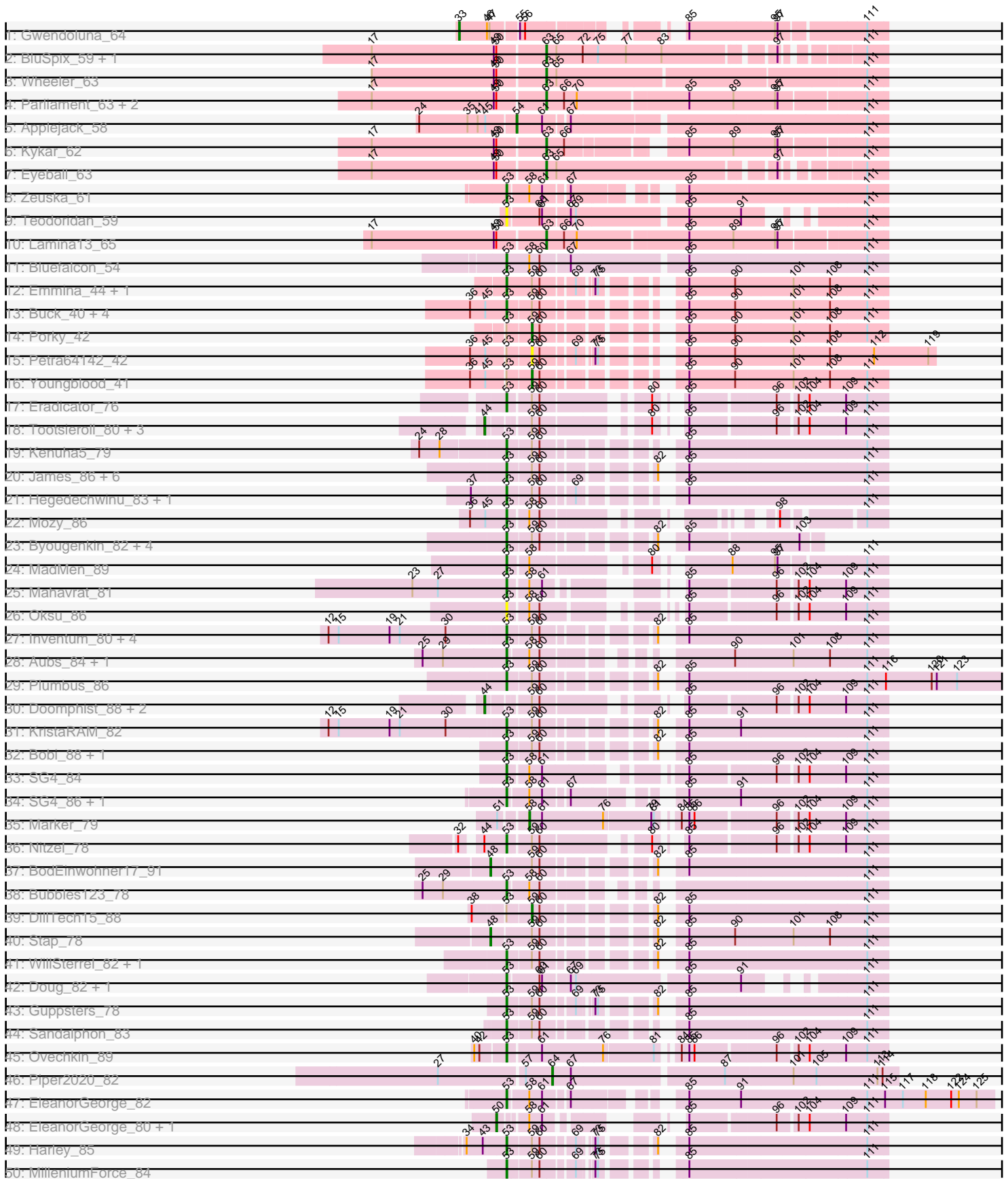
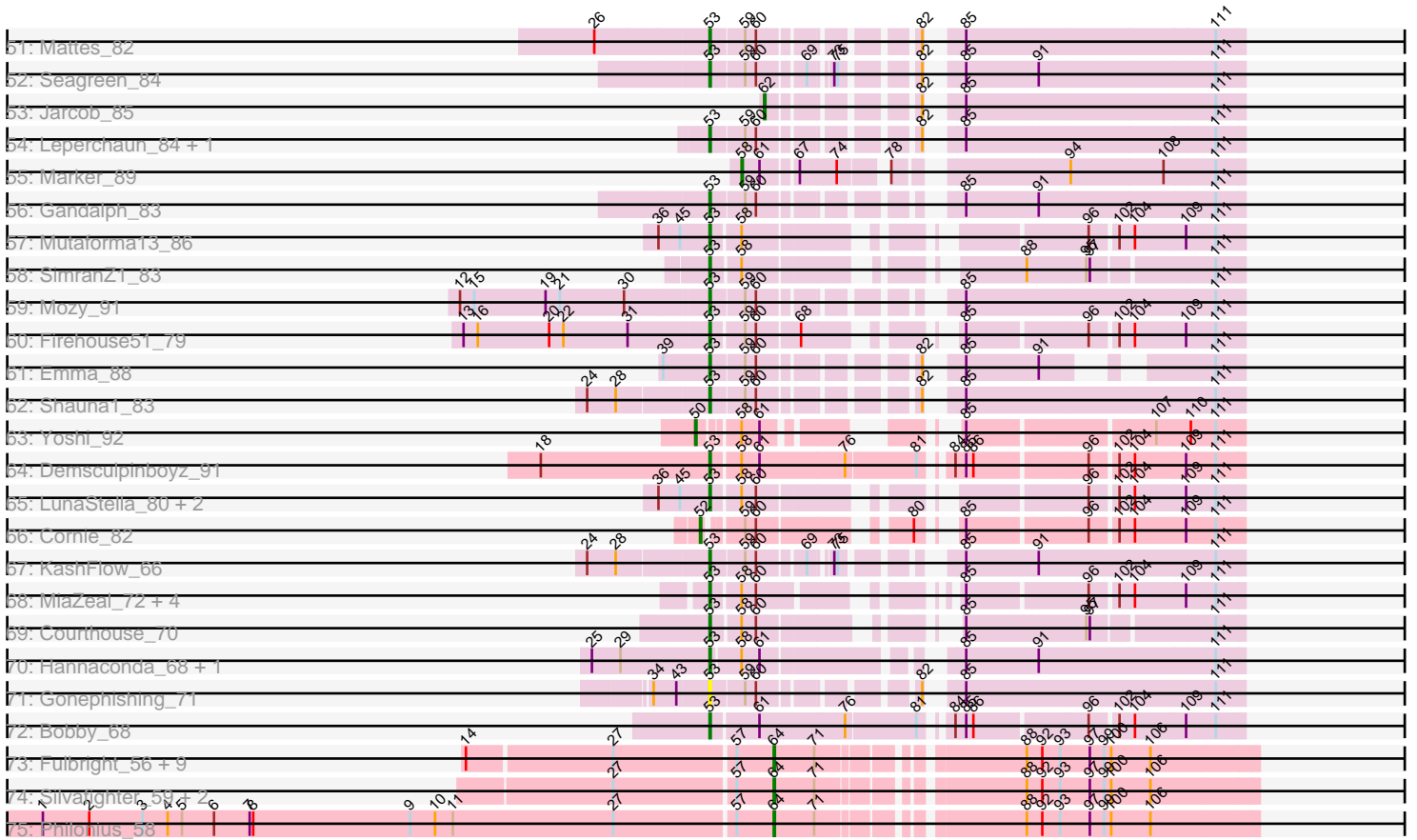


Pham 193834



Pham 193834



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 193834 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193834 has 128 members, 4 are drafts.

Phages represented in each track:

- Track 1 : Gwendoluna_64
- Track 2 : BluSpix_59, IgnatiusPatJac_61
- Track 3 : Wheeler_63
- Track 4 : Parliament_63, Paphu_61, Tasp14_65
- Track 5 : Applejack_58
- Track 6 : Kykar_62
- Track 7 : Eyeball_63
- Track 8 : Zeuska_61
- Track 9 : Teodoridan_59
- Track 10 : Lamina13_65
- Track 11 : Bluefalcon_54
- Track 12 : Emmina_44, Teaspoon_45
- Track 13 : Buck_40, Elite2014_40, Lilpickle_40, Rimmer_40, ChosenOne_41
- Track 14 : Porky_42
- Track 15 : Petra64142_42
- Track 16 : Youngblood_41
- Track 17 : Eradicator_76
- Track 18 : Tootsieroll_80, Polka14_89, KingMidas_84, Scottish_83
- Track 19 : Kenuha5_79
- Track 20 : James_86, Flathead_85, ShiLan_85, OlympiaSaint_85, Moonbeam_83, Phanphagia_84, Spoonbill_81
- Track 21 : Hegedechwinu_83, JalFarm20_90
- Track 22 : Mozy_86
- Track 23 : Byougenkin_82, Royals2015_90, PopTart_77, SassyB_77, Blexus_80
- Track 24 : MadMen_89
- Track 25 : Mahavrat_81
- Track 26 : Oksu_86
- Track 27 : Inventum_80, Ramsey_86, RedBird_83, Dorothy_83, Sassafras_83
- Track 28 : Aubs_84, Donkeykong_90
- Track 29 : Plumbus_86
- Track 30 : Doomphist_88, Empress_83, Poenanya_88
- Track 31 : KristaRAM_82
- Track 32 : Bobi_88, DaWorst_83
- Track 33 : SG4_84
- Track 34 : SG4_86, Whatsapiecost_76
- Track 35 : Marker_79
- Track 36 : Nitzel_78

- Track 37 : BodEinwohner17_91
- Track 38 : Bubbles123_78
- Track 39 : DillTech15_88
- Track 40 : Stap_78
- Track 41 : WillSterrel_82, IrishSherpFalk_83
- Track 42 : Doug_82, Bipolar_86
- Track 43 : Guppsters_78
- Track 44 : Sandalphon_83
- Track 45 : Ovechkin_89
- Track 46 : Piper2020_82
- Track 47 : EleanorGeorge_82
- Track 48 : EleanorGeorge_80, Zizzle_86
- Track 49 : Harley_85
- Track 50 : MilleniumForce_84
- Track 51 : Mattes_82
- Track 52 : Seagreen_84
- Track 53 : Jarcob_85
- Track 54 : Leperchaun_84, JoeyJr_86
- Track 55 : Marker_89
- Track 56 : Gandalph_83
- Track 57 : Mutaforma13_86
- Track 58 : SimranZ1_83
- Track 59 : Mozy_91
- Track 60 : Firehouse51_79
- Track 61 : Emma_88
- Track 62 : Shauna1_83
- Track 63 : Yoshi_92
- Track 64 : Demsculpinboyz_91
- Track 65 : LunaStella_80, TChen_82, ShroomBoi_82
- Track 66 : Cornie_82
- Track 67 : KashFlow_66
- Track 68 : MiaZeal_72, Squint_72, Phoebus_74, Porcelain_71, Ariel_71
- Track 69 : Courthouse_70
- Track 70 : Hannaconda_68, SuperGrey_84
- Track 71 : Gonephishing_71
- Track 72 : Bobby_68
- Track 73 : Fulbright_56, Carcharodon_58, Magsby_58, Parmesanjohn_58, Xerxes_58, Smurph_58, Phloss_56, Gex_59, Pipsqueaks_59, Schnauzer_59
- Track 74 : Silvafighter_59, Melville_63, Duplicity_56
- Track 75 : Philonius_58

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

The start number called the most often in the published annotations is 53, it was called in 79 of the 124 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel_71, Aubs_84, Bipolar_86, Blexus_80, Bluefalcon_54, Bobby_68, Bobi_88, Bubbles123_78, Buck_40, Byougenkin_82, ChosenOne_41, Courthouse_70, DaWorst_83, Demsculpinboyz_91, Donkeykong_90, Dorothy_83, Doug_82,

EleanorGeorge_82, Elite2014_40, Emma_88, Emmina_44, Eradicator_76, Firehouse51_79, Flathead_85, Gandolph_83, Gonephishing_71, Guppsters_78, Hannaconda_68, Harley_85, Hegedechwinu_83, Inventum_80, IrishSherpFalk_83, JalFarm20_90, James_86, JoeyJr_86, KashFlow_66, Kenuha5_79, KristaRAM_82, Leperchaun_84, Lilpickle_40, LunaStella_80, MadMen_89, Mahavrat_81, Mattes_82, MiaZeal_72, MilleniumForce_84, Moonbeam_83, Mozy_86, Mozy_91, Mutaforma13_86, Nitzel_78, Oksu_86, OlympiaSaint_85, Ovechkin_89, Phanphagia_84, Phoebus_74, Plumbus_86, PopTart_77, Porcelain_71, Ramsey_86, RedBird_83, Rimmer_40, Royals2015_90, SG4_84, SG4_86, Sandalphon_83, Sassafras_83, SassyB_77, Seagreen_84, Shauna1_83, ShiLan_85, ShroomBoi_82, SimranZ1_83, Spoonbill_81, Squint_72, SuperGrey_84, TChen_82, Teaspoon_45, Teodoridan_59, Whatsapiecost_76, WillSterrel_82, Zeuska_61,

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

- DillTech15_88, Petra64142_42, Porky_42, Youngblood_41,

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

- Applejack_58, BluSpix_59, BodEinwohner17_91, Carcharodon_58, Cornie_82, Doomphist_88, Duplicity_56, EleanorGeorge_80, Empress_83, Eyeball_63, Fulbright_56, Gex_59, Gwendoluna_64, IgnatiusPatJac_61, Jarcob_85, KingMidas_84, Kykar_62, Lamina13_65, Magsby_58, Marker_79, Marker_89, Melville_63, Paphu_61, Parliament_63, Parmesanjohn_58, Philonius_58, Phloss_56, Piper2020_82, Pipsqueaks_59, Poenanya_88, Polka14_89, Schnauzer_59, Scottish_83, Silvafighter_59, Smurph_58, Stap_78, Tasp14_65, Tootsieroll_80, Wheeler_63, Xerxes_58, Yoshi_92, Zizzle_86,

Summary by start number:

Start 33:

- Found in 1 of 128 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gwendoluna_64 (A1),

Start 44:

- Found in 8 of 128 (6.2%) of genes in pham
- Manual Annotations of this start: 7 of 124
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Doomphist_88 (F1), Empress_83 (F1), KingMidas_84 (F1), Poenanya_88 (F1), Polka14_89 (F1), Scottish_83 (F1), Tootsieroll_80 (F1),

Start 48:

- Found in 2 of 128 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17_91 (F1), Stap_78 (F1),

Start 50:

- Found in 12 of 128 (9.4%) of genes in pham
- Manual Annotations of this start: 3 of 124
- Called 25.0% of time when present

- Phage (with cluster) where this start called: EleanorGeorge_80 (F1), Yoshi_92 (F2), Zizzle_86 (F1),

Start 52:

- Found in 1 of 128 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Cornie_82 (F5),

Start 53:

- Found in 86 of 128 (67.2%) of genes in pham
- Manual Annotations of this start: 79 of 124
- Called 95.3% of time when present
- Phage (with cluster) where this start called: Ariel_71 (J), Aubs_84 (F1), Bipolar_86 (F1), Blexus_80 (F1), Bluefalcon_54 (A5), Bobby_68 (J), Bobi_88 (F1), Bubbles123_78 (F1), Buck_40 (E), Byougenkin_82 (F1), ChosenOne_41 (E), Courthouse_70 (J), DaWorst_83 (F1), Demsculpinboyz_91 (F2), Donkeykong_90 (F1), Dorothy_83 (F1), Doug_82 (F1), EleanorGeorge_82 (F1), Elite2014_40 (E), Emma_88 (F1), Emmina_44 (E), Eradicator_76 (F1), Firehouse51_79 (F1), Flathead_85 (F1), Gandalph_83 (F1), Gonephishing_71 (J), Guppsters_78 (F1), Hannaconda_68 (J), Harley_85 (F1), Hegedechwinu_83 (F1), Inventum_80 (F1), IrishSherpFalk_83 (F1), JalFarm20_90 (F1), James_86 (F1), JoeyJr_86 (F1), KashFlow_66 (J), Kenuha5_79 (F1), KristaRAM_82 (F1), Leperchaun_84 (F1), Lilpickle_40 (E), LunaStella_80 (F4), MadMen_89 (F1), Mahavrat_81 (F1), Mattes_82 (F1), MiaZeal_72 (J), MilleniumForce_84 (F1), Moonbeam_83 (F1), Mozy_86 (F1), Mozy_91 (F1), Mutaforma13_86 (F1), Nitzel_78 (F1), Oksu_86 (F1), OlympiaSaint_85 (F1), Ovechkin_89 (F1), Phanphagia_84 (F1), Phoebus_74 (J), Plumbus_86 (F1), PopTart_77 (F1), Porcelain_71 (J), Ramsey_86 (F1), RedBird_83 (F1), Rimmer_40 (E), Royals2015_90 (F1), SG4_84 (F1), SG4_86 (F1), Sandalphon_83 (F1), Sassafras_83 (F1), SassyB_77 (F1), Seagreen_84 (F1), Shauna1_83 (F1), ShiLan_85 (F1), ShroomBoi_82 (F1), SimranZ1_83 (F1), Spoonbill_81 (F1), Squint_72 (J), SuperGrey_84 (F1), TChen_82 (F4), Teaspoon_45 (E), Teodoridan_59 (A1), Whatsapiecost_76 (F1), WillSterrel_82 (F1), Zeuska_61 (A1),

Start 54:

- Found in 1 of 128 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Applejack_58 (A1),

Start 58:

- Found in 32 of 128 (25.0%) of genes in pham
- Manual Annotations of this start: 2 of 124
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Marker_79 (F1), Marker_89 (F1),

Start 59:

- Found in 64 of 128 (50.0%) of genes in pham
- Manual Annotations of this start: 3 of 124
- Called 6.2% of time when present
- Phage (with cluster) where this start called: DillTech15_88 (F1), Petra64142_42 (E), Porky_42 (E), Youngblood_41 (E),

Start 62:

- Found in 1 of 128 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jacob_85 (F1),

Start 63:

- Found in 9 of 128 (7.0%) of genes in pham
- Manual Annotations of this start: 9 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BluSpix_59 (A1), Eyeball_63 (A1), IgnatiusPatJac_61 (A1), Kykar_62 (A1), Lamina13_65 (A1), Paphu_61 (A1), Parliament_63 (A1), Tasp14_65 (A1), Wheeler_63 (A1),

Start 64:

- Found in 15 of 128 (11.7%) of genes in pham
- Manual Annotations of this start: 15 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Carcharodon_58 (N), Duplicity_56 (N), Fulbright_56 (N), Gex_59 (N), Magsby_58 (N), Melville_63 (N), Parmesanjohn_58 (N), Philonius_58 (N), Phloss_56 (N), Piper2020_82 (F1), Pipsqueaks_59 (N), Schnauzer_59 (N), Silvafighter_59 (N), Smurph_58 (N), Xerxes_58 (N),

Summary by clusters:

There are 9 clusters represented in this pham: F1, F2, F4, F5, J, N, A1, A5, E,

Info for manual annotations of cluster A1:

- Start number 33 was manually annotated 1 time for cluster A1.
- Start number 53 was manually annotated 1 time for cluster A1.
- Start number 54 was manually annotated 1 time for cluster A1.
- Start number 63 was manually annotated 9 times for cluster A1.

Info for manual annotations of cluster A5:

- Start number 53 was manually annotated 1 time for cluster A5.

Info for manual annotations of cluster E:

- Start number 53 was manually annotated 7 times for cluster E.
- Start number 59 was manually annotated 2 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 44 was manually annotated 7 times for cluster F1.
- Start number 48 was manually annotated 2 times for cluster F1.
- Start number 50 was manually annotated 2 times for cluster F1.
- Start number 53 was manually annotated 58 times for cluster F1.
- Start number 58 was manually annotated 2 times for cluster F1.
- Start number 59 was manually annotated 1 time for cluster F1.
- Start number 62 was manually annotated 1 time for cluster F1.
- Start number 64 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 53 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:

- Start number 53 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F5:

- Start number 52 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 53 was manually annotated 9 times for cluster J.

Info for manual annotations of cluster N:

- Start number 64 was manually annotated 14 times for cluster N.

Gene Information:

Gene: Applejack_58 Start: 39182, Stop: 38778, Start Num: 54

Candidate Starts for Applejack_58:

(24, 39293), (35, 39236), (41, 39224), (45, 39215), (Start: 54 @39182 has 1 MA's), (61, 39152), (67, 39128), (111, 38801),

Gene: Ariel_71 Start: 45936, Stop: 45583, Start Num: 53

Candidate Starts for Ariel_71:

(Start: 53 @45936 has 79 MA's), (Start: 58 @45915 has 2 MA's), (60, 45903), (85, 45795), (96, 45702), (102, 45684), (104, 45672), (109, 45630), (111, 45606),

Gene: Aubs_84 Start: 50517, Stop: 50876, Start Num: 53

Candidate Starts for Aubs_84:

(25, 50424), (29, 50448), (Start: 53 @50517 has 79 MA's), (Start: 58 @50538 has 2 MA's), (60, 50550), (90, 50706), (101, 50769), (108, 50811), (111, 50853),

Gene: Bipolar_86 Start: 51239, Stop: 51601, Start Num: 53

Candidate Starts for Bipolar_86:

(Start: 53 @51239 has 79 MA's), (60, 51272), (61, 51275), (67, 51302), (69, 51308), (85, 51428), (91, 51488), (111, 51578),

Gene: Blexus_80 Start: 49926, Stop: 50210, Start Num: 53

Candidate Starts for Blexus_80:

(Start: 53 @49926 has 79 MA's), (Start: 59 @49950 has 3 MA's), (60, 49959), (82, 50058), (85, 50073), (103, 50187),

Gene: BluSpix_59 Start: 36720, Stop: 36373, Start Num: 63

Candidate Starts for BluSpix_59:

(17, 36921), (49, 36777), (Start: 50 @36774 has 3 MA's), (Start: 63 @36720 has 9 MA's), (65, 36708), (72, 36678), (75, 36660), (77, 36627), (83, 36585), (97, 36471), (111, 36396),

Gene: Bluefalcon_54 Start: 39442, Stop: 39023, Start Num: 53

Candidate Starts for Bluefalcon_54:

(Start: 53 @39442 has 79 MA's), (Start: 58 @39415 has 2 MA's), (60, 39403), (67, 39373), (85, 39247), (111, 39046),

Gene: Bobby_68 Start: 49135, Stop: 48737, Start Num: 53

Candidate Starts for Bobby_68:

(Start: 53 @49135 has 79 MA's), (61, 49099), (76, 49030), (81, 48973), (84, 48958), (85, 48949), (86, 48943), (96, 48856), (102, 48838), (104, 48826), (109, 48784), (111, 48760),

Gene: Bobi_88 Start: 51408, Stop: 51779, Start Num: 53

Candidate Starts for Bobi_88:

(Start: 53 @51408 has 79 MA's), (Start: 59 @51432 has 3 MA's), (60, 51441), (82, 51540), (85, 51555), (111, 51756),

Gene: BodEinwohner17_91 Start: 52011, Stop: 52400, Start Num: 48

Candidate Starts for BodEinwohner17_91:

(Start: 48 @52011 has 2 MA's), (Start: 59 @52053 has 3 MA's), (60, 52062), (82, 52161), (85, 52176), (111, 52377),

Gene: Bubbles123_78 Start: 49394, Stop: 49753, Start Num: 53

Candidate Starts for Bubbles123_78:

(25, 49301), (29, 49325), (Start: 53 @49394 has 79 MA's), (Start: 58 @49415 has 2 MA's), (60, 49427), (111, 49730),

Gene: Buck_40 Start: 34705, Stop: 34334, Start Num: 53

Candidate Starts for Buck_40:

(36, 34744), (45, 34726), (Start: 53 @34705 has 79 MA's), (Start: 59 @34681 has 3 MA's), (60, 34672), (85, 34558), (90, 34504), (101, 34441), (108, 34399), (111, 34357),

Gene: Byougenkin_82 Start: 47350, Stop: 47634, Start Num: 53

Candidate Starts for Byougenkin_82:

(Start: 53 @47350 has 79 MA's), (Start: 59 @47374 has 3 MA's), (60, 47383), (82, 47482), (85, 47497), (103, 47611),

Gene: Carcharodon_58 Start: 37518, Stop: 37880, Start Num: 64

Candidate Starts for Carcharodon_58:

(14, 37275), (27, 37392), (57, 37488), (Start: 64 @37518 has 15 MA's), (71, 37551), (88, 37692), (92, 37704), (93, 37719), (97, 37743), (99, 37755), (100, 37761), (106, 37794),

Gene: ChosenOne_41 Start: 33974, Stop: 33603, Start Num: 53

Candidate Starts for ChosenOne_41:

(36, 34013), (45, 33995), (Start: 53 @33974 has 79 MA's), (Start: 59 @33950 has 3 MA's), (60, 33941), (85, 33827), (90, 33773), (101, 33710), (108, 33668), (111, 33626),

Gene: Cornie_82 Start: 48423, Stop: 48782, Start Num: 52

Candidate Starts for Cornie_82:

(Start: 52 @48423 has 1 MA's), (Start: 59 @48447 has 3 MA's), (60, 48456), (80, 48555), (85, 48570), (96, 48663), (102, 48681), (104, 48693), (109, 48735), (111, 48759),

Gene: Courthouse_70 Start: 46345, Stop: 45986, Start Num: 53

Candidate Starts for Courthouse_70:

(Start: 53 @46345 has 79 MA's), (Start: 58 @46324 has 2 MA's), (60, 46312), (85, 46204), (95, 46105), (97, 46102), (111, 46009),

Gene: DaWorst_83 Start: 48921, Stop: 49292, Start Num: 53

Candidate Starts for DaWorst_83:

(Start: 53 @48921 has 79 MA's), (Start: 59 @48945 has 3 MA's), (60, 48954), (82, 49053), (85, 49068), (111, 49269),

Gene: Demsculpinboyz_91 Start: 47365, Stop: 47763, Start Num: 53

Candidate Starts for Demsculpinboyz_91:

(18, 47227), (Start: 53 @47365 has 79 MA's), (Start: 58 @47386 has 2 MA's), (61, 47401), (76, 47470), (81, 47527), (84, 47542), (85, 47551), (86, 47557), (96, 47644), (102, 47662), (104, 47674), (109, 47716), (111, 47740),

Gene: DillTech15_88 Start: 49164, Stop: 49511, Start Num: 59

Candidate Starts for DillTech15_88:

(38, 49107), (Start: 53 @49140 has 79 MA's), (Start: 59 @49164 has 3 MA's), (60, 49173), (82, 49272), (85, 49287), (111, 49488),

Gene: Donkeykong_90 Start: 52122, Stop: 52481, Start Num: 53

Candidate Starts for Donkeykong_90:

(25, 52029), (29, 52053), (Start: 53 @52122 has 79 MA's), (Start: 58 @52143 has 2 MA's), (60, 52155), (90, 52311), (101, 52374), (108, 52416), (111, 52458),

Gene: Doomphist_88 Start: 50710, Stop: 51087, Start Num: 44

Candidate Starts for Doomphist_88:

(Start: 44 @50710 has 7 MA's), (Start: 59 @50752 has 3 MA's), (60, 50761), (85, 50875), (96, 50968), (102, 50986), (104, 50998), (109, 51040), (111, 51064),

Gene: Dorothy_83 Start: 51040, Stop: 51411, Start Num: 53

Candidate Starts for Dorothy_83:

(12, 50839), (15, 50851), (19, 50911), (21, 50923), (30, 50977), (Start: 53 @51040 has 79 MA's), (Start: 59 @51064 has 3 MA's), (60, 51073), (82, 51172), (85, 51187), (111, 51388),

Gene: Doug_82 Start: 50547, Stop: 50909, Start Num: 53

Candidate Starts for Doug_82:

(Start: 53 @50547 has 79 MA's), (60, 50580), (61, 50583), (67, 50610), (69, 50616), (85, 50736), (91, 50796), (111, 50886),

Gene: Duplicity_56 Start: 36775, Stop: 37137, Start Num: 64

Candidate Starts for Duplicity_56:

(27, 36649), (57, 36745), (Start: 64 @36775 has 15 MA's), (71, 36808), (88, 36949), (92, 36961), (93, 36976), (97, 37000), (99, 37012), (100, 37018), (106, 37051),

Gene: EleanorGeorge_82 Start: 49312, Stop: 49815, Start Num: 53

Candidate Starts for EleanorGeorge_82:

(Start: 53 @49312 has 79 MA's), (Start: 58 @49333 has 2 MA's), (61, 49348), (67, 49372), (85, 49465), (91, 49525), (111, 49666), (115, 49687), (117, 49708), (118, 49735), (122, 49765), (124, 49774), (125, 49795),

Gene: EleanorGeorge_80 Start: 48792, Stop: 49136, Start Num: 50

Candidate Starts for EleanorGeorge_80:

(Start: 50 @48792 has 3 MA's), (Start: 58 @48819 has 2 MA's), (61, 48834), (85, 48924), (96, 49017), (102, 49035), (104, 49047), (109, 49089), (111, 49113),

Gene: Elite2014_40 Start: 33973, Stop: 33602, Start Num: 53

Candidate Starts for Elite2014_40:

(36, 34012), (45, 33994), (Start: 53 @33973 has 79 MA's), (Start: 59 @33949 has 3 MA's), (60, 33940), (85, 33826), (90, 33772), (101, 33709), (108, 33667), (111, 33625),

Gene: Emma_88 Start: 49160, Stop: 49480, Start Num: 53

Candidate Starts for Emma_88:

(39, 49127), (Start: 53 @49160 has 79 MA's), (Start: 59 @49184 has 3 MA's), (60, 49193), (82, 49292), (85, 49307), (91, 49367), (111, 49457),

Gene: Emmina_44 Start: 34912, Stop: 34541, Start Num: 53

Candidate Starts for Emmina_44:

(Start: 53 @34912 has 79 MA's), (Start: 59 @34885 has 3 MA's), (60, 34876), (69, 34843), (73, 34831), (75, 34828), (85, 34765), (90, 34711), (101, 34648), (108, 34606), (111, 34564),

Gene: Empress_83 Start: 49521, Stop: 49898, Start Num: 44

Candidate Starts for Empress_83:

(Start: 44 @49521 has 7 MA's), (Start: 59 @49563 has 3 MA's), (60, 49572), (85, 49686), (96, 49779), (102, 49797), (104, 49809), (109, 49851), (111, 49875),

Gene: Eradicator_76 Start: 47953, Stop: 48312, Start Num: 53

Candidate Starts for Eradicator_76:

(Start: 53 @47953 has 79 MA's), (Start: 59 @47977 has 3 MA's), (60, 47986), (80, 48085), (85, 48100), (96, 48193), (102, 48211), (104, 48223), (109, 48265), (111, 48289),

Gene: Eyeball_63 Start: 41903, Stop: 41556, Start Num: 63

Candidate Starts for Eyeball_63:

(17, 42104), (49, 41960), (Start: 50 @41957 has 3 MA's), (Start: 63 @41903 has 9 MA's), (65, 41891), (97, 41654), (111, 41579),

Gene: Firehouse51_79 Start: 50692, Stop: 51051, Start Num: 53

Candidate Starts for Firehouse51_79:

(13, 50491), (16, 50503), (20, 50563), (22, 50575), (31, 50629), (Start: 53 @50692 has 79 MA's), (Start: 59 @50716 has 3 MA's), (60, 50725), (68, 50758), (85, 50839), (96, 50932), (102, 50950), (104, 50962), (109, 51004), (111, 51028),

Gene: Flathead_85 Start: 49803, Stop: 50174, Start Num: 53

Candidate Starts for Flathead_85:

(Start: 53 @49803 has 79 MA's), (Start: 59 @49827 has 3 MA's), (60, 49836), (82, 49935), (85, 49950), (111, 50151),

Gene: Fulbright_56 Start: 36212, Stop: 36574, Start Num: 64

Candidate Starts for Fulbright_56:

(14, 35969), (27, 36086), (57, 36182), (Start: 64 @36212 has 15 MA's), (71, 36245), (88, 36386), (92, 36398), (93, 36413), (97, 36437), (99, 36449), (100, 36455), (106, 36488),

Gene: Gandolph_83 Start: 47074, Stop: 47445, Start Num: 53

Candidate Starts for Gandolph_83:

(Start: 53 @47074 has 79 MA's), (Start: 59 @47098 has 3 MA's), (60, 47107), (85, 47221), (91, 47281), (111, 47422),

Gene: Gex_59 Start: 37534, Stop: 37896, Start Num: 64

Candidate Starts for Gex_59:

(14, 37291), (27, 37408), (57, 37504), (Start: 64 @37534 has 15 MA's), (71, 37567), (88, 37708), (92, 37720), (93, 37735), (97, 37759), (99, 37771), (100, 37777), (106, 37810),

Gene: Gonephishing_71 Start: 47256, Stop: 46885, Start Num: 53
Candidate Starts for Gonephishing_71:
(34, 47295), (43, 47277), (Start: 53 @47256 has 79 MA's), (Start: 59 @47232 has 3 MA's), (60, 47223), (82, 47124), (85, 47109), (111, 46908),

Gene: Guppsters_78 Start: 47339, Stop: 47707, Start Num: 53
Candidate Starts for Guppsters_78:
(Start: 53 @47339 has 79 MA's), (Start: 59 @47363 has 3 MA's), (60, 47372), (69, 47405), (73, 47417), (75, 47420), (82, 47468), (85, 47483), (111, 47684),

Gene: Gwendoluna_64 Start: 42781, Stop: 42374, Start Num: 33
Candidate Starts for Gwendoluna_64:
(Start: 33 @42781 has 1 MA's), (46, 42748), (47, 42745), (55, 42718), (56, 42712), (85, 42592), (95, 42493), (97, 42490), (111, 42397),

Gene: Hannaconda_68 Start: 45250, Stop: 44864, Start Num: 53
Candidate Starts for Hannaconda_68:
(25, 45343), (29, 45319), (Start: 53 @45250 has 79 MA's), (Start: 58 @45229 has 2 MA's), (61, 45214), (85, 45088), (91, 45028), (111, 44887),

Gene: Harley_85 Start: 49675, Stop: 50043, Start Num: 53
Candidate Starts for Harley_85:
(34, 49636), (43, 49654), (Start: 53 @49675 has 79 MA's), (Start: 59 @49699 has 3 MA's), (60, 49708), (69, 49741), (73, 49753), (75, 49756), (82, 49804), (85, 49819), (111, 50020),

Gene: Hegedechwinu_83 Start: 48330, Stop: 48701, Start Num: 53
Candidate Starts for Hegedechwinu_83:
(37, 48294), (Start: 53 @48330 has 79 MA's), (Start: 59 @48354 has 3 MA's), (60, 48363), (69, 48396), (85, 48477), (111, 48678),

Gene: IgnatiusPatJac_61 Start: 40665, Stop: 40318, Start Num: 63
Candidate Starts for IgnatiusPatJac_61:
(17, 40866), (49, 40722), (Start: 50 @40719 has 3 MA's), (Start: 63 @40665 has 9 MA's), (65, 40653), (72, 40623), (75, 40605), (77, 40572), (83, 40530), (97, 40416), (111, 40341),

Gene: Inventum_80 Start: 49225, Stop: 49596, Start Num: 53
Candidate Starts for Inventum_80:
(12, 49024), (15, 49036), (19, 49096), (21, 49108), (30, 49162), (Start: 53 @49225 has 79 MA's), (Start: 59 @49249 has 3 MA's), (60, 49258), (82, 49357), (85, 49372), (111, 49573),

Gene: IrishSherpFalk_83 Start: 50030, Stop: 50401, Start Num: 53
Candidate Starts for IrishSherpFalk_83:
(Start: 53 @50030 has 79 MA's), (Start: 59 @50054 has 3 MA's), (60, 50063), (82, 50162), (85, 50177), (111, 50378),

Gene: JalFarm20_90 Start: 50347, Stop: 50718, Start Num: 53
Candidate Starts for JalFarm20_90:
(37, 50311), (Start: 53 @50347 has 79 MA's), (Start: 59 @50371 has 3 MA's), (60, 50380), (69, 50413), (85, 50494), (111, 50695),

Gene: James_86 Start: 51529, Stop: 51900, Start Num: 53
Candidate Starts for James_86:

(Start: 53 @51529 has 79 MA's), (Start: 59 @51553 has 3 MA's), (60, 51562), (82, 51661), (85, 51676), (111, 51877),

Gene: Jarcob_85 Start: 51167, Stop: 51499, Start Num: 62

Candidate Starts for Jarcob_85:

(Start: 62 @51167 has 1 MA's), (82, 51260), (85, 51275), (111, 51476),

Gene: JoeyJr_86 Start: 51134, Stop: 51505, Start Num: 53

Candidate Starts for JoeyJr_86:

(Start: 53 @51134 has 79 MA's), (Start: 59 @51158 has 3 MA's), (60, 51167), (82, 51266), (85, 51281), (111, 51482),

Gene: KashFlow_66 Start: 45121, Stop: 44753, Start Num: 53

Candidate Starts for KashFlow_66:

(24, 45214), (28, 45190), (Start: 53 @45121 has 79 MA's), (Start: 59 @45097 has 3 MA's), (60, 45088), (69, 45055), (73, 45043), (75, 45040), (85, 44977), (91, 44917), (111, 44776),

Gene: Kenuha5_79 Start: 50155, Stop: 50526, Start Num: 53

Candidate Starts for Kenuha5_79:

(24, 50062), (28, 50086), (Start: 53 @50155 has 79 MA's), (Start: 59 @50179 has 3 MA's), (60, 50188), (85, 50302), (111, 50503),

Gene: KingMidas_84 Start: 49936, Stop: 50313, Start Num: 44

Candidate Starts for KingMidas_84:

(Start: 44 @49936 has 7 MA's), (Start: 59 @49978 has 3 MA's), (60, 49987), (80, 50086), (85, 50101), (96, 50194), (102, 50212), (104, 50224), (109, 50266), (111, 50290),

Gene: KristaRAM_82 Start: 48874, Stop: 49245, Start Num: 53

Candidate Starts for KristaRAM_82:

(12, 48673), (15, 48685), (19, 48745), (21, 48757), (30, 48811), (Start: 53 @48874 has 79 MA's), (Start: 59 @48898 has 3 MA's), (60, 48907), (82, 49006), (85, 49021), (91, 49081), (111, 49222),

Gene: Kykar_62 Start: 41465, Stop: 41115, Start Num: 63

Candidate Starts for Kykar_62:

(17, 41666), (49, 41522), (Start: 50 @41519 has 3 MA's), (Start: 63 @41465 has 9 MA's), (66, 41444), (85, 41333), (89, 41282), (95, 41234), (97, 41231), (111, 41138),

Gene: Lamina13_65 Start: 42283, Stop: 41903, Start Num: 63

Candidate Starts for Lamina13_65:

(17, 42484), (49, 42340), (Start: 50 @42337 has 3 MA's), (Start: 63 @42283 has 9 MA's), (66, 42262), (70, 42247), (85, 42121), (89, 42070), (95, 42022), (97, 42019), (111, 41926),

Gene: Leperchaun_84 Start: 50368, Stop: 50739, Start Num: 53

Candidate Starts for Leperchaun_84:

(Start: 53 @50368 has 79 MA's), (Start: 59 @50392 has 3 MA's), (60, 50401), (82, 50500), (85, 50515), (111, 50716),

Gene: Lilpickle_40 Start: 33973, Stop: 33602, Start Num: 53

Candidate Starts for Lilpickle_40:

(36, 34012), (45, 33994), (Start: 53 @33973 has 79 MA's), (Start: 59 @33949 has 3 MA's), (60, 33940), (85, 33826), (90, 33772), (101, 33709), (108, 33667), (111, 33625),

Gene: LunaStella_80 Start: 48469, Stop: 48825, Start Num: 53

Candidate Starts for LunaStella_80:

(36, 48427), (45, 48445), (Start: 53 @48469 has 79 MA's), (Start: 58 @48490 has 2 MA's), (60, 48502), (96, 48706), (102, 48724), (104, 48736), (109, 48778), (111, 48802),

Gene: MadMen_89 Start: 50218, Stop: 50580, Start Num: 53

Candidate Starts for MadMen_89:

(Start: 53 @50218 has 79 MA's), (Start: 58 @50239 has 2 MA's), (80, 50347), (88, 50413), (95, 50461), (97, 50464), (111, 50557),

Gene: Magsby_58 Start: 37535, Stop: 37897, Start Num: 64

Candidate Starts for Magsby_58:

(14, 37292), (27, 37409), (57, 37505), (Start: 64 @37535 has 15 MA's), (71, 37568), (88, 37709), (92, 37721), (93, 37736), (97, 37760), (99, 37772), (100, 37778), (106, 37811),

Gene: Mahavrat_81 Start: 47831, Stop: 48169, Start Num: 53

Candidate Starts for Mahavrat_81:

(23, 47726), (27, 47756), (Start: 53 @47831 has 79 MA's), (Start: 58 @47852 has 2 MA's), (61, 47867), (85, 47957), (96, 48050), (102, 48068), (104, 48080), (109, 48122), (111, 48146),

Gene: Marker_79 Start: 47302, Stop: 47679, Start Num: 58

Candidate Starts for Marker_79:

(51, 47275), (Start: 58 @47302 has 2 MA's), (61, 47317), (76, 47386), (79, 47440), (81, 47443), (84, 47458), (85, 47467), (86, 47473), (96, 47560), (102, 47578), (104, 47590), (109, 47632), (111, 47656),

Gene: Marker_89 Start: 50064, Stop: 50420, Start Num: 58

Candidate Starts for Marker_89:

(Start: 58 @50064 has 2 MA's), (61, 50079), (67, 50103), (74, 50130), (78, 50160), (94, 50280), (108, 50355), (111, 50397),

Gene: Mattes_82 Start: 50261, Stop: 50632, Start Num: 53

Candidate Starts for Mattes_82:

(26, 50174), (Start: 53 @50261 has 79 MA's), (Start: 59 @50285 has 3 MA's), (60, 50294), (82, 50393), (85, 50408), (111, 50609),

Gene: Melville_63 Start: 37089, Stop: 37451, Start Num: 64

Candidate Starts for Melville_63:

(27, 36963), (57, 37059), (Start: 64 @37089 has 15 MA's), (71, 37122), (88, 37263), (92, 37275), (93, 37290), (97, 37314), (99, 37326), (100, 37332), (106, 37365),

Gene: MiaZeal_72 Start: 46608, Stop: 46255, Start Num: 53

Candidate Starts for MiaZeal_72:

(Start: 53 @46608 has 79 MA's), (Start: 58 @46587 has 2 MA's), (60, 46575), (85, 46467), (96, 46374), (102, 46356), (104, 46344), (109, 46302), (111, 46278),

Gene: MilleniumForce_84 Start: 50365, Stop: 50733, Start Num: 53

Candidate Starts for MilleniumForce_84:

(Start: 53 @50365 has 79 MA's), (Start: 59 @50389 has 3 MA's), (60, 50398), (69, 50431), (73, 50443), (75, 50446), (85, 50509), (111, 50710),

Gene: Moonbeam_83 Start: 49609, Stop: 49980, Start Num: 53

Candidate Starts for Moonbeam_83:

(Start: 53 @49609 has 79 MA's), (Start: 59 @49633 has 3 MA's), (60, 49642), (82, 49741), (85, 49756), (111, 49957),

Gene: Mozy_86 Start: 47832, Stop: 48131, Start Num: 53

Candidate Starts for Mozy_86:

(36, 47790), (45, 47808), (Start: 53 @47832 has 79 MA's), (Start: 58 @47853 has 2 MA's), (60, 47865), (98, 48033), (111, 48108),

Gene: Mozy_91 Start: 49284, Stop: 49655, Start Num: 53

Candidate Starts for Mozy_91:

(12, 49083), (15, 49095), (19, 49155), (21, 49167), (30, 49221), (Start: 53 @49284 has 79 MA's), (Start: 59 @49308 has 3 MA's), (60, 49317), (85, 49431), (111, 49632),

Gene: Mutaforma13_86 Start: 49538, Stop: 49894, Start Num: 53

Candidate Starts for Mutaforma13_86:

(36, 49496), (45, 49514), (Start: 53 @49538 has 79 MA's), (Start: 58 @49559 has 2 MA's), (96, 49775), (102, 49793), (104, 49805), (109, 49847), (111, 49871),

Gene: Nitzel_78 Start: 46831, Stop: 47190, Start Num: 53

Candidate Starts for Nitzel_78:

(32, 46792), (Start: 44 @46810 has 7 MA's), (Start: 53 @46831 has 79 MA's), (Start: 59 @46855 has 3 MA's), (60, 46864), (80, 46963), (85, 46978), (96, 47071), (102, 47089), (104, 47101), (109, 47143), (111, 47167),

Gene: Oksu_86 Start: 50903, Stop: 51256, Start Num: 53

Candidate Starts for Oksu_86:

(Start: 53 @50903 has 79 MA's), (Start: 58 @50924 has 2 MA's), (60, 50936), (85, 51044), (96, 51137), (102, 51155), (104, 51167), (109, 51209), (111, 51233),

Gene: OlympiaSaint_85 Start: 50471, Stop: 50842, Start Num: 53

Candidate Starts for OlympiaSaint_85:

(Start: 53 @50471 has 79 MA's), (Start: 59 @50495 has 3 MA's), (60, 50504), (82, 50603), (85, 50618), (111, 50819),

Gene: Ovechkin_89 Start: 50892, Stop: 51290, Start Num: 53

Candidate Starts for Ovechkin_89:

(40, 50862), (42, 50868), (Start: 53 @50892 has 79 MA's), (61, 50928), (76, 50997), (81, 51054), (84, 51069), (85, 51078), (86, 51084), (96, 51171), (102, 51189), (104, 51201), (109, 51243), (111, 51267),

Gene: Paphu_61 Start: 41641, Stop: 41261, Start Num: 63

Candidate Starts for Paphu_61:

(17, 41842), (49, 41698), (Start: 50 @41695 has 3 MA's), (Start: 63 @41641 has 9 MA's), (66, 41620), (70, 41605), (85, 41479), (89, 41428), (95, 41380), (97, 41377), (111, 41284),

Gene: Parliament_63 Start: 43433, Stop: 43053, Start Num: 63

Candidate Starts for Parliament_63:

(17, 43634), (49, 43490), (Start: 50 @43487 has 3 MA's), (Start: 63 @43433 has 9 MA's), (66, 43412), (70, 43397), (85, 43271), (89, 43220), (95, 43172), (97, 43169), (111, 43076),

Gene: Parmesanjohn_58 Start: 37538, Stop: 37900, Start Num: 64

Candidate Starts for Parmesanjohn_58:

(14, 37295), (27, 37412), (57, 37508), (Start: 64 @37538 has 15 MA's), (71, 37571), (88, 37712), (92, 37724), (93, 37739), (97, 37763), (99, 37775), (100, 37781), (106, 37814),

Gene: Petra64142_42 Start: 35106, Stop: 34705, Start Num: 59

Candidate Starts for Petra64142_42:

(36, 35169), (45, 35151), (Start: 53 @35130 has 79 MA's), (Start: 59 @35106 has 3 MA's), (60, 35097), (69, 35064), (73, 35052), (75, 35049), (85, 34986), (90, 34932), (101, 34869), (108, 34827), (112, 34776), (119, 34713),

Gene: Phanphagia_84 Start: 50468, Stop: 50839, Start Num: 53

Candidate Starts for Phanphagia_84:

(Start: 53 @50468 has 79 MA's), (Start: 59 @50492 has 3 MA's), (60, 50501), (82, 50600), (85, 50615), (111, 50816),

Gene: Philonius_58 Start: 37703, Stop: 38065, Start Num: 64

Candidate Starts for Philonius_58:

(1, 37097), (2, 37136), (3, 37181), (4, 37202), (5, 37214), (6, 37241), (7, 37271), (8, 37274), (9, 37406), (10, 37427), (11, 37442), (27, 37577), (57, 37673), (Start: 64 @37703 has 15 MA's), (71, 37736), (88, 37877), (92, 37889), (93, 37904), (97, 37928), (99, 37940), (100, 37946), (106, 37979),

Gene: Phloss_56 Start: 36945, Stop: 37307, Start Num: 64

Candidate Starts for Phloss_56:

(14, 36702), (27, 36819), (57, 36915), (Start: 64 @36945 has 15 MA's), (71, 36978), (88, 37119), (92, 37131), (93, 37146), (97, 37170), (99, 37182), (100, 37188), (106, 37221),

Gene: Phoebus_74 Start: 51482, Stop: 51129, Start Num: 53

Candidate Starts for Phoebus_74:

(Start: 53 @51482 has 79 MA's), (Start: 58 @51461 has 2 MA's), (60, 51449), (85, 51341), (96, 51248), (102, 51230), (104, 51218), (109, 51176), (111, 51152),

Gene: Piper2020_82 Start: 50625, Stop: 51008, Start Num: 64

Candidate Starts for Piper2020_82:

(27, 50499), (57, 50595), (Start: 64 @50625 has 15 MA's), (67, 50646), (87, 50814), (101, 50889), (105, 50916), (113, 50985), (114, 50991),

Gene: Pipsqueaks_59 Start: 37516, Stop: 37878, Start Num: 64

Candidate Starts for Pipsqueaks_59:

(14, 37273), (27, 37390), (57, 37486), (Start: 64 @37516 has 15 MA's), (71, 37549), (88, 37690), (92, 37702), (93, 37717), (97, 37741), (99, 37753), (100, 37759), (106, 37792),

Gene: Plumbus_86 Start: 47486, Stop: 48037, Start Num: 53

Candidate Starts for Plumbus_86:

(Start: 53 @47486 has 79 MA's), (Start: 59 @47510 has 3 MA's), (60, 47519), (82, 47618), (85, 47633), (111, 47834), (116, 47855), (120, 47909), (121, 47915), (123, 47939),

Gene: Poenanya_88 Start: 50710, Stop: 51087, Start Num: 44

Candidate Starts for Poenanya_88:

(Start: 44 @50710 has 7 MA's), (Start: 59 @50752 has 3 MA's), (60, 50761), (85, 50875), (96, 50968), (102, 50986), (104, 50998), (109, 51040), (111, 51064),

Gene: Polka14_89 Start: 51500, Stop: 51877, Start Num: 44

Candidate Starts for Polka14_89:

(Start: 44 @51500 has 7 MA's), (Start: 59 @51542 has 3 MA's), (60, 51551), (80, 51650), (85, 51665), (96, 51758), (102, 51776), (104, 51788), (109, 51830), (111, 51854),

Gene: PopTart_77 Start: 47157, Stop: 47441, Start Num: 53

Candidate Starts for PopTart_77:

(Start: 53 @47157 has 79 MA's), (Start: 59 @47181 has 3 MA's), (60, 47190), (82, 47289), (85, 47304), (103, 47418),

Gene: Porcelain_71 Start: 46608, Stop: 46255, Start Num: 53

Candidate Starts for Porcelain_71:

(Start: 53 @46608 has 79 MA's), (Start: 58 @46587 has 2 MA's), (60, 46575), (85, 46467), (96, 46374), (102, 46356), (104, 46344), (109, 46302), (111, 46278),

Gene: Porky_42 Start: 34896, Stop: 34549, Start Num: 59

Candidate Starts for Porky_42:

(Start: 53 @34920 has 79 MA's), (Start: 59 @34896 has 3 MA's), (60, 34887), (85, 34773), (90, 34719), (101, 34656), (108, 34614), (111, 34572),

Gene: Ramsey_86 Start: 51149, Stop: 51520, Start Num: 53

Candidate Starts for Ramsey_86:

(12, 50948), (15, 50960), (19, 51020), (21, 51032), (30, 51086), (Start: 53 @51149 has 79 MA's), (Start: 59 @51173 has 3 MA's), (60, 51182), (82, 51281), (85, 51296), (111, 51497),

Gene: RedBird_83 Start: 50910, Stop: 51281, Start Num: 53

Candidate Starts for RedBird_83:

(12, 50709), (15, 50721), (19, 50781), (21, 50793), (30, 50847), (Start: 53 @50910 has 79 MA's), (Start: 59 @50934 has 3 MA's), (60, 50943), (82, 51042), (85, 51057), (111, 51258),

Gene: Rimmer_40 Start: 34315, Stop: 33944, Start Num: 53

Candidate Starts for Rimmer_40:

(36, 34354), (45, 34336), (Start: 53 @34315 has 79 MA's), (Start: 59 @34291 has 3 MA's), (60, 34282), (85, 34168), (90, 34114), (101, 34051), (108, 34009), (111, 33967),

Gene: Royals2015_90 Start: 49759, Stop: 50043, Start Num: 53

Candidate Starts for Royals2015_90:

(Start: 53 @49759 has 79 MA's), (Start: 59 @49783 has 3 MA's), (60, 49792), (82, 49891), (85, 49906), (103, 50020),

Gene: SG4_84 Start: 50324, Stop: 50698, Start Num: 53

Candidate Starts for SG4_84:

(Start: 53 @50324 has 79 MA's), (Start: 58 @50345 has 2 MA's), (61, 50360), (85, 50486), (96, 50579), (102, 50597), (104, 50609), (109, 50651), (111, 50675),

Gene: SG4_86 Start: 50874, Stop: 51251, Start Num: 53

Candidate Starts for SG4_86:

(Start: 53 @50874 has 79 MA's), (Start: 58 @50895 has 2 MA's), (61, 50910), (67, 50934), (85, 51027), (91, 51087), (111, 51228),

Gene: Sandalphon_83 Start: 50748, Stop: 51119, Start Num: 53

Candidate Starts for Sandalphon_83:

(Start: 53 @50748 has 79 MA's), (Start: 59 @50772 has 3 MA's), (60, 50781), (85, 50895), (111, 51096),

Gene: Sassafras_83 Start: 49224, Stop: 49595, Start Num: 53

Candidate Starts for Sassafras_83:

(12, 49023), (15, 49035), (19, 49095), (21, 49107), (30, 49161), (Start: 53 @49224 has 79 MA's), (Start: 59 @49248 has 3 MA's), (60, 49257), (82, 49356), (85, 49371), (111, 49572),

Gene: SassyB_77 Start: 47157, Stop: 47441, Start Num: 53

Candidate Starts for SassyB_77:

(Start: 53 @47157 has 79 MA's), (Start: 59 @47181 has 3 MA's), (60, 47190), (82, 47289), (85, 47304), (103, 47418),

Gene: Schnauzer_59 Start: 37538, Stop: 37900, Start Num: 64

Candidate Starts for Schnauzer_59:

(14, 37295), (27, 37412), (57, 37508), (Start: 64 @37538 has 15 MA's), (71, 37571), (88, 37712), (92, 37724), (93, 37739), (97, 37763), (99, 37775), (100, 37781), (106, 37814),

Gene: Scottish_83 Start: 49191, Stop: 49568, Start Num: 44

Candidate Starts for Scottish_83:

(Start: 44 @49191 has 7 MA's), (Start: 59 @49233 has 3 MA's), (60, 49242), (80, 49341), (85, 49356), (96, 49449), (102, 49467), (104, 49479), (109, 49521), (111, 49545),

Gene: Seagreen_84 Start: 50260, Stop: 50628, Start Num: 53

Candidate Starts for Seagreen_84:

(Start: 53 @50260 has 79 MA's), (Start: 59 @50284 has 3 MA's), (60, 50293), (69, 50326), (73, 50338), (75, 50341), (82, 50389), (85, 50404), (91, 50464), (111, 50605),

Gene: Shauna1_83 Start: 50441, Stop: 50812, Start Num: 53

Candidate Starts for Shauna1_83:

(24, 50348), (28, 50372), (Start: 53 @50441 has 79 MA's), (Start: 59 @50465 has 3 MA's), (60, 50474), (82, 50573), (85, 50588), (111, 50789),

Gene: ShiLan_85 Start: 51984, Stop: 52355, Start Num: 53

Candidate Starts for ShiLan_85:

(Start: 53 @51984 has 79 MA's), (Start: 59 @52008 has 3 MA's), (60, 52017), (82, 52116), (85, 52131), (111, 52332),

Gene: ShroomBoi_82 Start: 49425, Stop: 49781, Start Num: 53

Candidate Starts for ShroomBoi_82:

(36, 49383), (45, 49401), (Start: 53 @49425 has 79 MA's), (Start: 58 @49446 has 2 MA's), (60, 49458), (96, 49662), (102, 49680), (104, 49692), (109, 49734), (111, 49758),

Gene: Silvafighter_59 Start: 37081, Stop: 37443, Start Num: 64

Candidate Starts for Silvafighter_59:

(27, 36955), (57, 37051), (Start: 64 @37081 has 15 MA's), (71, 37114), (88, 37255), (92, 37267), (93, 37282), (97, 37306), (99, 37318), (100, 37324), (106, 37357),

Gene: SimranZ1_83 Start: 48924, Stop: 49286, Start Num: 53

Candidate Starts for SimranZ1_83:

(Start: 53 @48924 has 79 MA's), (Start: 58 @48945 has 2 MA's), (88, 49119), (95, 49167), (97, 49170), (111, 49263),

Gene: Smurph_58 Start: 37538, Stop: 37900, Start Num: 64

Candidate Starts for Smurph_58:

(14, 37295), (27, 37412), (57, 37508), (Start: 64 @37538 has 15 MA's), (71, 37571), (88, 37712), (92, 37724), (93, 37739), (97, 37763), (99, 37775), (100, 37781), (106, 37814),

Gene: Spoonbill_81 Start: 47897, Stop: 48268, Start Num: 53

Candidate Starts for Spoonbill_81:

(Start: 53 @47897 has 79 MA's), (Start: 59 @47921 has 3 MA's), (60, 47930), (82, 48029), (85, 48044), (111, 48245),

Gene: Squint_72 Start: 46727, Stop: 46374, Start Num: 53

Candidate Starts for Squint_72:

(Start: 53 @46727 has 79 MA's), (Start: 58 @46706 has 2 MA's), (60, 46694), (85, 46586), (96, 46493), (102, 46475), (104, 46463), (109, 46421), (111, 46397),

Gene: Stap_78 Start: 46857, Stop: 47246, Start Num: 48

Candidate Starts for Stap_78:

(Start: 48 @46857 has 2 MA's), (Start: 59 @46899 has 3 MA's), (60, 46908), (82, 47007), (85, 47022), (90, 47076), (101, 47139), (108, 47181), (111, 47223),

Gene: SuperGrey_84 Start: 51807, Stop: 52193, Start Num: 53

Candidate Starts for SuperGrey_84:

(25, 51714), (29, 51738), (Start: 53 @51807 has 79 MA's), (Start: 58 @51828 has 2 MA's), (61, 51843), (85, 51969), (91, 52029), (111, 52170),

Gene: TChen_82 Start: 50420, Stop: 50776, Start Num: 53

Candidate Starts for TChen_82:

(36, 50378), (45, 50396), (Start: 53 @50420 has 79 MA's), (Start: 58 @50441 has 2 MA's), (60, 50453), (96, 50657), (102, 50675), (104, 50687), (109, 50729), (111, 50753),

Gene: Tasp14_65 Start: 42922, Stop: 42542, Start Num: 63

Candidate Starts for Tasp14_65:

(17, 43123), (49, 42979), (Start: 50 @42976 has 3 MA's), (Start: 63 @42922 has 9 MA's), (66, 42901), (70, 42886), (85, 42760), (89, 42709), (95, 42661), (97, 42658), (111, 42565),

Gene: Teaspoon_45 Start: 35627, Stop: 35256, Start Num: 53

Candidate Starts for Teaspoon_45:

(Start: 53 @35627 has 79 MA's), (Start: 59 @35600 has 3 MA's), (60, 35591), (69, 35558), (73, 35546), (75, 35543), (85, 35480), (90, 35426), (101, 35363), (108, 35321), (111, 35279),

Gene: Teodoridan_59 Start: 40032, Stop: 39670, Start Num: 53

Candidate Starts for Teodoridan_59:

(Start: 53 @40032 has 79 MA's), (60, 39999), (61, 39996), (67, 39969), (69, 39963), (85, 39843), (91, 39783), (111, 39693),

Gene: Tootsieroll_80 Start: 50185, Stop: 50562, Start Num: 44

Candidate Starts for Tootsieroll_80:

(Start: 44 @50185 has 7 MA's), (Start: 59 @50227 has 3 MA's), (60, 50236), (80, 50335), (85, 50350), (96, 50443), (102, 50461), (104, 50473), (109, 50515), (111, 50539),

Gene: Whatsapiecost_76 Start: 44789, Stop: 45166, Start Num: 53

Candidate Starts for Whatsapiecost_76:

(Start: 53 @44789 has 79 MA's), (Start: 58 @44810 has 2 MA's), (61, 44825), (67, 44849), (85, 44942), (91, 45002), (111, 45143),

Gene: Wheeler_63 Start: 41547, Stop: 41161, Start Num: 63

Candidate Starts for Wheeler_63:

(17, 41748), (49, 41604), (Start: 50 @41601 has 3 MA's), (Start: 63 @41547 has 9 MA's), (65, 41535), (111, 41184),

Gene: WillSterrel_82 Start: 50063, Stop: 50434, Start Num: 53

Candidate Starts for WillSterrel_82:

(Start: 53 @50063 has 79 MA's), (Start: 59 @50087 has 3 MA's), (60, 50096), (82, 50195), (85, 50210), (111, 50411),

Gene: Xerxes_58 Start: 37535, Stop: 37897, Start Num: 64

Candidate Starts for Xerxes_58:

(14, 37292), (27, 37409), (57, 37505), (Start: 64 @37535 has 15 MA's), (71, 37568), (88, 37709), (92, 37721), (93, 37736), (97, 37760), (99, 37772), (100, 37778), (106, 37811),

Gene: Yoshi_92 Start: 49392, Stop: 49736, Start Num: 50

Candidate Starts for Yoshi_92:

(Start: 50 @49392 has 3 MA's), (Start: 58 @49419 has 2 MA's), (61, 49434), (85, 49524), (107, 49665), (110, 49692), (111, 49713),

Gene: Youngblood_41 Start: 34902, Stop: 34555, Start Num: 59

Candidate Starts for Youngblood_41:

(36, 34965), (45, 34947), (Start: 53 @34926 has 79 MA's), (Start: 59 @34902 has 3 MA's), (60, 34893), (85, 34779), (90, 34725), (101, 34662), (108, 34620), (111, 34578),

Gene: Zeuska_61 Start: 42220, Stop: 41843, Start Num: 53

Candidate Starts for Zeuska_61:

(Start: 53 @42220 has 79 MA's), (Start: 58 @42199 has 2 MA's), (61, 42184), (67, 42160), (85, 42067), (111, 41866),

Gene: Zizzle_86 Start: 51134, Stop: 51478, Start Num: 50

Candidate Starts for Zizzle_86:

(Start: 50 @51134 has 3 MA's), (Start: 58 @51161 has 2 MA's), (61, 51176), (85, 51266), (96, 51359), (102, 51377), (104, 51389), (109, 51431), (111, 51455),