MegTheThird_3, Celestiallunch_4
- Track 44 : WorldCup_3
- Track 45 : BeeGee_36
- Track 46 : Herod_32, Eviarto_32, BatStarr_32, Nymphadora_32, TimTam_32, Hugley_31
- Track 47 : Bosnia_32
- Track 48 : Nyceirae_9
- Track 49 : Meyran_7
- Track 50 : Manilisa_9
- Track 51 : Phishy_8

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 21, it was called in 72 of the 99 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 40AC_4, Acolyte_3, Anon_3, Arissanae_3, Artemis2UCLA_3, BABullseye_3, BabyBack_3, Bactobuster_3, Bellris_3, BennyP_3, BlessJoy_3, Blinn1_3, Blue7_3, BogosyJay_3, Candra_3, Caraxes_3, Charm_3, Chartreuse_3, CloudWang3_3, CogOmlette_3, Cookiedough_3, DaVinci_3, DelvinSonDorr_3, Dorothea_3, DreamTeam1_3, EagleEye_3, Elephantoan_3, Elle_3, EricB_3, Garak_3, GaugeLDP_3, Gladiator_3, GreedyLawyer_3, Gruunaga_3, Hammer_3, Helmet_3, Hexamo_3, Hoot_3, Indra_3, Isiphiwo_3, Jaan_3, Jeffabunny_3, JewelBug_3, Jordennis_3, Kazan_3, Kipper29_3, Klodlith_3, Koko_3, Landor_3, Lilbunny_3, LoneWolf_3, Maminiaina_3, McFly_3, Minispark_3, Neeharika16_3, Newrala_3, NothingSpecial_3, Odin_2, Ph8s_3, Pmask_3, Polyphemus_3, Priamo_3, Rahalelujah_3, Rifter_3, Roksolana_3, SheaKeira_3, SmellyB_3, SuperAwesome_3, SuperCallie99_3, Superchunk_3, Temprado_3, ToneTone_3, Trooper_4, Tucker_3, Vanisoa_3, VohminGhazi_3, Wiks_3, WorldCup_3, WunderPhul_3, Yecey3_3, Yokurt_3, Zaka_3, Zulu_3,

Genes that have the "Most Annotated" start but do not call it:

- Adzzy_3, BatStarr_32, BeeGee_36, Bosnia_32, Celestiallunch_4, Che12_3, Eviarto_32, Herod_32, Hugley_31, IronMan_3, Iwokeuplikedis_4, Lucyedi_3, MegTheThird_3, Nyceirae_9, Nymphadora_32, PainterBoy_3, Phaded_3, Pukovnik_3, SwirlSquare_3, TimTam_32, Tristan_3,

Genes that do not have the "Most Annotated" start:

- Darrell_3, DarthPhader_3, Keziacharles14_3, Manilisa_9, Meyran_7, Pharaoh_3, Phishy_8, Refuge_3, Steamy_3, Zimmer_3,

Summary by start number:

Start 17:

- Found in 12 of 114 (10.5%) of genes in pham
- Manual Annotations of this start: 8 of 99
- Called 83.3% of time when present
- Phage (with cluster) where this start called: BatStarr_32 (CZ1), BeeGee_36 (CY5), Eviarto_32 (CZ1), Herod_32 (CZ1), Hugley_31 (CZ1), Manilisa_9 (DT), Nyceirae_9 (DT), Nymphadora_32 (CZ1), Phishy_8 (DT), TimTam_32 (CZ1),

Start 18:

- Found in 1 of 114 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 99
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Meyran_7 (DT),

Start 19:

- Found in 7 of 114 (6.1%) of genes in pham
- Manual Annotations of this start: 7 of 99
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Darrell_3 (A9), DarthPhader_3 (A12), Keziacharles14_3 (A9), Pharaoh_3 (A12), Refuge_3 (A12), Steamy_3 (A12), Zimmer_3 (A12),

Start 20:

- Found in 12 of 114 (10.5%) of genes in pham
- Manual Annotations of this start: 1 of 99
- Called 8.3% of time when present
- Phage (with cluster) where this start called: Bosnia_32 (CZ1),

Start 21:

- Found in 104 of 114 (91.2%) of genes in pham
- Manual Annotations of this start: 72 of 99
- Called 79.8% of time when present
- Phage (with cluster) where this start called: 40AC_4 (A17), Acolyte_3 (A2), Anon_3 (A15), Arissanae_3 (A9), Artemis2UCLA_3 (A6), BABullseye_3 (A6), BabyBack_3 (A2), Bactobuster_3 (A2), Bellris_3 (A9), BennyP_3 (A6), BlessJoy_3 (A6), Blinn1_3 (A6), Blue7_3 (A6), BogosyJay_3 (A9), Candra_3 (A6), Caraxes_3 (A2), Charm_3 (A9), Chartreuse_3 (A6), CloudWang3_3 (A6), CogOmlette_3 (A9), Cookiedough_3 (A6), DaVinci_3 (A6), DelvinSonDorr_3 (A6), Dorothea_3 (A6), DreamTeam1_3 (A9), EagleEye_3 (A16), Elephantoon_3 (A9), Elle_3 (A15), EricB_3 (A6), Garak_3 (A6), GaugeLDP_3 (A2), Gladiator_3 (A6), GreedyLawyer_3 (A6), Gruunaga_3 (A6), Hammer_3 (A6), Helmet_3 (A6), Hexamo_3 (A6), Hoot_3 (A6), Indra_3 (A6), Isiphiwo_3 (A6), Jaan_3 (A2), Jeffabunny_3 (A6), JewelBug_3 (A6), Jordennis_3 (A6), Kazan_3 (A6), Kipper29_3 (A6), Klodlith_3 (A9), Koko_3 (A6), Landor_3 (A2), Lilbunny_3 (A6), LoneWolf_3 (A9), Maminiaina_3 (A9), McFly_3 (A6), Minispark_3 (A9), Neeharika16_3 (A6), Newrala_3 (A6), NothingSpecial_3 (A2), Odin_2 (A2), Ph8s_3 (A2), Pmask_3 (A6), Polyphemus_3 (A6), Priamo_3 (A6), Rahalelujah_3 (A9), Rifter_3 (A6), Roksolana_3 (A6), SheaKeira_3 (A9), SmellyB_3 (A6),

SuperAwesome_3 (A6), SuperCallie99_3 (A6), Superchunk_3 (A2), Temprado_3 (A6), ToneTone_3 (A6), Trooper_4 (A2), Tucker_3 (A6), Vanisoa_3 (A9), VohminGhazi_3 (A6), Wiks_3 (A6), WorldCup_3 (A9), WunderPhul_3 (A6), Yecey3_3 (A9), Yokurt_3 (A6), Zaka_3 (A6), Zulu_3 (A6),

Start 22:

- Found in 37 of 114 (32.5%) of genes in pham
- Manual Annotations of this start: 9 of 99
- Called 29.7% of time when present
- Phage (with cluster) where this start called: Adzzy_3 (A2), Celestialunch_4 (A9), Che12_3 (A2), Iwokeuplikedis_4 (A2), Lucyedi_3 (A16), MegTheThird_3 (A9), PainterBoy_3 (A16), Phaded_3 (A2), Pukovnik_3 (A2), SwirlSquare_3 (A2), Tristan_3 (A2),

Start 28:

- Found in 6 of 114 (5.3%) of genes in pham
- Manual Annotations of this start: 1 of 99
- Called 16.7% of time when present
- Phage (with cluster) where this start called: IronMan_3 (A2),

Summary by clusters:

There are 10 clusters represented in this pham: A15, A17, A16, CY5, A12, CZ1, A2, A6, A9, DT,

Info for manual annotations of cluster A12:

- Start number 19 was manually annotated 5 times for cluster A12.

Info for manual annotations of cluster A15:

- Start number 21 was manually annotated 1 time for cluster A15.

Info for manual annotations of cluster A16:

- Start number 21 was manually annotated 1 time for cluster A16.
- Start number 22 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 21 was manually annotated 11 times for cluster A2.
- Start number 22 was manually annotated 7 times for cluster A2.
- Start number 28 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A6:

- Start number 21 was manually annotated 48 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 19 was manually annotated 2 times for cluster A9.
- Start number 21 was manually annotated 11 times for cluster A9.

Info for manual annotations of cluster CY5:

- Start number 17 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CZ1:

- Start number 17 was manually annotated 5 times for cluster CZ1.

- Start number 20 was manually annotated 1 time for cluster CZ1.

Info for manual annotations of cluster DT:

- Start number 17 was manually annotated 2 times for cluster DT.
- Start number 18 was manually annotated 1 time for cluster DT.

Gene Information:

Gene: 40AC_4 Start: 2081, Stop: 2299, Start Num: 21

Candidate Starts for 40AC_4:

(Start: 21 @2081 has 72 MA's), (Start: 22 @2084 has 9 MA's), (34, 2171), (35, 2177), (48, 2279),

Gene: Acolyte_3 Start: 1904, Stop: 2125, Start Num: 21

Candidate Starts for Acolyte_3:

(Start: 21 @1904 has 72 MA's), (Start: 22 @1907 has 9 MA's), (29, 1949), (43, 2060), (51, 2120),

Gene: Adzzy_3 Start: 1945, Stop: 2163, Start Num: 22

Candidate Starts for Adzzy_3:

(Start: 21 @1942 has 72 MA's), (Start: 22 @1945 has 9 MA's), (51, 2158),

Gene: Anon_3 Start: 1964, Stop: 2185, Start Num: 21

Candidate Starts for Anon_3:

(13, 1898), (16, 1940), (Start: 21 @1964 has 72 MA's), (35, 2060), (51, 2180),

Gene: Arissanae_3 Start: 1903, Stop: 2124, Start Num: 21

Candidate Starts for Arissanae_3:

(13, 1837), (Start: 21 @1903 has 72 MA's), (30, 1960), (34, 1993), (40, 2026), (51, 2119),

Gene: Artemis2UCLA_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Artemis2UCLA_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: BABullseye_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for BABullseye_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: BabyBack_3 Start: 1878, Stop: 2099, Start Num: 21

Candidate Starts for BabyBack_3:

(Start: 21 @1878 has 72 MA's), (Start: 22 @1881 has 9 MA's), (24, 1899), (51, 2094),

Gene: Bactobuster_3 Start: 1888, Stop: 2109, Start Num: 21

Candidate Starts for Bactobuster_3:

(9, 1663), (Start: 21 @1888 has 72 MA's), (Start: 22 @1891 has 9 MA's), (Start: 28 @1930 has 1 MA's), (30, 1945), (51, 2104),

Gene: BatStarr_32 Start: 28866, Stop: 29126, Start Num: 17

Candidate Starts for BatStarr_32:

(3, 28422), (4, 28551), (11, 28761), (Start: 17 @28866 has 8 MA's), (Start: 20 @28878 has 1 MA's), (Start: 21 @28881 has 72 MA's), (Start: 22 @28884 has 9 MA's), (42, 29025),

Gene: BeeGee_36 Start: 29645, Stop: 29905, Start Num: 17

Candidate Starts for BeeGee_36:

(Start: 17 @29645 has 8 MA's), (Start: 20 @29657 has 1 MA's), (Start: 21 @29660 has 72 MA's),
(Start: 22 @29663 has 9 MA's),

Gene: Bellris_3 Start: 1884, Stop: 2105, Start Num: 21

Candidate Starts for Bellris_3:

(7, 1617), (8, 1635), (13, 1815), (Start: 21 @1884 has 72 MA's), (30, 1941), (36, 1992), (51, 2100),

Gene: BennyP_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for BennyP_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: BlessJoy_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for BlessJoy_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Blinn1_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Blinn1_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Blue7_3 Start: 1914, Stop: 2135, Start Num: 21

Candidate Starts for Blue7_3:

(Start: 21 @1914 has 72 MA's), (43, 2070), (51, 2130),

Gene: BogosyJay_3 Start: 1884, Stop: 2105, Start Num: 21

Candidate Starts for BogosyJay_3:

(Start: 21 @1884 has 72 MA's), (30, 1941), (31, 1947), (40, 2007), (51, 2100),

Gene: Bosnia_32 Start: 28878, Stop: 29126, Start Num: 20

Candidate Starts for Bosnia_32:

(3, 28422), (4, 28551), (11, 28761), (Start: 17 @28866 has 8 MA's), (Start: 20 @28878 has 1 MA's),
(Start: 21 @28881 has 72 MA's), (Start: 22 @28884 has 9 MA's), (42, 29025),

Gene: Candra_3 Start: 1958, Stop: 2179, Start Num: 21

Candidate Starts for Candra_3:

(Start: 21 @1958 has 72 MA's), (43, 2114), (45, 2138), (51, 2174),

Gene: Caraxes_3 Start: 1936, Stop: 2157, Start Num: 21

Candidate Starts for Caraxes_3:

(9, 1711), (Start: 21 @1936 has 72 MA's), (51, 2152),

Gene: Celestiallunch_4 Start: 1890, Stop: 2108, Start Num: 22

Candidate Starts for Celestiallunch_4:

(Start: 21 @1887 has 72 MA's), (Start: 22 @1890 has 9 MA's), (26, 1920), (30, 1944), (34, 1977), (36,
1995), (37, 1998), (51, 2103),

Gene: Charm_3 Start: 1890, Stop: 2111, Start Num: 21

Candidate Starts for Charm_3:

(12, 1821), (Start: 21 @1890 has 72 MA's), (Start: 22 @1893 has 9 MA's), (29, 1935), (51, 2106),

Gene: Chartreuse_3 Start: 1926, Stop: 2147, Start Num: 21

Candidate Starts for Chartreuse_3:

(Start: 21 @1926 has 72 MA's), (43, 2082), (45, 2106), (51, 2142),

Gene: Che12_3 Start: 1900, Stop: 2118, Start Num: 22
Candidate Starts for Che12_3:
(Start: 21 @1897 has 72 MA's), (Start: 22 @1900 has 9 MA's), (39, 2014), (43, 2053), (51, 2113),

Gene: CloudWang3_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for CloudWang3_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: CogOmlette_3 Start: 1884, Stop: 2105, Start Num: 21
Candidate Starts for CogOmlette_3:
(7, 1617), (8, 1635), (13, 1815), (Start: 21 @1884 has 72 MA's), (30, 1941), (36, 1992), (51, 2100),

Gene: Cookiedough_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Cookiedough_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: DaVinci_3 Start: 1926, Stop: 2147, Start Num: 21
Candidate Starts for DaVinci_3:
(Start: 21 @1926 has 72 MA's), (43, 2082), (45, 2106), (51, 2142),

Gene: Darrell_3 Start: 1912, Stop: 2220, Start Num: 19
Candidate Starts for Darrell_3:
(Start: 19 @1912 has 7 MA's), (31, 1981), (35, 2014), (52, 2215),

Gene: DarthPhader_3 Start: 1938, Stop: 2249, Start Num: 19
Candidate Starts for DarthPhader_3:
(14, 1899), (Start: 19 @1938 has 7 MA's), (23, 1959), (39, 2064),

Gene: DelvinSonDorr_3 Start: 1927, Stop: 2148, Start Num: 21
Candidate Starts for DelvinSonDorr_3:
(Start: 21 @1927 has 72 MA's), (43, 2083), (45, 2107), (51, 2143),

Gene: Dorothea_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Dorothea_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: DreamTeam1_3 Start: 1890, Stop: 2111, Start Num: 21
Candidate Starts for DreamTeam1_3:
(13, 1812), (Start: 21 @1890 has 72 MA's), (29, 1935), (39, 2007), (51, 2106),

Gene: EagleEye_3 Start: 1907, Stop: 2128, Start Num: 21
Candidate Starts for EagleEye_3:
(7, 1646), (9, 1685), (Start: 21 @1907 has 72 MA's), (Start: 22 @1910 has 9 MA's), (30, 1964), (45, 2087), (51, 2123),

Gene: Elephantoon_3 Start: 1877, Stop: 2098, Start Num: 21
Candidate Starts for Elephantoon_3:
(13, 1811), (Start: 21 @1877 has 72 MA's), (30, 1934), (40, 2000), (43, 2033), (51, 2093),

Gene: Elle_3 Start: 1923, Stop: 2144, Start Num: 21
Candidate Starts for Elle_3:
(13, 1857), (16, 1899), (Start: 21 @1923 has 72 MA's), (35, 2019), (51, 2139),

Gene: EricB_3 Start: 1926, Stop: 2147, Start Num: 21
Candidate Starts for EricB_3:
(Start: 21 @1926 has 72 MA's), (43, 2082), (45, 2106), (51, 2142),

Gene: Eviarto_32 Start: 28842, Stop: 29102, Start Num: 17
Candidate Starts for Eviarto_32:
(3, 28398), (4, 28527), (11, 28737), (Start: 17 @28842 has 8 MA's), (Start: 20 @28854 has 1 MA's),
(Start: 21 @28857 has 72 MA's), (Start: 22 @28860 has 9 MA's), (42, 29001),

Gene: Garak_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Garak_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: GaugeLDP_3 Start: 1874, Stop: 2095, Start Num: 21
Candidate Starts for GaugeLDP_3:
(9, 1649), (13, 1808), (16, 1850), (Start: 21 @1874 has 72 MA's), (Start: 22 @1877 has 9 MA's), (24,
1895), (51, 2090),

Gene: Gladiator_3 Start: 1915, Stop: 2136, Start Num: 21
Candidate Starts for Gladiator_3:
(Start: 21 @1915 has 72 MA's), (43, 2071), (51, 2131),

Gene: GreedyLawyer_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for GreedyLawyer_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Gruunaga_3 Start: 1915, Stop: 2136, Start Num: 21
Candidate Starts for Gruunaga_3:
(Start: 21 @1915 has 72 MA's), (43, 2071), (51, 2131),

Gene: Hammer_3 Start: 1914, Stop: 2135, Start Num: 21
Candidate Starts for Hammer_3:
(Start: 21 @1914 has 72 MA's), (43, 2070), (45, 2094), (51, 2130),

Gene: Helmet_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Helmet_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Herod_32 Start: 28866, Stop: 29126, Start Num: 17
Candidate Starts for Herod_32:
(3, 28422), (4, 28551), (11, 28761), (Start: 17 @28866 has 8 MA's), (Start: 20 @28878 has 1 MA's),
(Start: 21 @28881 has 72 MA's), (Start: 22 @28884 has 9 MA's), (42, 29025),

Gene: Hexamo_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Hexamo_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Hoot_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Hoot_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Hugley_31 Start: 28865, Stop: 29125, Start Num: 17

Candidate Starts for Hugley_31:

(3, 28421), (4, 28550), (11, 28760), (Start: 17 @28865 has 8 MA's), (Start: 20 @28877 has 1 MA's), (Start: 21 @28880 has 72 MA's), (Start: 22 @28883 has 9 MA's), (42, 29024),

Gene: Indra_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Indra_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: IronMan_3 Start: 1938, Stop: 2117, Start Num: 28

Candidate Starts for IronMan_3:

(Start: 21 @1896 has 72 MA's), (Start: 22 @1899 has 9 MA's), (Start: 28 @1938 has 1 MA's), (51, 2112),

Gene: Isiphiwo_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Isiphiwo_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Iwokeuplikedis_4 Start: 2149, Stop: 2367, Start Num: 22

Candidate Starts for Iwokeuplikedis_4:

(Start: 21 @2146 has 72 MA's), (Start: 22 @2149 has 9 MA's), (Start: 28 @2188 has 1 MA's), (30, 2203), (36, 2254), (39, 2263), (51, 2362),

Gene: Jaan_3 Start: 1892, Stop: 2113, Start Num: 21

Candidate Starts for Jaan_3:

(Start: 21 @1892 has 72 MA's), (Start: 22 @1895 has 9 MA's), (51, 2108),

Gene: Jeffabunny_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Jeffabunny_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: JewelBug_3 Start: 1926, Stop: 2147, Start Num: 21

Candidate Starts for JewelBug_3:

(Start: 21 @1926 has 72 MA's), (43, 2082), (45, 2106), (51, 2142),

Gene: Jordennis_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Jordennis_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Kazan_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Kazan_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Keziacharles14_3 Start: 1907, Stop: 2215, Start Num: 19

Candidate Starts for Keziacharles14_3:

(Start: 19 @1907 has 7 MA's), (35, 2009), (36, 2021),

Gene: Kipper29_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Kipper29_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Klodlith_3 Start: 1890, Stop: 2111, Start Num: 21

Candidate Starts for Klodlith_3:

(12, 1821), (Start: 21 @1890 has 72 MA's), (Start: 22 @1893 has 9 MA's), (29, 1935), (51, 2106),

Gene: Koko_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Koko_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Landor_3 Start: 1894, Stop: 2115, Start Num: 21
Candidate Starts for Landor_3:
(9, 1669), (Start: 21 @1894 has 72 MA's), (Start: 22 @1897 has 9 MA's), (Start: 28 @1936 has 1 MA's), (30, 1951), (51, 2110),

Gene: Lilbunny_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Lilbunny_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: LoneWolf_3 Start: 1881, Stop: 2102, Start Num: 21
Candidate Starts for LoneWolf_3:
(13, 1815), (Start: 21 @1881 has 72 MA's), (30, 1938), (36, 1989), (40, 2004), (42, 2016), (51, 2097),

Gene: Lucyedi_3 Start: 1910, Stop: 2128, Start Num: 22
Candidate Starts for Lucyedi_3:
(7, 1646), (9, 1685), (Start: 21 @1907 has 72 MA's), (Start: 22 @1910 has 9 MA's), (30, 1964), (45, 2087), (51, 2123),

Gene: Maminiaina_3 Start: 1884, Stop: 2105, Start Num: 21
Candidate Starts for Maminiaina_3:
(Start: 21 @1884 has 72 MA's), (30, 1941), (31, 1947), (40, 2007), (51, 2100),

Gene: Manilisa_9 Start: 6442, Stop: 6702, Start Num: 17
Candidate Starts for Manilisa_9:
(15, 6412), (Start: 17 @6442 has 8 MA's), (Start: 20 @6454 has 1 MA's), (Start: 22 @6460 has 9 MA's), (42, 6601), (51, 6679),

Gene: McFly_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for McFly_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: MegTheThird_3 Start: 1890, Stop: 2108, Start Num: 22
Candidate Starts for MegTheThird_3:
(Start: 21 @1887 has 72 MA's), (Start: 22 @1890 has 9 MA's), (26, 1920), (30, 1944), (34, 1977), (36, 1995), (37, 1998), (51, 2103),

Gene: Meyran_7 Start: 6273, Stop: 6530, Start Num: 18
Candidate Starts for Meyran_7:
(15, 6240), (Start: 17 @6270 has 8 MA's), (Start: 18 @6273 has 1 MA's), (Start: 20 @6282 has 1 MA's), (Start: 22 @6288 has 9 MA's), (42, 6429), (51, 6507),

Gene: Minispark_3 Start: 1884, Stop: 2105, Start Num: 21
Candidate Starts for Minispark_3:
(7, 1617), (8, 1635), (13, 1815), (Start: 21 @1884 has 72 MA's), (30, 1941), (36, 1992), (51, 2100),

Gene: Neeharika16_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Neeharika16_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Newrala_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Newrala_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: NothingSpecial_3 Start: 1929, Stop: 2150, Start Num: 21
Candidate Starts for NothingSpecial_3:
(Start: 21 @1929 has 72 MA's), (Start: 22 @1932 has 9 MA's), (29, 1974), (51, 2145),

Gene: Nyceirae_9 Start: 6259, Stop: 6519, Start Num: 17
Candidate Starts for Nyceirae_9:
(15, 6229), (Start: 17 @6259 has 8 MA's), (Start: 20 @6271 has 1 MA's), (Start: 21 @6274 has 72 MA's), (Start: 22 @6277 has 9 MA's), (25, 6304), (27, 6316), (33, 6358), (42, 6418),

Gene: Nymphadora_32 Start: 28866, Stop: 29126, Start Num: 17
Candidate Starts for Nymphadora_32:
(3, 28422), (4, 28551), (11, 28761), (Start: 17 @28866 has 8 MA's), (Start: 20 @28878 has 1 MA's), (Start: 21 @28881 has 72 MA's), (Start: 22 @28884 has 9 MA's), (42, 29025),

Gene: Odin_2 Start: 1935, Stop: 2156, Start Num: 21
Candidate Starts for Odin_2:
(6, 1653), (9, 1710), (Start: 21 @1935 has 72 MA's), (51, 2151),

Gene: PainterBoy_3 Start: 1910, Stop: 2128, Start Num: 22
Candidate Starts for PainterBoy_3:
(7, 1646), (9, 1685), (Start: 21 @1907 has 72 MA's), (Start: 22 @1910 has 9 MA's), (30, 1964), (45, 2087), (51, 2123),

Gene: Ph8s_3 Start: 1942, Stop: 2163, Start Num: 21
Candidate Starts for Ph8s_3:
(Start: 21 @1942 has 72 MA's), (Start: 22 @1945 has 9 MA's), (51, 2158),

Gene: Phaded_3 Start: 1894, Stop: 2112, Start Num: 22
Candidate Starts for Phaded_3:
(Start: 21 @1891 has 72 MA's), (Start: 22 @1894 has 9 MA's), (51, 2107),

Gene: Pharaoh_3 Start: 1910, Stop: 2221, Start Num: 19
Candidate Starts for Pharaoh_3:
(Start: 19 @1910 has 7 MA's), (23, 1931), (49, 2123),

Gene: Phishy_8 Start: 6231, Stop: 6491, Start Num: 17
Candidate Starts for Phishy_8:
(15, 6201), (Start: 17 @6231 has 8 MA's), (Start: 20 @6243 has 1 MA's), (Start: 22 @6249 has 9 MA's), (42, 6390),

Gene: Pmask_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Pmask_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Polyphemus_3 Start: 1927, Stop: 2148, Start Num: 21
Candidate Starts for Polyphemus_3:
(Start: 21 @1927 has 72 MA's), (43, 2083), (45, 2107), (51, 2143),

Gene: Priamo_3 Start: 1940, Stop: 2161, Start Num: 21
Candidate Starts for Priamo_3:
(Start: 21 @1940 has 72 MA's), (43, 2096), (45, 2120), (51, 2156),

Gene: Pukovnik_3 Start: 1873, Stop: 2091, Start Num: 22
Candidate Starts for Pukovnik_3:
(Start: 21 @1870 has 72 MA's), (Start: 22 @1873 has 9 MA's), (51, 2086),

Gene: Rahalelujah_3 Start: 1884, Stop: 2105, Start Num: 21
Candidate Starts for Rahalelujah_3:
(7, 1617), (8, 1635), (13, 1815), (Start: 21 @1884 has 72 MA's), (30, 1941), (36, 1992), (51, 2100),

Gene: Refuge_3 Start: 1939, Stop: 2250, Start Num: 19
Candidate Starts for Refuge_3:
(14, 1900), (Start: 19 @1939 has 7 MA's), (23, 1960), (38, 2062), (39, 2065), (47, 2143), (49, 2152),

Gene: Rifter_3 Start: 1914, Stop: 2135, Start Num: 21
Candidate Starts for Rifter_3:
(Start: 21 @1914 has 72 MA's), (43, 2070), (51, 2130),

Gene: Roksolana_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Roksolana_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: SheaKeira_3 Start: 1905, Stop: 2126, Start Num: 21
Candidate Starts for SheaKeira_3:
(Start: 21 @1905 has 72 MA's), (30, 1962), (36, 2013), (51, 2121),

Gene: SmellyB_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for SmellyB_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Steamy_3 Start: 1910, Stop: 2221, Start Num: 19
Candidate Starts for Steamy_3:
(1, 1442), (5, 1610), (14, 1871), (Start: 19 @1910 has 7 MA's), (41, 2051), (46, 2111),

Gene: SuperAwesome_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for SuperAwesome_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: SuperCallie99_3 Start: 1926, Stop: 2147, Start Num: 21
Candidate Starts for SuperCallie99_3:
(Start: 21 @1926 has 72 MA's), (43, 2082), (45, 2106), (51, 2142),

Gene: Superchunk_3 Start: 1936, Stop: 2157, Start Num: 21
Candidate Starts for Superchunk_3:
(9, 1711), (Start: 21 @1936 has 72 MA's), (51, 2152),

Gene: SwirlSquare_3 Start: 1938, Stop: 2156, Start Num: 22
Candidate Starts for SwirlSquare_3:
(6, 1653), (9, 1710), (Start: 21 @1935 has 72 MA's), (Start: 22 @1938 has 9 MA's), (32, 2001), (51, 2151),

Gene: Temprado_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Temprado_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: TimTam_32 Start: 28866, Stop: 29126, Start Num: 17
Candidate Starts for TimTam_32:
(3, 28422), (4, 28551), (11, 28761), (Start: 17 @28866 has 8 MA's), (Start: 20 @28878 has 1 MA's),
(Start: 21 @28881 has 72 MA's), (Start: 22 @28884 has 9 MA's), (42, 29025),

Gene: ToneTone_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for ToneTone_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Tristan_3 Start: 1901, Stop: 2119, Start Num: 22
Candidate Starts for Tristan_3:
(Start: 21 @1898 has 72 MA's), (Start: 22 @1901 has 9 MA's), (51, 2114),

Gene: Trooper_4 Start: 2152, Stop: 2373, Start Num: 21
Candidate Starts for Trooper_4:
(2, 1708), (7, 1888), (9, 1927), (13, 2086), (Start: 21 @2152 has 72 MA's), (Start: 22 @2155 has 9
MA's), (Start: 28 @2194 has 1 MA's), (30, 2209), (36, 2260), (39, 2269), (43, 2308), (51, 2368),

Gene: Tucker_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Tucker_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Vanisoa_3 Start: 1884, Stop: 2105, Start Num: 21
Candidate Starts for Vanisoa_3:
(Start: 21 @1884 has 72 MA's), (30, 1941), (36, 1992), (50, 2094), (51, 2100),

Gene: VohminGhazi_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for VohminGhazi_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Wiks_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Wiks_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: WorldCup_3 Start: 1884, Stop: 2105, Start Num: 21
Candidate Starts for WorldCup_3:
(7, 1617), (8, 1635), (13, 1815), (Start: 21 @1884 has 72 MA's), (30, 1941), (51, 2100),

Gene: WunderPhul_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for WunderPhul_3:
(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Yecey3_3 Start: 1883, Stop: 2104, Start Num: 21
Candidate Starts for Yecey3_3:
(7, 1619), (10, 1679), (13, 1817), (Start: 21 @1883 has 72 MA's), (Start: 28 @1925 has 1 MA's), (51,
2099),

Gene: Yokurt_3 Start: 1925, Stop: 2146, Start Num: 21
Candidate Starts for Yokurt_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Zaka_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Zaka_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),

Gene: Zimmer_3 Start: 1948, Stop: 2259, Start Num: 19

Candidate Starts for Zimmer_3:

(14, 1909), (Start: 19 @1948 has 7 MA's), (23, 1969), (38, 2071), (39, 2074), (44, 2122),

Gene: Zulu_3 Start: 1925, Stop: 2146, Start Num: 21

Candidate Starts for Zulu_3:

(Start: 21 @1925 has 72 MA's), (43, 2081), (45, 2105), (51, 2141),