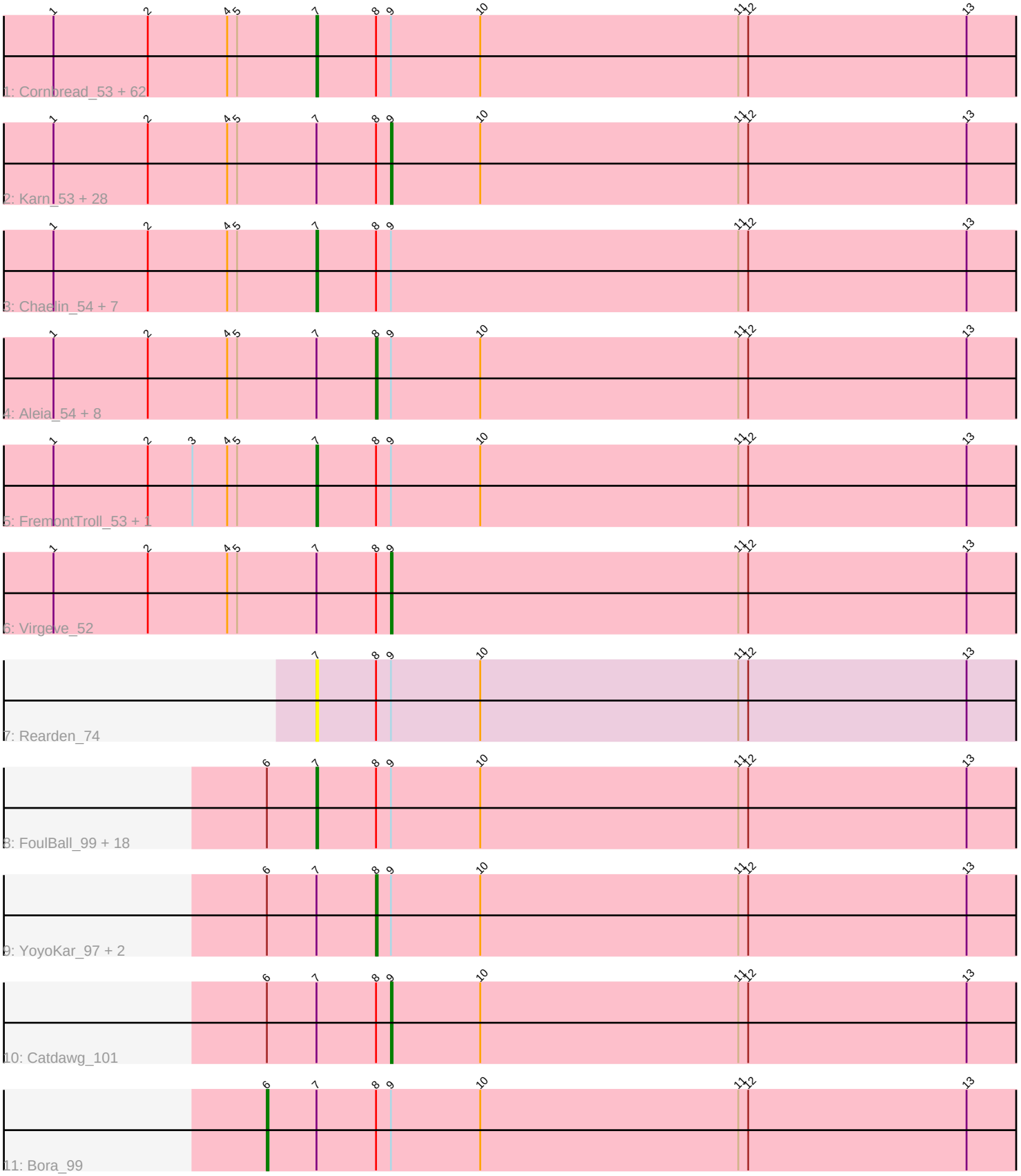
Pham 345489


1: Cornbread_53 + 62
2: Karn_53 + 28
3: Chaelin_54 + 7
4: Aleia_54 + 8
5: FremontTroll_53 + 1
6: Virgeve_52
7: Rearden_74
8: FoulBall_99 + 18
9: YoyoKar_97 + 2
10: Catdawg_101
11: Bora_99

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 345489 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345489 has 137 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Cornbread_53, LasagnaCat_55, JakeO_53, Hartsy_54, Chute_54, Jiminy_53, Magic8_54, Duggie_53, BlueHusk_54, Cher_53, Emiris_55, Gophee_54, Charles1_54, Aonishiki_54, Schueller_53, Cobra_54, Veritas_54, Mecca_53, Skippy_54, PhatLouie_54, KingTut_45, Daka_55, Omniscient_54, Squiggle_54, Zonia_54, YouGoGlencoco_54, Vaticameos_50, AngelCake_54, Keitherie_54, PhrankReynolds_52, Inchworm_55, CampRoach_55, Jiraiya_53, Bishoperium_53, Riggan_54, Vectra_54, BatteryCK_53, Kimbrough_54, Jillium_53, Kailash_53, Labeouficaum_53, FugateOSU_53, Derpp_52, Gareth_53, DirtJuice_54, Anderson_54, Wallhey_53, PinheadLarry_54, Durga_55, Nehme_52, Swiphy_54, LemonSlice_54, Slatt_54, Caspiboi_53, Bluephacebaby_53, Kiwot_55, Kwksand96_53, Virapocalypse_54, Quisquiliae_54, Hocus_53, Burr_53, Mag7_53, Tomlarah_54
• Track 2 : Karn_53, Scrick_54, LostAndPhound_53, Ashraf_54, Hekos_50, MichaelPhcott_53, ShadowBud_54, Prickles_54, Andre_55, JangoPhett_53, Megamind20_54, Coletti_54, Plata_53, ImtiyazSitla_54, Mutante_53, Iridoclysis_54, Trypo_55, MelsMeow_53, CharlieGBrown_53, Phergie_54, Thunderbird_52, Struggle_53, Phleuron_53, TyrionL_53, PhenghisKhan_53, Maskar_54, Oline_53, Pinkman_52, PhrodoBaggins_54
• Track 3 : Chaelin_54, Windsor_53, Jesabah_54, FleetyMac_53, BlacksBerry_52, Flake_53, SirBeauregard_54, Larson_55
• Track 4 : Aleia_54, PallasAthena_53, Nova1_54, Taraxa_54, Mcshane_52, GeneCoco_53, DuchessDung_54, Jbug01_53, Salazzle_54
• Track 5 : FremontTroll_53, Placalicious_53
• Track 6 : Virgeve_52
• Track 7 : Rearden_74
• Track 8 : FoulBall_99, Shida_102, Familton_101, Mori_100, JangDynasty_96, Blessica_98, Idergollasper_102, Schuy_100, Winget_100, Vorrps_100, Imara_99, Vagabond_99, Zebo_99, KingPhillip3_100, Alkhayr_100, Murai_100, Krili_102, TelAviv_97, NiebruSaylor_100
• Track 9 : YoyoKar_97, Wogge42_97, SchoolBus_99
• Track 10 : Catdawg_101
• Track 11 : Bora_99

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

The start number called the most often in the published annotations is 7, it was called in 87 of the 121 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alkhayr_100, Anderson_54, AngelCake_54, Aonishiki_54, BatteryCK_53, Bishoperium_53, BlacksBerry_52, Blessica_98, BlueHusk_54, Bluephacebaby_53, Burr_53, CampRoach_55, Caspiboi_53, Chaelin_54, Charles1_54, Cher_53, Chute_54, Cobra_54, Cornbread_53, Daka_55, Derpp_52, DirtJuice_54, Duggie_53, Durga_55, Emiris_55, Familton_101, Flake_53, FleetyMac_53, FoulBall_99, FremontTroll_53, FugateOSU_53, Gareth_53, Gophee_54, Hartsy_54, Hocus_53, Idergollasper_102, Imara_99, Inchworm_55, JakeO_53, JangDynasty_96, Jesabah_54, Jillium_53, Jiminy_53, Jiraiya_53, Kailash_53, Keitherie_54, Kimbrough_54, KingPhillip3_100, KingTut_45, Kiwot_55, Krili_102, Kwksand96_53, Labeouficaum_53, Larson_55, LasagnaCat_55, LemonSlice_54, Mag7_53, Magic8_54, Mecca_53, Mori_100, Murai_100, Nehme_52, NiebruSaylor_100, Omniscient_54, PhatLouie_54, PhrankReynolds_52, PinheadLarry_54, Placalicious_53, Quisquiliae_54, Rearden_74, Riggan_54, Schueller_53, Schuy_100, Shida_102, SirBeauregard_54, Skippy_54, Slatt_54, Squiggle_54, Swiphy_54, TelAviv_97, Tomlarah_54, Vagabond_99, Vaticameos_50, Vectra_54, Veritas_54, Virapocalypse_54, Vorrps_100, Wallhey_53, Windsor_53, Winget_100, YouGoGlencoco_54, Zebo_99, Zonia_54,

Genes that have the "Most Annotated" start but do not call it:
• Aleia_54, Andre_55, Ashraf_54, Bora_99, Catdawg_101, CharlieGBrown_53, Coletti_54, DuchessDung_54, GeneCoco_53, Hekos_50, ImtiyazSitla_54, Iridoclysis_54, JangoPhett_53, Jbug01_53, Karn_53, LostAndPhound_53, Maskar_54, Mcshane_52, Megamind20_54, MelsMeow_53, MichaelPhcott_53, Mutante_53, Nova1_54, Oline_53, PallasAthena_53, PhenghisKhan_53, Phergie_54, Phleuron_53, PhrodoBaggins_54, Pinkman_52, Plata_53, Prickles_54, Salazzle_54, SchoolBus_99, Scrick_54, ShadowBud_54, Struggle_53, Taraxa_54, Thunderbird_52, Trypo_55, TyrionL_53, Virgeve_52, Wogge42_97, YoyoKar_97,

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

Summary by start number:

Start 6:
• Found in 24 of 137 (17.5%) of genes in pham
• Manual Annotations of this start: 1 of 121
• Called 4.2% of time when present
• Phage (with cluster) where this start called: Bora_99 (O),

Start 7:
• Found in 137 of 137 (100.0%) of genes in pham
• Manual Annotations of this start: 87 of 121
• Called 67.9% of time when present
• Phage (with cluster) where this start called: Alkhayr_100 (O), Anderson_54 (B1), AngelCake_54 (B1), Aonishiki_54 (B1), BatteryCK_53 (B1), Bishoperium_53 (B1), BlacksBerry_52 (B1), Blessica_98 (O), BlueHusk_54 (B1), Bluephacebaby_53 (B1), Burr_53 (B1), CampRoach_55 (B1), Caspiboi_53 (B1), Chaelin_54 (B1), Charles1_54 (B1), Cher_53 (B1), Chute_54 (B1), Cobra_54 (B1), Cornbread_53 (B1), Daka_55

(B1), Derpp_52 (B1), DirtJuice_54 (B1), Duggie_53 (B1), Durga_55 (B1), Emiris_55 (B1), Familton_101 (O), Flake_53 (B1), FleetyMac_53 (B1), FoulBall_99 (O), FremontTroll_53 (B1), FugateOSU_53 (B1), Gareth_53 (B1), Gophee_54 (B1), Hartsy_54 (B1), Hocus_53 (B1), Idergollasper_102 (O), Imara_99 (O), Inchworm_55 (B1), JakeO_53 (B1), JangDynasty_96 (O), Jesabah_54 (B1), Jillium_53 (B1), Jiminy_53 (B1), Jiraiya_53 (B1), Kailash_53 (B1), Keitherie_54 (B1), Kimbrough_54 (B1), KingPhillip3_100 (O), KingTut_45 (B1), Kiwot_55 (B1), Krili_102 (O), Kwksand96_53 (B1), Labeouficaum_53 (B1), Larson_55 (B1), LasagnaCat_55 (B1), LemonSlice_54 (B1), Mag7_53 (B1), Magic8_54 (B1), Mecca_53 (B1), Mori_100 (O), Murai_100 (O), Nehme_52 (B1), NiebruSaylor_100 (O), Omniscient_54 (B1), PhatLouie_54 (B1), PhrankReynolds_52 (B1), PinheadLarry_54 (B1), Placalicious_53 (B1), Quisquiliae_54 (B1), Rearden_74 (J), Riggan_54 (B1), Schueller_53 (B1), Schuy_100 (O), Shida_102 (O), SirBeauregard_54 (B1), Skippy_54 (B1), Slatt_54 (B1), Squiggle_54 (B1), Swiphy_54 (B1), TelAviv_97 (O), Tomlarah_54 (B1), Vagabond_99 (O), Vaticameos_50 (B1), Vectra_54 (B1), Veritas_54 (B1), Virapocalypse_54 (B1), Vorrps_100 (O), Wallhey_53 (B1), Windsor_53 (B1), Winget_100 (O), YouGoGlencoco_54 (B1), Zebo_99 (O), Zonia_54 (B1),

Start 8:
• Found in 137 of 137 (100.0%) of genes in pham
• Manual Annotations of this start: 5 of 121
• Called 8.8% of time when present
• Phage (with cluster) where this start called: Aleia_54 (B1), DuchessDung_54 (B1), GeneCoco_53 (B1), Jbug01_53 (B1), Mcshane_52 (B1), Nova1_54 (B1), PallasAthena_53 (B1), Salazzle_54 (B1), SchoolBus_99 (O), Taraxa_54 (B1), Wogge42_97 (O), YoyoKar_97 (O),

Start 9:
• Found in 137 of 137 (100.0%) of genes in pham
• Manual Annotations of this start: 28 of 121
• Called 22.6% of time when present
• Phage (with cluster) where this start called: Andre_55 (B1), Ashraf_54 (B1), Catdawg_101 (O), CharlieGBrown_53 (B1), Coletti_54 (B1), Hekos_50 (B1), ImtiyazSitla_54 (B1), Iridoclysis_54 (B1), JangoPhett_53 (B1), Karn_53 (B1), LostAndPhound_53 (B1), Maskar_54 (B1), Megamind20_54 (B1), MelsMeow_53 (B1), MichaelPhcott_53 (B1), Mutante_53 (B1), Oline_53 (B1), PhenghisKhan_53 (B1), Phergie_54 (B1), Phleuron_53 (B1), PhrodoBaggins_54 (B1), Pinkman_52 (B1), Plata_53 (B1), Prickles_54 (B1), Scrick_54 (B1), ShadowBud_54 (B1), Struggle_53 (B1), Thunderbird_52 (B1), Trypo_55 (B1), TyrionL_53 (B1), Virgeve_52 (B1),

Summary by clusters:

There are 3 clusters represented in this pham: J, B1, O,

Info for manual annotations of cluster B1:
•Start number 7 was manually annotated 68 times for cluster B1.
•Start number 8 was manually annotated 4 times for cluster B1.
•Start number 9 was manually annotated 27 times for cluster B1.

Info for manual annotations of cluster O:
•Start number 6 was manually annotated 1 time for cluster O.
•Start number 7 was manually annotated 19 times for cluster O.

•Start number 8 was manually annotated 1 time for cluster O.
•Start number 9 was manually annotated 1 time for cluster O.

Gene Information:

Gene: Aleia_54 Start: 47678, Stop: 47277, Start Num: 8
Candidate Starts for Aleia_54:
(1, 47873), (2, 47816), (4, 47768), (5, 47762), (Start: 7 @47714 has 87 MA's), (Start: 8 @47678 has 5 MA's), (Start: 9 @47669 has 28 MA's), (10, 47615), (11, 47459), (12, 47453), (13, 47321),

Gene: Alkhayr_100 Start: 61605, Stop: 61171, Start Num: 7
Candidate Starts for Alkhayr_100:
(Start: 6 @61635 has 1 MA's), (Start: 7 @61605 has 87 MA's), (Start: 8 @61569 has 5 MA's), (Start: 9 @61560 has 28 MA's), (10, 61506), (11, 61350), (12, 61344), (13, 61212),

Gene: Anderson_54 Start: 47887, Stop: 47453, Start Num: 7
Candidate Starts for Anderson_54:
(1, 48046), (2, 47989), (4, 47941), (5, 47935), (Start: 7 @47887 has 87 MA's), (Start: 8 @47851 has 5 MA's), (Start: 9 @47842 has 28 MA's), (10, 47788), (11, 47632), (12, 47626), (13, 47494),

Gene: Andre_55 Start: 47979, Stop: 47590, Start Num: 9
Candidate Starts for Andre_55:
(1, 48183), (2, 48126), (4, 48078), (5, 48072), (Start: 7 @48024 has 87 MA's), (Start: 8 @47988 has 5 MA's), (Start: 9 @47979 has 28 MA's), (10, 47925), (11, 47769), (12, 47763), (13, 47631),

Gene: AngelCake_54 Start: 47909, Stop: 47475, Start Num: 7
Candidate Starts for AngelCake_54:
(1, 48068), (2, 48011), (4, 47963), (5, 47957), (Start: 7 @47909 has 87 MA's), (Start: 8 @47873 has 5 MA's), (Start: 9 @47864 has 28 MA's), (10, 47810), (11, 47654), (12, 47648), (13, 47516),

Gene: Aonishiki_54 Start: 47930, Stop: 47496, Start Num: 7
Candidate Starts for Aonishiki_54:
(1, 48089), (2, 48032), (4, 47984), (5, 47978), (Start: 7 @47930 has 87 MA's), (Start: 8 @47894 has 5 MA's), (Start: 9 @47885 has 28 MA's), (10, 47831), (11, 47675), (12, 47669), (13, 47537),

Gene: Ashraf_54 Start: 47544, Stop: 47155, Start Num: 9
Candidate Starts for Ashraf_54:
(1, 47748), (2, 47691), (4, 47643), (5, 47637), (Start: 7 @47589 has 87 MA's), (Start: 8 @47553 has 5 MA's), (Start: 9 @47544 has 28 MA's), (10, 47490), (11, 47334), (12, 47328), (13, 47196),

Gene: BatteryCK_53 Start: 47529, Stop: 47095, Start Num: 7
Candidate Starts for BatteryCK_53:
(1, 47688), (2, 47631), (4, 47583), (5, 47577), (Start: 7 @47529 has 87 MA's), (Start: 8 @47493 has 5 MA's), (Start: 9 @47484 has 28 MA's), (10, 47430), (11, 47274), (12, 47268), (13, 47136),

Gene: Bishoperium_53 Start: 47601, Stop: 47167, Start Num: 7
Candidate Starts for Bishoperium_53:
(1, 47760), (2, 47703), (4, 47655), (5, 47649), (Start: 7 @47601 has 87 MA's), (Start: 8 @47565 has 5 MA's), (Start: 9 @47556 has 28 MA's), (10, 47502), (11, 47346), (12, 47340), (13, 47208),

Gene: BlacksBerry_52 Start: 47279, Stop: 46848, Start Num: 7

Candidate Starts for BlacksBerry_52:
(1, 47438), (2, 47381), (4, 47333), (5, 47327), (Start: 7 @47279 has 87 MA's), (Start: 8 @47243 has 5 MA's), (Start: 9 @47234 has 28 MA's), (11, 47027), (12, 47021), (13, 46889),

Gene: Blessica_98 Start: 61813, Stop: 61379, Start Num: 7
Candidate Starts for Blessica_98:
(Start: 6 @61843 has 1 MA's), (Start: 7 @61813 has 87 MA's), (Start: 8 @61777 has 5 MA's), (Start: 9 @61768 has 28 MA's), (10, 61714), (11, 61558), (12, 61552), (13, 61420),

Gene: BlueHusk_54 Start: 47404, Stop: 46973, Start Num: 7
Candidate Starts for BlueHusk_54:
(1, 47563), (2, 47506), (4, 47458), (5, 47452), (Start: 7 @47404 has 87 MA's), (Start: 8 @47368 has 5 MA's), (Start: 9 @47359 has 28 MA's), (10, 47305), (11, 47152), (12, 47146), (13, 47014),

Gene: Bluephacebaby_53 Start: 47604, Stop: 47170, Start Num: 7
Candidate Starts for Bluephacebaby_53:
(1, 47763), (2, 47706), (4, 47658), (5, 47652), (Start: 7 @47604 has 87 MA's), (Start: 8 @47568 has 5 MA's), (Start: 9 @47559 has 28 MA's), (10, 47505), (11, 47349), (12, 47343), (13, 47211),

Gene: Bora_99 Start: 62685, Stop: 62221, Start Num: 6
Candidate Starts for Bora_99:
(Start: 6 @62685 has 1 MA's), (Start: 7 @62655 has 87 MA's), (Start: 8 @62619 has 5 MA's), (Start: 9 @62610 has 28 MA's), (10, 62556), (11, 62400), (12, 62394), (13, 62262),

Gene: Burr_53 Start: 47598, Stop: 47164, Start Num: 7
Candidate Starts for Burr_53:
(1, 47757), (2, 47700), (4, 47652), (5, 47646), (Start: 7 @47598 has 87 MA's), (Start: 8 @47562 has 5 MA's), (Start: 9 @47553 has 28 MA's), (10, 47499), (11, 47343), (12, 47337), (13, 47205),

Gene: CampRoach_55 Start: 48028, Stop: 47594, Start Num: 7
Candidate Starts for CampRoach_55:
(1, 48187), (2, 48130), (4, 48082), (5, 48076), (Start: 7 @48028 has 87 MA's), (Start: 8 @47992 has 5 MA's), (Start: 9 @47983 has 28 MA's), (10, 47929), (11, 47773), (12, 47767), (13, 47635),

Gene: Caspiboi_53 Start: 47602, Stop: 47168, Start Num: 7
Candidate Starts for Caspiboi_53:
(1, 47761), (2, 47704), (4, 47656), (5, 47650), (Start: 7 @47602 has 87 MA's), (Start: 8 @47566 has 5 MA's), (Start: 9 @47557 has 28 MA's), (10, 47503), (11, 47347), (12, 47341), (13, 47209),

Gene: Catdawg_101 Start: 62880, Stop: 62491, Start Num: 9
Candidate Starts for Catdawg_101:
(Start: 6 @62955 has 1 MA's), (Start: 7 @62925 has 87 MA's), (Start: 8 @62889 has 5 MA's), (Start: 9 @62880 has 28 MA's), (10, 62826), (11, 62670), (12, 62664), (13, 62532),

Gene: Chaelin_54 Start: 47599, Stop: 47165, Start Num: 7
Candidate Starts for Chaelin_54:
(1, 47758), (2, 47701), (4, 47653), (5, 47647), (Start: 7 @47599 has 87 MA's), (Start: 8 @47563 has 5 MA's), (Start: 9 @47554 has 28 MA's), (11, 47344), (12, 47338), (13, 47206),

Gene: Charles1_54 Start: 47884, Stop: 47450, Start Num: 7
Candidate Starts for Charles1_54:
(1, 48043), (2, 47986), (4, 47938), (5, 47932), (Start: 7 @47884 has 87 MA's), (Start: 8 @47848 has 5 MA's), (Start: 9 @47839 has 28 MA's), (10, 47785), (11, 47629), (12, 47623), (13, 47491),

Gene: CharlieGBrown_53 Start: 47429, Stop: 47040, Start Num: 9
Candidate Starts for CharlieGBrown_53:
(1, 47633), (2, 47576), (4, 47528), (5, 47522), (Start: 7 @47474 has 87 MA's), (Start: 8 @47438 has 5 MA's), (Start: 9 @47429 has 28 MA's), (10, 47375), (11, 47219), (12, 47213), (13, 47081),

Gene: Cher_53 Start: 47621, Stop: 47187, Start Num: 7
Candidate Starts for Cher_53:
(1, 47780), (2, 47723), (4, 47675), (5, 47669), (Start: 7 @47621 has 87 MA's), (Start: 8 @47585 has 5 MA's), (Start: 9 @47576 has 28 MA's), (10, 47522), (11, 47366), (12, 47360), (13, 47228),

Gene: Chute_54 Start: 47945, Stop: 47511, Start Num: 7
Candidate Starts for Chute_54:
(1, 48104), (2, 48047), (4, 47999), (5, 47993), (Start: 7 @47945 has 87 MA's), (Start: 8 @47909 has 5 MA's), (Start: 9 @47900 has 28 MA's), (10, 47846), (11, 47690), (12, 47684), (13, 47552),

Gene: Cobra_54 Start: 47919, Stop: 47485, Start Num: 7
Candidate Starts for Cobra_54:
(1, 48078), (2, 48021), (4, 47973), (5, 47967), (Start: 7 @47919 has 87 MA's), (Start: 8 @47883 has 5 MA's), (Start: 9 @47874 has 28 MA's), (10, 47820), (11, 47664), (12, 47658), (13, 47526),

Gene: Coletti_54 Start: 47900, Stop: 47511, Start Num: 9
Candidate Starts for Coletti_54:
(1, 48104), (2, 48047), (4, 47999), (5, 47993), (Start: 7 @47945 has 87 MA's), (Start: 8 @47909 has 5 MA's), (Start: 9 @47900 has 28 MA's), (10, 47846), (11, 47690), (12, 47684), (13, 47552),

Gene: Cornbread_53 Start: 47610, Stop: 47176, Start Num: 7
Candidate Starts for Cornbread_53:
(1, 47769), (2, 47712), (4, 47664), (5, 47658), (Start: 7 @47610 has 87 MA's), (Start: 8 @47574 has 5 MA's), (Start: 9 @47565 has 28 MA's), (10, 47511), (11, 47355), (12, 47349), (13, 47217),

Gene: Daka_55 Start: 47887, Stop: 47453, Start Num: 7
Candidate Starts for Daka_55:
(1, 48046), (2, 47989), (4, 47941), (5, 47935), (Start: 7 @47887 has 87 MA's), (Start: 8 @47851 has 5 MA's), (Start: 9 @47842 has 28 MA's), (10, 47788), (11, 47632), (12, 47626), (13, 47494),

Gene: Derpp_52 Start: 47463, Stop: 47029, Start Num: 7
Candidate Starts for Derpp_52:
(1, 47622), (2, 47565), (4, 47517), (5, 47511), (Start: 7 @47463 has 87 MA's), (Start: 8 @47427 has 5 MA's), (Start: 9 @47418 has 28 MA's), (10, 47364), (11, 47208), (12, 47202), (13, 47070),

Gene: DirtJuice_54 Start: 47876, Stop: 47442, Start Num: 7
Candidate Starts for DirtJuice_54:
(1, 48035), (2, 47978), (4, 47930), (5, 47924), (Start: 7 @47876 has 87 MA's), (Start: 8 @47840 has 5 MA's), (Start: 9 @47831 has 28 MA's), (10, 47777), (11, 47621), (12, 47615), (13, 47483),

Gene: DuchessDung_54 Start: 47101, Stop: 46700, Start Num: 8
Candidate Starts for DuchessDung_54:
(1, 47296), (2, 47239), (4, 47191), (5, 47185), (Start: 7 @47137 has 87 MA's), (Start: 8 @47101 has 5 MA's), (Start: 9 @47092 has 28 MA's), (10, 47038), (11, 46882), (12, 46876), (13, 46744),

Gene: Duggie_53 Start: 47616, Stop: 47182, Start Num: 7
Candidate Starts for Duggie_53:

(1, 47775), (2, 47718), (4, 47670), (5, 47664), (Start: 7 @47616 has 87 MA's), (Start: 8 @47580 has 5 MA's), (Start: 9 @47571 has 28 MA's), (10, 47517), (11, 47361), (12, 47355), (13, 47223),

Gene: Durga_55 Start: 48055, Stop: 47621, Start Num: 7
Candidate Starts for Durga_55:
(1, 48214), (2, 48157), (4, 48109), (5, 48103), (Start: 7 @48055 has 87 MA's), (Start: 8 @48019 has 5 MA's), (Start: 9 @48010 has 28 MA's), (10, 47956), (11, 47800), (12, 47794), (13, 47662),

Gene: Emiris_55 Start: 48023, Stop: 47589, Start Num: 7
Candidate Starts for Emiris_55:
(1, 48182), (2, 48125), (4, 48077), (5, 48071), (Start: 7 @48023 has 87 MA's), (Start: 8 @47987 has 5 MA's), (Start: 9 @47978 has 28 MA's), (10, 47924), (11, 47768), (12, 47762), (13, 47630),

Gene: Familton_101 Start: 62337, Stop: 61903, Start Num: 7
Candidate Starts for Familton_101:
(Start: 6 @62367 has 1 MA's), (Start: 7 @62337 has 87 MA's), (Start: 8 @62301 has 5 MA's), (Start: 9 @62292 has 28 MA's), (10, 62238), (11, 62082), (12, 62076), (13, 61944),

Gene: Flake_53 Start: 47626, Stop: 47192, Start Num: 7
Candidate Starts for Flake_53:
(1, 47785), (2, 47728), (4, 47680), (5, 47674), (Start: 7 @47626 has 87 MA's), (Start: 8 @47590 has 5 MA's), (Start: 9 @47581 has 28 MA's), (11, 47371), (12, 47365), (13, 47233),

Gene: FleetyMac_53 Start: 47568, Stop: 47134, Start Num: 7
Candidate Starts for FleetyMac_53:
(1, 47727), (2, 47670), (4, 47622), (5, 47616), (Start: 7 @47568 has 87 MA's), (Start: 8 @47532 has 5 MA's), (Start: 9 @47523 has 28 MA's), (11, 47313), (12, 47307), (13, 47175),

Gene: FoulBall_99 Start: 61888, Stop: 61454, Start Num: 7
Candidate Starts for FoulBall_99:
(Start: 6 @61918 has 1 MA's), (Start: 7 @61888 has 87 MA's), (Start: 8 @61852 has 5 MA's), (Start: 9 @61843 has 28 MA's), (10, 61789), (11, 61633), (12, 61627), (13, 61495),

Gene: FremontTroll_53 Start: 47663, Stop: 47229, Start Num: 7
Candidate Starts for FremontTroll_53:
(1, 47822), (2, 47765), (3, 47738), (4, 47717), (5, 47711), (Start: 7 @47663 has 87 MA's), (Start: 8 @47627 has 5 MA's), (Start: 9 @47618 has 28 MA's), (10, 47564), (11, 47408), (12, 47402), (13, 47270),

Gene: FugateOSU_53 Start: 47602, Stop: 47168, Start Num: 7
Candidate Starts for FugateOSU_53:
(1, 47761), (2, 47704), (4, 47656), (5, 47650), (Start: 7 @47602 has 87 MA's), (Start: 8 @47566 has 5 MA's), (Start: 9 @47557 has 28 MA's), (10, 47503), (11, 47347), (12, 47341), (13, 47209),

Gene: Gareth_53 Start: 47596, Stop: 47162, Start Num: 7
Candidate Starts for Gareth_53:
(1, 47755), (2, 47698), (4, 47650), (5, 47644), (Start: 7 @47596 has 87 MA's), (Start: 8 @47560 has 5 MA's), (Start: 9 @47551 has 28 MA's), (10, 47497), (11, 47341), (12, 47335), (13, 47203),

Gene: GeneCoco_53 Start: 47875, Stop: 47477, Start Num: 8
Candidate Starts for GeneCoco_53:
(1, 48070), (2, 48013), (4, 47965), (5, 47959), (Start: 7 @47911 has 87 MA's), (Start: 8 @47875 has 5 MA's), (Start: 9 @47866 has 28 MA's), (10, 47812), (11, 47656), (12, 47650), (13, 47518),

Gene: Gophee_54 Start: 47894, Stop: 47460, Start Num: 7
Candidate Starts for Gophee_54:
(1, 48053), (2, 47996), (4, 47948), (5, 47942), (Start: 7 @47894 has 87 MA's), (Start: 8 @47858 has 5 MA's), (Start: 9 @47849 has 28 MA's), (10, 47795), (11, 47639), (12, 47633), (13, 47501),

Gene: Hartsy_54 Start: 47943, Stop: 47509, Start Num: 7
Candidate Starts for Hartsy_54:
(1, 48102), (2, 48045), (4, 47997), (5, 47991), (Start: 7 @47943 has 87 MA's), (Start: 8 @47907 has 5 MA's), (Start: 9 @47898 has 28 MA's), (10, 47844), (11, 47688), (12, 47682), (13, 47550),

Gene: Hekos_50 Start: 46418, Stop: 46032, Start Num: 9
Candidate Starts for Hekos_50:
(1, 46622), (2, 46565), (4, 46517), (5, 46511), (Start: 7 @46463 has 87 MA's), (Start: 8 @46427 has 5 MA's), (Start: 9 @46418 has 28 MA's), (10, 46364), (11, 46211), (12, 46205), (13, 46073),

Gene: Hocus_53 Start: 47600, Stop: 47166, Start Num: 7
Candidate Starts for Hocus_53:
(1, 47759), (2, 47702), (4, 47654), (5, 47648), (Start: 7 @47600 has 87 MA's), (Start: 8 @47564 has 5 MA's), (Start: 9 @47555 has 28 MA's), (10, 47501), (11, 47345), (12, 47339), (13, 47207),

Gene: Idergollasper_102 Start: 62885, Stop: 62451, Start Num: 7
Candidate Starts for Idergollasper_102:
(Start: 6 @62915 has 1 MA's), (Start: 7 @62885 has 87 MA's), (Start: 8 @62849 has 5 MA's), (Start: 9 @62840 has 28 MA's), (10, 62786), (11, 62630), (12, 62624), (13, 62492),

Gene: Imara_99 Start: 61691, Stop: 61257, Start Num: 7
Candidate Starts for Imara_99:
(Start: 6 @61721 has 1 MA's), (Start: 7 @61691 has 87 MA's), (Start: 8 @61655 has 5 MA's), (Start: 9 @61646 has 28 MA's), (10, 61592), (11, 61436), (12, 61430), (13, 61298),

Gene: ImtiyazSitla_54 Start: 47544, Stop: 47155, Start Num: 9
Candidate Starts for ImtiyazSitla_54:
(1, 47748), (2, 47691), (4, 47643), (5, 47637), (Start: 7 @47589 has 87 MA's), (Start: 8 @47553 has 5 MA's), (Start: 9 @47544 has 28 MA's), (10, 47490), (11, 47334), (12, 47328), (13, 47196),

Gene: Inchworm_55 Start: 48027, Stop: 47593, Start Num: 7
Candidate Starts for Inchworm_55:
(1, 48186), (2, 48129), (4, 48081), (5, 48075), (Start: 7 @48027 has 87 MA's), (Start: 8 @47991 has 5 MA's), (Start: 9 @47982 has 28 MA's), (10, 47928), (11, 47772), (12, 47766), (13, 47634),

Gene: Iridoclysis_54 Start: 47841, Stop: 47452, Start Num: 9
Candidate Starts for Iridoclysis_54:
(1, 48045), (2, 47988), (4, 47940), (5, 47934), (Start: 7 @47886 has 87 MA's), (Start: 8 @47850 has 5 MA's), (Start: 9 @47841 has 28 MA's), (10, 47787), (11, 47631), (12, 47625), (13, 47493),

Gene: JakeO_53 Start: 47619, Stop: 47185, Start Num: 7
Candidate Starts for JakeO_53:
(1, 47778), (2, 47721), (4, 47673), (5, 47667), (Start: 7 @47619 has 87 MA's), (Start: 8 @47583 has 5 MA's), (Start: 9 @47574 has 28 MA's), (10, 47520), (11, 47364), (12, 47358), (13, 47226),

Gene: JangDynasty_96 Start: 61231, Stop: 60797, Start Num: 7
Candidate Starts for JangDynasty_96:

(Start: 6 @61261 has 1 MA's), (Start: 7 @61231 has 87 MA's), (Start: 8 @61195 has 5 MA's), (Start: 9 @61186 has 28 MA's), (10, 61132), (11, 60976), (12, 60970), (13, 60838),

Gene: JangoPhett_53 Start: 47852, Stop: 47463, Start Num: 9
Candidate Starts for JangoPhett_53:
(1, 48056), (2, 47999), (4, 47951), (5, 47945), (Start: 7 @47897 has 87 MA's), (Start: 8 @47861 has 5 MA's), (Start: 9 @47852 has 28 MA's), (10, 47798), (11, 47642), (12, 47636), (13, 47504),

Gene: Jbug01_53 Start: 47329, Stop: 46928, Start Num: 8
Candidate Starts for Jbug01_53:
(1, 47524), (2, 47467), (4, 47419), (5, 47413), (Start: 7 @47365 has 87 MA's), (Start: 8 @47329 has 5 MA's), (Start: 9 @47320 has 28 MA's), (10, 47266), (11, 47110), (12, 47104), (13, 46972),

Gene: Jesabah_54 Start: 47625, Stop: 47191, Start Num: 7
Candidate Starts for Jesabah_54:
(1, 47784), (2, 47727), (4, 47679), (5, 47673), (Start: 7 @47625 has 87 MA's), (Start: 8 @47589 has 5 MA's), (Start: 9 @47580 has 28 MA's), (11, 47370), (12, 47364), (13, 47232),

Gene: Jillium_53 Start: 47616, Stop: 47182, Start Num: 7
Candidate Starts for Jillium_53:
(1, 47775), (2, 47718), (4, 47670), (5, 47664), (Start: 7 @47616 has 87 MA's), (Start: 8 @47580 has 5 MA's), (Start: 9 @47571 has 28 MA's), (10, 47517), (11, 47361), (12, 47355), (13, 47223),

Gene: Jiminy_53 Start: 47454, Stop: 47020, Start Num: 7
Candidate Starts for Jiminy_53:
(1, 47613), (2, 47556), (4, 47508), (5, 47502), (Start: 7 @47454 has 87 MA's), (Start: 8 @47418 has 5 MA's), (Start: 9 @47409 has 28 MA's), (10, 47355), (11, 47199), (12, 47193), (13, 47061),

Gene: Jiraiya_53 Start: 47607, Stop: 47173, Start Num: 7
Candidate Starts for Jiraiya_53:
(1, 47766), (2, 47709), (4, 47661), (5, 47655), (Start: 7 @47607 has 87 MA's), (Start: 8 @47571 has 5 MA's), (Start: 9 @47562 has 28 MA's), (10, 47508), (11, 47352), (12, 47346), (13, 47214),

Gene: Kailash_53 Start: 47973, Stop: 47539, Start Num: 7
Candidate Starts for Kailash_53:
(1, 48132), (2, 48075), (4, 48027), (5, 48021), (Start: 7 @47973 has 87 MA's), (Start: 8 @47937 has 5 MA's), (Start: 9 @47928 has 28 MA's), (10, 47874), (11, 47718), (12, 47712), (13, 47580),

Gene: Karn_53 Start: 47569, Stop: 47180, Start Num: 9
Candidate Starts for Karn_53:
(1, 47773), (2, 47716), (4, 47668), (5, 47662), (Start: 7 @47614 has 87 MA's), (Start: 8 @47578 has 5 MA's), (Start: 9 @47569 has 28 MA's), (10, 47515), (11, 47359), (12, 47353), (13, 47221),

Gene: Keitherie_54 Start: 47954, Stop: 47520, Start Num: 7
Candidate Starts for Keitherie_54:
(1, 48113), (2, 48056), (4, 48008), (5, 48002), (Start: 7 @47954 has 87 MA's), (Start: 8 @47918 has 5 MA's), (Start: 9 @47909 has 28 MA's), (10, 47855), (11, 47699), (12, 47693), (13, 47561),

Gene: Kimbrough_54 Start: 47617, Stop: 47183, Start Num: 7
Candidate Starts for Kimbrough_54:
(1, 47776), (2, 47719), (4, 47671), (5, 47665), (Start: 7 @47617 has 87 MA's), (Start: 8 @47581 has 5 MA's), (Start: 9 @47572 has 28 MA's), (10, 47518), (11, 47362), (12, 47356), (13, 47224),

Gene: KingPhillip3_100 Start: 62585, Stop: 62151, Start Num: 7
Candidate Starts for KingPhillip3_100:
(Start: 6 @62615 has 1 MA's), (Start: 7 @62585 has 87 MA's), (Start: 8 @62549 has 5 MA's), (Start: 9 @62540 has 28 MA's), (10, 62486), (11, 62330), (12, 62324), (13, 62192),

Gene: KingTut_45 Start: 43281, Stop: 42847, Start Num: 7
Candidate Starts for KingTut_45:
(1, 43440), (2, 43383), (4, 43335), (5, 43329), (Start: 7 @43281 has 87 MA's), (Start: 8 @43245 has 5 MA's), (Start: 9 @43236 has 28 MA's), (10, 43182), (11, 43026), (12, 43020), (13, 42888),

Gene: Kiwot_55 Start: 47729, Stop: 47292, Start Num: 7
Candidate Starts for Kiwot_55:
(1, 47888), (2, 47831), (4, 47783), (5, 47777), (Start: 7 @47729 has 87 MA's), (Start: 8 @47693 has 5 MA's), (Start: 9 @47684 has 28 MA's), (10, 47630), (11, 47474), (12, 47468), (13, 47336),

Gene: Krili_102 Start: 62434, Stop: 62000, Start Num: 7
Candidate Starts for Krili_102:
(Start: 6 @62464 has 1 MA's), (Start: 7 @62434 has 87 MA's), (Start: 8 @62398 has 5 MA's), (Start: 9 @62389 has 28 MA's), (10, 62335), (11, 62179), (12, 62173), (13, 62041),

Gene: Kwksand96_53 Start: 47469, Stop: 47035, Start Num: 7
Candidate Starts for Kwksand96_53:
(1, 47628), (2, 47571), (4, 47523), (5, 47517), (Start: 7 @47469 has 87 MA's), (Start: 8 @47433 has 5 MA's), (Start: 9 @47424 has 28 MA's), (10, 47370), (11, 47214), (12, 47208), (13, 47076),

Gene: Labeouficaum_53 Start: 47463, Stop: 47029, Start Num: 7
Candidate Starts for Labeouficaum_53:
(1, 47622), (2, 47565), (4, 47517), (5, 47511), (Start: 7 @47463 has 87 MA's), (Start: 8 @47427 has 5 MA's), (Start: 9 @47418 has 28 MA's), (10, 47364), (11, 47208), (12, 47202), (13, 47070),

Gene: Larson_55 Start: 47686, Stop: 47252, Start Num: 7
Candidate Starts for Larson_55:
(1, 47845), (2, 47788), (4, 47740), (5, 47734), (Start: 7 @47686 has 87 MA's), (Start: 8 @47650 has 5 MA's), (Start: 9 @47641 has 28 MA's), (11, 47431), (12, 47425), (13, 47293),

Gene: LasagnaCat_55 Start: 48039, Stop: 47605, Start Num: 7
Candidate Starts for LasagnaCat_55:
(1, 48198), (2, 48141), (4, 48093), (5, 48087), (Start: 7 @48039 has 87 MA's), (Start: 8 @48003 has 5 MA's), (Start: 9 @47994 has 28 MA's), (10, 47940), (11, 47784), (12, 47778), (13, 47646),

Gene: LemonSlice_54 Start: 47605, Stop: 47171, Start Num: 7
Candidate Starts for LemonSlice_54:
(1, 47764), (2, 47707), (4, 47659), (5, 47653), (Start: 7 @47605 has 87 MA's), (Start: 8 @47569 has 5 MA's), (Start: 9 @47560 has 28 MA's), (10, 47506), (11, 47350), (12, 47344), (13, 47212),

Gene: LostAndPhound_53 Start: 47575, Stop: 47186, Start Num: 9
Candidate Starts for LostAndPhound_53:
(1, 47779), (2, 47722), (4, 47674), (5, 47668), (Start: 7 @47620 has 87 MA's), (Start: 8 @47584 has 5 MA's), (Start: 9 @47575 has 28 MA's), (10, 47521), (11, 47365), (12, 47359), (13, 47227),

Gene: Mag7_53 Start: 47523, Stop: 47089, Start Num: 7
Candidate Starts for Mag7_53:

(1, 47682), (2, 47625), (4, 47577), (5, 47571), (Start: 7 @47523 has 87 MA's), (Start: 8 @47487 has 5 MA's), (Start: 9 @47478 has 28 MA's), (10, 47424), (11, 47268), (12, 47262), (13, 47130),

Gene: Magic8_54 Start: 47958, Stop: 47524, Start Num: 7
Candidate Starts for Magic8_54:
(1, 48117), (2, 48060), (4, 48012), (5, 48006), (Start: 7 @47958 has 87 MA's), (Start: 8 @47922 has 5 MA's), (Start: 9 @47913 has 28 MA's), (10, 47859), (11, 47703), (12, 47697), (13, 47565),

Gene: Maskar_54 Start: 47544, Stop: 47155, Start Num: 9
Candidate Starts for Maskar_54:
(1, 47748), (2, 47691), (4, 47643), (5, 47637), (Start: 7 @47589 has 87 MA's), (Start: 8 @47553 has 5 MA's), (Start: 9 @47544 has 28 MA's), (10, 47490), (11, 47334), (12, 47328), (13, 47196),

Gene: Mcshane_52 Start: 47565, Stop: 47167, Start Num: 8
Candidate Starts for Mcshane_52:
(1, 47760), (2, 47703), (4, 47655), (5, 47649), (Start: 7 @47601 has 87 MA's), (Start: 8 @47565 has 5 MA's), (Start: 9 @47556 has 28 MA's), (10, 47502), (11, 47346), (12, 47340), (13, 47208),

Gene: Mecca_53 Start: 47605, Stop: 47171, Start Num: 7
Candidate Starts for Mecca_53:
(1, 47764), (2, 47707), (4, 47659), (5, 47653), (Start: 7 @47605 has 87 MA's), (Start: 8 @47569 has 5 MA's), (Start: 9 @47560 has 28 MA's), (10, 47506), (11, 47350), (12, 47344), (13, 47212),

Gene: Megamind20_54 Start: 47583, Stop: 47194, Start Num: 9
Candidate Starts for Megamind20_54:
(1, 47787), (2, 47730), (4, 47682), (5, 47676), (Start: 7 @47628 has 87 MA's), (Start: 8 @47592 has 5 MA's), (Start: 9 @47583 has 28 MA's), (10, 47529), (11, 47373), (12, 47367), (13, 47235),

Gene: MelsMeow_53 Start: 47597, Stop: 47208, Start Num: 9
Candidate Starts for MelsMeow_53:
(1, 47801), (2, 47744), (4, 47696), (5, 47690), (Start: 7 @47642 has 87 MA's), (Start: 8 @47606 has 5 MA's), (Start: 9 @47597 has 28 MA's), (10, 47543), (11, 47387), (12, 47381), (13, 47249),

Gene: MichaelPhcott_53 Start: 47475, Stop: 47086, Start Num: 9
Candidate Starts for MichaelPhcott_53:
(1, 47679), (2, 47622), (4, 47574), (5, 47568), (Start: 7 @47520 has 87 MA's), (Start: 8 @47484 has 5 MA's), (Start: 9 @47475 has 28 MA's), (10, 47421), (11, 47265), (12, 47259), (13, 47127),

Gene: Mori_100 Start: 62463, Stop: 62029, Start Num: 7
Candidate Starts for Mori_100:
(Start: 6 @62493 has 1 MA's), (Start: 7 @62463 has 87 MA's), (Start: 8 @62427 has 5 MA's), (Start: 9 @62418 has 28 MA's), (10, 62364), (11, 62208), (12, 62202), (13, 62070),

Gene: Murai_100 Start: 62311, Stop: 61877, Start Num: 7
Candidate Starts for Murai_100:
(Start: 6 @62341 has 1 MA's), (Start: 7 @62311 has 87 MA's), (Start: 8 @62275 has 5 MA's), (Start: 9 @62266 has 28 MA's), (10, 62212), (11, 62056), (12, 62050), (13, 61918),

Gene: Mutante_53 Start: 47568, Stop: 47179, Start Num: 9
Candidate Starts for Mutante_53:
(1, 47772), (2, 47715), (4, 47667), (5, 47661), (Start: 7 @47613 has 87 MA's), (Start: 8 @47577 has 5 MA's), (Start: 9 @47568 has 28 MA's), (10, 47514), (11, 47358), (12, 47352), (13, 47220),

Gene: Nehme_52 Start: 47899, Stop: 47462, Start Num: 7
Candidate Starts for Nehme_52:
(1, 48058), (2, 48001), (4, 47953), (5, 47947), (Start: 7 @47899 has 87 MA's), (Start: 8 @47863 has 5 MA's), (Start: 9 @47854 has 28 MA's), (10, 47800), (11, 47644), (12, 47638), (13, 47506),

Gene: NiebruSaylor_100 Start: 61578, Stop: 61144, Start Num: 7
Candidate Starts for NiebruSaylor_100:
(Start: 6 @61608 has 1 MA's), (Start: 7 @61578 has 87 MA's), (Start: 8 @61542 has 5 MA's), (Start: 9 @61533 has 28 MA's), (10, 61479), (11, 61323), (12, 61317), (13, 61185),

Gene: Nova1_54 Start: 47766, Stop: 47365, Start Num: 8
Candidate Starts for Nova1_54:
(1, 47961), (2, 47904), (4, 47856), (5, 47850), (Start: 7 @47802 has 87 MA's), (Start: 8 @47766 has 5 MA's), (Start: 9 @47757 has 28 MA's), (10, 47703), (11, 47547), (12, 47541), (13, 47409),

Gene: Oline_53 Start: 47422, Stop: 47033, Start Num: 9
Candidate Starts for Oline_53:
(1, 47626), (2, 47569), (4, 47521), (5, 47515), (Start: 7 @47467 has 87 MA's), (Start: 8 @47431 has 5 MA's), (Start: 9 @47422 has 28 MA's), (10, 47368), (11, 47212), (12, 47206), (13, 47074),

Gene: Omniscient_54 Start: 47912, Stop: 47478, Start Num: 7
Candidate Starts for Omniscient_54:
(1, 48071), (2, 48014), (4, 47966), (5, 47960), (Start: 7 @47912 has 87 MA's), (Start: 8 @47876 has 5 MA's), (Start: 9 @47867 has 28 MA's), (10, 47813), (11, 47657), (12, 47651), (13, 47519),

Gene: PallasAthena_53 Start: 47576, Stop: 47178, Start Num: 8
Candidate Starts for PallasAthena_53:
(1, 47771), (2, 47714), (4, 47666), (5, 47660), (Start: 7 @47612 has 87 MA's), (Start: 8 @47576 has 5 MA's), (Start: 9 @47567 has 28 MA's), (10, 47513), (11, 47357), (12, 47351), (13, 47219),

Gene: PhatLouie_54 Start: 47906, Stop: 47472, Start Num: 7
Candidate Starts for PhatLouie_54:
(1, 48065), (2, 48008), (4, 47960), (5, 47954), (Start: 7 @47906 has 87 MA's), (Start: 8 @47870 has 5 MA's), (Start: 9 @47861 has 28 MA's), (10, 47807), (11, 47651), (12, 47645), (13, 47513),

Gene: PhenghisKhan_53 Start: 47481, Stop: 47092, Start Num: 9
Candidate Starts for PhenghisKhan_53:
(1, 47685), (2, 47628), (4, 47580), (5, 47574), (Start: 7 @47526 has 87 MA's), (Start: 8 @47490 has 5 MA's), (Start: 9 @47481 has 28 MA's), (10, 47427), (11, 47271), (12, 47265), (13, 47133),

Gene: Phergie_54 Start: 47473, Stop: 47084, Start Num: 9
Candidate Starts for Phergie_54:
(1, 47677), (2, 47620), (4, 47572), (5, 47566), (Start: 7 @47518 has 87 MA's), (Start: 8 @47482 has 5 MA's), (Start: 9 @47473 has 28 MA's), (10, 47419), (11, 47263), (12, 47257), (13, 47125),

Gene: Phleuron_53 Start: 47478, Stop: 47089, Start Num: 9
Candidate Starts for Phleuron_53:
(1, 47682), (2, 47625), (4, 47577), (5, 47571), (Start: 7 @47523 has 87 MA's), (Start: 8 @47487 has 5 MA's), (Start: 9 @47478 has 28 MA's), (10, 47424), (11, 47268), (12, 47262), (13, 47130),

Gene: PhrankReynolds_52 Start: 47523, Stop: 47089, Start Num: 7
Candidate Starts for PhrankReynolds_52:

(1, 47682), (2, 47625), (4, 47577), (5, 47571), (Start: 7 @47523 has 87 MA's), (Start: 8 @47487 has 5 MA's), (Start: 9 @47478 has 28 MA's), (10, 47424), (11, 47268), (12, 47262), (13, 47130),

Gene: PhrodoBaggins_54 Start: 47985, Stop: 47596, Start Num: 9
Candidate Starts for PhrodoBaggins_54:
(1, 48189), (2, 48132), (4, 48084), (5, 48078), (Start: 7 @48030 has 87 MA's), (Start: 8 @47994 has 5 MA's), (Start: 9 @47985 has 28 MA's), (10, 47931), (11, 47775), (12, 47769), (13, 47637),

Gene: PinheadLarry_54 Start: 47609, Stop: 47175, Start Num: 7
Candidate Starts for PinheadLarry_54:
(1, 47768), (2, 47711), (4, 47663), (5, 47657), (Start: 7 @47609 has 87 MA's), (Start: 8 @47573 has 5 MA's), (Start: 9 @47564 has 28 MA's), (10, 47510), (11, 47354), (12, 47348), (13, 47216),

Gene: Pinkman_52 Start: 47416, Stop: 47027, Start Num: 9
Candidate Starts for Pinkman_52:
(1, 47620), (2, 47563), (4, 47515), (5, 47509), (Start: 7 @47461 has 87 MA's), (Start: 8 @47425 has 5 MA's), (Start: 9 @47416 has 28 MA's), (10, 47362), (11, 47206), (12, 47200), (13, 47068),

Gene: Placalicious_53 Start: 47599, Stop: 47165, Start Num: 7
Candidate Starts for Placalicious_53:
(1, 47758), (2, 47701), (3, 47674), (4, 47653), (5, 47647), (Start: 7 @47599 has 87 MA's), (Start: 8 @47563 has 5 MA's), (Start: 9 @47554 has 28 MA's), (10, 47500), (11, 47344), (12, 47338), (13, 47206),

Gene: Plata_53 Start: 47569, Stop: 47180, Start Num: 9
Candidate Starts for Plata_53:
(1, 47773), (2, 47716), (4, 47668), (5, 47662), (Start: 7 @47614 has 87 MA's), (Start: 8 @47578 has 5 MA's), (Start: 9 @47569 has 28 MA's), (10, 47515), (11, 47359), (12, 47353), (13, 47221),

Gene: Prickles_54 Start: 47837, Stop: 47448, Start Num: 9
Candidate Starts for Prickles_54:
(1, 48041), (2, 47984), (4, 47936), (5, 47930), (Start: 7 @47882 has 87 MA's), (Start: 8 @47846 has 5 MA's), (Start: 9 @47837 has 28 MA's), (10, 47783), (11, 47627), (12, 47621), (13, 47489),

Gene: Quisquiliae_54 Start: 47930, Stop: 47496, Start Num: 7
Candidate Starts for Quisquiliae_54:
(1, 48089), (2, 48032), (4, 47984), (5, 47978), (Start: 7 @47930 has 87 MA's), (Start: 8 @47894 has 5 MA's), (Start: 9 @47885 has 28 MA's), (10, 47831), (11, 47675), (12, 47669), (13, 47537),

Gene: Rearden_74 Start: 48235, Stop: 47795, Start Num: 7
Candidate Starts for Rearden_74:
(Start: 7 @48235 has 87 MA's), (Start: 8 @48199 has 5 MA's), (Start: 9 @48190 has 28 MA's), (10, 48136), (11, 47980), (12, 47974), (13, 47842),

Gene: Riggan_54 Start: 47881, Stop: 47447, Start Num: 7
Candidate Starts for Riggan_54:
(1, 48040), (2, 47983), (4, 47935), (5, 47929), (Start: 7 @47881 has 87 MA's), (Start: 8 @47845 has 5 MA's), (Start: 9 @47836 has 28 MA's), (10, 47782), (11, 47626), (12, 47620), (13, 47488),

Gene: Salazzle_54 Start: 47699, Stop: 47298, Start Num: 8
Candidate Starts for Salazzle_54:
(1, 47894), (2, 47837), (4, 47789), (5, 47783), (Start: 7 @47735 has 87 MA's), (Start: 8 @47699 has 5 MA's), (Start: 9 @47690 has 28 MA's), (10, 47636), (11, 47480), (12, 47474), (13, 47342),

Gene: SchoolBus_99 Start: 62018, Stop: 61620, Start Num: 8
Candidate Starts for SchoolBus_99:
(Start: 6 @62084 has 1 MA's), (Start: 7 @62054 has 87 MA's), (Start: 8 @62018 has 5 MA's), (Start: 9 @62009 has 28 MA's), (10, 61955), (11, 61799), (12, 61793), (13, 61661),

Gene: Schueller_53 Start: 47604, Stop: 47170, Start Num: 7
Candidate Starts for Schueller_53:
(1, 47763), (2, 47706), (4, 47658), (5, 47652), (Start: 7 @47604 has 87 MA's), (Start: 8 @47568 has 5 MA's), (Start: 9 @47559 has 28 MA's), (10, 47505), (11, 47349), (12, 47343), (13, 47211),

Gene: Schuy_100 Start: 61673, Stop: 61239, Start Num: 7
Candidate Starts for Schuy_100:
(Start: 6 @61703 has 1 MA's), (Start: 7 @61673 has 87 MA's), (Start: 8 @61637 has 5 MA's), (Start: 9 @61628 has 28 MA's), (10, 61574), (11, 61418), (12, 61412), (13, 61280),

Gene: Scrick_54 Start: 47584, Stop: 47195, Start Num: 9
Candidate Starts for Scrick_54:
(1, 47788), (2, 47731), (4, 47683), (5, 47677), (Start: 7 @47629 has 87 MA's), (Start: 8 @47593 has 5 MA's), (Start: 9 @47584 has 28 MA's), (10, 47530), (11, 47374), (12, 47368), (13, 47236),

Gene: ShadowBud_54 Start: 47882, Stop: 47493, Start Num: 9
Candidate Starts for ShadowBud_54:
(1, 48086), (2, 48029), (4, 47981), (5, 47975), (Start: 7 @47927 has 87 MA's), (Start: 8 @47891 has 5 MA's), (Start: 9 @47882 has 28 MA's), (10, 47828), (11, 47672), (12, 47666), (13, 47534),

Gene: Shida_102 Start: 62555, Stop: 62121, Start Num: 7
Candidate Starts for Shida_102:
(Start: 6 @62585 has 1 MA's), (Start: 7 @62555 has 87 MA's), (Start: 8 @62519 has 5 MA's), (Start: 9 @62510 has 28 MA's), (10, 62456), (11, 62300), (12, 62294), (13, 62162),

Gene: SirBeauregard_54 Start: 47599, Stop: 47165, Start Num: 7
Candidate Starts for SirBeauregard_54:
(1, 47758), (2, 47701), (4, 47653), (5, 47647), (Start: 7 @47599 has 87 MA's), (Start: 8 @47563 has 5 MA's), (Start: 9 @47554 has 28 MA's), (11, 47344), (12, 47338), (13, 47206),

Gene: Skippy_54 Start: 47887, Stop: 47453, Start Num: 7
Candidate Starts for Skippy_54:
(1, 48046), (2, 47989), (4, 47941), (5, 47935), (Start: 7 @47887 has 87 MA's), (Start: 8 @47851 has 5 MA's), (Start: 9 @47842 has 28 MA's), (10, 47788), (11, 47632), (12, 47626), (13, 47494),

Gene: Slatt_54 Start: 47913, Stop: 47479, Start Num: 7
Candidate Starts for Slatt_54:
(1, 48072), (2, 48015), (4, 47967), (5, 47961), (Start: 7 @47913 has 87 MA's), (Start: 8 @47877 has 5 MA's), (Start: 9 @47868 has 28 MA's), (10, 47814), (11, 47658), (12, 47652), (13, 47520),

Gene: Squiggle_54 Start: 47623, Stop: 47189, Start Num: 7
Candidate Starts for Squiggle_54:
(1, 47782), (2, 47725), (4, 47677), (5, 47671), (Start: 7 @47623 has 87 MA's), (Start: 8 @47587 has 5 MA's), (Start: 9 @47578 has 28 MA's), (10, 47524), (11, 47368), (12, 47362), (13, 47230),

Gene: Struggle_53 Start: 47407, Stop: 47018, Start Num: 9
Candidate Starts for Struggle_53:

(1, 47611), (2, 47554), (4, 47506), (5, 47500), (Start: 7 @47452 has 87 MA's), (Start: 8 @47416 has 5 MA's), (Start: 9 @47407 has 28 MA's), (10, 47353), (11, 47197), (12, 47191), (13, 47059),

Gene: Swiphy_54 Start: 47906, Stop: 47472, Start Num: 7
Candidate Starts for Swiphy_54:
(1, 48065), (2, 48008), (4, 47960), (5, 47954), (Start: 7 @47906 has 87 MA's), (Start: 8 @47870 has 5 MA's), (Start: 9 @47861 has 28 MA's), (10, 47807), (11, 47651), (12, 47645), (13, 47513),

Gene: Taraxa_54 Start: 47320, Stop: 46919, Start Num: 8
Candidate Starts for Taraxa_54:
(1, 47515), (2, 47458), (4, 47410), (5, 47404), (Start: 7 @47356 has 87 MA's), (Start: 8 @47320 has 5 MA's), (Start: 9 @47311 has 28 MA's), (10, 47257), (11, 47101), (12, 47095), (13, 46963),

Gene: TelAviv_97 Start: 62280, Stop: 61846, Start Num: 7
Candidate Starts for TelAviv_97:
(Start: 6 @62310 has 1 MA's), (Start: 7 @62280 has 87 MA's), (Start: 8 @62244 has 5 MA's), (Start: 9 @62235 has 28 MA's), (10, 62181), (11, 62025), (12, 62019), (13, 61887),

Gene: Thunderbird_52 Start: 47562, Stop: 47173, Start Num: 9
Candidate Starts for Thunderbird_52:
(1, 47766), (2, 47709), (4, 47661), (5, 47655), (Start: 7 @47607 has 87 MA's), (Start: 8 @47571 has 5 MA's), (Start: 9 @47562 has 28 MA's), (10, 47508), (11, 47352), (12, 47346), (13, 47214),

Gene: Tomlarah_54 Start: 47897, Stop: 47463, Start Num: 7
Candidate Starts for Tomlarah_54:
(1, 48056), (2, 47999), (4, 47951), (5, 47945), (Start: 7 @47897 has 87 MA's), (Start: 8 @47861 has 5 MA's), (Start: 9 @47852 has 28 MA's), (10, 47798), (11, 47642), (12, 47636), (13, 47504),

Gene: Trypo_55 Start: 47993, Stop: 47604, Start Num: 9
Candidate Starts for Trypo_55:
(1, 48197), (2, 48140), (4, 48092), (5, 48086), (Start: 7 @48038 has 87 MA's), (Start: 8 @48002 has 5 MA's), (Start: 9 @47993 has 28 MA's), (10, 47939), (11, 47783), (12, 47777), (13, 47645),

Gene: TyrionL_53 Start: 47418, Stop: 47029, Start Num: 9
Candidate Starts for TyrionL_53:
(1, 47622), (2, 47565), (4, 47517), (5, 47511), (Start: 7 @47463 has 87 MA's), (Start: 8 @47427 has 5 MA's), (Start: 9 @47418 has 28 MA's), (10, 47364), (11, 47208), (12, 47202), (13, 47070),

Gene: Vagabond_99 Start: 61721, Stop: 61287, Start Num: 7
Candidate Starts for Vagabond_99:
(Start: 6 @61751 has 1 MA's), (Start: 7 @61721 has 87 MA's), (Start: 8 @61685 has 5 MA's), (Start: 9 @61676 has 28 MA's), (10, 61622), (11, 61466), (12, 61460), (13, 61328),

Gene: Vaticameos_50 Start: 45588, Stop: 45154, Start Num: 7
Candidate Starts for Vaticameos_50:
(1, 45747), (2, 45690), (4, 45642), (5, 45636), (Start: 7 @45588 has 87 MA's), (Start: 8 @45552 has 5 MA's), (Start: 9 @45543 has 28 MA's), (10, 45489), (11, 45333), (12, 45327), (13, 45195),

Gene: Vectra_54 Start: 47720, Stop: 47283, Start Num: 7
Candidate Starts for Vectra_54:
(1, 47879), (2, 47822), (4, 47774), (5, 47768), (Start: 7 @47720 has 87 MA's), (Start: 8 @47684 has 5 MA's), (Start: 9 @47675 has 28 MA's), (10, 47621), (11, 47465), (12, 47459), (13, 47327),

Gene: Veritas_54 Start: 47732, Stop: 47295, Start Num: 7
Candidate Starts for Veritas_54:
(1, 47891), (2, 47834), (4, 47786), (5, 47780), (Start: 7 @47732 has 87 MA's), (Start: 8 @47696 has 5 MA's), (Start: 9 @47687 has 28 MA's), (10, 47633), (11, 47477), (12, 47471), (13, 47339),

Gene: Virapocalypse_54 Start: 47897, Stop: 47463, Start Num: 7
Candidate Starts for Virapocalypse_54:
(1, 48056), (2, 47999), (4, 47951), (5, 47945), (Start: 7 @47897 has 87 MA's), (Start: 8 @47861 has 5 MA's), (Start: 9 @47852 has 28 MA's), (10, 47798), (11, 47642), (12, 47636), (13, 47504),

Gene: Virgeve_52 Start: 47289, Stop: 46900, Start Num: 9
Candidate Starts for Virgeve_52:
(1, 47493), (2, 47436), (4, 47388), (5, 47382), (Start: 7 @47334 has 87 MA's), (Start: 8 @47298 has 5 MA's), (Start: 9 @47289 has 28 MA's), (11, 47079), (12, 47073), (13, 46941),

Gene: Vorrps_100 Start: 62464, Stop: 62030, Start Num: 7
Candidate Starts for Vorrps_100:
(Start: 6 @62494 has 1 MA's), (Start: 7 @62464 has 87 MA's), (Start: 8 @62428 has 5 MA's), (Start: 9 @62419 has 28 MA's), (10, 62365), (11, 62209), (12, 62203), (13, 62071),

Gene: Wallhey_53 Start: 47467, Stop: 47033, Start Num: 7
Candidate Starts for Wallhey_53:
(1, 47626), (2, 47569), (4, 47521), (5, 47515), (Start: 7 @47467 has 87 MA's), (Start: 8 @47431 has 5 MA's), (Start: 9 @47422 has 28 MA's), (10, 47368), (11, 47212), (12, 47206), (13, 47074),

Gene: Windsor_53 Start: 47603, Stop: 47169, Start Num: 7
Candidate Starts for Windsor_53:
(1, 47762), (2, 47705), (4, 47657), (5, 47651), (Start: 7 @47603 has 87 MA's), (Start: 8 @47567 has 5 MA's), (Start: 9 @47558 has 28 MA's), (11, 47348), (12, 47342), (13, 47210),

Gene: Winget_100 Start: 62358, Stop: 61924, Start Num: 7
Candidate Starts for Winget_100:
(Start: 6 @62388 has 1 MA's), (Start: 7 @62358 has 87 MA's), (Start: 8 @62322 has 5 MA's), (Start: 9 @62313 has 28 MA's), (10, 62259), (11, 62103), (12, 62097), (13, 61965),

Gene: Wogge42_97 Start: 61606, Stop: 61208, Start Num: 8
Candidate Starts for Wogge42_97:
(Start: 6 @61672 has 1 MA's), (Start: 7 @61642 has 87 MA's), (Start: 8 @61606 has 5 MA's), (Start: 9 @61597 has 28 MA's), (10, 61543), (11, 61387), (12, 61381), (13, 61249),

Gene: YouGoGlencoco_54 Start: 47901, Stop: 47467, Start Num: 7
Candidate Starts for YouGoGlencoco_54:
(1, 48060), (2, 48003), (4, 47955), (5, 47949), (Start: 7 @47901 has 87 MA's), (Start: 8 @47865 has 5 MA's), (Start: 9 @47856 has 28 MA's), (10, 47802), (11, 47646), (12, 47640), (13, 47508),

Gene: YoyoKar_97 Start: 61580, Stop: 61182, Start Num: 8
Candidate Starts for YoyoKar_97:
(Start: 6 @61646 has 1 MA's), (Start: 7 @61616 has 87 MA's), (Start: 8 @61580 has 5 MA's), (Start: 9 @61571 has 28 MA's), (10, 61517), (11, 61361), (12, 61355), (13, 61223),

Gene: Zebo_99 Start: 62054, Stop: 61620, Start Num: 7
Candidate Starts for Zebo_99:

(Start: 6 @62084 has 1 MA's), (Start: 7 @62054 has 87 MA's), (Start: 8 @62018 has 5 MA's), (Start: 9 @62009 has 28 MA's), (10, 61955), (11, 61799), (12, 61793), (13, 61661),

Gene: Zonia_54 Start: 47918, Stop: 47484, Start Num: 7
Candidate Starts for Zonia_54:
(1, 48077), (2, 48020), (4, 47972), (5, 47966), (Start: 7 @47918 has 87 MA's), (Start: 8 @47882 has 5 MA's), (Start: 9 @47873 has 28 MA's), (10, 47819), (11, 47663), (12, 47657), (13, 47525),