

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 294476 Report

This analysis was run 04/18/26 on database version 643.

Pham number 294476 has 167 members, 18 are drafts.

Phages represented in each track:

- Track 1 : BigPaolini_39, lLeeKay_42, Cueylyss_40, LunarLander_41, Eyeball_40, Graduation_42, Doom_40, Wilkins_39, Phlippers_38, Topgun_39, Puppet_40, Licorice_42, Smairt_41
- Track 2 : KBG_41
- Track 3 : MrGordo_62
- Track 4 : Acme_63, Lesedi_57, Fajezeel_62, Bxb1_55, Greg_62
- Track 5 : Solon_59
- Track 6 : BPBiebs31_63
- Track 7 : STLscum_68
- Track 8 : Froghopper_59
- Track 9 : Maroc7_58
- Track 10 : Big3_61
- Track 11 : Fringe_55
- Track 12 : Rabinovish_16
- Track 13 : Pinkcreek_11
- Track 14 : Birdsong_61
- Track 15 : BearBQ_59
- Track 16 : ODay_87
- Track 17 : Kenna_88
- Track 18 : Frickyeah_84
- Track 19 : Kuwabara_80
- Track 20 : Elph10_43, NoSleep_45, Maxxinista_45, Lilac_46, Cjw1_44, Lilizi_43, Czyszczonek_44, RiverMonster_44, Murphy_45
- Track 21 : Moldemort_42, MadamMonkfish_42, Bogg_42, AmericanBeauty_43
- Track 22 : Buck_42, TeamEdward_43, StormChicken_43, Rimmer_42, Youngblood_43
- Track 23 : PaddyBaddy_43, DrDrey_44, Hopey_44, Phrux_42, HanKaySha_43, 244_45, ShereKhan_42
- Track 24 : Contagion_41, Cookies_41, Mosby_40, TeardropMSU_40, Tomaszewski_40
- Track 25 : Xandras_43, JeTaime_44, OrionPax_43, Filch_44, Pumpkin_45
- Track 26 : Miniwave_41
- Track 27 : Budgie_53
- Track 28 : Thresher_46
- Track 29 : Ptowny_43
- Track 30 : Stark_45
- Track 31 : Blarby_90, Zapner_89, Jabbawokkie_90

- Track 32 : Nivrat_78, Che8_85, LilMoolah_80
- Track 33 : LunaBlu_89
- Track 34 : VRedHorse_87, Estave1_94, Avani_91
- Track 35 : Latretium_87, Dante_84
- Track 36 : Flathead_79
- Track 37 : ByChance_74, ShowerHandel_83
- Track 38 : SG4_79
- Track 39 : Topiatin_88
- Track 40 : Grimmer_91, Mahavrat_77
- Track 41 : EleanorGeorge_87
- Track 42 : Che8_94
- Track 43 : Fruitloop_76
- Track 44 : Martik_82
- Track 45 : CaptainTrips_82, MinionDave_78
- Track 46 : Frankie_90
- Track 47 : Ovechkin_83
- Track 48 : Latretium_80
- Track 49 : Latretium_83, Wanda_76, Minerva_78, Klein_72
- Track 50 : Galactic_79
- Track 51 : Wachhund_79
- Track 52 : Avani_88
- Track 53 : Yoshi_97
- Track 54 : Demsculpinboyz_96
- Track 55 : Zelink_70, Superphikiman_70, Schatzie_67, Kalah2_67, Ejimix_72, MiaZeal_73, Squint_73, Beem_72, JuicyJay_71, Halley_74, Phoebus_75, DmpstrDiver_72, Dallas_71, Odette_71, HokkenD_65, FairyPath_41, Porcelain_72, ThreeRngTarjay_70, NihilNomen_73, Redno2_69, Qualification_42, Lucky2013_70, Hughesyang_71, Ariel_72
- Track 56 : BAKA_81, Duke13_79
- Track 57 : Nibley_66
- Track 58 : Marleymoo_66
- Track 59 : Thespis_54, Brusacoram_54, Atcoo_54
- Track 60 : GreaseLightnin_58, StevieRay_57
- Track 61 : Juniormint_57
- Track 62 : Raela_10, Tesla_10, SG4_82, Poise_10, Blackbeetle_10
- Track 63 : Beelzebub_13, Corazon_10, FeliMaine_11, Lilbit_11, LittleLaf_10, Pringar_10, Clarkson_11, JoieB_11, Huphlepuuff_11
- Track 64 : Marvin_9
- Track 65 : RedRaider77_11
- Track 66 : Stellammi_52
- Track 67 : Stellammi_138
- Track 68 : Argie_65
- Track 69 : Kumao_58
- Track 70 : TinyDot_39

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

The start number called the most often in the published annotations is 66, it was called in 108 of the 149 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_45, Acme_63, AmericanBeauty_43, Ariel_72, Atcoo_54, Avani_91, BAKA_81, Beelzebub_13, Beem_72, Big3_61, Blarby_90, Bogg_42, Brusacoram_54, Buck_42, Bxb1_55, ByChance_74, CaptainTrips_82, Cjw1_44, Clarkson_11, Contagion_41, Cookies_41, Corazon_10, Czyszczo1_44, Dallas_71, Demsculpinboyz_96, DmpstrDiver_72, DrDrey_44, Duke13_79, Ejimix_72, EleanorGeorge_87, Elph10_43, Estave1_94, FairyPath_41, Fajezeel_62, FeliMaine_11, Filch_44, Flathead_79, Frickyeah_84, Froghopper_59, Fruitloop_76, Galactic_79, GreaseLightnin_58, Greg_62, Grimmer_91, Halley_74, HanKaySha_43, HokkenD_65, Hopey_44, Hughesyang_71, Huphlepuuff_11, Jabbawokkie_90, JeTaime_44, JoieB_11, JuicyJay_71, Kalah2_67, Klein_72, Kuwabara_80, Latretium_80, Latretium_83, Lesedi_57, Lilac_46, Lilbit_11, Lilizi_43, LittleLaf_10, Lucky2013_70, MadamMonkfish_42, Mahavrat_77, Marleymoo_66, Martik_82, Marvin_9, Maxxinista_45, MiaZeal_73, Minerva_78, MinionDave_78, Miniwave_41, Moldemort_42, Mosby_40, MrGordo_62, Murphy_45, Nibley_66, NihilNomen_73, NoSleep_45, ODay_87, Odette_71, OrionPax_43, PaddyBaddy_43, Phoebus_75, Phrux_42, Pinkcreek_11, Porcelain_72, Pringar_10, Ptowny_43, Pumpkin_45, Quallification_42, Redno2_69, Rimmer_42, RiverMonster_44, SG4_79, Schatzie_67, ShereKhan_42, ShowerHandel_83, Squint_73, Stark_45, Stellammi_138, StevieRay_57, StormChicken_43, Superphikiman_70, TeamEdward_43, TeardropMSU_40, Thespis_54, ThreeRngTarjay_70, Thresher_46, TinyDot_39, Tomaszewski_40, VRedHorse_87, Wanda_76, Xandras_43, Yoshi_97, Youngblood_43, Zapner_89, Zelink_70,

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

- Kumao_58, Rabinovish_16,

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

- Argie_65, Avani_88, BPBiebs31_63, BearBQ_59, BigPaolini_39, Birdsong_61, Blackbeetle_10, Budgie_53, Che8_85, Che8_94, Cueyllyss_40, Dante_84, Doom_40, Eyeball_40, Frankie_90, Fringe_55, Graduation_42, ILeeKay_42, Juniormint_57, KBG_41, Kenna_88, Latretium_87, Licorice_42, LilMoolah_80, LunaBlu_89, LunarLander_41, Maroc7_58, Nivrat_78, Ovechkin_83, Phlippers_38, Poise_10, Puppet_40, Raela_10, RedRaider77_11, SG4_82, STLscum_68, Smairt_41, Solon_59, Stellammi_52, Tesla_10, Topgun_39, Topiatin_88, Wachhund_79, Wilkins_39,

Summary by start number:

Start 25:

- Found in 1 of 167 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao_58 (singleton),

Start 41:

- Found in 8 of 167 (4.8%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Rabinovish_16 (C1),

Start 43:

- Found in 1 of 167 (0.6%) of genes in pham

- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Budgie_53 (E),

Start 50:

- Found in 2 of 167 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Avani_88 (F2), Wachhund_79 (F1),

Start 59:

- Found in 3 of 167 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 33.3% of time when present
- Phage (with cluster) where this start called: LunaBlu_89 (F1),

Start 60:

- Found in 2 of 167 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Juniormint_57 (P1), Kenna_88 (DN1),

Start 62:

- Found in 5 of 167 (3.0%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Fringe_55 (B1), RedRaider77_11 (S),

Start 63:

- Found in 1 of 167 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argie_65 (W),

Start 65:

- Found in 14 of 167 (8.4%) of genes in pham
- Manual Annotations of this start: 12 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigPaolini_39 (A1), Cueylyss_40 (A1), Doom_40 (A1), Eyeball_40 (A1), Graduation_42 (A1), ILeeKay_42 (A1), KBG_41 (A1), Licorice_42 (A1), LunarLander_41 (A1), Phlippers_38 (A1), Puppet_40 (A1), Smairt_41 (A1), Topgun_39 (A1), Wilkins_39 (A1),

Start 66:

- Found in 123 of 167 (73.7%) of genes in pham
- Manual Annotations of this start: 108 of 149
- Called 98.4% of time when present
- Phage (with cluster) where this start called: 244_45 (E), Acme_63 (A1), AmericanBeauty_43 (E), Ariel_72 (J), Atcoo_54 (P1), Avani_91 (F2), BAKA_81 (J), Beelzebub_13 (S), Beem_72 (J), Big3_61 (A1), Blarby_90 (F), Bogg_42 (E), Brusacoram_54 (P1), Buck_42 (E), Bxb1_55 (A1), ByChance_74 (F1), CaptainTrips_82 (F1), Cjw1_44 (E), Clarkson_11 (S), Contagion_41 (E), Cookies_41 (E), Corazon_10 (S), Czyszczonek_44 (E), Dallas_71 (J), Demsculpinboyz_96 (F2),

DmpstrDiver_72 (J), DrDrey_44 (E), Duke13_79 (J), Ejimix_72 (J), EleanorGeorge_87 (F1), Elph10_43 (E), Estave1_94 (F1), FairyPath_41 (E), Fajezeel_62 (A1), FeliMaine_11 (S), Filch_44 (E), Flathead_79 (F1), Frickyeah_84 (DN1), Froghopper_59 (A1), Fruitloop_76 (F1), Galactic_79 (F1), GreaseLightnin_58 (P1), Greg_62 (A1), Grimmer_91 (F1), Halley_74 (J), HanKaySha_43 (E), HokkenD_65 (J), Hopey_44 (E), Hughesyang_71 (J), Huphlepuuff_11 (S), Jabbawokkie_90 (F2), JeTaime_44 (E), JoieB_11 (S), JuicyJay_71 (J), Kalah2_67 (J), Klein_72 (J), Kuwabara_80 (DN4), Latretium_80 (F1), Latretium_83 (F1), Lesedi_57 (A1), Lilac_46 (E), Lilbit_11 (S), Lilizi_43 (E), LittleLaf_10 (S), Lucky2013_70 (J), MadamMonkfish_42 (E), Mahavrat_77 (F1), Marleymoo_66 (J), Martik_82 (F1), Marvin_9 (S), Maxxinista_45 (E), MiaZeal_73 (J), Minerva_78 (J), MinionDave_78 (F1), Miniwave_41 (E), Moldemort_42 (E), Mosby_40 (E), MrGordo_62 (A1), Murphy_45 (E), Nibley_66 (J), NihilNomen_73 (J), NoSleep_45 (E), ODay_87 (DN), Odette_71 (J), OrionPax_43 (E), PaddyBaddy_43 (E), Phoebus_75 (J), Phrux_42 (E), Pinkcreek_11 (C1), Porcelain_72 (J), Pringar_10 (S), Ptowny_43 (E), Pumpkin_45 (E), Quallification_42 (E), Redno2_69 (J), Rimmer_42 (E), RiverMonster_44 (E), SG4_79 (F1), Schatzie_67 (J), ShereKhan_42 (E), ShowerHandel_83 (F1), Squint_73 (J), Stark_45 (E), Stellammi_138 (UNK), StevieRay_57 (P1), StormChicken_43 (E), Superphikiman_70 (J), TeamEdward_43 (E), TeardropMSU_40 (E), Thespis_54 (P1), ThreeRngTarjay_70 (J), Thresher_46 (E), TinyDot_39 (singleton), Tomaszewski_40 (E), VRedHorse_87 (F1), Wanda_76 (J), Xandras_43 (E), Yoshi_97 (F2), Youngblood_43 (E), Zapner_89 (F2), Zelink_70 (J),

Start 69:

- Found in 25 of 167 (15.0%) of genes in pham
- Manual Annotations of this start: 5 of 149
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Che8_85 (F1), Frankie_90 (F1), LilMoolah_80 (F1), Nivrat_78 (F1), Ovechkin_83 (F1),

Start 73:

- Found in 3 of 167 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Dante_84 (F1), Latretium_87 (F1),

Start 76:

- Found in 2 of 167 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BearBQ_59 (DN), Birdsong_61 (DN),

Start 78:

- Found in 3 of 167 (1.8%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Topiatin_88 (F1),

Start 79:

- Found in 1 of 167 (0.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Stellammi_52 (UNK),

Start 88:

- Found in 2 of 167 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Che8_94 (F1), STLscum_68 (A1),

Start 95:

- Found in 8 of 167 (4.8%) of genes in pham
- Manual Annotations of this start: 8 of 149
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BPBiabs31_63 (A1), Blackbeetle_10 (S), Maroc7_58 (A1), Poise_10 (S), Raela_10 (S), SG4_82 (F1), Solon_59 (A1), Tesla_10 (S),

Summary by clusters:

There are 16 clusters represented in this pham: DN, F1, F2, P1, E, F, J, singleton, A1, DN4, S, DN1, B1, W, C1, UNK,

Info for manual annotations of cluster A1:

- Start number 65 was manually annotated 12 times for cluster A1.
- Start number 66 was manually annotated 8 times for cluster A1.
- Start number 88 was manually annotated 1 time for cluster A1.
- Start number 95 was manually annotated 3 times for cluster A1.

Info for manual annotations of cluster B1:

- Start number 62 was manually annotated 1 time for cluster B1.

Info for manual annotations of cluster C1:

- Start number 41 was manually annotated 1 time for cluster C1.
- Start number 66 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster DN:

- Start number 66 was manually annotated 1 time for cluster DN.
- Start number 76 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 60 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DN4:

- Start number 66 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster E:

- Start number 66 was manually annotated 35 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 50 was manually annotated 1 time for cluster F1.
- Start number 59 was manually annotated 1 time for cluster F1.
- Start number 66 was manually annotated 15 times for cluster F1.
- Start number 69 was manually annotated 5 times for cluster F1.

- Start number 73 was manually annotated 2 times for cluster F1.
- Start number 88 was manually annotated 1 time for cluster F1.
- Start number 95 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 50 was manually annotated 1 time for cluster F2.
- Start number 66 was manually annotated 5 times for cluster F2.

Info for manual annotations of cluster J:

- Start number 66 was manually annotated 26 times for cluster J.

Info for manual annotations of cluster P1:

- Start number 60 was manually annotated 1 time for cluster P1.
- Start number 66 was manually annotated 5 times for cluster P1.

Info for manual annotations of cluster S:

- Start number 62 was manually annotated 1 time for cluster S.
- Start number 66 was manually annotated 10 times for cluster S.
- Start number 95 was manually annotated 4 times for cluster S.

Info for manual annotations of cluster W:

- Start number 63 was manually annotated 1 time for cluster W.

Gene Information:

Gene: 244_45 Start: 35533, Stop: 35168, Start Num: 66

Candidate Starts for 244_45:

(61, 35548), (Start: 66 @35533 has 108 MA's), (100, 35398), (107, 35374), (113, 35350), (125, 35305), (127, 35287),

Gene: Acme_63 Start: 41329, Stop: 40964, Start Num: 66

Candidate Starts for Acme_63:

(11, 41530), (40, 41386), (Start: 41 @41383 has 1 MA's), (Start: 66 @41329 has 108 MA's), (93, 41212), (100, 41194), (107, 41170), (113, 41146), (125, 41101),

Gene: AmericanBeauty_43 Start: 35021, Stop: 34656, Start Num: 66

Candidate Starts for AmericanBeauty_43:

(45, 35060), (56, 35042), (Start: 66 @35021 has 108 MA's), (100, 34886), (107, 34862), (113, 34838), (125, 34793), (127, 34775),

Gene: Argie_65 Start: 48661, Stop: 49026, Start Num: 63

Candidate Starts for Argie_65:

(17, 48544), (24, 48574), (33, 48601), (48, 48637), (Start: 63 @48661 has 1 MA's), (85, 48766), (101, 48814), (106, 48832), (108, 48838), (122, 48895), (123, 48904), (140, 48976), (144, 49000), (147, 49015),

Gene: Ariel_72 Start: 46298, Stop: 45933, Start Num: 66

Candidate Starts for Ariel_72:

(Start: 66 @46298 has 108 MA's), (75, 46256), (108, 46160), (125, 46091), (131, 46052),

Gene: Atcoo_54 Start: 36879, Stop: 37241, Start Num: 66

Candidate Starts for Atcoo_54:

(7, 36651), (30, 36798), (39, 36822), (Start: 66 @36879 has 108 MA's), (83, 36954), (98, 36969), (108, 36996), (109, 37002), (121, 37047), (123, 37059), (153, 37218),

Gene: Avani_88 Start: 46792, Stop: 47127, Start Num: 50

Candidate Starts for Avani_88:

(35, 46759), (Start: 50 @46792 has 2 MA's), (57, 46804), (71, 46852), (94, 46927), (104, 46936), (121, 46984), (123, 46996),

Gene: Avani_91 Start: 47610, Stop: 47966, Start Num: 66

Candidate Starts for Avani_91:

(Start: 66 @47610 has 108 MA's), (140, 47862),

Gene: BAKA_81 Start: 52347, Stop: 51940, Start Num: 66

Candidate Starts for BAKA_81:

(Start: 66 @52347 has 108 MA's), (75, 52305), (108, 52209), (112, 52188), (121, 52155), (123, 52143), (130, 52110), (152, 52002),

Gene: BPBiebs31_63 Start: 41560, Stop: 41312, Start Num: 95

Candidate Starts for BPBiebs31_63:

(37, 41761), (78, 41617), (80, 41614), (Start: 95 @41560 has 8 MA's), (110, 41512), (123, 41452),

Gene: BearBQ_59 Start: 40143, Stop: 40532, Start Num: 76

Candidate Starts for BearBQ_59:

(8, 39858), (12, 39897), (14, 39936), (55, 40062), (Start: 76 @40143 has 2 MA's), (96, 40230), (122, 40329),

Gene: Beelzebub_13 Start: 3753, Stop: 4160, Start Num: 66

Candidate Starts for Beelzebub_13:

(Start: 66 @3753 has 108 MA's), (Start: 69 @3765 has 5 MA's), (100, 3891), (107, 3915), (113, 3939), (122, 3972), (153, 4137),

Gene: Beem_72 Start: 50575, Stop: 50210, Start Num: 66

Candidate Starts for Beem_72:

(Start: 66 @50575 has 108 MA's), (75, 50533), (108, 50437), (125, 50368), (131, 50329),

Gene: Big3_61 Start: 41706, Stop: 41350, Start Num: 66

Candidate Starts for Big3_61:

(42, 41754), (54, 41736), (Start: 66 @41706 has 108 MA's), (Start: 69 @41694 has 5 MA's), (100, 41568), (103, 41559), (107, 41544), (113, 41520), (121, 41490), (123, 41478),

Gene: BigPaolini_39 Start: 30429, Stop: 30067, Start Num: 65

Candidate Starts for BigPaolini_39:

(15, 30567), (23, 30534), (Start: 65 @30429 has 12 MA's), (123, 30186), (127, 30165), (128, 30159), (129, 30156),

Gene: Birdsong_61 Start: 38810, Stop: 39199, Start Num: 76

Candidate Starts for Birdsong_61:

(Start: 76 @38810 has 2 MA's), (96, 38897), (122, 38996),

Gene: Blackbeetle_10 Start: 3064, Stop: 3315, Start Num: 95

Candidate Starts for Blackbeetle_10:

(Start: 95 @3064 has 8 MA's), (110, 3112), (123, 3172), (125, 3175), (127, 3193),

Gene: Blarby_90 Start: 47520, Stop: 47888, Start Num: 66

Candidate Starts for Blarby_90:

(51, 47484), (Start: 66 @47520 has 108 MA's), (100, 47655), (107, 47679), (113, 47703), (125, 47748), (127, 47766), (135, 47814),

Gene: Bogg_42 Start: 34449, Stop: 34084, Start Num: 66

Candidate Starts for Bogg_42:

(45, 34488), (56, 34470), (Start: 66 @34449 has 108 MA's), (100, 34314), (107, 34290), (113, 34266), (125, 34221), (127, 34203),

Gene: Brusacoram_54 Start: 36385, Stop: 36747, Start Num: 66

Candidate Starts for Brusacoram_54:

(7, 36157), (30, 36304), (39, 36328), (Start: 66 @36385 has 108 MA's), (83, 36460), (98, 36475), (108, 36502), (109, 36508), (121, 36553), (123, 36565), (153, 36724),

Gene: Buck_42 Start: 35321, Stop: 34953, Start Num: 66

Candidate Starts for Buck_42:

(Start: 66 @35321 has 108 MA's), (Start: 69 @35309 has 5 MA's), (100, 35183), (107, 35159), (113, 35135), (127, 35072),

Gene: Budgie_53 Start: 36596, Stop: 36261, Start Num: 43

Candidate Starts for Budgie_53:

(43, 36596), (67, 36542), (121, 36404), (123, 36392),

Gene: Bxb1_55 Start: 39572, Stop: 39207, Start Num: 66

Candidate Starts for Bxb1_55:

(11, 39773), (40, 39629), (Start: 41 @39626 has 1 MA's), (Start: 66 @39572 has 108 MA's), (93, 39455), (100, 39437), (107, 39413), (113, 39389), (125, 39344),

Gene: ByChance_74 Start: 45038, Stop: 45421, Start Num: 66

Candidate Starts for ByChance_74:

(Start: 66 @45038 has 108 MA's), (68, 45047), (98, 45149), (101, 45158), (121, 45230), (123, 45242), (150, 45368),

Gene: CaptainTrips_82 Start: 48768, Stop: 49100, Start Num: 66

Candidate Starts for CaptainTrips_82:

(Start: 66 @48768 has 108 MA's), (75, 48810), (108, 48906), (122, 48963),

Gene: Che8_85 Start: 49488, Stop: 49877, Start Num: 69

Candidate Starts for Che8_85:

(56, 49449), (Start: 69 @49488 has 5 MA's), (72, 49500), (87, 49572), (90, 49581), (102, 49617), (122, 49689),

Gene: Che8_94 Start: 51968, Stop: 52192, Start Num: 88

Candidate Starts for Che8_94:

(Start: 88 @51968 has 2 MA's), (114, 52028), (115, 52031), (123, 52064),

Gene: Cjw1_44 Start: 36482, Stop: 36078, Start Num: 66

Candidate Starts for Cjw1_44:

(Start: 66 @36482 has 108 MA's), (100, 36347), (107, 36323), (113, 36299), (125, 36254), (150, 36131),

Gene: Clarkson_11 Start: 3529, Stop: 3936, Start Num: 66

Candidate Starts for Clarkson_11:

(Start: 66 @3529 has 108 MA's), (Start: 69 @3541 has 5 MA's), (100, 3667), (107, 3691), (113, 3715), (122, 3748), (153, 3913),

Gene: Contagion_41 Start: 34707, Stop: 34342, Start Num: 66

Candidate Starts for Contagion_41:

(61, 34722), (Start: 66 @34707 has 108 MA's), (100, 34572), (107, 34548), (113, 34524), (127, 34461),

Gene: Cookies_41 Start: 35072, Stop: 34707, Start Num: 66

Candidate Starts for Cookies_41:

(61, 35087), (Start: 66 @35072 has 108 MA's), (100, 34937), (107, 34913), (113, 34889), (127, 34826),

Gene: Corazon_10 Start: 3482, Stop: 3889, Start Num: 66

Candidate Starts for Corazon_10:

(Start: 66 @3482 has 108 MA's), (Start: 69 @3494 has 5 MA's), (100, 3620), (107, 3644), (113, 3668), (122, 3701), (153, 3866),

Gene: Cueylyss_40 Start: 32157, Stop: 31795, Start Num: 65

Candidate Starts for Cueylyss_40:

(15, 32295), (23, 32262), (Start: 65 @32157 has 12 MA's), (123, 31914), (127, 31893), (128, 31887), (129, 31884),

Gene: Czyszczonek_44 Start: 35291, Stop: 34887, Start Num: 66

Candidate Starts for Czyszczonek_44:

(Start: 66 @35291 has 108 MA's), (100, 35156), (107, 35132), (113, 35108), (125, 35063), (150, 34940),

Gene: Dallas_71 Start: 49496, Stop: 49131, Start Num: 66

Candidate Starts for Dallas_71:

(Start: 66 @49496 has 108 MA's), (75, 49454), (108, 49358), (125, 49289), (131, 49250),

Gene: Dante_84 Start: 51687, Stop: 51980, Start Num: 73

Candidate Starts for Dante_84:

(Start: 59 @51639 has 1 MA's), (Start: 62 @51645 has 2 MA's), (Start: 73 @51687 has 2 MA's), (119, 51831), (126, 51864),

Gene: Demsculpinboyz_96 Start: 48718, Stop: 49200, Start Num: 66

Candidate Starts for Demsculpinboyz_96:

(47, 48679), (Start: 66 @48718 has 108 MA's), (Start: 69 @48730 has 5 MA's), (100, 48856), (107, 48880), (113, 48904), (121, 48934), (123, 48946), (138, 49018), (153, 49108),

Gene: DmpstrDiver_72 Start: 49923, Stop: 49558, Start Num: 66

Candidate Starts for DmpstrDiver_72:

(Start: 66 @49923 has 108 MA's), (75, 49881), (108, 49785), (125, 49716), (131, 49677),

Gene: Doom_40 Start: 32350, Stop: 31988, Start Num: 65

Candidate Starts for Doom_40:

(15, 32488), (23, 32455), (Start: 65 @32350 has 12 MA's), (123, 32107), (127, 32086), (128, 32080), (129, 32077),

Gene: DrDrey_44 Start: 36335, Stop: 35970, Start Num: 66

Candidate Starts for DrDrey_44:

(61, 36350), (Start: 66 @36335 has 108 MA's), (100, 36200), (107, 36176), (113, 36152), (125, 36107), (127, 36089),

Gene: Duke13_79 Start: 51559, Stop: 51152, Start Num: 66

Candidate Starts for Duke13_79:

(Start: 66 @51559 has 108 MA's), (75, 51517), (108, 51421), (112, 51400), (121, 51367), (123, 51355), (130, 51322), (152, 51214),

Gene: Ejimix_72 Start: 51361, Stop: 50996, Start Num: 66

Candidate Starts for Ejimix_72:

(Start: 66 @51361 has 108 MA's), (75, 51319), (108, 51223), (125, 51154), (131, 51115),

Gene: EleanorGeorge_87 Start: 51109, Stop: 51492, Start Num: 66

Candidate Starts for EleanorGeorge_87:

(53, 51076), (Start: 66 @51109 has 108 MA's), (98, 51220), (101, 51229), (121, 51301), (123, 51313), (150, 51439),

Gene: Elph10_43 Start: 34783, Stop: 34379, Start Num: 66

Candidate Starts for Elph10_43:

(Start: 66 @34783 has 108 MA's), (100, 34648), (107, 34624), (113, 34600), (125, 34555), (150, 34432),

Gene: Estave1_94 Start: 53968, Stop: 54324, Start Num: 66

Candidate Starts for Estave1_94:

(Start: 66 @53968 has 108 MA's), (140, 54220),

Gene: Eyeball_40 Start: 31827, Stop: 31465, Start Num: 65

Candidate Starts for Eyeball_40:

(15, 31965), (23, 31932), (Start: 65 @31827 has 12 MA's), (123, 31584), (127, 31563), (128, 31557), (129, 31554),

Gene: FairyPath_41 Start: 35211, Stop: 34846, Start Num: 66

Candidate Starts for FairyPath_41:

(Start: 66 @35211 has 108 MA's), (75, 35169), (108, 35073), (125, 35004), (131, 34965),

Gene: Fajezeel_62 Start: 40619, Stop: 40254, Start Num: 66

Candidate Starts for Fajezeel_62:

(11, 40820), (40, 40676), (Start: 41 @40673 has 1 MA's), (Start: 66 @40619 has 108 MA's), (93, 40502), (100, 40484), (107, 40460), (113, 40436), (125, 40391),

Gene: FeliMaine_11 Start: 3530, Stop: 3937, Start Num: 66

Candidate Starts for FeliMaine_11:

(Start: 66 @3530 has 108 MA's), (Start: 69 @3542 has 5 MA's), (100, 3668), (107, 3692), (113, 3716), (122, 3749), (153, 3914),

Gene: Filch_44 Start: 35012, Stop: 34647, Start Num: 66

Candidate Starts for Filch_44:

(Start: 66 @35012 has 108 MA's), (100, 34877), (107, 34853), (113, 34829), (127, 34766),

Gene: Flathead_79 Start: 48157, Stop: 48534, Start Num: 66

Candidate Starts for Flathead_79:

(64, 48154), (Start: 66 @48157 has 108 MA's), (75, 48199), (100, 48304), (107, 48328), (113, 48352), (127, 48415),

Gene: Frankie_90 Start: 50801, Stop: 51076, Start Num: 69

Candidate Starts for Frankie_90:

(56, 50762), (Start: 69 @50801 has 5 MA's), (81, 50861), (82, 50864), (90, 50897), (124, 51023),

Gene: Frickyeah_84 Start: 46460, Stop: 46879, Start Num: 66

Candidate Starts for Frickyeah_84:

(Start: 66 @46460 has 108 MA's), (77, 46517), (91, 46580), (105, 46625), (132, 46748), (144, 46802), (146, 46811), (150, 46832), (151, 46841),

Gene: Fringe_55 Start: 47885, Stop: 47511, Start Num: 62

Candidate Starts for Fringe_55:

(Start: 62 @47885 has 2 MA's), (100, 47735), (107, 47711), (113, 47687), (122, 47654), (139, 47573),

Gene: Froghopper_59 Start: 39967, Stop: 39602, Start Num: 66

Candidate Starts for Froghopper_59:

(11, 40168), (40, 40024), (Start: 41 @40021 has 1 MA's), (Start: 66 @39967 has 108 MA's), (93, 39850), (100, 39832), (107, 39808), (113, 39784), (125, 39739),

Gene: Fruitloop_76 Start: 48252, Stop: 48602, Start Num: 66

Candidate Starts for Fruitloop_76:

(51, 48216), (Start: 66 @48252 has 108 MA's), (100, 48387), (107, 48411), (113, 48435), (122, 48468),

Gene: Galactic_79 Start: 48078, Stop: 48443, Start Num: 66

Candidate Starts for Galactic_79:

(1, 47778), (2, 47787), (3, 47793), (4, 47802), (6, 47832), (49, 48042), (Start: 66 @48078 has 108 MA's), (100, 48213), (107, 48237), (113, 48261), (125, 48306), (127, 48324),

Gene: Graduation_42 Start: 32744, Stop: 32382, Start Num: 65

Candidate Starts for Graduation_42:

(15, 32882), (23, 32849), (Start: 65 @32744 has 12 MA's), (123, 32501), (127, 32480), (128, 32474), (129, 32471),

Gene: GreaseLightnin_58 Start: 38269, Stop: 38631, Start Num: 66

Candidate Starts for GreaseLightnin_58:

(5, 38008), (9, 38041), (10, 38065), (11, 38071), (39, 38212), (Start: 66 @38269 has 108 MA's), (83, 38344), (98, 38359), (108, 38386), (109, 38392), (121, 38437), (123, 38449), (153, 38608),

Gene: Greg_62 Start: 40619, Stop: 40254, Start Num: 66

Candidate Starts for Greg_62:

(11, 40820), (40, 40676), (Start: 41 @40673 has 1 MA's), (Start: 66 @40619 has 108 MA's), (93, 40502), (100, 40484), (107, 40460), (113, 40436), (125, 40391),

Gene: Grimmer_91 Start: 49019, Stop: 49426, Start Num: 66

Candidate Starts for Grimmer_91:

(Start: 66 @49019 has 108 MA's), (Start: 69 @49031 has 5 MA's), (70, 49040), (100, 49157), (107, 49181), (113, 49205), (122, 49238), (136, 49310),

Gene: Halley_74 Start: 50575, Stop: 50210, Start Num: 66

Candidate Starts for Halley_74:

(Start: 66 @50575 has 108 MA's), (75, 50533), (108, 50437), (125, 50368), (131, 50329),

Gene: HanKaySha_43 Start: 34995, Stop: 34630, Start Num: 66

Candidate Starts for HanKaySha_43:

(61, 35010), (Start: 66 @34995 has 108 MA's), (100, 34860), (107, 34836), (113, 34812), (125, 34767), (127, 34749),

Gene: HokkenD_65 Start: 48844, Stop: 48479, Start Num: 66

Candidate Starts for HokkenD_65:

(Start: 66 @48844 has 108 MA's), (75, 48802), (108, 48706), (125, 48637), (131, 48598),

Gene: Hopey_44 Start: 35530, Stop: 35165, Start Num: 66

Candidate Starts for Hopey_44:

(61, 35545), (Start: 66 @35530 has 108 MA's), (100, 35395), (107, 35371), (113, 35347), (125, 35302), (127, 35284),

Gene: Hughesyang_71 Start: 50504, Stop: 50139, Start Num: 66

Candidate Starts for Hughesyang_71:

(Start: 66 @50504 has 108 MA's), (75, 50462), (108, 50366), (125, 50297), (131, 50258),

Gene: Huphlepuuff_11 Start: 3259, Stop: 3666, Start Num: 66

Candidate Starts for Huphlepuuff_11:

(Start: 66 @3259 has 108 MA's), (Start: 69 @3271 has 5 MA's), (100, 3397), (107, 3421), (113, 3445), (122, 3478), (153, 3643),

Gene: ILeeKay_42 Start: 32194, Stop: 31832, Start Num: 65

Candidate Starts for ILeeKay_42:

(15, 32332), (23, 32299), (Start: 65 @32194 has 12 MA's), (123, 31951), (127, 31930), (128, 31924), (129, 31921),

Gene: Jabbawokkie_90 Start: 47440, Stop: 47808, Start Num: 66

Candidate Starts for Jabbawokkie_90:

(51, 47404), (Start: 66 @47440 has 108 MA's), (100, 47575), (107, 47599), (113, 47623), (125, 47668), (127, 47686), (135, 47734),

Gene: JeTaime_44 Start: 36054, Stop: 35689, Start Num: 66

Candidate Starts for JeTaime_44:

(Start: 66 @36054 has 108 MA's), (100, 35919), (107, 35895), (113, 35871), (127, 35808),

Gene: JoieB_11 Start: 3478, Stop: 3885, Start Num: 66

Candidate Starts for JoieB_11:

(Start: 66 @3478 has 108 MA's), (Start: 69 @3490 has 5 MA's), (100, 3616), (107, 3640), (113, 3664), (122, 3697), (153, 3862),

Gene: JuicyJay_71 Start: 51709, Stop: 51344, Start Num: 66

Candidate Starts for JuicyJay_71:

(Start: 66 @51709 has 108 MA's), (75, 51667), (108, 51571), (125, 51502), (131, 51463),

Gene: Juniormint_57 Start: 37791, Stop: 38165, Start Num: 60

Candidate Starts for Juniormint_57:

(Start: 60 @37791 has 2 MA's), (83, 37878), (98, 37893), (108, 37920), (109, 37926), (121, 37971), (123, 37983), (153, 38142),

Gene: KBG_41 Start: 33134, Stop: 32772, Start Num: 65

Candidate Starts for KBG_41:

(23, 33239), (Start: 65 @33134 has 12 MA's), (123, 32891), (127, 32870), (128, 32864), (129, 32861),

Gene: Kalah2_67 Start: 49868, Stop: 49503, Start Num: 66

Candidate Starts for Kalah2_67:

(Start: 66 @49868 has 108 MA's), (75, 49826), (108, 49730), (125, 49661), (131, 49622),

Gene: Kenna_88 Start: 49368, Stop: 49775, Start Num: 60

Candidate Starts for Kenna_88:

(20, 49263), (21, 49269), (30, 49302), (58, 49359), (Start: 60 @49368 has 2 MA's), (84, 49467), (86, 49482), (99, 49524), (101, 49530), (125, 49623), (145, 49719), (149, 49734),

Gene: Klein_72 Start: 49891, Stop: 49526, Start Num: 66

Candidate Starts for Klein_72:

(Start: 66 @49891 has 108 MA's), (75, 49849), (108, 49753), (125, 49684), (131, 49645),

Gene: Kumao_58 Start: 42552, Stop: 43010, Start Num: 25

Candidate Starts for Kumao_58:

(Start: 25 @42552 has 1 MA's), (26, 42555), (Start: 66 @42645 has 108 MA's), (100, 42780), (107, 42804), (113, 42828), (125, 42873), (127, 42891),

Gene: Kuwabara_80 Start: 47595, Stop: 48080, Start Num: 66

Candidate Starts for Kuwabara_80:

(Start: 66 @47595 has 108 MA's), (122, 47805), (148, 47946),

Gene: Latretium_87 Start: 49978, Stop: 50271, Start Num: 73

Candidate Starts for Latretium_87:

(Start: 59 @49930 has 1 MA's), (Start: 62 @49936 has 2 MA's), (Start: 73 @49978 has 2 MA's), (119, 50122), (126, 50155),

Gene: Latretium_80 Start: 47741, Stop: 48100, Start Num: 66

Candidate Starts for Latretium_80:

(Start: 66 @47741 has 108 MA's), (100, 47879), (103, 47888), (107, 47903), (113, 47927), (121, 47957), (123, 47969),

Gene: Latretium_83 Start: 48583, Stop: 48948, Start Num: 66

Candidate Starts for Latretium_83:

(Start: 66 @48583 has 108 MA's), (75, 48625), (108, 48721), (125, 48790), (131, 48829),

Gene: Lesedi_57 Start: 39252, Stop: 38887, Start Num: 66

Candidate Starts for Lesedi_57:

(11, 39453), (40, 39309), (Start: 41 @39306 has 1 MA's), (Start: 66 @39252 has 108 MA's), (93, 39135), (100, 39117), (107, 39093), (113, 39069), (125, 39024),

Gene: Licorice_42 Start: 33025, Stop: 32663, Start Num: 65

Candidate Starts for Licorice_42:

(15, 33163), (23, 33130), (Start: 65 @33025 has 12 MA's), (123, 32782), (127, 32761), (128, 32755), (129, 32752),

Gene: LilMoolah_80 Start: 49043, Stop: 49381, Start Num: 69

Candidate Starts for LilMoolah_80:

(56, 49004), (Start: 69 @49043 has 5 MA's), (72, 49055), (87, 49127), (90, 49136), (102, 49172), (122, 49244),

Gene: Lilac_46 Start: 35189, Stop: 34785, Start Num: 66

Candidate Starts for Lilac_46:

(Start: 66 @35189 has 108 MA's), (100, 35054), (107, 35030), (113, 35006), (125, 34961), (150, 34838),

Gene: Lilbit_11 Start: 3530, Stop: 3937, Start Num: 66

Candidate Starts for Lilbit_11:

(Start: 66 @3530 has 108 MA's), (Start: 69 @3542 has 5 MA's), (100, 3668), (107, 3692), (113, 3716), (122, 3749), (153, 3914),

Gene: Lilizi_43 Start: 34863, Stop: 34459, Start Num: 66

Candidate Starts for Lilizi_43:

(Start: 66 @34863 has 108 MA's), (100, 34728), (107, 34704), (113, 34680), (125, 34635), (150, 34512),

Gene: LittleLaf_10 Start: 3259, Stop: 3666, Start Num: 66

Candidate Starts for LittleLaf_10:

(Start: 66 @3259 has 108 MA's), (Start: 69 @3271 has 5 MA's), (100, 3397), (107, 3421), (113, 3445), (122, 3478), (153, 3643),

Gene: Lucky2013_70 Start: 46314, Stop: 45949, Start Num: 66

Candidate Starts for Lucky2013_70:

(Start: 66 @46314 has 108 MA's), (75, 46272), (108, 46176), (125, 46107), (131, 46068),

Gene: LunaBlu_89 Start: 51072, Stop: 51413, Start Num: 59

Candidate Starts for LunaBlu_89:

(Start: 59 @51072 has 1 MA's), (Start: 62 @51078 has 2 MA's), (Start: 73 @51120 has 2 MA's), (119, 51264), (126, 51297),

Gene: LunarLander_41 Start: 32151, Stop: 31789, Start Num: 65

Candidate Starts for LunarLander_41:

(15, 32289), (23, 32256), (Start: 65 @32151 has 12 MA's), (123, 31908), (127, 31887), (128, 31881), (129, 31878),

Gene: MadamMonkfish_42 Start: 34547, Stop: 34182, Start Num: 66

Candidate Starts for MadamMonkfish_42:

(45, 34586), (56, 34568), (Start: 66 @34547 has 108 MA's), (100, 34412), (107, 34388), (113, 34364), (125, 34319), (127, 34301),

Gene: Mahavrat_77 Start: 46587, Stop: 46994, Start Num: 66

Candidate Starts for Mahavrat_77:

(Start: 66 @46587 has 108 MA's), (Start: 69 @46599 has 5 MA's), (70, 46608), (100, 46725), (107, 46749), (113, 46773), (122, 46806), (136, 46878),

Gene: Marleymoo_66 Start: 48687, Stop: 48322, Start Num: 66

Candidate Starts for Marleymoo_66:

(28, 48771), (Start: 66 @48687 has 108 MA's), (75, 48645), (108, 48549), (125, 48480), (131, 48441),

Gene: Maroc7_58 Start: 41045, Stop: 40797, Start Num: 95

Candidate Starts for Maroc7_58:

(32, 41255), (37, 41246), (78, 41102), (80, 41099), (Start: 95 @41045 has 8 MA's), (110, 40997), (123, 40937),

Gene: Martik_82 Start: 51049, Stop: 51432, Start Num: 66

Candidate Starts for Martik_82:

(27, 50959), (34, 50974), (53, 51016), (Start: 66 @51049 has 108 MA's), (98, 51160), (101, 51169), (121, 51241), (123, 51253), (150, 51379),

Gene: Marvin_9 Start: 3241, Stop: 3600, Start Num: 66

Candidate Starts for Marvin_9:

(Start: 66 @3241 has 108 MA's), (Start: 69 @3253 has 5 MA's), (83, 3316), (98, 3331), (108, 3358), (109, 3364), (121, 3409), (123, 3421),

Gene: Maxxinista_45 Start: 35159, Stop: 34755, Start Num: 66

Candidate Starts for Maxxinista_45:

(Start: 66 @35159 has 108 MA's), (100, 35024), (107, 35000), (113, 34976), (125, 34931), (150, 34808),

Gene: MiaZeal_73 Start: 46970, Stop: 46605, Start Num: 66

Candidate Starts for MiaZeal_73:

(Start: 66 @46970 has 108 MA's), (75, 46928), (108, 46832), (125, 46763), (131, 46724),

Gene: Minerva_78 Start: 51991, Stop: 51626, Start Num: 66

Candidate Starts for Minerva_78:

(Start: 66 @51991 has 108 MA's), (75, 51949), (108, 51853), (125, 51784), (131, 51745),

Gene: MinionDave_78 Start: 48768, Stop: 49100, Start Num: 66

Candidate Starts for MinionDave_78:

(Start: 66 @48768 has 108 MA's), (75, 48810), (108, 48906), (122, 48963),

Gene: Miniwave_41 Start: 35246, Stop: 34860, Start Num: 66

Candidate Starts for Miniwave_41:

(61, 35261), (Start: 66 @35246 has 108 MA's), (100, 35111), (107, 35087), (113, 35063), (125, 35018), (131, 34979),

Gene: Moldemort_42 Start: 34776, Stop: 34411, Start Num: 66

Candidate Starts for Moldemort_42:

(45, 34815), (56, 34797), (Start: 66 @34776 has 108 MA's), (100, 34641), (107, 34617), (113, 34593), (125, 34548), (127, 34530),

Gene: Mosby_40 Start: 34707, Stop: 34342, Start Num: 66

Candidate Starts for Mosby_40:

(61, 34722), (Start: 66 @34707 has 108 MA's), (100, 34572), (107, 34548), (113, 34524), (127, 34461),

Gene: MrGordo_62 Start: 40946, Stop: 40590, Start Num: 66

Candidate Starts for MrGordo_62:

(Start: 66 @40946 has 108 MA's), (Start: 69 @40934 has 5 MA's), (100, 40808), (103, 40799), (107, 40784), (113, 40760), (121, 40730), (123, 40718),

Gene: Murphy_45 Start: 35671, Stop: 35267, Start Num: 66

Candidate Starts for Murphy_45:

(Start: 66 @35671 has 108 MA's), (100, 35536), (107, 35512), (113, 35488), (125, 35443), (150, 35320),

Gene: Nibley_66 Start: 45326, Stop: 44961, Start Num: 66

Candidate Starts for Nibley_66:

(Start: 41 @45374 has 1 MA's), (44, 45368), (Start: 66 @45326 has 108 MA's), (100, 45191), (107, 45167), (113, 45143), (127, 45080),

Gene: NihilNomen_73 Start: 50662, Stop: 50297, Start Num: 66

Candidate Starts for NihilNomen_73:

(Start: 66 @50662 has 108 MA's), (75, 50620), (108, 50524), (125, 50455), (131, 50416),

Gene: Nivrat_78 Start: 48916, Stop: 49254, Start Num: 69

Candidate Starts for Nivrat_78:

(56, 48877), (Start: 69 @48916 has 5 MA's), (72, 48928), (87, 49000), (90, 49009), (102, 49045), (122, 49117),

Gene: NoSleep_45 Start: 35431, Stop: 35027, Start Num: 66

Candidate Starts for NoSleep_45:

(Start: 66 @35431 has 108 MA's), (100, 35296), (107, 35272), (113, 35248), (125, 35203), (150, 35080),

Gene: ODay_87 Start: 48574, Stop: 49005, Start Num: 66

Candidate Starts for ODay_87:

(Start: 66 @48574 has 108 MA's), (77, 48631), (91, 48694), (105, 48739), (122, 48802), (146, 48937),

Gene: Odette_71 Start: 49705, Stop: 49340, Start Num: 66

Candidate Starts for Odette_71:

(Start: 66 @49705 has 108 MA's), (75, 49663), (108, 49567), (125, 49498), (131, 49459),

Gene: OrionPax_43 Start: 35001, Stop: 34636, Start Num: 66

Candidate Starts for OrionPax_43:

(Start: 66 @35001 has 108 MA's), (100, 34866), (107, 34842), (113, 34818), (127, 34755),

Gene: Ovechkin_83 Start: 49406, Stop: 49663, Start Num: 69

Candidate Starts for Ovechkin_83:

(Start: 69 @49406 has 5 MA's), (81, 49466), (82, 49469), (90, 49502), (111, 49574), (125, 49616), (129, 49643),

Gene: PaddyBaddy_43 Start: 35008, Stop: 34643, Start Num: 66

Candidate Starts for PaddyBaddy_43:

(61, 35023), (Start: 66 @35008 has 108 MA's), (100, 34873), (107, 34849), (113, 34825), (125, 34780), (127, 34762),

Gene: Phlippers_38 Start: 32612, Stop: 32250, Start Num: 65

Candidate Starts for Phlippers_38:

(15, 32750), (23, 32717), (Start: 65 @32612 has 12 MA's), (123, 32369), (127, 32348), (128, 32342), (129, 32339),

Gene: Phoebus_75 Start: 51844, Stop: 51479, Start Num: 66

Candidate Starts for Phoebus_75:

(Start: 66 @51844 has 108 MA's), (75, 51802), (108, 51706), (125, 51637), (131, 51598),

Gene: Phrux_42 Start: 34994, Stop: 34629, Start Num: 66

Candidate Starts for Phrux_42:

(61, 35009), (Start: 66 @34994 has 108 MA's), (100, 34859), (107, 34835), (113, 34811), (125, 34766), (127, 34748),

Gene: Pinkcreek_11 Start: 4628, Stop: 5008, Start Num: 66

Candidate Starts for Pinkcreek_11:

(51, 4592), (Start: 66 @4628 has 108 MA's), (100, 4763), (107, 4787), (113, 4811), (122, 4844), (133, 4904), (134, 4907), (141, 4937),

Gene: Poise_10 Start: 3064, Stop: 3315, Start Num: 95

Candidate Starts for Poise_10:

(Start: 95 @3064 has 8 MA's), (110, 3112), (123, 3172), (125, 3175), (127, 3193),

Gene: Porcelain_72 Start: 46970, Stop: 46605, Start Num: 66

Candidate Starts for Porcelain_72:

(Start: 66 @46970 has 108 MA's), (75, 46928), (108, 46832), (125, 46763), (131, 46724),

Gene: Pringar_10 Start: 3084, Stop: 3491, Start Num: 66

Candidate Starts for Pringar_10:

(Start: 66 @3084 has 108 MA's), (Start: 69 @3096 has 5 MA's), (100, 3222), (107, 3246), (113, 3270), (122, 3303), (153, 3468),

Gene: Ptowny_43 Start: 34586, Stop: 34221, Start Num: 66

Candidate Starts for Ptowny_43:

(61, 34601), (Start: 66 @34586 has 108 MA's), (93, 34469), (100, 34451), (107, 34427), (113, 34403), (125, 34358), (127, 34340),

Gene: Pumpkin_45 Start: 35920, Stop: 35555, Start Num: 66

Candidate Starts for Pumpkin_45:

(Start: 66 @35920 has 108 MA's), (100, 35785), (107, 35761), (113, 35737), (127, 35674),

Gene: Puppet_40 Start: 32097, Stop: 31735, Start Num: 65

Candidate Starts for Puppet_40:

(15, 32235), (23, 32202), (Start: 65 @32097 has 12 MA's), (123, 31854), (127, 31833), (128, 31827), (129, 31824),

Gene: Quallification_42 Start: 35222, Stop: 34857, Start Num: 66

Candidate Starts for Quallification_42:

(Start: 66 @35222 has 108 MA's), (75, 35180), (108, 35084), (125, 35015), (131, 34976),

Gene: Rabinovish_16 Start: 6579, Stop: 6902, Start Num: 41

Candidate Starts for Rabinovish_16:

(Start: 41 @6579 has 1 MA's), (44, 6585), (Start: 66 @6627 has 108 MA's), (100, 6762), (107, 6786), (113, 6810), (125, 6855), (129, 6882),

Gene: Raela_10 Start: 3468, Stop: 3719, Start Num: 95

Candidate Starts for Raela_10:

(Start: 95 @3468 has 8 MA's), (110, 3516), (123, 3576), (125, 3579), (127, 3597),

Gene: RedRaider77_11 Start: 3531, Stop: 3950, Start Num: 62

Candidate Starts for RedRaider77_11:

(Start: 62 @3531 has 2 MA's), (100, 3681), (107, 3705), (113, 3729), (120, 3756), (121, 3759),

Gene: Redno2_69 Start: 47458, Stop: 47093, Start Num: 66

Candidate Starts for Redno2_69:

(Start: 66 @47458 has 108 MA's), (75, 47416), (108, 47320), (125, 47251), (131, 47212),

Gene: Rimmer_42 Start: 34931, Stop: 34563, Start Num: 66
Candidate Starts for Rimmer_42:
(Start: 66 @34931 has 108 MA's), (Start: 69 @34919 has 5 MA's), (100, 34793), (107, 34769), (113, 34745), (127, 34682),

Gene: RiverMonster_44 Start: 35447, Stop: 35043, Start Num: 66
Candidate Starts for RiverMonster_44:
(Start: 66 @35447 has 108 MA's), (100, 35312), (107, 35288), (113, 35264), (125, 35219), (150, 35096),

Gene: SG4_82 Start: 49730, Stop: 49978, Start Num: 95
Candidate Starts for SG4_82:
(Start: 95 @49730 has 8 MA's), (110, 49778), (123, 49838), (125, 49841), (127, 49859),

Gene: SG4_79 Start: 48739, Stop: 49107, Start Num: 66
Candidate Starts for SG4_79:
(52, 48706), (Start: 66 @48739 has 108 MA's), (100, 48877), (103, 48886), (107, 48901), (113, 48925), (127, 48988),

Gene: STLscum_68 Start: 42547, Stop: 42314, Start Num: 88
Candidate Starts for STLscum_68:
(Start: 88 @42547 has 2 MA's), (92, 42538), (115, 42475), (117, 42469), (122, 42451),

Gene: Schatzie_67 Start: 49452, Stop: 49087, Start Num: 66
Candidate Starts for Schatzie_67:
(Start: 66 @49452 has 108 MA's), (75, 49410), (108, 49314), (125, 49245), (131, 49206),

Gene: ShereKhan_42 Start: 35964, Stop: 35599, Start Num: 66
Candidate Starts for ShereKhan_42:
(61, 35979), (Start: 66 @35964 has 108 MA's), (100, 35829), (107, 35805), (113, 35781), (125, 35736), (127, 35718),

Gene: ShowerHandel_83 Start: 48976, Stop: 49359, Start Num: 66
Candidate Starts for ShowerHandel_83:
(Start: 66 @48976 has 108 MA's), (68, 48985), (98, 49087), (101, 49096), (121, 49168), (123, 49180), (150, 49306),

Gene: Smairt_41 Start: 32245, Stop: 31883, Start Num: 65
Candidate Starts for Smairt_41:
(15, 32383), (23, 32350), (Start: 65 @32245 has 12 MA's), (123, 32002), (127, 31981), (128, 31975), (129, 31972),

Gene: Solon_59 Start: 40107, Stop: 39859, Start Num: 95
Candidate Starts for Solon_59:
(Start: 95 @40107 has 8 MA's), (110, 40059), (125, 39996), (127, 39978),

Gene: Squint_73 Start: 47089, Stop: 46724, Start Num: 66
Candidate Starts for Squint_73:
(Start: 66 @47089 has 108 MA's), (75, 47047), (108, 46951), (125, 46882), (131, 46843),

Gene: Stark_45 Start: 35450, Stop: 35046, Start Num: 66
Candidate Starts for Stark_45:

(61, 35465), (Start: 66 @35450 has 108 MA's), (100, 35315), (107, 35291), (113, 35267), (125, 35222), (150, 35099),

Gene: Stellammi_52 Start: 31914, Stop: 31642, Start Num: 79

Candidate Starts for Stellammi_52:

(79, 31914), (83, 31902), (100, 31854), (112, 31818), (143, 31713), (150, 31689), (153, 31659),

Gene: Stellammi_138 Start: 61513, Stop: 61869, Start Num: 66

Candidate Starts for Stellammi_138:

(13, 61351), (36, 61444), (38, 61447), (Start: 66 @61513 has 108 MA's), (68, 61522), (75, 61555), (112, 61687), (116, 61702), (122, 61723), (143, 61798), (150, 61822), (153, 61852),

Gene: StevieRay_57 Start: 37992, Stop: 38351, Start Num: 66

Candidate Starts for StevieRay_57:

(5, 37731), (9, 37764), (10, 37788), (11, 37794), (39, 37935), (Start: 66 @37992 has 108 MA's), (83, 38067), (98, 38082), (108, 38109), (109, 38115), (121, 38160), (123, 38172), (153, 38328),

Gene: StormChicken_43 Start: 35539, Stop: 35171, Start Num: 66

Candidate Starts for StormChicken_43:

(Start: 66 @35539 has 108 MA's), (Start: 69 @35527 has 5 MA's), (100, 35401), (107, 35377), (113, 35353), (127, 35290),

Gene: Superphikiman_70 Start: 46180, Stop: 45815, Start Num: 66

Candidate Starts for Superphikiman_70:

(Start: 66 @46180 has 108 MA's), (75, 46138), (108, 46042), (125, 45973), (131, 45934),

Gene: TeamEdward_43 Start: 35536, Stop: 35168, Start Num: 66

Candidate Starts for TeamEdward_43:

(Start: 66 @35536 has 108 MA's), (Start: 69 @35524 has 5 MA's), (100, 35398), (107, 35374), (113, 35350), (127, 35287),

Gene: TeardropMSU_40 Start: 34933, Stop: 34568, Start Num: 66

Candidate Starts for TeardropMSU_40:

(61, 34948), (Start: 66 @34933 has 108 MA's), (100, 34798), (107, 34774), (113, 34750), (127, 34687),

Gene: Tesla_10 Start: 3055, Stop: 3306, Start Num: 95

Candidate Starts for Tesla_10:

(Start: 95 @3055 has 8 MA's), (110, 3103), (123, 3163), (125, 3166), (127, 3184),

Gene: Thespis_54 Start: 36385, Stop: 36747, Start Num: 66

Candidate Starts for Thespis_54:

(7, 36157), (30, 36304), (39, 36328), (Start: 66 @36385 has 108 MA's), (83, 36460), (98, 36475), (108, 36502), (109, 36508), (121, 36553), (123, 36565), (153, 36724),

Gene: ThreeRngTarjay_70 Start: 50738, Stop: 50373, Start Num: 66

Candidate Starts for ThreeRngTarjay_70:

(Start: 66 @50738 has 108 MA's), (75, 50696), (108, 50600), (125, 50531), (131, 50492),

Gene: Thresher_46 Start: 36685, Stop: 36281, Start Num: 66

Candidate Starts for Thresher_46:

(Start: 66 @36685 has 108 MA's), (100, 36550), (107, 36526), (113, 36502), (122, 36469), (150, 36334),

Gene: TinyDot_39 Start: 28787, Stop: 29068, Start Num: 66
Candidate Starts for TinyDot_39:
(18, 28661), (19, 28664), (22, 28673), (Start: 66 @28787 has 108 MA's), (122, 29000),

Gene: Tomaszewski_40 Start: 34800, Stop: 34435, Start Num: 66
Candidate Starts for Tomaszewski_40:
(61, 34815), (Start: 66 @34800 has 108 MA's), (100, 34665), (107, 34641), (113, 34617), (127, 34554),

Gene: Topgun_39 Start: 31551, Stop: 31189, Start Num: 65
Candidate Starts for Topgun_39:
(15, 31689), (23, 31656), (Start: 65 @31551 has 12 MA's), (123, 31308), (127, 31287), (128, 31281),
(129, 31278),

Gene: Topiatin_88 Start: 50765, Stop: 51043, Start Num: 78
Candidate Starts for Topiatin_88:
(78, 50765), (118, 50876), (126, 50912), (142, 50969),

Gene: VRedHorse_87 Start: 48107, Stop: 48463, Start Num: 66
Candidate Starts for VRedHorse_87:
(Start: 66 @48107 has 108 MA's), (140, 48359),

Gene: Wachhund_79 Start: 46376, Stop: 46765, Start Num: 50
Candidate Starts for Wachhund_79:
(29, 46334), (31, 46337), (Start: 50 @46376 has 2 MA's), (57, 46388), (74, 46454), (89, 46517), (97,
46541), (121, 46625), (123, 46637),

Gene: Wanda_76 Start: 50200, Stop: 49835, Start Num: 66
Candidate Starts for Wanda_76:
(Start: 66 @50200 has 108 MA's), (75, 50158), (108, 50062), (125, 49993), (131, 49954),

Gene: Wilkins_39 Start: 31484, Stop: 31122, Start Num: 65
Candidate Starts for Wilkins_39:
(15, 31622), (23, 31589), (Start: 65 @31484 has 12 MA's), (123, 31241), (127, 31220), (128, 31214),
(129, 31211),

Gene: Xandras_43 Start: 35049, Stop: 34684, Start Num: 66
Candidate Starts for Xandras_43:
(Start: 66 @35049 has 108 MA's), (100, 34914), (107, 34890), (113, 34866), (127, 34803),

Gene: Yoshi_97 Start: 50855, Stop: 51199, Start Num: 66
Candidate Starts for Yoshi_97:
(16, 50720), (21, 50744), (39, 50801), (46, 50813), (52, 50822), (Start: 66 @50855 has 108 MA's),
(137, 51101),

Gene: Youngblood_43 Start: 35542, Stop: 35174, Start Num: 66
Candidate Starts for Youngblood_43:
(Start: 66 @35542 has 108 MA's), (Start: 69 @35530 has 5 MA's), (100, 35404), (107, 35380), (113,
35356), (127, 35293),

Gene: Zapner_89 Start: 47534, Stop: 47902, Start Num: 66
Candidate Starts for Zapner_89:
(51, 47498), (Start: 66 @47534 has 108 MA's), (100, 47669), (107, 47693), (113, 47717), (125, 47762),
(127, 47780), (135, 47828),

Gene: Zelink_70 Start: 51051, Stop: 50686, Start Num: 66

Candidate Starts for Zelink_70:

(Start: 66 @51051 has 108 MA's), (75, 51009), (108, 50913), (125, 50844), (131, 50805),