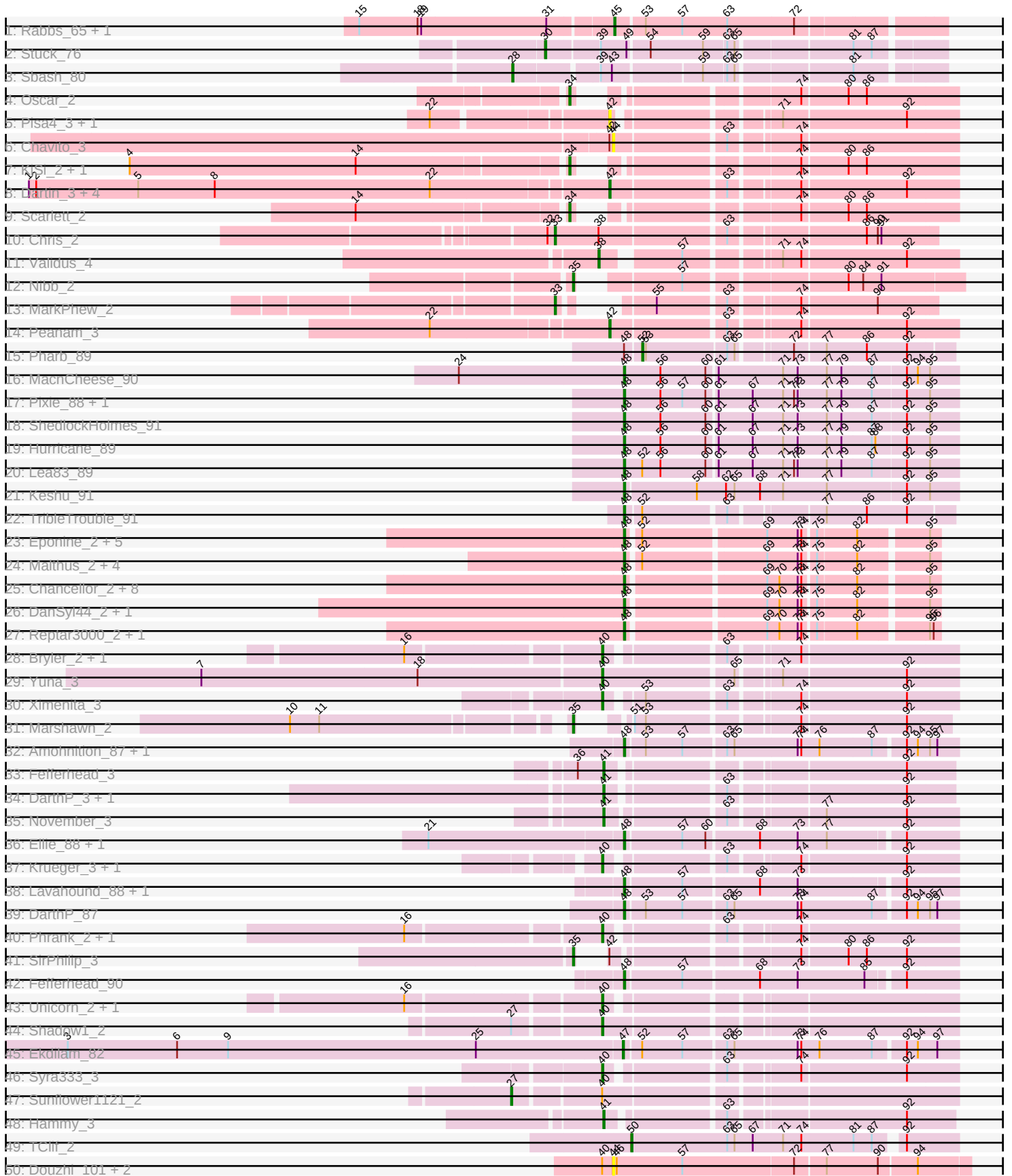
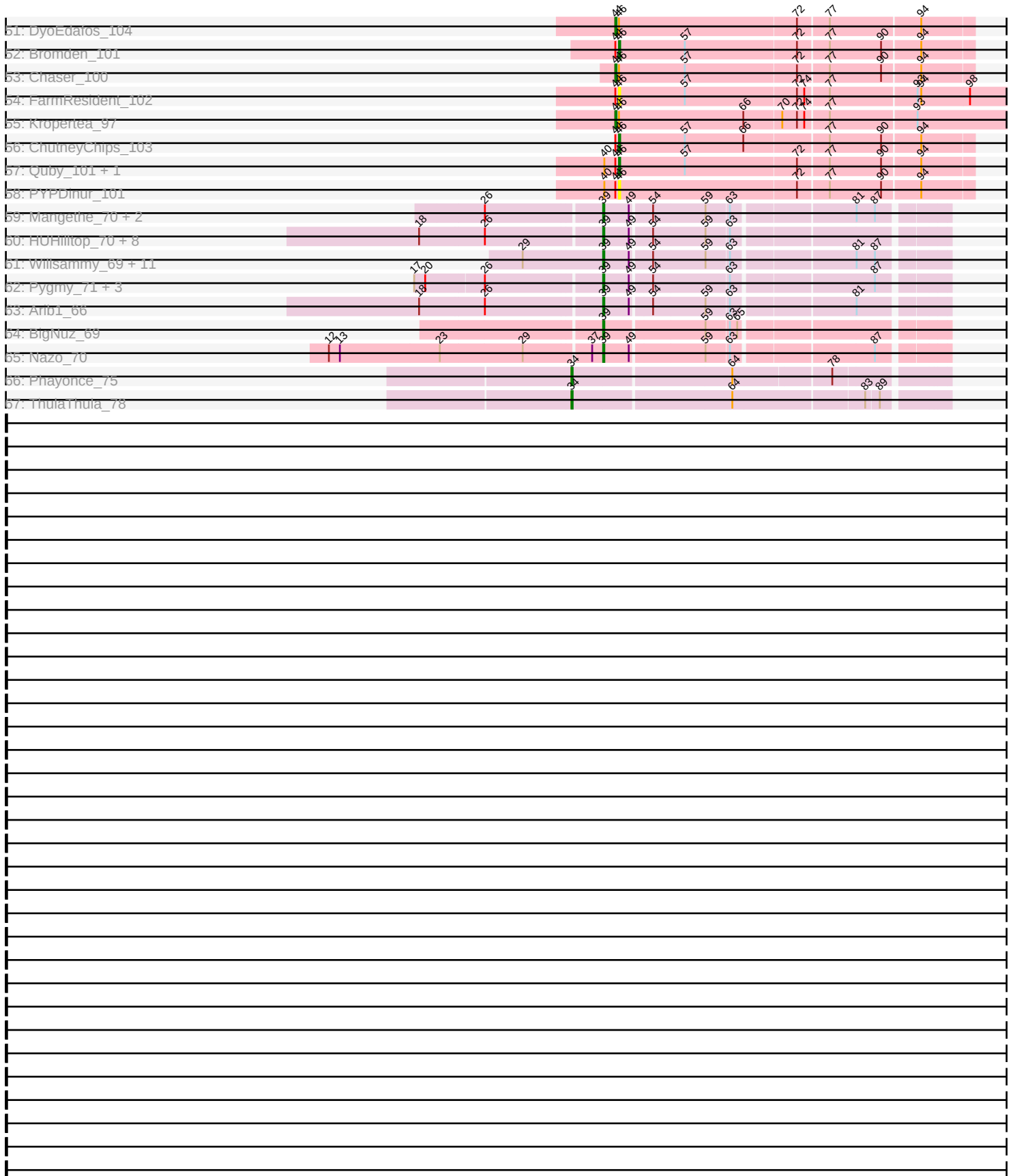


Pham 330604



Pham 330604



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 330604 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330604 has 129 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Rabbs_65, Sneeze_64
- Track 2 : Stuck_76
- Track 3 : Sbash_80
- Track 4 : Oscar_2
- Track 5 : Pisa4_3, Pisa1_3
- Track 6 : Chavito_3
- Track 7 : KiSi_2, LeMond_2
- Track 8 : Dartin_3, Niklas_3, McMater_3, Shaobing_3, Richo_3
- Track 9 : Scarlett_2
- Track 10 : Chris_2
- Track 11 : Validus_4
- Track 12 : Nibb_2
- Track 13 : MarkPhew_2
- Track 14 : Peanam_3
- Track 15 : Pharb_89
- Track 16 : MacnCheese_90
- Track 17 : Pixie_88, TBond007_85
- Track 18 : ShedlockHolmes_91
- Track 19 : Hurricane_89
- Track 20 : Lea83_89
- Track 21 : Keshu_91
- Track 22 : TribbleTrouble_91
- Track 23 : Eponine_2, Y10_02, Wintermute_2, Fionnbharth_2, Y2_02, JF1_2
- Track 24 : Malthus_2, Kraw_2, Juliette_2, Ruthiejr_2, YasnayaPolyana_2
- Track 25 : Chancellor_2, Cheetobro_2, Patt_2, Qhanda_2, Taquito_2, OmniCritical_2, Mitti_2, Slarp_2, SamScheppers_2
- Track 26 : DanSyl44_2, Lebo14_2
- Track 27 : Reptar3000_2, Bobquesha_2
- Track 28 : Bryler_2, Cain_2
- Track 29 : Yuna_3
- Track 30 : Ximenita_3
- Track 31 : Marshawn_2
- Track 32 : Amohnition_87, Hammy_87
- Track 33 : Fefferhead_3
- Track 34 : DarthP_3, Amohnition_3
- Track 35 : November_3
- Track 36 : Ellie_88, Applecrisp_87

- Track 37 : Krueger_3, Tigress9_3
- Track 38 : Lavahound_88, Amgine_89
- Track 39 : DarthP_87
- Track 40 : Phrank_2, Tierra_2
- Track 41 : SirPhilip_3
- Track 42 : Fefferhead_90
- Track 43 : Unicorn_2, PhelpsODU_2
- Track 44 : Shadow1_2
- Track 45 : Ekdilam_82
- Track 46 : Syra333_3
- Track 47 : Sunflower1121_2
- Track 48 : Hammy_3
- Track 49 : TClif_2
- Track 50 : Douzhi_101, BrainDrainer_102, Sheng711_102
- Track 51 : DyoEdafos_104
- Track 52 : Bromden_101
- Track 53 : Chaser_100
- Track 54 : FarmResident_102
- Track 55 : Kropertea_97
- Track 56 : ChutneyChips_103
- Track 57 : Quby_101, Douge_101
- Track 58 : PYPDinur_101
- Track 59 : Mangethe_70, Phegasus_70, Majeke_70
- Track 60 : HUHilltop_70, Malithi_67, Bogie_70, Sonah_68, Dynamo_67, Necropolis_65, Phineas_68, Shipwreck_70, Camster_68
- Track 61 : Willsammy_69, Megiddo_67, Chubbello_66, Donovan_67, Gavriela_67, CactusJack_68, Kari_67, Fishburne_66, StressBall_67, Glaske_67, KilKor_68, Phalm_68
- Track 62 : Pygmy_71, Bartholomew_63, Techage_68, Venti_65
- Track 63 : Arib1_66
- Track 64 : BigNuz_69
- Track 65 : Nazo_70
- Track 66 : Phayonce_75
- Track 67 : ThulaThula_78

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

The start number called the most often in the published annotations is 48, it was called in 37 of the 116 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amgine_89, Amohnition_87, Applecrisp_87, Bobquesha_2, Chancellor_2, Cheetobro_2, DanSyl44_2, DarthP_87, Ellie_88, Eponine_2, Fefferhead_90, Fionnbharth_2, Hammy_87, Hurricane_89, JF1_2, Juliette_2, Keshu_91, Kraw_2, Lavahound_88, Lea83_89, Lebo14_2, MacnCheese_90, Malthus_2, Mitti_2, OmniCritical_2, Patt_2, Pixie_88, Qhanda_2, Reptar3000_2, Ruthiejr_2, SamScheppers_2, ShedlockHolmes_91, Slarp_2, TBond007_85, Taquito_2, TribbleTrouble_91, Wintermute_2, Y10_02, Y2_02, YasnayaPolyana_2,

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

- Pharb_89,

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

- Amohnition_3, Arib1_66, Bartholomew_63, BigNuz_69, Bogie_70, BrainDrainer_102, Bromden_101, Bryler_2, CactusJack_68, Cain_2, Camster_68, Chaser_100, Chavito_3, Chris_2, Chubbello_66, ChutneyChips_103, DarthP_3, Dartin_3, Donovan_67, Douge_101, Douzhi_101, Dynamo_67, DyoEdafos_104, Ekdilam_82, FarmResident_102, Fefferhead_3, Fishburne_66, Gavriela_67, Glaske_67, HUHilltop_70, Hammy_3, Kari_67, KiSi_2, KilKor_68, Kropertea_97, Krueger_3, LeMond_2, Majeke_70, Malithi_67, Mangethe_70, MarkPhew_2, Marshawn_2, McMater_3, Megiddo_67, Nazo_70, Necropolis_65, Nibb_2, Niklas_3, November_3, Oscar_2, PYPDinur_101, Peanam_3, Phalm_68, Phayonce_75, Phegasus_70, PhelpsODU_2, Phineas_68, Phrank_2, Pisa1_3, Pisa4_3, Pygmy_71, Quby_101, Rabbs_65, Richo_3, Sbash_80, Scarlett_2, Shadow1_2, Shaobing_3, Sheng711_102, Shipwreck_70, SirPhilip_3, Sneeze_64, Sonah_68, StressBall_67, Stuck_76, Sunflower1121_2, Syra333_3, TClif_2, Techage_68, ThulaThula_78, Tierra_2, Tigress9_3, Unicorn_2, Validus_4, Venti_65, Willsammy_69, Ximenita_3, Yuna_3,

Summary by start number:

Start 27:

- Found in 2 of 129 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Sunflower1121_2 (K6),

Start 28:

- Found in 1 of 129 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sbash_80 (I2),

Start 30:

- Found in 1 of 129 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Stuck_76 (I2),

Start 33:

- Found in 2 of 129 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chris_2 (K1), MarkPhew_2 (K1),

Start 34:

- Found in 6 of 129 (4.7%) of genes in pham
- Manual Annotations of this start: 6 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: KiSi_2 (K1), LeMond_2 (K1), Oscar_2 (K1), Phayonce_75 (P5), Scarlett_2 (K1), ThulaThula_78 (P5),

Start 35:

- Found in 3 of 129 (2.3%) of genes in pham
- Manual Annotations of this start: 3 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Marshawn_2 (K6), Nibb_2 (K1), SirPhilip_3 (K6),

Start 38:

- Found in 2 of 129 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Validus_4 (K1),

Start 39:

- Found in 33 of 129 (25.6%) of genes in pham
- Manual Annotations of this start: 30 of 116
- Called 93.9% of time when present
- Phage (with cluster) where this start called: Arib1_66 (P1), Bartholomew_63 (P1), BigNuz_69 (P4), Bogie_70 (P1), CactusJack_68 (P1), Camster_68 (P1), Chubbello_66 (P1), Donovan_67 (P1), Dynamo_67 (P1), Fishburne_66 (P1), Gavriela_67 (P1), Glaske_67 (P1), HUHilltop_70 (P1), Kari_67 (P1), KilKor_68 (P1), Majeke_70 (P1), Malithi_67 (P1), Mangethe_70 (P1), Megiddo_67 (P1), Nazo_70 (P4), Necropolis_65 (P1), Phalm_68 (P1), Phegasus_70 (P1), Phineas_68 (P1), Pygmy_71 (P1), Shipwreck_70 (P1), Sonah_68 (P1), StressBall_67 (P1), Techage_68 (P1), Venti_65 (P1), Willsammy_69 (P1),

Start 40:

- Found in 19 of 129 (14.7%) of genes in pham
- Manual Annotations of this start: 12 of 116
- Called 63.2% of time when present
- Phage (with cluster) where this start called: Bryler_2 (K6), Cain_2 (K6), Krueger_3 (K6), PhelpsODU_2 (K6), Phrank_2 (K6), Shadow1_2 (K6), Syra333_3 (K6), Tierra_2 (K6), Tigress9_3 (K6), Unicorn_2 (K6), Ximenita_3 (K6), Yuna_3 (K6),

Start 41:

- Found in 5 of 129 (3.9%) of genes in pham
- Manual Annotations of this start: 5 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amohnition_3 (K6), DARTH_P_3 (K6), Fefferhead_3 (K6), Hammy_3 (K6), November_3 (K6),

Start 42:

- Found in 10 of 129 (7.8%) of genes in pham
- Manual Annotations of this start: 6 of 116
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Dartin_3 (K1), McMater_3 (K1), Niklas_3 (K1), Peanam_3 (K1), Pisa1_3 (K1), Pisa4_3 (K1), Richo_3 (K1), Shaobing_3 (K1),

Start 44:

- Found in 13 of 129 (10.1%) of genes in pham
- Manual Annotations of this start: 3 of 116
- Called 53.8% of time when present
- Phage (with cluster) where this start called: BrainDrainer_102 (L4), Chaser_100 (L4), Chavito_3 (K1), Douzhi_101 (L4), DyoEdafos_104 (L4), Kropertea_97 (L4),

Sheng711_102 (L4),

Start 45:

- Found in 2 of 129 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rabbs_65 (G1), Sneeze_64 (G1),

Start 46:

- Found in 12 of 129 (9.3%) of genes in pham
- Manual Annotations of this start: 3 of 116
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bromden_101 (L4), ChutneyChips_103 (L4), Douge_101 (L4), FarmResident_102 (L4), PYPDinur_101 (L4), Quby_101 (L4),

Start 47:

- Found in 1 of 129 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ekdilam_82 (K6),

Start 48:

- Found in 41 of 129 (31.8%) of genes in pham
- Manual Annotations of this start: 37 of 116
- Called 97.6% of time when present
- Phage (with cluster) where this start called: Amgine_89 (K6), Amohnition_87 (K6), Applecrisp_87 (K6), Bobquesha_2 (K4), Chancellor_2 (K4), Cheetobro_2 (K4), DanSyl44_2 (K4), DearthP_87 (K6), Ellie_88 (K6), Eponine_2 (K4), Fefferhead_90 (K6), Fionnbharth_2 (K4), Hammy_87 (K6), Hurricane_89 (K3), JF1_2 (K4), Juliette_2 (K4), Keshu_91 (K3), Kraw_2 (K4), Lavahound_88 (K6), Lea83_89 (K3), Lebo14_2 (K4), MacnCheese_90 (K3), Malthus_2 (K4), Mitti_2 (K4), OmniCritical_2 (K4), Patt_2 (K4), Pixie_88 (K3), Qhanda_2 (K4), Reptar3000_2 (K4), Ruthiejr_2 (K4), SamScheppers_2 (K4), ShedlockHolmes_91 (K3), Slarp_2 (K4), TBond007_85 (K3), Taquito_2 (K4), TribbleTrouble_91 (K3), Wintermute_2 (K4), Y10_02 (K4), Y2_02 (K4), YasnayaPolyana_2 (K4),

Start 50:

- Found in 1 of 129 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TClif_2 (K6),

Start 52:

- Found in 15 of 129 (11.6%) of genes in pham
- Manual Annotations of this start: 1 of 116
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Pharb_89 (K3),

Summary by clusters:

There are 10 clusters represented in this pham: P1, G1, P4, P5, I2, L4, K3, K1, K6, K4,

Info for manual annotations of cluster G1:

- Start number 45 was manually annotated 2 times for cluster G1.

Info for manual annotations of cluster I2:

- Start number 28 was manually annotated 1 time for cluster I2.
- Start number 30 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster K1:

- Start number 33 was manually annotated 2 times for cluster K1.
- Start number 34 was manually annotated 4 times for cluster K1.
- Start number 35 was manually annotated 1 time for cluster K1.
- Start number 38 was manually annotated 1 time for cluster K1.
- Start number 42 was manually annotated 6 times for cluster K1.

Info for manual annotations of cluster K3:

- Start number 48 was manually annotated 8 times for cluster K3.
- Start number 52 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K4:

- Start number 48 was manually annotated 21 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 27 was manually annotated 1 time for cluster K6.
- Start number 35 was manually annotated 2 times for cluster K6.
- Start number 40 was manually annotated 12 times for cluster K6.
- Start number 41 was manually annotated 5 times for cluster K6.
- Start number 47 was manually annotated 1 time for cluster K6.
- Start number 48 was manually annotated 8 times for cluster K6.
- Start number 50 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster L4:

- Start number 44 was manually annotated 3 times for cluster L4.
- Start number 46 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster P1:

- Start number 39 was manually annotated 28 times for cluster P1.

Info for manual annotations of cluster P4:

- Start number 39 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 34 was manually annotated 2 times for cluster P5.

Gene Information:

Gene: Amgine_89 Start: 58064, Stop: 58318, Start Num: 48

Candidate Starts for Amgine_89:

(Start: 48 @58064 has 37 MA's), (57, 58109), (68, 58166), (73, 58196), (92, 58277),

Gene: Amohnition_87 Start: 57065, Stop: 57322, Start Num: 48

Candidate Starts for Amohnition_87:

(Start: 48 @57065 has 37 MA's), (53, 57080), (57, 57110), (63, 57140), (65, 57146), (73, 57197), (74, 57200), (76, 57215), (87, 57257), (92, 57281), (94, 57290), (95, 57299), (97, 57305),

Gene: Amohnition_3 Start: 416, Stop: 673, Start Num: 41

Candidate Starts for Amohnition_3:

(Start: 41 @416 has 5 MA's), (63, 500), (92, 635),

Gene: Applecrisp_87 Start: 57244, Stop: 57498, Start Num: 48

Candidate Starts for Applecrisp_87:

(21, 57088), (Start: 48 @57244 has 37 MA's), (57, 57289), (60, 57307), (68, 57346), (73, 57376), (77, 57400), (92, 57457),

Gene: Arib1_66 Start: 42262, Stop: 42516, Start Num: 39

Candidate Starts for Arib1_66:

(18, 42121), (26, 42172), (Start: 39 @42262 has 30 MA's), (49, 42283), (54, 42298), (59, 42340), (63, 42358), (81, 42451),

Gene: Bartholomew_63 Start: 41542, Stop: 41796, Start Num: 39

Candidate Starts for Bartholomew_63:

(17, 41398), (20, 41407), (26, 41452), (Start: 39 @41542 has 30 MA's), (49, 41563), (54, 41578), (63, 41638), (87, 41746),

Gene: BigNuz_69 Start: 44457, Stop: 44711, Start Num: 39

Candidate Starts for BigNuz_69:

(Start: 39 @44457 has 30 MA's), (59, 44535), (63, 44553), (65, 44559),

Gene: Bobquesha_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Bobquesha_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473), (96, 476),

Gene: Bogie_70 Start: 44612, Stop: 44866, Start Num: 39

Candidate Starts for Bogie_70:

(18, 44471), (26, 44522), (Start: 39 @44612 has 30 MA's), (49, 44633), (54, 44648), (59, 44690), (63, 44708),

Gene: BrainDrainer_102 Start: 61701, Stop: 61985, Start Num: 44

Candidate Starts for BrainDrainer_102:

(Start: 40 @61692 has 12 MA's), (Start: 44 @61701 has 3 MA's), (Start: 46 @61704 has 3 MA's), (57, 61758), (72, 61848), (77, 61872), (90, 61914), (94, 61944),

Gene: Bromden_101 Start: 62440, Stop: 62721, Start Num: 46

Candidate Starts for Bromden_101:

(Start: 44 @62437 has 3 MA's), (Start: 46 @62440 has 3 MA's), (57, 62494), (72, 62584), (77, 62608), (90, 62650), (94, 62680),

Gene: Bryler_2 Start: 388, Stop: 648, Start Num: 40

Candidate Starts for Bryler_2:

(16, 241), (Start: 40 @388 has 12 MA's), (63, 472), (74, 523),

Gene: CactusJack_68 Start: 44240, Stop: 44494, Start Num: 39

Candidate Starts for CactusJack_68:

(29, 44177), (Start: 39 @44240 has 30 MA's), (49, 44261), (54, 44276), (59, 44318), (63, 44336), (81, 44429), (87, 44444),

Gene: Cain_2 Start: 388, Stop: 648, Start Num: 40

Candidate Starts for Cain_2:

(16, 241), (Start: 40 @388 has 12 MA's), (63, 472), (74, 523),

Gene: Camster_68 Start: 43073, Stop: 43327, Start Num: 39

Candidate Starts for Camster_68:

(18, 42932), (26, 42983), (Start: 39 @43073 has 30 MA's), (49, 43094), (54, 43109), (59, 43151), (63, 43169),

Gene: Chancellor_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Chancellor_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Chaser_100 Start: 61053, Stop: 61337, Start Num: 44

Candidate Starts for Chaser_100:

(Start: 44 @61053 has 3 MA's), (Start: 46 @61056 has 3 MA's), (57, 61110), (72, 61200), (77, 61224), (90, 61266), (94, 61296),

Gene: Chavito_3 Start: 474, Stop: 734, Start Num: 44

Candidate Starts for Chavito_3:

(Start: 42 @471 has 6 MA's), (Start: 44 @474 has 3 MA's), (63, 558), (74, 609),

Gene: Cheetobro_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Cheetobro_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Chris_2 Start: 375, Stop: 665, Start Num: 33

Candidate Starts for Chris_2:

(32, 369), (Start: 33 @375 has 2 MA's), (Start: 38 @411 has 1 MA's), (63, 507), (86, 609), (90, 618), (91, 621),

Gene: Chubbello_66 Start: 42262, Stop: 42516, Start Num: 39

Candidate Starts for Chubbello_66:

(29, 42199), (Start: 39 @42262 has 30 MA's), (49, 42283), (54, 42298), (59, 42340), (63, 42358), (81, 42451), (87, 42466),

Gene: ChutneyChips_103 Start: 61752, Stop: 62033, Start Num: 46

Candidate Starts for ChutneyChips_103:

(Start: 44 @61749 has 3 MA's), (Start: 46 @61752 has 3 MA's), (57, 61806), (66, 61854), (77, 61920), (90, 61962), (94, 61992),

Gene: DanSyl44_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for DanSyl44_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: DarthP_3 Start: 416, Stop: 673, Start Num: 41

Candidate Starts for DarthP_3:

(Start: 41 @416 has 5 MA's), (63, 500), (92, 635),

Gene: DarthP_87 Start: 56918, Stop: 57175, Start Num: 48

Candidate Starts for DarthP_87:

(Start: 48 @56918 has 37 MA's), (53, 56933), (57, 56963), (63, 56993), (65, 56999), (73, 57050), (74, 57053), (87, 57110), (92, 57134), (94, 57143), (95, 57152), (97, 57158),

Gene: Dartin_3 Start: 469, Stop: 732, Start Num: 42

Candidate Starts for Dartin_3:

(1, 1), (2, 7), (5, 91), (8, 154), (22, 331), (Start: 42 @469 has 6 MA's), (63, 556), (74, 607), (92, 691),

Gene: Donovan_67 Start: 43202, Stop: 43456, Start Num: 39

Candidate Starts for Donovan_67:

(29, 43139), (Start: 39 @43202 has 30 MA's), (49, 43223), (54, 43238), (59, 43280), (63, 43298), (81, 43391), (87, 43406),

Gene: Douge_101 Start: 61124, Stop: 61405, Start Num: 46

Candidate Starts for Douge_101:

(Start: 40 @61112 has 12 MA's), (Start: 44 @61121 has 3 MA's), (Start: 46 @61124 has 3 MA's), (57, 61178), (72, 61268), (77, 61292), (90, 61334), (94, 61364),

Gene: Douzhi_101 Start: 61390, Stop: 61674, Start Num: 44

Candidate Starts for Douzhi_101:

(Start: 40 @61381 has 12 MA's), (Start: 44 @61390 has 3 MA's), (Start: 46 @61393 has 3 MA's), (57, 61447), (72, 61537), (77, 61561), (90, 61603), (94, 61633),

Gene: Dynamo_67 Start: 42646, Stop: 42900, Start Num: 39

Candidate Starts for Dynamo_67:

(18, 42505), (26, 42556), (Start: 39 @42646 has 30 MA's), (49, 42667), (54, 42682), (59, 42724), (63, 42742),

Gene: DyoEdafos_104 Start: 61681, Stop: 61965, Start Num: 44

Candidate Starts for DyoEdafos_104:

(Start: 44 @61681 has 3 MA's), (Start: 46 @61684 has 3 MA's), (72, 61828), (77, 61852), (94, 61924),

Gene: Ekdilam_82 Start: 56617, Stop: 56874, Start Num: 47

Candidate Starts for Ekdilam_82:

(3, 56164), (6, 56254), (9, 56296), (25, 56500), (Start: 47 @56617 has 1 MA's), (Start: 52 @56629 has 1 MA's), (57, 56662), (63, 56692), (65, 56698), (73, 56749), (74, 56752), (76, 56767), (87, 56809), (92, 56833), (94, 56842), (97, 56857),

Gene: Ellie_88 Start: 57234, Stop: 57488, Start Num: 48

Candidate Starts for Ellie_88:

(21, 57078), (Start: 48 @57234 has 37 MA's), (57, 57279), (60, 57297), (68, 57336), (73, 57366), (77, 57390), (92, 57447),

Gene: Eponine_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Eponine_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: FarmResident_102 Start: 61280, Stop: 61591, Start Num: 46

Candidate Starts for FarmResident_102:

(Start: 44 @61277 has 3 MA's), (Start: 46 @61280 has 3 MA's), (57, 61334), (72, 61424), (74, 61430), (77, 61448), (93, 61517), (94, 61520), (98, 61559),

Gene: Fefferhead_3 Start: 410, Stop: 667, Start Num: 41

Candidate Starts for Fefferhead_3:

(36, 389), (Start: 41 @410 has 5 MA's), (92, 629),

Gene: Fefferhead_90 Start: 57025, Stop: 57279, Start Num: 48

Candidate Starts for Fefferhead_90:

(Start: 48 @57025 has 37 MA's), (57, 57070), (68, 57127), (73, 57157), (85, 57211), (92, 57238),

Gene: Fionnbharth_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Fionnbharth_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Fishburne_66 Start: 43028, Stop: 43282, Start Num: 39

Candidate Starts for Fishburne_66:

(29, 42965), (Start: 39 @43028 has 30 MA's), (49, 43049), (54, 43064), (59, 43106), (63, 43124), (81, 43217), (87, 43232),

Gene: Gavriela_67 Start: 43933, Stop: 44187, Start Num: 39

Candidate Starts for Gavriela_67:

(29, 43870), (Start: 39 @43933 has 30 MA's), (49, 43954), (54, 43969), (59, 44011), (63, 44029), (81, 44122), (87, 44137),

Gene: Glaske_67 Start: 44240, Stop: 44494, Start Num: 39

Candidate Starts for Glaske_67:

(29, 44177), (Start: 39 @44240 has 30 MA's), (49, 44261), (54, 44276), (59, 44318), (63, 44336), (81, 44429), (87, 44444),

Gene: HUHilltop_70 Start: 42869, Stop: 43123, Start Num: 39

Candidate Starts for HUHilltop_70:

(18, 42728), (26, 42779), (Start: 39 @42869 has 30 MA's), (49, 42890), (54, 42905), (59, 42947), (63, 42965),

Gene: Hammy_87 Start: 56908, Stop: 57165, Start Num: 48

Candidate Starts for Hammy_87:

(Start: 48 @56908 has 37 MA's), (53, 56923), (57, 56953), (63, 56983), (65, 56989), (73, 57040), (74, 57043), (76, 57058), (87, 57100), (92, 57124), (94, 57133), (95, 57142), (97, 57148),

Gene: Hammy_3 Start: 413, Stop: 670, Start Num: 41

Candidate Starts for Hammy_3:

(Start: 41 @413 has 5 MA's), (63, 497), (92, 632),

Gene: Hurricane_89 Start: 56085, Stop: 56348, Start Num: 48

Candidate Starts for Hurricane_89:

(Start: 48 @56085 has 37 MA's), (56, 56115), (60, 56151), (61, 56157), (67, 56184), (71, 56208), (73, 56220), (77, 56244), (79, 56256), (87, 56280), (88, 56283), (92, 56307), (95, 56325),

Gene: JF1_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for JF1_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Juliette_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Juliette_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Kari_67 Start: 43025, Stop: 43279, Start Num: 39

Candidate Starts for Kari_67:

(29, 42962), (Start: 39 @43025 has 30 MA's), (49, 43046), (54, 43061), (59, 43103), (63, 43121), (81, 43214), (87, 43229),

Gene: Keshu_91 Start: 56377, Stop: 56640, Start Num: 48

Candidate Starts for Keshu_91:

(Start: 48 @56377 has 37 MA's), (58, 56434), (62, 56455), (65, 56461), (68, 56482), (71, 56500), (77, 56536), (92, 56599), (95, 56617),

Gene: KiSi_2 Start: 346, Stop: 612, Start Num: 34

Candidate Starts for KiSi_2:

(4, 1), (14, 187), (Start: 34 @346 has 6 MA's), (74, 487), (80, 523), (86, 538),

Gene: KilKor_68 Start: 44933, Stop: 45187, Start Num: 39

Candidate Starts for KilKor_68:

(29, 44870), (Start: 39 @44933 has 30 MA's), (49, 44954), (54, 44969), (59, 45011), (63, 45029), (81, 45122), (87, 45137),

Gene: Kraw_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Kraw_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Kropertea_97 Start: 60883, Stop: 61203, Start Num: 44

Candidate Starts for Kropertea_97:

(Start: 44 @60883 has 3 MA's), (Start: 46 @60886 has 3 MA's), (66, 60988), (70, 61018), (72, 61030), (74, 61036), (77, 61054), (93, 61123),

Gene: Krueger_3 Start: 500, Stop: 760, Start Num: 40

Candidate Starts for Krueger_3:

(Start: 40 @500 has 12 MA's), (63, 584), (74, 635), (92, 719),

Gene: Lavahound_88 Start: 58194, Stop: 58448, Start Num: 48

Candidate Starts for Lavahound_88:

(Start: 48 @58194 has 37 MA's), (57, 58239), (68, 58296), (73, 58326), (92, 58407),

Gene: LeMond_2 Start: 346, Stop: 612, Start Num: 34

Candidate Starts for LeMond_2:

(4, 1), (14, 187), (Start: 34 @346 has 6 MA's), (74, 487), (80, 523), (86, 538),

Gene: Lea83_89 Start: 56206, Stop: 56469, Start Num: 48

Candidate Starts for Lea83_89:

(Start: 48 @56206 has 37 MA's), (Start: 52 @56221 has 1 MA's), (56, 56236), (60, 56272), (61, 56278), (67, 56305), (71, 56329), (72, 56338), (73, 56341), (77, 56365), (79, 56377), (87, 56401), (92, 56428), (95, 56446),

Gene: Lebo14_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Lebo14_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: MacnCheese_90 Start: 56613, Stop: 56876, Start Num: 48

Candidate Starts for MacnCheese_90:

(24, 56478), (Start: 48 @56613 has 37 MA's), (56, 56643), (60, 56679), (61, 56685), (71, 56736), (73, 56748), (77, 56772), (79, 56784), (87, 56808), (92, 56835), (94, 56844), (95, 56853),

Gene: Majeke_70 Start: 43651, Stop: 43905, Start Num: 39

Candidate Starts for Majeke_70:

(26, 43561), (Start: 39 @43651 has 30 MA's), (49, 43672), (54, 43687), (59, 43729), (63, 43747), (81, 43840), (87, 43855),

Gene: Malithi_67 Start: 42795, Stop: 43049, Start Num: 39

Candidate Starts for Malithi_67:

(18, 42654), (26, 42705), (Start: 39 @42795 has 30 MA's), (49, 42816), (54, 42831), (59, 42873), (63, 42891),

Gene: Malthus_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Malthus_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Mangethe_70 Start: 43651, Stop: 43905, Start Num: 39

Candidate Starts for Mangethe_70:

(26, 43561), (Start: 39 @43651 has 30 MA's), (49, 43672), (54, 43687), (59, 43729), (63, 43747), (81, 43840), (87, 43855),

Gene: MarkPhew_2 Start: 323, Stop: 568, Start Num: 33

Candidate Starts for MarkPhew_2:

(Start: 33 @323 has 2 MA's), (55, 359), (63, 410), (74, 461), (90, 521),

Gene: Marshawn_2 Start: 329, Stop: 583, Start Num: 35

Candidate Starts for Marshawn_2:

(10, 125), (11, 149), (Start: 35 @329 has 3 MA's), (51, 344), (53, 353), (74, 464), (92, 548),

Gene: McMater_3 Start: 469, Stop: 732, Start Num: 42

Candidate Starts for McMater_3:

(1, 1), (2, 7), (5, 91), (8, 154), (22, 331), (Start: 42 @469 has 6 MA's), (63, 556), (74, 607), (92, 691),

Gene: Megiddo_67 Start: 44801, Stop: 45055, Start Num: 39

Candidate Starts for Megiddo_67:

(29, 44738), (Start: 39 @44801 has 30 MA's), (49, 44822), (54, 44837), (59, 44879), (63, 44897), (81, 44990), (87, 45005),

Gene: Mitti_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Mitti_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Nazo_70 Start: 44643, Stop: 44897, Start Num: 39

Candidate Starts for Nazo_70:

(12, 44427), (13, 44436), (23, 44517), (29, 44583), (37, 44634), (Start: 39 @44643 has 30 MA's), (49, 44664), (59, 44721), (63, 44739), (87, 44847),

Gene: Necropolis_65 Start: 42235, Stop: 42489, Start Num: 39

Candidate Starts for Necropolis_65:

(18, 42094), (26, 42145), (Start: 39 @42235 has 30 MA's), (49, 42256), (54, 42271), (59, 42313), (63, 42331),

Gene: Nibb_2 Start: 333, Stop: 605, Start Num: 35

Candidate Starts for Nibb_2:

(Start: 35 @333 has 3 MA's), (57, 393), (80, 513), (84, 525), (91, 540),

Gene: Niklas_3 Start: 469, Stop: 732, Start Num: 42

Candidate Starts for Niklas_3:

(1, 1), (2, 7), (5, 91), (8, 154), (22, 331), (Start: 42 @469 has 6 MA's), (63, 556), (74, 607), (92, 691),

Gene: November_3 Start: 424, Stop: 687, Start Num: 41

Candidate Starts for November_3:

(Start: 41 @424 has 5 MA's), (63, 511), (77, 580), (92, 646),

Gene: OmniCritical_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for OmniCritical_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Oscar_2 Start: 346, Stop: 612, Start Num: 34

Candidate Starts for Oscar_2:

(Start: 34 @346 has 6 MA's), (74, 487), (80, 523), (86, 538),

Gene: PYPDinur_101 Start: 61956, Stop: 62237, Start Num: 46

Candidate Starts for PYPDinur_101:

(Start: 40 @61944 has 12 MA's), (Start: 44 @61953 has 3 MA's), (Start: 46 @61956 has 3 MA's), (72, 62100), (77, 62124), (90, 62166), (94, 62196),

Gene: Patt_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Patt_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Peanam_3 Start: 469, Stop: 732, Start Num: 42

Candidate Starts for Peanam_3:

(22, 331), (Start: 42 @469 has 6 MA's), (63, 556), (74, 607), (92, 691),

Gene: Phalm_68 Start: 44231, Stop: 44485, Start Num: 39

Candidate Starts for Phalm_68:

(29, 44168), (Start: 39 @44231 has 30 MA's), (49, 44252), (54, 44267), (59, 44309), (63, 44327), (81, 44420), (87, 44435),

Gene: Pharb_89 Start: 56013, Stop: 56249, Start Num: 52

Candidate Starts for Pharb_89:

(Start: 48 @56001 has 37 MA's), (Start: 52 @56013 has 1 MA's), (53, 56016), (63, 56079), (65, 56085), (72, 56124), (77, 56148), (86, 56181), (92, 56214),

Gene: Phayonce_75 Start: 47994, Stop: 48278, Start Num: 34

Candidate Starts for Phayonce_75:

(Start: 34 @47994 has 6 MA's), (64, 48120), (78, 48195),

Gene: Phegasus_70 Start: 43618, Stop: 43872, Start Num: 39

Candidate Starts for Phegasus_70:

(26, 43528), (Start: 39 @43618 has 30 MA's), (49, 43639), (54, 43654), (59, 43696), (63, 43714), (81, 43807), (87, 43822),

Gene: PhelpsODU_2 Start: 389, Stop: 649, Start Num: 40

Candidate Starts for PhelpsODU_2:

(16, 242), (Start: 40 @389 has 12 MA's),

Gene: Phineas_68 Start: 43203, Stop: 43457, Start Num: 39

Candidate Starts for Phineas_68:

(18, 43062), (26, 43113), (Start: 39 @43203 has 30 MA's), (49, 43224), (54, 43239), (59, 43281), (63, 43299),

Gene: Phrank_2 Start: 394, Stop: 654, Start Num: 40

Candidate Starts for Phrank_2:

(16, 247), (Start: 40 @394 has 12 MA's), (63, 478), (74, 529),

Gene: Pisa1_3 Start: 442, Stop: 696, Start Num: 42

Candidate Starts for Pisa1_3:

(22, 310), (Start: 42 @442 has 6 MA's), (71, 556), (92, 655),

Gene: Pisa4_3 Start: 442, Stop: 696, Start Num: 42

Candidate Starts for Pisa4_3:

(22, 310), (Start: 42 @442 has 6 MA's), (71, 556), (92, 655),

Gene: Pixie_88 Start: 55789, Stop: 56052, Start Num: 48

Candidate Starts for Pixie_88:

(Start: 48 @55789 has 37 MA's), (56, 55819), (57, 55837), (60, 55855), (61, 55861), (67, 55888), (71, 55912), (72, 55921), (73, 55924), (77, 55948), (79, 55960), (87, 55984), (92, 56011), (95, 56029),

Gene: Pygmy_71 Start: 44585, Stop: 44839, Start Num: 39

Candidate Starts for Pygmy_71:

(17, 44441), (20, 44450), (26, 44495), (Start: 39 @44585 has 30 MA's), (49, 44606), (54, 44621), (63, 44681), (87, 44789),

Gene: Qhanda_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Qhanda_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Quby_101 Start: 61285, Stop: 61566, Start Num: 46

Candidate Starts for Quby_101:

(Start: 40 @61273 has 12 MA's), (Start: 44 @61282 has 3 MA's), (Start: 46 @61285 has 3 MA's), (57, 61339), (72, 61429), (77, 61453), (90, 61495), (94, 61525),

Gene: Rabbs_65 Start: 41915, Stop: 42166, Start Num: 45

Candidate Starts for Rabbs_65:

(15, 41714), (18, 41762), (19, 41765), (31, 41867), (Start: 45 @41915 has 2 MA's), (53, 41936), (57, 41966), (63, 42002), (72, 42056),

Gene: Reptar3000_2 Start: 250, Stop: 480, Start Num: 48

Candidate Starts for Reptar3000_2:

(Start: 48 @250 has 37 MA's), (69, 355), (70, 364), (73, 379), (74, 382), (75, 391), (82, 421), (95, 472), (96, 475),

Gene: Richo_3 Start: 469, Stop: 732, Start Num: 42

Candidate Starts for Richo_3:

(1, 1), (2, 7), (5, 91), (8, 154), (22, 331), (Start: 42 @469 has 6 MA's), (63, 556), (74, 607), (92, 691),

Gene: Ruthiejr_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Ruthiejr_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: SamScheppers_2 Start: 250, Stop: 480, Start Num: 48

Candidate Starts for SamScheppers_2:

(Start: 48 @250 has 37 MA's), (69, 355), (70, 364), (73, 379), (74, 382), (75, 391), (82, 421), (95, 472),

Gene: Sbash_80 Start: 51476, Stop: 51787, Start Num: 28

Candidate Starts for Sbash_80:

(Start: 28 @51476 has 1 MA's), (Start: 39 @51536 has 30 MA's), (43, 51545), (59, 51611), (63, 51629), (65, 51635), (81, 51722),

Gene: Scarlett_2 Start: 346, Stop: 612, Start Num: 34

Candidate Starts for Scarlett_2:

(14, 187), (Start: 34 @346 has 6 MA's), (74, 487), (80, 523), (86, 538),

Gene: Shadow1_2 Start: 396, Stop: 665, Start Num: 40

Candidate Starts for Shadow1_2:

(Start: 27 @330 has 1 MA's), (Start: 40 @396 has 12 MA's),

Gene: Shaobing_3 Start: 469, Stop: 732, Start Num: 42

Candidate Starts for Shaobing_3:

(1, 1), (2, 7), (5, 91), (8, 154), (22, 331), (Start: 42 @469 has 6 MA's), (63, 556), (74, 607), (92, 691),

Gene: ShedlockHolmes_91 Start: 56212, Stop: 56475, Start Num: 48

Candidate Starts for ShedlockHolmes_91:

(Start: 48 @56212 has 37 MA's), (56, 56242), (60, 56278), (61, 56284), (67, 56311), (71, 56335), (73, 56347), (77, 56371), (79, 56383), (87, 56407), (92, 56434), (95, 56452),

Gene: Sheng711_102 Start: 61477, Stop: 61761, Start Num: 44

Candidate Starts for Sheng711_102:

(Start: 40 @61468 has 12 MA's), (Start: 44 @61477 has 3 MA's), (Start: 46 @61480 has 3 MA's), (57, 61534), (72, 61624), (77, 61648), (90, 61690), (94, 61720),

Gene: Shipwreck_70 Start: 44643, Stop: 44897, Start Num: 39

Candidate Starts for Shipwreck_70:

(18, 44502), (26, 44553), (Start: 39 @44643 has 30 MA's), (49, 44664), (54, 44679), (59, 44721), (63, 44739),

Gene: SirPhilip_3 Start: 468, Stop: 731, Start Num: 35

Candidate Starts for SirPhilip_3:

(Start: 35 @468 has 3 MA's), (Start: 42 @471 has 6 MA's), (74, 606), (80, 642), (86, 657), (92, 690),

Gene: Slarp_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Slarp_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Sneeze_64 Start: 41914, Stop: 42165, Start Num: 45

Candidate Starts for Sneeze_64:

(15, 41713), (18, 41761), (19, 41764), (31, 41866), (Start: 45 @41914 has 2 MA's), (53, 41935), (57, 41965), (63, 42001), (72, 42055),

Gene: Sonah_68 Start: 42340, Stop: 42594, Start Num: 39

Candidate Starts for Sonah_68:

(18, 42199), (26, 42250), (Start: 39 @42340 has 30 MA's), (49, 42361), (54, 42376), (59, 42418), (63, 42436),

Gene: StressBall_67 Start: 43933, Stop: 44187, Start Num: 39

Candidate Starts for StressBall_67:

(29, 43870), (Start: 39 @43933 has 30 MA's), (49, 43954), (54, 43969), (59, 44011), (63, 44029), (81, 44122), (87, 44137),

Gene: Stuck_76 Start: 50755, Stop: 51048, Start Num: 30

Candidate Starts for Stuck_76:

(Start: 30 @50755 has 1 MA's), (Start: 39 @50794 has 30 MA's), (49, 50815), (54, 50830), (59, 50872), (63, 50890), (65, 50896), (81, 50983), (87, 50998),

Gene: Sunflower1121_2 Start: 329, Stop: 664, Start Num: 27

Candidate Starts for Sunflower1121_2:

(Start: 27 @329 has 1 MA's), (Start: 40 @395 has 12 MA's),

Gene: Syra333_3 Start: 509, Stop: 769, Start Num: 40

Candidate Starts for Syra333_3:

(Start: 40 @509 has 12 MA's), (63, 593), (74, 644), (92, 728),

Gene: TBond007_85 Start: 55787, Stop: 56050, Start Num: 48

Candidate Starts for TBond007_85:

(Start: 48 @55787 has 37 MA's), (56, 55817), (57, 55835), (60, 55853), (61, 55859), (67, 55886), (71, 55910), (72, 55919), (73, 55922), (77, 55946), (79, 55958), (87, 55982), (92, 56009), (95, 56027),

Gene: TClif_2 Start: 240, Stop: 494, Start Num: 50

Candidate Starts for TClif_2:

(Start: 50 @240 has 1 MA's), (63, 318), (65, 324), (67, 339), (71, 363), (74, 378), (81, 420), (87, 435), (92, 453),

Gene: Taquito_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Taquito_2:

(Start: 48 @251 has 37 MA's), (69, 356), (70, 365), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Techage_68 Start: 43134, Stop: 43388, Start Num: 39

Candidate Starts for Techage_68:

(17, 42990), (20, 42999), (26, 43044), (Start: 39 @43134 has 30 MA's), (49, 43155), (54, 43170), (63, 43230), (87, 43338),

Gene: ThulaThula_78 Start: 49203, Stop: 49487, Start Num: 34

Candidate Starts for ThulaThula_78:

(Start: 34 @49203 has 6 MA's), (64, 49329), (83, 49431), (89, 49440),

Gene: Tierra_2 Start: 395, Stop: 655, Start Num: 40

Candidate Starts for Tierra_2:

(16, 248), (Start: 40 @395 has 12 MA's), (63, 479), (74, 530),

Gene: Tigress9_3 Start: 500, Stop: 760, Start Num: 40

Candidate Starts for Tigress9_3:

(Start: 40 @500 has 12 MA's), (63, 584), (74, 635), (92, 719),

Gene: TribbleTrouble_91 Start: 58049, Stop: 58294, Start Num: 48

Candidate Starts for TribbleTrouble_91:

(Start: 48 @58049 has 37 MA's), (Start: 52 @58061 has 1 MA's), (63, 58124), (77, 58193), (86, 58226), (92, 58259),

Gene: Unicorn_2 Start: 389, Stop: 649, Start Num: 40

Candidate Starts for Unicorn_2:

(16, 242), (Start: 40 @389 has 12 MA's),

Gene: Validus_4 Start: 682, Stop: 942, Start Num: 38

Candidate Starts for Validus_4:

(Start: 38 @682 has 1 MA's), (57, 736), (71, 802), (74, 817), (92, 901),

Gene: Venti_65 Start: 41542, Stop: 41796, Start Num: 39

Candidate Starts for Venti_65:

(17, 41398), (20, 41407), (26, 41452), (Start: 39 @41542 has 30 MA's), (49, 41563), (54, 41578), (63, 41638), (87, 41746),

Gene: Willsammy_69 Start: 44417, Stop: 44671, Start Num: 39

Candidate Starts for Willsammy_69:

(29, 44354), (Start: 39 @44417 has 30 MA's), (49, 44438), (54, 44453), (59, 44495), (63, 44513), (81, 44606), (87, 44621),

Gene: Wintermute_2 Start: 250, Stop: 480, Start Num: 48

Candidate Starts for Wintermute_2:

(Start: 48 @250 has 37 MA's), (Start: 52 @259 has 1 MA's), (69, 355), (73, 379), (74, 382), (75, 391), (82, 421), (95, 472),

Gene: Ximenita_3 Start: 509, Stop: 769, Start Num: 40

Candidate Starts for Ximenita_3:

(Start: 40 @509 has 12 MA's), (53, 533), (63, 593), (74, 644), (92, 728),

Gene: Y10_02 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Y10_02:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Y2_02 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for Y2_02:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: YasnayaPolyana_2 Start: 251, Stop: 481, Start Num: 48

Candidate Starts for YasnayaPolyana_2:

(Start: 48 @251 has 37 MA's), (Start: 52 @260 has 1 MA's), (69, 356), (73, 380), (74, 383), (75, 392), (82, 422), (95, 473),

Gene: Yuna_3 Start: 525, Stop: 797, Start Num: 40

Candidate Starts for Yuna_3:

(7, 201), (18, 378), (Start: 40 @525 has 12 MA's), (65, 627), (71, 657), (92, 756),