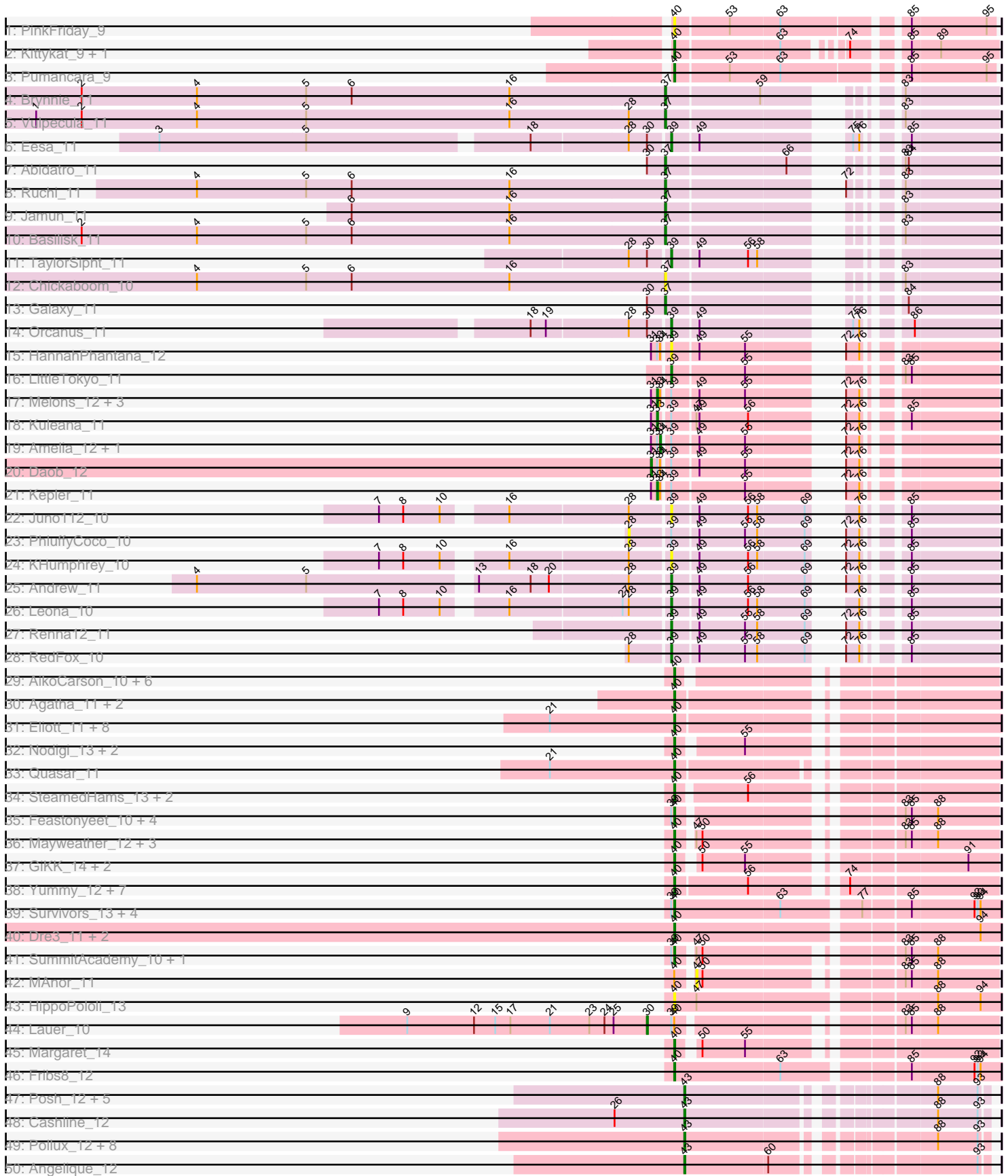
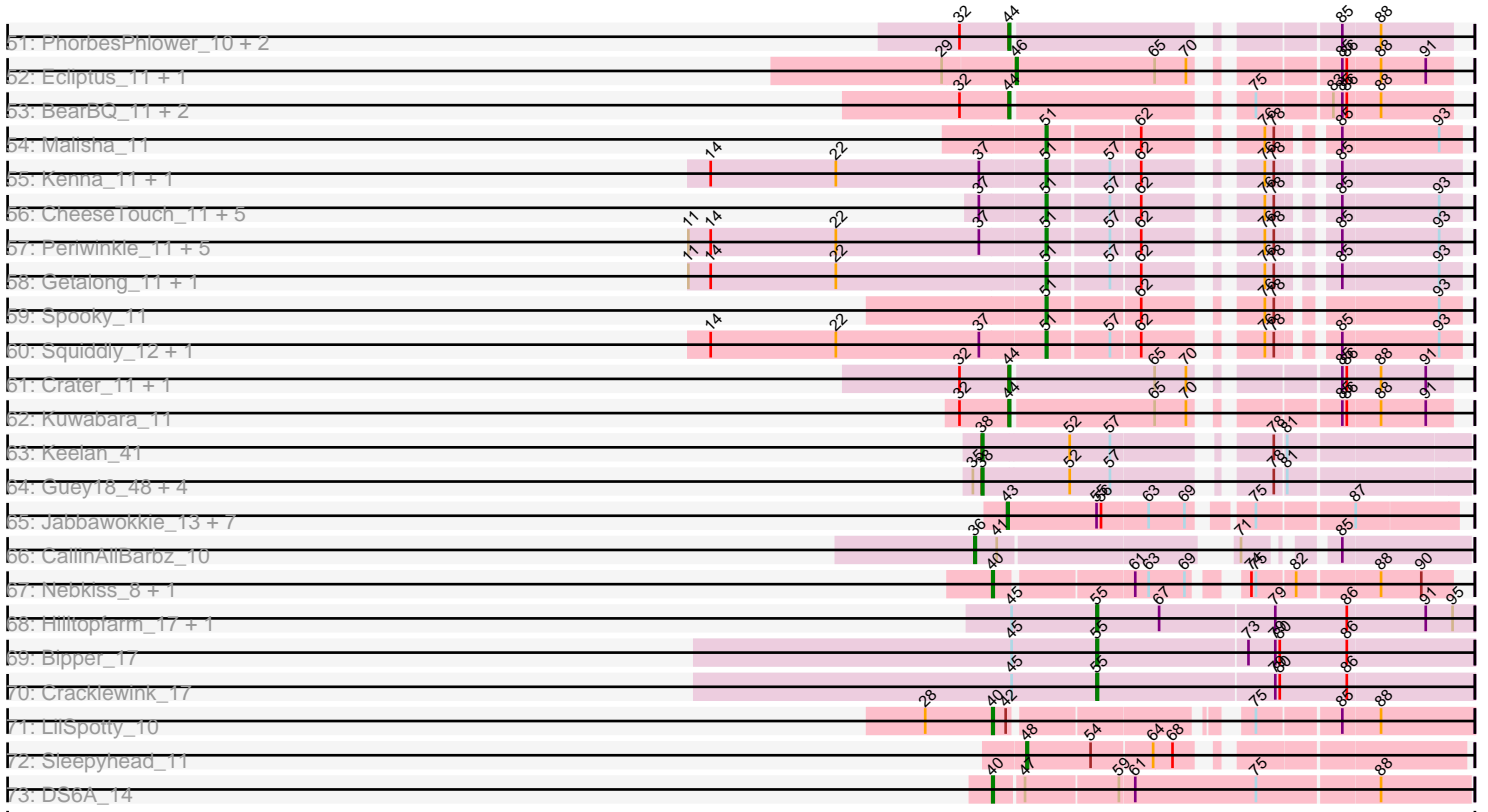


Pham 163385



Pham 163385



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 163385 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163385 has 166 members, 23 are drafts.

Phages represented in each track:

- Track 1 : PinkFriday_9
- Track 2 : Kittykat_9, Preamble_9
- Track 3 : Pumancara_9
- Track 4 : Brynnie_11
- Track 5 : Vulpecula_11
- Track 6 : Eesa_11
- Track 7 : Abidatro_11
- Track 8 : Ruchi_11
- Track 9 : Jamun_11
- Track 10 : Basilisk_11
- Track 11 : TaylorSipht_11
- Track 12 : Chickaboom_10
- Track 13 : Galaxy_11
- Track 14 : Orcanus_11
- Track 15 : HannahPhantana_12
- Track 16 : LittleTokyo_11
- Track 17 : Melons_12, Polka_11, Cote_12, Coral_11
- Track 18 : Kuleana_11
- Track 19 : Amelia_12, Lunar_12
- Track 20 : Daob_12
- Track 21 : Kepler_11
- Track 22 : Juno112_10
- Track 23 : PhluffyCoco_10
- Track 24 : KHumphrey_10
- Track 25 : Andrew_11
- Track 26 : Leona_10
- Track 27 : Renna12_11
- Track 28 : RedFox_10
- Track 29 : AikoCarson_10, Amok_10, BillDoor_13, Emalyn_10, Yarn_10, Yakult_12, AndPeggy_10
- Track 30 : Agatha_11, GoldHunter_12, Burnsey_11
- Track 31 : Elliott_11, Cozz_11, Nina_12, PsychoKiller_11, Axym_11, MunkgeeRoachy_12, Typhonmarchy_12, Sopeesian_11, RedBaron_12
- Track 32 : Nodigi_13, Hexbug_13, Orla_13
- Track 33 : Quasar_11
- Track 34 : SteamedHams_13, Tolls_13, GTE2_09
- Track 35 : Feastonyeet_10, Vine_12, KayGee_10, BigChungus_10, Elinal_12

- Track 36 : Mayweather_12, CherryonLim_12, SheckWes_10, Pons_11
- Track 37 : GiKK_14, Button_12, Jamzy_14
- Track 38 : Yummy_12, Biskit_12, SweatNTears_13, Buttrmlkdreams_11, Troje_11, SketchMex_10, MScarn_13, Horseradish_12
- Track 39 : Survivors_13, Nibbles_13, Zareef_15, MaVan_13, Azira_13
- Track 40 : Dre3_11, Cleo_11, Gibbous_11
- Track 41 : SummitAcademy_10, PotPie_12
- Track 42 : MAnor_11
- Track 43 : HippoPololi_13
- Track 44 : Lauer_10
- Track 45 : Margaret_14
- Track 46 : Fribs8_12
- Track 47 : Posh_12, Wrigley_12, Pytheas_12, LonelyBoi_12, Jablanski_12, BeeGee_12
- Track 48 : Cashline_12
- Track 49 : Pollux_12, Lilas_12, Bradissa_12, Floral_12, BritBrat_12, EMSquaredA_12, Marteena_12, EnalisNailo_12, Confidence_12
- Track 50 : Angelique_12
- Track 51 : PhorbessPhlower_10, Morkie_10, Lucky10_10
- Track 52 : Ecliptus_11, ODay_11
- Track 53 : BearBQ_11, MortyNRick_11, Birdsong_11
- Track 54 : Malisha_11
- Track 55 : Kenna_11, Lutum_11
- Track 56 : CheeseTouch_11, Budski_11, LitninMcQueen_11, Kamaru_11, Holliday_11, Phabuloso_11
- Track 57 : Periwinkle_11, Leroy_11, BENtherdunthat_11, Frickyeah_11, Asapag_11, Horus_11
- Track 58 : Getalong_11, Whitney_11
- Track 59 : Spooky_11
- Track 60 : Squiddly_12, Phistory_11
- Track 61 : Crater_11, Apricot_11
- Track 62 : Kuwabara_11
- Track 63 : Keelan_41
- Track 64 : Guey18_48, Volt_45, Fryberger_43, Ronaldo_46, Ziko_46
- Track 65 : Jabbawokkie_13, Avani_12, Yoshi_12, Soul22_12, Che9d_12, Demsculpinboyz_12, Zapner_13, Blarby_13
- Track 66 : CallinAllBarbz_10
- Track 67 : Nebkiss_8, Gaia_8
- Track 68 : Hilltopfarm_17, Typha_17
- Track 69 : Bipper_17
- Track 70 : Cracklewink_17
- Track 71 : LilSpotty_10
- Track 72 : Sleepyhead_11
- Track 73 : DS6A_14

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

The start number called the most often in the published annotations is 40, it was called in 54 of the 143 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agatha_11, AikoCarson_10, Amok_10, AndPeggy_10, Axym_11, Azira_13, BigChungus_10, BillDoor_13, Biskit_12, Burnsey_11, Button_12, Buttrmilkdreams_11, CherryonLim_12, Cleo_11, Cozz_11, DS6A_14, Dre3_11, Elinal_12, Elliott_11, Emalyn_10, Feastonyeet_10, Fribs8_12, GTE2_09, Gaia_8, GiKK_14, Gibbous_11, GoldHunter_12, Hexbug_13, HippoPololi_13, Horseradish_12, Jamzy_14, KayGee_10, Kittykat_9, LilSpotty_10, MScarn_13, MaVan_13, Margaret_14, Mayweather_12, MunkgeeRoachy_12, Nebkiss_8, Nibbles_13, Nina_12, Nodigi_13, Orla_13, PinkFriday_9, Pons_11, PotPie_12, Preamble_9, PsychoKiller_11, Pumancara_9, Quasar_11, RedBaron_12, SheckWes_10, SketchMex_10, Sopespian_11, SteamedHams_13, SummitAcademy_10, Survivors_13, SweatNTears_13, Tolls_13, Troje_11, Typhonomachy_12, Vine_12, Yakult_12, Yarn_10, Yummy_12, Zareef_15,

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

- Lauer_10, MAnor_11,

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

- Abidatro_11, Amelia_12, Andrew_11, Angelique_12, Apricot_11, Asapag_11, Avani_12, BENtherdunthat_11, Basilisk_11, BearBQ_11, BeeGee_12, Bipper_17, Birdsong_11, Blarby_13, Bradissa_12, BritBrat_12, Brynnie_11, Budski_11, CallinAllBarbz_10, Cashline_12, Che9d_12, CheeseTouch_11, Chickaboom_10, Confidence_12, Coral_11, Cote_12, Cracklewink_17, Crater_11, Daob_12, Demsculpinboyz_12, EMsquaredA_12, Ecliptus_11, Eesa_11, EnalisNailo_12, Floral_12, Frickyeah_11, Fryberger_43, Galaxy_11, Getalong_11, Guey18_48, HannahPhantana_12, Hilltopfarm_17, Holliday_11, Horus_11, Jabbawokkie_13, Jablanski_12, Jamun_11, Juno112_10, KHumphrey_10, Kamaru_11, Keelan_41, Kenna_11, Kepler_11, Kuleana_11, Kuwabara_11, Leona_10, Leroy_11, Lilas_12, LitninMcQueen_11, LittleTokyo_11, LonelyBoi_12, Lucky10_10, Lunar_12, Lutum_11, Malisha_11, Marteenaa_12, Melons_12, Morkie_10, MortyNRick_11, ODay_11, Orcanus_11, Periwinkle_11, Phabuloso_11, Phistory_11, PhluffyCoco_10, PhorbesPhlower_10, Polka_11, Pollux_12, Posh_12, Pytheas_12, RedFox_10, Renna12_11, Ronaldo_46, Ruchi_11, Sleepyhead_11, Soul22_12, Spooky_11, Squiddly_12, TaylorSipht_11, Typha_17, Volt_45, Vulpecula_11, Whitney_11, Wrigley_12, Yoshi_12, Zapner_13, Ziko_46,

Summary by start number:

Start 28:

- Found in 11 of 166 (6.6%) of genes in pham
- No Manual Annotations of this start.
- Called 9.1% of time when present
- Phage (with cluster) where this start called: PhluffyCoco_10 (AS3),

Start 30:

- Found in 6 of 166 (3.6%) of genes in pham
- Manual Annotations of this start: 1 of 143
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Lauer_10 (CT),

Start 31:

- Found in 10 of 166 (6.0%) of genes in pham
- Manual Annotations of this start: 1 of 143

- Called 10.0% of time when present
- Phage (with cluster) where this start called: Daob_12 (AS2),

Start 33:

- Found in 10 of 166 (6.0%) of genes in pham
- Manual Annotations of this start: 6 of 143
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Coral_11 (AS2), Cote_12 (AS2), Kepler_11 (AS2), Kuleana_11 (AS2), Melons_12 (AS2), Polka_11 (AS2),

Start 34:

- Found in 9 of 166 (5.4%) of genes in pham
- Manual Annotations of this start: 2 of 143
- Called 22.2% of time when present
- Phage (with cluster) where this start called: Amelia_12 (AS2), Lunar_12 (AS2),

Start 36:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CallinAllBarbz_10 (FP),

Start 37:

- Found in 24 of 166 (14.5%) of genes in pham
- Manual Annotations of this start: 7 of 143
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Abidatro_11 (AS1), Basilisk_11 (AS1), Brynnie_11 (AS1), Chickaboom_10 (AS1), Galaxy_11 (AS1), Jamun_11 (AS1), Ruchi_11 (AS1), Vulpecula_11 (AS1),

Start 38:

- Found in 6 of 166 (3.6%) of genes in pham
- Manual Annotations of this start: 6 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fryberger_43 (DP), Guey18_48 (DP), Keelan_41 (DP), Ronaldo_46 (DP), Volt_45 (DP), Ziko_46 (DP),

Start 39:

- Found in 34 of 166 (20.5%) of genes in pham
- Manual Annotations of this start: 8 of 143
- Called 32.4% of time when present
- Phage (with cluster) where this start called: Andrew_11 (AS3), Eesa_11 (AS1), HannahPhantana_12 (AS2), Juno112_10 (AS3), KHumphrey_10 (AS3), Leona_10 (AS3), LittleTokyo_11 (AS2), Orcanus_11 (AS1), RedFox_10 (AS3), Renna12_11 (AS3), TaylorSipht_11 (AS1),

Start 40:

- Found in 69 of 166 (41.6%) of genes in pham
- Manual Annotations of this start: 54 of 143
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Agatha_11 (CT), AikoCarson_10 (CT), Amok_10 (CT), AndPeggy_10 (CT), Axym_11 (CT), Azira_13 (CT), BigChungus_10 (CT), BillDoor_13 (CT), Biskit_12 (CT), Burnsey_11 (CT), Button_12 (CT),

Buttrmlkdreams_11 (CT), CherryonLim_12 (CT), Cleo_11 (CT), Cozz_11 (CT), DS6A_14 (singleton), Dre3_11 (CT), Elinal_12 (CT), Elliott_11 (CT), Emalyn_10 (CT), Feastonyeet_10 (CT), Fribs8_12 (CT), GTE2_09 (CT), Gaia_8 (X), GiKK_14 (CT), Gibbous_11 (CT), GoldHunter_12 (CT), Hexbug_13 (CT), HippoPololi_13 (CT), Horseradish_12 (CT), Jamzy_14 (CT), KayGee_10 (CT), Kittykat_9 (AK), LilSpotty_10 (singleton), MScarn_13 (CT), MaVan_13 (CT), Margaret_14 (CT), Mayweather_12 (CT), MunkgeeRoachy_12 (CT), Nebkiss_8 (X), Nibbles_13 (CT), Nina_12 (CT), Nodigi_13 (CT), Orla_13 (CT), PinkFriday_9 (AK), Pons_11 (CT), PotPie_12 (CT), Preamble_9 (AK), PsychoKiller_11 (CT), Pumancara_9 (AK), Quasar_11 (CT), RedBaron_12 (CT), SheckWes_10 (CT), SketchMex_10 (CT), Sopespian_11 (CT), SteamedHams_13 (CT), SummitAcademy_10 (CT), Survivors_13 (CT), SweatNTears_13 (CT), Tolls_13 (CT), Troje_11 (CT), Typhonmarchy_12 (CT), Vine_12 (CT), Yakult_12 (CT), Yarn_10 (CT), Yummy_12 (CT), Zareef_15 (CT),

Start 43:

- Found in 25 of 166 (15.1%) of genes in pham
- Manual Annotations of this start: 24 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_12 (CY1), Avani_12 (F2), BeeGee_12 (CY), Blarby_13 (F), Bradissa_12 (CY1), BritBrat_12 (CY2), Cashline_12 (CY), Che9d_12 (F2), Confidence_12 (CY1), Demsculpinboyz_12 (F2), EMSquaredA_12 (CY1), EnalisNailo_12 (CY1), Floral_12 (CY1), Jabbawokkie_13 (F2), Jablanski_12 (CY), Lilas_12 (CY1), LonelyBoi_12 (CY), Marteena_12 (CY1), Pollux_12 (CY1), Posh_12 (CY), Pytheas_12 (CY), Soul22_12 (F2), Wrigley_12 (CY), Yoshi_12 (F2), Zapner_13 (F2),

Start 44:

- Found in 9 of 166 (5.4%) of genes in pham
- Manual Annotations of this start: 8 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apricot_11 (DN3), BearBQ_11 (DN), Birdsong_11 (DN), Crater_11 (DN3), Kuwabara_11 (DN4), Lucky10_10 (DH), Morkie_10 (DH), MortyNRick_11 (DN), PhorbesPhlower_10 (DH),

Start 46:

- Found in 2 of 166 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ecliptus_11 (DN), ODay_11 (DN),

Start 47:

- Found in 10 of 166 (6.0%) of genes in pham
- No Manual Annotations of this start.
- Called 10.0% of time when present
- Phage (with cluster) where this start called: MAnor_11 (CT),

Start 48:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sleepyhead_11 (singleton),

Start 51:

- Found in 20 of 166 (12.0%) of genes in pham
- Manual Annotations of this start: 18 of 143
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Asapag_11 (DN1), BENtherdunthat_11 (DN1), Budski_11 (DN), CheeseTouch_11 (DN1), Frickyeah_11 (DN1), Getalong_11 (DN1), Holliday_11 (DN1), Horus_11 (DN1), Kamaru_11 (DN1), Kenna_11 (DN1), Leroy_11 (DN1), LitninMcQueen_11 (DN1), Lutum_11 (DN1), Malisha_11 (DN), Periwinkle_11 (DN1), Phabuloso_11 (DN1), Phistory_11 (DN1), Spooky_11 (DN2), Squiddly_12 (DN2), Whitney_11 (DN1),

Start 55:

- Found in 32 of 166 (19.3%) of genes in pham
- Manual Annotations of this start: 4 of 143
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Bipper_17 (Y), Cracklewink_17 (Y), Hilltopfarm_17 (Y), Typha_17 (Y),

Summary by clusters:

There are 21 clusters represented in this pham: DN, AS2, AS1, DH, CY2, AK, F, F2, FP, AS3, CY1, CY, DN1, DN3, DN2, Y, X, singleton, DN4, DP, CT,

Info for manual annotations of cluster AK:

- Start number 40 was manually annotated 3 times for cluster AK.

Info for manual annotations of cluster AS1:

- Start number 37 was manually annotated 7 times for cluster AS1.
- Start number 39 was manually annotated 3 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 31 was manually annotated 1 time for cluster AS2.
- Start number 33 was manually annotated 6 times for cluster AS2.
- Start number 34 was manually annotated 2 times for cluster AS2.
- Start number 39 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 39 was manually annotated 4 times for cluster AS3.

Info for manual annotations of cluster CT:

- Start number 30 was manually annotated 1 time for cluster CT.
- Start number 40 was manually annotated 47 times for cluster CT.

Info for manual annotations of cluster CY:

- Start number 43 was manually annotated 7 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 43 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 43 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DH:

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

Info for manual annotations of cluster DN:

- Start number 44 was manually annotated 2 times for cluster DN.
- Start number 46 was manually annotated 2 times for cluster DN.
- Start number 51 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 51 was manually annotated 14 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 51 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 44 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:

- Start number 44 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DP:

- Start number 38 was manually annotated 6 times for cluster DP.

Info for manual annotations of cluster F2:

- Start number 43 was manually annotated 7 times for cluster F2.

Info for manual annotations of cluster FP:

- Start number 36 was manually annotated 1 time for cluster FP.

Info for manual annotations of cluster X:

- Start number 40 was manually annotated 2 times for cluster X.

Info for manual annotations of cluster Y:

- Start number 55 was manually annotated 4 times for cluster Y.

Gene Information:

Gene: Abidatro_11 Start: 8071, Stop: 8328, Start Num: 37

Candidate Starts for Abidatro_11:

(Start: 30 @8053 has 1 MA's), (Start: 37 @8071 has 7 MA's), (66, 8185), (83, 8239), (84, 8242),

Gene: Agatha_11 Start: 7257, Stop: 7538, Start Num: 40

Candidate Starts for Agatha_11:

(Start: 40 @7257 has 54 MA's),

Gene: AikoCarson_10 Start: 6987, Stop: 7256, Start Num: 40

Candidate Starts for AikoCarson_10:

(Start: 40 @6987 has 54 MA's),

Gene: Amelia_12 Start: 8244, Stop: 8504, Start Num: 34

Candidate Starts for Amelia_12:

(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 2 MA's), (Start: 39 @8250 has 8 MA's), (49, 8274), (Start: 55 @8319 has 4 MA's), (72, 8382), (76, 8394),

Gene: Amok_10 Start: 6987, Stop: 7256, Start Num: 40

Candidate Starts for Amok_10:

(Start: 40 @6987 has 54 MA's),

Gene: AndPeggy_10 Start: 7275, Stop: 7547, Start Num: 40

Candidate Starts for AndPeggy_10:

(Start: 40 @7275 has 54 MA's),

Gene: Andrew_11 Start: 8034, Stop: 8288, Start Num: 39

Candidate Starts for Andrew_11:

(4, 7596), (5, 7704), (13, 7854), (18, 7905), (20, 7923), (28, 7998), (Start: 39 @8034 has 8 MA's), (49, 8058), (56, 8106), (69, 8160), (72, 8166), (76, 8178), (85, 8205),

Gene: Angelique_12 Start: 8007, Stop: 8264, Start Num: 43

Candidate Starts for Angelique_12:

(Start: 43 @8007 has 24 MA's), (60, 8088), (93, 8256),

Gene: Apricot_11 Start: 7129, Stop: 7386, Start Num: 44

Candidate Starts for Apricot_11:

(32, 7096), (Start: 44 @7129 has 8 MA's), (65, 7222), (70, 7243), (85, 7315), (86, 7318), (88, 7339), (91, 7369),

Gene: Asapag_11 Start: 6824, Stop: 7048, Start Num: 51

Candidate Starts for Asapag_11:

(11, 6587), (14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: Avani_12 Start: 6948, Stop: 7220, Start Num: 43

Candidate Starts for Avani_12:

(Start: 43 @6948 has 24 MA's), (Start: 55 @7008 has 4 MA's), (56, 7011), (63, 7041), (69, 7065), (75, 7095), (87, 7155),

Gene: Axym_11 Start: 7257, Stop: 7538, Start Num: 40

Candidate Starts for Axym_11:

(21, 7134), (Start: 40 @7257 has 54 MA's),

Gene: Azira_13 Start: 8163, Stop: 8462, Start Num: 40

Candidate Starts for Azira_13:

(Start: 39 @8160 has 8 MA's), (Start: 40 @8163 has 54 MA's), (63, 8265), (77, 8334), (85, 8376), (92, 8436), (93, 8439), (94, 8442),

Gene: BENtherdunthat_11 Start: 6824, Stop: 7048, Start Num: 51

Candidate Starts for BENtherdunthat_11:

(11, 6587), (14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: Basilisk_11 Start: 8395, Stop: 8652, Start Num: 37

Candidate Starts for Basilisk_11:

(2, 7819), (4, 7933), (5, 8041), (6, 8086), (16, 8242), (Start: 37 @8395 has 7 MA's), (83, 8563),

Gene: BearBQ_11 Start: 7129, Stop: 7386, Start Num: 44
Candidate Starts for BearBQ_11:
(32, 7096), (Start: 44 @7129 has 8 MA's), (75, 7264), (83, 7309), (85, 7315), (86, 7318), (88, 7339),

Gene: BeeGee_12 Start: 8009, Stop: 8266, Start Num: 43
Candidate Starts for BeeGee_12:
(Start: 43 @8009 has 24 MA's), (88, 8219), (93, 8258),

Gene: BigChungus_10 Start: 7054, Stop: 7326, Start Num: 40
Candidate Starts for BigChungus_10:
(Start: 39 @7051 has 8 MA's), (Start: 40 @7054 has 54 MA's), (83, 7237), (85, 7243), (88, 7267),

Gene: BillDoor_13 Start: 7240, Stop: 7512, Start Num: 40
Candidate Starts for BillDoor_13:
(Start: 40 @7240 has 54 MA's),

Gene: Bipper_17 Start: 11835, Stop: 12083, Start Num: 55
Candidate Starts for Bipper_17:
(45, 11778), (Start: 55 @11835 has 4 MA's), (73, 11934), (79, 11952), (80, 11955), (86, 12000),

Gene: Birdsong_11 Start: 7129, Stop: 7386, Start Num: 44
Candidate Starts for Birdsong_11:
(32, 7096), (Start: 44 @7129 has 8 MA's), (75, 7264), (83, 7309), (85, 7315), (86, 7318), (88, 7339),

Gene: Biskit_12 Start: 7241, Stop: 7519, Start Num: 40
Candidate Starts for Biskit_12:
(Start: 40 @7241 has 54 MA's), (56, 7310), (74, 7382),

Gene: Blarby_13 Start: 7472, Stop: 7744, Start Num: 43
Candidate Starts for Blarby_13:
(Start: 43 @7472 has 24 MA's), (Start: 55 @7532 has 4 MA's), (56, 7535), (63, 7565), (69, 7589), (75, 7619), (87, 7679),

Gene: Bradissa_12 Start: 8013, Stop: 8270, Start Num: 43
Candidate Starts for Bradissa_12:
(Start: 43 @8013 has 24 MA's), (88, 8223), (93, 8262),

Gene: BritBrat_12 Start: 8015, Stop: 8272, Start Num: 43
Candidate Starts for BritBrat_12:
(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: Brynnie_11 Start: 8207, Stop: 8464, Start Num: 37
Candidate Starts for Brynnie_11:
(2, 7631), (4, 7745), (5, 7853), (6, 7898), (16, 8054), (Start: 37 @8207 has 7 MA's), (59, 8297), (83, 8375),

Gene: Budski_11 Start: 6829, Stop: 7053, Start Num: 51
Candidate Starts for Budski_11:
(Start: 37 @6787 has 7 MA's), (Start: 51 @6829 has 18 MA's), (57, 6868), (62, 6886), (76, 6943), (78, 6949), (85, 6976), (93, 7039),

Gene: Burnsey_11 Start: 7258, Stop: 7539, Start Num: 40
Candidate Starts for Burnsey_11:

(Start: 40 @7258 has 54 MA's),

Gene: Button_12 Start: 7274, Stop: 7543, Start Num: 40

Candidate Starts for Button_12:

(Start: 40 @7274 has 54 MA's), (50, 7289), (Start: 55 @7331 has 4 MA's), (91, 7514),

Gene: Buttrmlkdreams_11 Start: 7235, Stop: 7504, Start Num: 40

Candidate Starts for Buttrmlkdreams_11:

(Start: 40 @7235 has 54 MA's), (56, 7295), (74, 7367),

Gene: CallinAllBarbz_10 Start: 6520, Stop: 6792, Start Num: 36

Candidate Starts for CallinAllBarbz_10:

(Start: 36 @6520 has 1 MA's), (41, 6535), (71, 6667), (85, 6709),

Gene: Cashline_12 Start: 7862, Stop: 8119, Start Num: 43

Candidate Starts for Cashline_12:

(26, 7793), (Start: 43 @7862 has 24 MA's), (88, 8072), (93, 8111),

Gene: Che9d_12 Start: 6957, Stop: 7229, Start Num: 43

Candidate Starts for Che9d_12:

(Start: 43 @6957 has 24 MA's), (Start: 55 @7017 has 4 MA's), (56, 7020), (63, 7050), (69, 7074), (75, 7104), (87, 7164),

Gene: CheeseTouch_11 Start: 6829, Stop: 7053, Start Num: 51

Candidate Starts for CheeseTouch_11:

(Start: 37 @6787 has 7 MA's), (Start: 51 @6829 has 18 MA's), (57, 6868), (62, 6886), (76, 6943), (78, 6949), (85, 6976), (93, 7039),

Gene: CherryonLim_12 Start: 7780, Stop: 8052, Start Num: 40

Candidate Starts for CherryonLim_12:

(Start: 40 @7780 has 54 MA's), (47, 7792), (50, 7798), (83, 7963), (85, 7969), (88, 7993),

Gene: Chickaboom_10 Start: 7752, Stop: 8009, Start Num: 37

Candidate Starts for Chickaboom_10:

(4, 7290), (5, 7398), (6, 7443), (16, 7599), (Start: 37 @7752 has 7 MA's), (83, 7920),

Gene: Cleo_11 Start: 7463, Stop: 7762, Start Num: 40

Candidate Starts for Cleo_11:

(Start: 40 @7463 has 54 MA's), (94, 7742),

Gene: Confidence_12 Start: 8009, Stop: 8266, Start Num: 43

Candidate Starts for Confidence_12:

(Start: 43 @8009 has 24 MA's), (88, 8219), (93, 8258),

Gene: Coral_11 Start: 8080, Stop: 8343, Start Num: 33

Candidate Starts for Coral_11:

(Start: 31 @8074 has 1 MA's), (Start: 33 @8080 has 6 MA's), (Start: 34 @8083 has 2 MA's), (Start: 39 @8089 has 8 MA's), (49, 8113), (Start: 55 @8158 has 4 MA's), (72, 8221), (76, 8233),

Gene: Cote_12 Start: 8241, Stop: 8504, Start Num: 33

Candidate Starts for Cote_12:

(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 2 MA's), (Start: 39 @8250 has 8 MA's), (49, 8274), (Start: 55 @8319 has 4 MA's), (72, 8382), (76, 8394),

Gene: Cozz_11 Start: 7258, Stop: 7539, Start Num: 40

Candidate Starts for Cozz_11:

(21, 7135), (Start: 40 @7258 has 54 MA's),

Gene: Cracklewink_17 Start: 11835, Stop: 12083, Start Num: 55

Candidate Starts for Cracklewink_17:

(45, 11778), (Start: 55 @11835 has 4 MA's), (79, 11952), (80, 11955), (86, 12000),

Gene: Crater_11 Start: 7129, Stop: 7386, Start Num: 44

Candidate Starts for Crater_11:

(32, 7096), (Start: 44 @7129 has 8 MA's), (65, 7222), (70, 7243), (85, 7315), (86, 7318), (88, 7339), (91, 7369),

Gene: DS6A_14 Start: 10056, Stop: 10361, Start Num: 40

Candidate Starts for DS6A_14:

(Start: 40 @10056 has 54 MA's), (47, 10074), (59, 10134), (61, 10143), (75, 10224), (88, 10302),

Gene: Daob_12 Start: 8238, Stop: 8507, Start Num: 31

Candidate Starts for Daob_12:

(Start: 31 @8238 has 1 MA's), (Start: 33 @8244 has 6 MA's), (Start: 34 @8247 has 2 MA's), (Start: 39 @8253 has 8 MA's), (49, 8277), (Start: 55 @8322 has 4 MA's), (72, 8385), (76, 8397),

Gene: Demsculpinboyz_12 Start: 6948, Stop: 7220, Start Num: 43

Candidate Starts for Demsculpinboyz_12:

(Start: 43 @6948 has 24 MA's), (Start: 55 @7008 has 4 MA's), (56, 7011), (63, 7041), (69, 7065), (75, 7095), (87, 7155),

Gene: Dre3_11 Start: 7410, Stop: 7709, Start Num: 40

Candidate Starts for Dre3_11:

(Start: 40 @7410 has 54 MA's), (94, 7689),

Gene: EMSquaredA_12 Start: 8015, Stop: 8272, Start Num: 43

Candidate Starts for EMSquaredA_12:

(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: Ecliptus_11 Start: 6857, Stop: 7114, Start Num: 46

Candidate Starts for Ecliptus_11:

(29, 6812), (Start: 46 @6857 has 2 MA's), (65, 6950), (70, 6971), (85, 7043), (86, 7046), (88, 7067), (91, 7097),

Gene: Eesa_11 Start: 8248, Stop: 8502, Start Num: 39

Candidate Starts for Eesa_11:

(3, 7771), (5, 7915), (18, 8119), (28, 8212), (Start: 30 @8230 has 1 MA's), (Start: 39 @8248 has 8 MA's), (49, 8272), (75, 8386), (76, 8392), (85, 8419),

Gene: Elinal_12 Start: 7035, Stop: 7307, Start Num: 40

Candidate Starts for Elinal_12:

(Start: 39 @7032 has 8 MA's), (Start: 40 @7035 has 54 MA's), (83, 7218), (85, 7224), (88, 7248),

Gene: Elliott_11 Start: 7257, Stop: 7538, Start Num: 40

Candidate Starts for Elliott_11:

(21, 7134), (Start: 40 @7257 has 54 MA's),

Gene: Emalyn_10 Start: 6986, Stop: 7255, Start Num: 40

Candidate Starts for Emalyn_10:

(Start: 40 @6986 has 54 MA's),

Gene: EnalisNailo_12 Start: 8015, Stop: 8272, Start Num: 43

Candidate Starts for EnalisNailo_12:

(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: Feastonyeet_10 Start: 7054, Stop: 7326, Start Num: 40

Candidate Starts for Feastonyeet_10:

(Start: 39 @7051 has 8 MA's), (Start: 40 @7054 has 54 MA's), (83, 7237), (85, 7243), (88, 7267),

Gene: Floral_12 Start: 8015, Stop: 8272, Start Num: 43

Candidate Starts for Floral_12:

(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: Fribs8_12 Start: 7976, Stop: 8275, Start Num: 40

Candidate Starts for Fribs8_12:

(Start: 40 @7976 has 54 MA's), (63, 8078), (85, 8189), (92, 8249), (93, 8252), (94, 8255),

Gene: Frickyeah_11 Start: 6824, Stop: 7048, Start Num: 51

Candidate Starts for Frickyeah_11:

(11, 6587), (14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: Fryberger_43 Start: 16293, Stop: 16577, Start Num: 38

Candidate Starts for Fryberger_43:

(35, 16287), (Start: 38 @16293 has 6 MA's), (52, 16350), (57, 16377), (78, 16458), (81, 16464),

Gene: GTE2_09 Start: 6936, Stop: 7208, Start Num: 40

Candidate Starts for GTE2_09:

(Start: 40 @6936 has 54 MA's), (56, 6999),

Gene: Gaia_8 Start: 7366, Stop: 7629, Start Num: 40

Candidate Starts for Gaia_8:

(Start: 40 @7366 has 54 MA's), (61, 7450), (63, 7459), (69, 7483), (74, 7504), (75, 7507), (82, 7531), (88, 7582), (90, 7609),

Gene: Galaxy_11 Start: 8078, Stop: 8335, Start Num: 37

Candidate Starts for Galaxy_11:

(Start: 30 @8060 has 1 MA's), (Start: 37 @8078 has 7 MA's), (84, 8249),

Gene: Getalong_11 Start: 6824, Stop: 7048, Start Num: 51

Candidate Starts for Getalong_11:

(11, 6587), (14, 6602), (22, 6686), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: GiKK_14 Start: 7577, Stop: 7846, Start Num: 40

Candidate Starts for GiKK_14:

(Start: 40 @7577 has 54 MA's), (50, 7592), (Start: 55 @7634 has 4 MA's), (91, 7817),

Gene: Gibbous_11 Start: 7410, Stop: 7709, Start Num: 40

Candidate Starts for Gibbous_11:
(Start: 40 @7410 has 54 MA's), (94, 7689),

Gene: GoldHunter_12 Start: 7258, Stop: 7539, Start Num: 40
Candidate Starts for GoldHunter_12:
(Start: 40 @7258 has 54 MA's),

Gene: Guey18_48 Start: 17486, Stop: 17770, Start Num: 38
Candidate Starts for Guey18_48:
(35, 17480), (Start: 38 @17486 has 6 MA's), (52, 17543), (57, 17570), (78, 17651), (81, 17657),

Gene: HannahPhantana_12 Start: 8253, Stop: 8507, Start Num: 39
Candidate Starts for HannahPhantana_12:
(Start: 31 @8238 has 1 MA's), (Start: 33 @8244 has 6 MA's), (Start: 34 @8247 has 2 MA's), (Start: 39 @8253 has 8 MA's), (49, 8277), (Start: 55 @8322 has 4 MA's), (72, 8385), (76, 8397),

Gene: Hexbug_13 Start: 8263, Stop: 8532, Start Num: 40
Candidate Starts for Hexbug_13:
(Start: 40 @8263 has 54 MA's), (Start: 55 @8320 has 4 MA's),

Gene: Hilltopfarm_17 Start: 11779, Stop: 12027, Start Num: 55
Candidate Starts for Hilltopfarm_17:
(45, 11722), (Start: 55 @11779 has 4 MA's), (67, 11821), (79, 11896), (86, 11944), (91, 11995), (95, 12013),

Gene: HippoPololi_13 Start: 8062, Stop: 8361, Start Num: 40
Candidate Starts for HippoPololi_13:
(Start: 40 @8062 has 54 MA's), (47, 8083), (88, 8299), (94, 8341),

Gene: Holliday_11 Start: 6829, Stop: 7053, Start Num: 51
Candidate Starts for Holliday_11:
(Start: 37 @6787 has 7 MA's), (Start: 51 @6829 has 18 MA's), (57, 6868), (62, 6886), (76, 6943), (78, 6949), (85, 6976), (93, 7039),

Gene: Horseradish_12 Start: 7139, Stop: 7417, Start Num: 40
Candidate Starts for Horseradish_12:
(Start: 40 @7139 has 54 MA's), (56, 7208), (74, 7280),

Gene: Horus_11 Start: 6824, Stop: 7048, Start Num: 51
Candidate Starts for Horus_11:
(11, 6587), (14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: Jabbawokkie_13 Start: 7471, Stop: 7743, Start Num: 43
Candidate Starts for Jabbawokkie_13:
(Start: 43 @7471 has 24 MA's), (Start: 55 @7531 has 4 MA's), (56, 7534), (63, 7564), (69, 7588), (75, 7618), (87, 7678),

Gene: Jablanski_12 Start: 7862, Stop: 8119, Start Num: 43
Candidate Starts for Jablanski_12:
(Start: 43 @7862 has 24 MA's), (88, 8072), (93, 8111),

Gene: Jamun_11 Start: 8419, Stop: 8676, Start Num: 37

Candidate Starts for Jamun_11:
(6, 8110), (16, 8266), (Start: 37 @8419 has 7 MA's), (83, 8587),

Gene: Jamzy_14 Start: 7587, Stop: 7856, Start Num: 40
Candidate Starts for Jamzy_14:
(Start: 40 @7587 has 54 MA's), (50, 7602), (Start: 55 @7644 has 4 MA's), (91, 7827),

Gene: Juno112_10 Start: 7656, Stop: 7910, Start Num: 39
Candidate Starts for Juno112_10:
(7, 7398), (8, 7422), (10, 7458), (16, 7506), (28, 7620), (Start: 39 @7656 has 8 MA's), (49, 7680), (56, 7728), (58, 7737), (69, 7782), (76, 7800), (85, 7827),

Gene: KHumphrey_10 Start: 7655, Stop: 7909, Start Num: 39
Candidate Starts for KHumphrey_10:
(7, 7397), (8, 7421), (10, 7457), (16, 7505), (28, 7619), (Start: 39 @7655 has 8 MA's), (49, 7679), (56, 7727), (58, 7736), (69, 7781), (72, 7787), (76, 7799), (85, 7826),

Gene: Kamaru_11 Start: 6829, Stop: 7053, Start Num: 51
Candidate Starts for Kamaru_11:
(Start: 37 @6787 has 7 MA's), (Start: 51 @6829 has 18 MA's), (57, 6868), (62, 6886), (76, 6943), (78, 6949), (85, 6976), (93, 7039),

Gene: KayGee_10 Start: 7035, Stop: 7307, Start Num: 40
Candidate Starts for KayGee_10:
(Start: 39 @7032 has 8 MA's), (Start: 40 @7035 has 54 MA's), (83, 7218), (85, 7224), (88, 7248),

Gene: Keelan_41 Start: 16268, Stop: 16552, Start Num: 38
Candidate Starts for Keelan_41:
(Start: 38 @16268 has 6 MA's), (52, 16325), (57, 16352), (78, 16433), (81, 16439),

Gene: Kenna_11 Start: 6824, Stop: 7048, Start Num: 51
Candidate Starts for Kenna_11:
(14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971),

Gene: Kepler_11 Start: 8079, Stop: 8342, Start Num: 33
Candidate Starts for Kepler_11:
(Start: 31 @8073 has 1 MA's), (Start: 33 @8079 has 6 MA's), (Start: 34 @8082 has 2 MA's), (Start: 39 @8088 has 8 MA's), (Start: 55 @8157 has 4 MA's), (72, 8220), (76, 8232),

Gene: Kittykat_9 Start: 7286, Stop: 7555, Start Num: 40
Candidate Starts for Kittykat_9:
(Start: 40 @7286 has 54 MA's), (63, 7385), (74, 7430), (85, 7472), (89, 7499),

Gene: Kuleana_11 Start: 8039, Stop: 8302, Start Num: 33
Candidate Starts for Kuleana_11:
(Start: 31 @8033 has 1 MA's), (Start: 33 @8039 has 6 MA's), (Start: 39 @8048 has 8 MA's), (47, 8069), (49, 8072), (56, 8120), (72, 8180), (76, 8192), (85, 8219),

Gene: Kuwabara_11 Start: 7129, Stop: 7386, Start Num: 44
Candidate Starts for Kuwabara_11:
(32, 7096), (Start: 44 @7129 has 8 MA's), (65, 7222), (70, 7243), (85, 7315), (86, 7318), (88, 7339), (91, 7369),

Gene: Lauer_10 Start: 7057, Stop: 7356, Start Num: 30

Candidate Starts for Lauer_10:

(9, 6820), (12, 6886), (15, 6907), (17, 6922), (21, 6961), (23, 7000), (24, 7015), (25, 7024), (Start: 30 @7057 has 1 MA's), (Start: 39 @7081 has 8 MA's), (Start: 40 @7084 has 54 MA's), (83, 7267), (85, 7273), (88, 7297),

Gene: Leona_10 Start: 7706, Stop: 7960, Start Num: 39

Candidate Starts for Leona_10:

(7, 7448), (8, 7472), (10, 7508), (16, 7556), (27, 7664), (28, 7670), (Start: 39 @7706 has 8 MA's), (49, 7730), (56, 7778), (58, 7787), (69, 7832), (76, 7850), (85, 7877),

Gene: Leroy_11 Start: 6825, Stop: 7049, Start Num: 51

Candidate Starts for Leroy_11:

(11, 6588), (14, 6603), (22, 6687), (Start: 37 @6783 has 7 MA's), (Start: 51 @6825 has 18 MA's), (57, 6864), (62, 6882), (76, 6939), (78, 6945), (85, 6972), (93, 7035),

Gene: LilSpotty_10 Start: 6830, Stop: 7105, Start Num: 40

Candidate Starts for LilSpotty_10:

(28, 6785), (Start: 40 @6830 has 54 MA's), (42, 6839), (75, 6968), (85, 7019), (88, 7043),

Gene: Lilas_12 Start: 8015, Stop: 8272, Start Num: 43

Candidate Starts for Lilas_12:

(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: LitninMcQueen_11 Start: 6829, Stop: 7053, Start Num: 51

Candidate Starts for LitninMcQueen_11:

(Start: 37 @6787 has 7 MA's), (Start: 51 @6829 has 18 MA's), (57, 6868), (62, 6886), (76, 6943), (78, 6949), (85, 6976), (93, 7039),

Gene: LittleTokyo_11 Start: 7988, Stop: 8242, Start Num: 39

Candidate Starts for LittleTokyo_11:

(Start: 39 @7988 has 8 MA's), (Start: 55 @8057 has 4 MA's), (83, 8153), (85, 8159),

Gene: LonelyBoi_12 Start: 7862, Stop: 8119, Start Num: 43

Candidate Starts for LonelyBoi_12:

(Start: 43 @7862 has 24 MA's), (88, 8072), (93, 8111),

Gene: Lucky10_10 Start: 6338, Stop: 6595, Start Num: 44

Candidate Starts for Lucky10_10:

(32, 6305), (Start: 44 @6338 has 8 MA's), (85, 6524), (88, 6548),

Gene: Lunar_12 Start: 8244, Stop: 8504, Start Num: 34

Candidate Starts for Lunar_12:

(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 2 MA's), (Start: 39 @8250 has 8 MA's), (49, 8274), (Start: 55 @8319 has 4 MA's), (72, 8382), (76, 8394),

Gene: Lutum_11 Start: 6824, Stop: 7048, Start Num: 51

Candidate Starts for Lutum_11:

(14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971),

Gene: MAnor_11 Start: 7037, Stop: 7297, Start Num: 47

Candidate Starts for MAnor_11:

(Start: 40 @7025 has 54 MA's), (47, 7037), (50, 7043), (83, 7208), (85, 7214), (88, 7238),

Gene: MScarn_13 Start: 7235, Stop: 7504, Start Num: 40

Candidate Starts for MScarn_13:

(Start: 40 @7235 has 54 MA's), (56, 7295), (74, 7367),

Gene: MaVan_13 Start: 8163, Stop: 8462, Start Num: 40

Candidate Starts for MaVan_13:

(Start: 39 @8160 has 8 MA's), (Start: 40 @8163 has 54 MA's), (63, 8265), (77, 8334), (85, 8376), (92, 8436), (93, 8439), (94, 8442),

Gene: Malisha_11 Start: 7874, Stop: 8098, Start Num: 51

Candidate Starts for Malisha_11:

(Start: 51 @7874 has 18 MA's), (62, 7931), (76, 7988), (78, 7994), (85, 8021), (93, 8084),

Gene: Margaret_14 Start: 7972, Stop: 8241, Start Num: 40

Candidate Starts for Margaret_14:

(Start: 40 @7972 has 54 MA's), (50, 7987), (Start: 55 @8029 has 4 MA's),

Gene: Marteena_12 Start: 8015, Stop: 8272, Start Num: 43

Candidate Starts for Marteena_12:

(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: Mayweather_12 Start: 7658, Stop: 7930, Start Num: 40

Candidate Starts for Mayweather_12:

(Start: 40 @7658 has 54 MA's), (47, 7670), (50, 7676), (83, 7841), (85, 7847), (88, 7871),

Gene: Melons_12 Start: 8241, Stop: 8504, Start Num: 33

Candidate Starts for Melons_12:

(Start: 31 @8235 has 1 MA's), (Start: 33 @8241 has 6 MA's), (Start: 34 @8244 has 2 MA's), (Start: 39 @8250 has 8 MA's), (49, 8274), (Start: 55 @8319 has 4 MA's), (72, 8382), (76, 8394),

Gene: Morkie_10 Start: 6300, Stop: 6557, Start Num: 44

Candidate Starts for Morkie_10:

(32, 6267), (Start: 44 @6300 has 8 MA's), (85, 6486), (88, 6510),

Gene: MortyNRick_11 Start: 7129, Stop: 7386, Start Num: 44

Candidate Starts for MortyNRick_11:

(32, 7096), (Start: 44 @7129 has 8 MA's), (75, 7264), (83, 7309), (85, 7315), (86, 7318), (88, 7339),

Gene: MunkgeeRoachy_12 Start: 7305, Stop: 7586, Start Num: 40

Candidate Starts for MunkgeeRoachy_12:

(21, 7182), (Start: 40 @7305 has 54 MA's),

Gene: Nebkiss_8 Start: 7367, Stop: 7630, Start Num: 40

Candidate Starts for Nebkiss_8:

(Start: 40 @7367 has 54 MA's), (61, 7451), (63, 7460), (69, 7484), (74, 7505), (75, 7508), (82, 7532), (88, 7583), (90, 7610),

Gene: Nibbles_13 Start: 8163, Stop: 8462, Start Num: 40

Candidate Starts for Nibbles_13:

(Start: 39 @8160 has 8 MA's), (Start: 40 @8163 has 54 MA's), (63, 8265), (77, 8334), (85, 8376), (92, 8436), (93, 8439), (94, 8442),

Gene: Nina_12 Start: 8291, Stop: 8572, Start Num: 40

Candidate Starts for Nina_12:

(21, 8168), (Start: 40 @8291 has 54 MA's),

Gene: Nodigi_13 Start: 8256, Stop: 8525, Start Num: 40

Candidate Starts for Nodigi_13:

(Start: 40 @8256 has 54 MA's), (Start: 55 @8313 has 4 MA's),

Gene: ODay_11 Start: 6855, Stop: 7112, Start Num: 46

Candidate Starts for ODay_11:

(29, 6810), (Start: 46 @6855 has 2 MA's), (65, 6948), (70, 6969), (85, 7041), (86, 7044), (88, 7065), (91, 7095),

Gene: Orcanus_11 Start: 8038, Stop: 8292, Start Num: 39

Candidate Starts for Orcanus_11:

(18, 7909), (19, 7924), (28, 8002), (Start: 30 @8020 has 1 MA's), (Start: 39 @8038 has 8 MA's), (49, 8062), (75, 8176), (76, 8182), (86, 8212),

Gene: Orla_13 Start: 8260, Stop: 8529, Start Num: 40

Candidate Starts for Orla_13:

(Start: 40 @8260 has 54 MA's), (Start: 55 @8317 has 4 MA's),

Gene: Periwinkle_11 Start: 6824, Stop: 7048, Start Num: 51

Candidate Starts for Periwinkle_11:

(11, 6587), (14, 6602), (22, 6686), (Start: 37 @6782 has 7 MA's), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: Phabuloso_11 Start: 6829, Stop: 7053, Start Num: 51

Candidate Starts for Phabuloso_11:

(Start: 37 @6787 has 7 MA's), (Start: 51 @6829 has 18 MA's), (57, 6868), (62, 6886), (76, 6943), (78, 6949), (85, 6976), (93, 7039),

Gene: Phistory_11 Start: 6813, Stop: 7037, Start Num: 51

Candidate Starts for Phistory_11:

(14, 6591), (22, 6675), (Start: 37 @6771 has 7 MA's), (Start: 51 @6813 has 18 MA's), (57, 6852), (62, 6870), (76, 6927), (78, 6933), (85, 6960), (93, 7023),

Gene: PhluffyCoco_10 Start: 7619, Stop: 7909, Start Num: 28

Candidate Starts for PhluffyCoco_10:

(28, 7619), (Start: 39 @7655 has 8 MA's), (49, 7679), (Start: 55 @7724 has 4 MA's), (58, 7736), (69, 7781), (72, 7787), (76, 7799), (85, 7826),

Gene: PhorbesPhlower_10 Start: 6300, Stop: 6557, Start Num: 44

Candidate Starts for PhorbesPhlower_10:

(32, 6267), (Start: 44 @6300 has 8 MA's), (85, 6486), (88, 6510),

Gene: PinkFriday_9 Start: 7264, Stop: 7551, Start Num: 40

Candidate Starts for PinkFriday_9:

(Start: 40 @7264 has 54 MA's), (53, 7315), (63, 7363), (85, 7471), (95, 7543),

Gene: Polka_11 Start: 8080, Stop: 8343, Start Num: 33

Candidate Starts for Polka_11:

(Start: 31 @8074 has 1 MA's), (Start: 33 @8080 has 6 MA's), (Start: 34 @8083 has 2 MA's), (Start: 39 @8089 has 8 MA's), (49, 8113), (Start: 55 @8158 has 4 MA's), (72, 8221), (76, 8233),

Gene: Pollux_12 Start: 8015, Stop: 8272, Start Num: 43

Candidate Starts for Pollux_12:

(Start: 43 @8015 has 24 MA's), (88, 8225), (93, 8264),

Gene: Pons_11 Start: 7037, Stop: 7309, Start Num: 40

Candidate Starts for Pons_11:

(Start: 40 @7037 has 54 MA's), (47, 7049), (50, 7055), (83, 7220), (85, 7226), (88, 7250),

Gene: Posh_12 Start: 8009, Stop: 8266, Start Num: 43

Candidate Starts for Posh_12:

(Start: 43 @8009 has 24 MA's), (88, 8219), (93, 8258),

Gene: PotPie_12 Start: 7888, Stop: 8160, Start Num: 40

Candidate Starts for PotPie_12:

(Start: 39 @7885 has 8 MA's), (Start: 40 @7888 has 54 MA's), (47, 7900), (50, 7906), (83, 8071), (85, 8077), (88, 8101),

Gene: Preamble_9 Start: 7244, Stop: 7513, Start Num: 40

Candidate Starts for Preamble_9:

(Start: 40 @7244 has 54 MA's), (63, 7343), (74, 7388), (85, 7430), (89, 7457),

Gene: PsychoKiller_11 Start: 7257, Stop: 7538, Start Num: 40

Candidate Starts for PsychoKiller_11:

(21, 7134), (Start: 40 @7257 has 54 MA's),

Gene: Pumancara_9 Start: 7263, Stop: 7550, Start Num: 40

Candidate Starts for Pumancara_9:

(Start: 40 @7263 has 54 MA's), (53, 7314), (63, 7362), (85, 7470), (95, 7542),

Gene: Pytheas_12 Start: 7862, Stop: 8119, Start Num: 43

Candidate Starts for Pytheas_12:

(Start: 43 @7862 has 24 MA's), (88, 8072), (93, 8111),

Gene: Quasar_11 Start: 7872, Stop: 8147, Start Num: 40

Candidate Starts for Quasar_11:

(21, 7749), (Start: 40 @7872 has 54 MA's),

Gene: RedBaron_12 Start: 7302, Stop: 7583, Start Num: 40

Candidate Starts for RedBaron_12:

(21, 7179), (Start: 40 @7302 has 54 MA's),

Gene: RedFox_10 Start: 7655, Stop: 7909, Start Num: 39

Candidate Starts for RedFox_10:

(28, 7619), (Start: 39 @7655 has 8 MA's), (49, 7679), (Start: 55 @7724 has 4 MA's), (58, 7736), (69, 7781), (72, 7787), (76, 7799), (85, 7826),

Gene: Renna12_11 Start: 7855, Stop: 8109, Start Num: 39

Candidate Starts for Renna12_11:

(Start: 39 @7855 has 8 MA's), (49, 7879), (Start: 55 @7924 has 4 MA's), (58, 7936), (69, 7981), (72, 7987), (76, 7999), (85, 8026),

Gene: Ronaldo_46 Start: 17223, Stop: 17507, Start Num: 38

Candidate Starts for Ronaldo_46:

(35, 17217), (Start: 38 @17223 has 6 MA's), (52, 17280), (57, 17307), (78, 17388), (81, 17394),

Gene: Ruchi_11 Start: 8341, Stop: 8598, Start Num: 37

Candidate Starts for Ruchi_11:

(4, 7879), (5, 7987), (6, 8032), (16, 8188), (Start: 37 @8341 has 7 MA's), (72, 8479), (83, 8509),

Gene: SheckWes_10 Start: 7025, Stop: 7297, Start Num: 40

Candidate Starts for SheckWes_10:

(Start: 40 @7025 has 54 MA's), (47, 7037), (50, 7043), (83, 7208), (85, 7214), (88, 7238),

Gene: SketchMex_10 Start: 7241, Stop: 7519, Start Num: 40

Candidate Starts for SketchMex_10:

(Start: 40 @7241 has 54 MA's), (56, 7310), (74, 7382),

Gene: Sleepyhead_11 Start: 7625, Stop: 7879, Start Num: 48

Candidate Starts for Sleepyhead_11:

(Start: 48 @7625 has 1 MA's), (54, 7667), (64, 7706), (68, 7718),

Gene: Sopespian_11 Start: 7257, Stop: 7538, Start Num: 40

Candidate Starts for Sopespian_11:

(21, 7134), (Start: 40 @7257 has 54 MA's),

Gene: Soul22_12 Start: 6947, Stop: 7219, Start Num: 43

Candidate Starts for Soul22_12:

(Start: 43 @6947 has 24 MA's), (Start: 55 @7007 has 4 MA's), (56, 7010), (63, 7040), (69, 7064), (75, 7094), (87, 7154),

Gene: Spooky_11 Start: 6822, Stop: 7046, Start Num: 51

Candidate Starts for Spooky_11:

(Start: 51 @6822 has 18 MA's), (62, 6879), (76, 6936), (78, 6942), (93, 7032),

Gene: Squiddly_12 Start: 7509, Stop: 7733, Start Num: 51

Candidate Starts for Squiddly_12:

(14, 7287), (22, 7371), (Start: 37 @7467 has 7 MA's), (Start: 51 @7509 has 18 MA's), (57, 7548), (62, 7566), (76, 7623), (78, 7629), (85, 7656), (93, 7719),

Gene: SteamedHams_13 Start: 7276, Stop: 7548, Start Num: 40

Candidate Starts for SteamedHams_13:

(Start: 40 @7276 has 54 MA's), (56, 7339),

Gene: SummitAcademy_10 Start: 7103, Stop: 7375, Start Num: 40

Candidate Starts for SummitAcademy_10:

(Start: 39 @7100 has 8 MA's), (Start: 40 @7103 has 54 MA's), (47, 7115), (50, 7121), (83, 7286), (85, 7292), (88, 7316),

Gene: Survivors_13 Start: 8017, Stop: 8316, Start Num: 40

Candidate Starts for Survivors_13:

(Start: 39 @8014 has 8 MA's), (Start: 40 @8017 has 54 MA's), (63, 8119), (77, 8188), (85, 8230), (92, 8290), (93, 8293), (94, 8296),

Gene: SweatNTears_13 Start: 7761, Stop: 8030, Start Num: 40
Candidate Starts for SweatNTears_13:
(Start: 40 @7761 has 54 MA's), (56, 7821), (74, 7893),

Gene: TaylorSipht_11 Start: 8123, Stop: 8377, Start Num: 39
Candidate Starts for TaylorSipht_11:
(28, 8087), (Start: 30 @8105 has 1 MA's), (Start: 39 @8123 has 8 MA's), (49, 8147), (56, 8195), (58, 8204),

Gene: Tolls_13 Start: 7279, Stop: 7551, Start Num: 40
Candidate Starts for Tolls_13:
(Start: 40 @7279 has 54 MA's), (56, 7342),

Gene: Troje_11 Start: 7235, Stop: 7504, Start Num: 40
Candidate Starts for Troje_11:
(Start: 40 @7235 has 54 MA's), (56, 7295), (74, 7367),

Gene: Typha_17 Start: 11749, Stop: 11997, Start Num: 55
Candidate Starts for Typha_17:
(45, 11692), (Start: 55 @11749 has 4 MA's), (67, 11791), (79, 11866), (86, 11914), (91, 11965), (95, 11983),

Gene: Typhonomachy_12 Start: 7257, Stop: 7538, Start Num: 40
Candidate Starts for Typhonomachy_12:
(21, 7134), (Start: 40 @7257 has 54 MA's),

Gene: Vine_12 Start: 8032, Stop: 8304, Start Num: 40
Candidate Starts for Vine_12:
(Start: 39 @8029 has 8 MA's), (Start: 40 @8032 has 54 MA's), (83, 8215), (85, 8221), (88, 8245),

Gene: Volt_45 Start: 17223, Stop: 17507, Start Num: 38
Candidate Starts for Volt_45:
(35, 17217), (Start: 38 @17223 has 6 MA's), (52, 17280), (57, 17307), (78, 17388), (81, 17394),

Gene: Vulpecula_11 Start: 8417, Stop: 8674, Start Num: 37
Candidate Starts for Vulpecula_11:
(1, 7796), (2, 7841), (4, 7955), (5, 8063), (16, 8264), (28, 8381), (Start: 37 @8417 has 7 MA's), (83, 8585),

Gene: Whitney_11 Start: 6824, Stop: 7048, Start Num: 51
Candidate Starts for Whitney_11:
(11, 6587), (14, 6602), (22, 6686), (Start: 51 @6824 has 18 MA's), (57, 6863), (62, 6881), (76, 6938), (78, 6944), (85, 6971), (93, 7034),

Gene: Wrigley_12 Start: 7859, Stop: 8116, Start Num: 43
Candidate Starts for Wrigley_12:
(Start: 43 @7859 has 24 MA's), (88, 8069), (93, 8108),

Gene: Yakult_12 Start: 7168, Stop: 7437, Start Num: 40
Candidate Starts for Yakult_12:

(Start: 40 @7168 has 54 MA's),

Gene: Yarn_10 Start: 7269, Stop: 7541, Start Num: 40

Candidate Starts for Yarn_10:

(Start: 40 @7269 has 54 MA's),

Gene: Yoshi_12 Start: 6947, Stop: 7219, Start Num: 43

Candidate Starts for Yoshi_12:

(Start: 43 @6947 has 24 MA's), (Start: 55 @7007 has 4 MA's), (56, 7010), (63, 7040), (69, 7064), (75, 7094), (87, 7154),

Gene: Yummy_12 Start: 7139, Stop: 7417, Start Num: 40

Candidate Starts for Yummy_12:

(Start: 40 @7139 has 54 MA's), (56, 7208), (74, 7280),

Gene: Zapner_13 Start: 7472, Stop: 7744, Start Num: 43

Candidate Starts for Zapner_13:

(Start: 43 @7472 has 24 MA's), (Start: 55 @7532 has 4 MA's), (56, 7535), (63, 7565), (69, 7589), (75, 7619), (87, 7679),

Gene: Zareef_15 Start: 8164, Stop: 8463, Start Num: 40

Candidate Starts for Zareef_15:

(Start: 39 @8161 has 8 MA's), (Start: 40 @8164 has 54 MA's), (63, 8266), (77, 8335), (85, 8377), (92, 8437), (93, 8440), (94, 8443),

Gene: Ziko_46 Start: 17163, Stop: 17447, Start Num: 38

Candidate Starts for Ziko_46:

(35, 17157), (Start: 38 @17163 has 6 MA's), (52, 17220), (57, 17247), (78, 17328), (81, 17334),