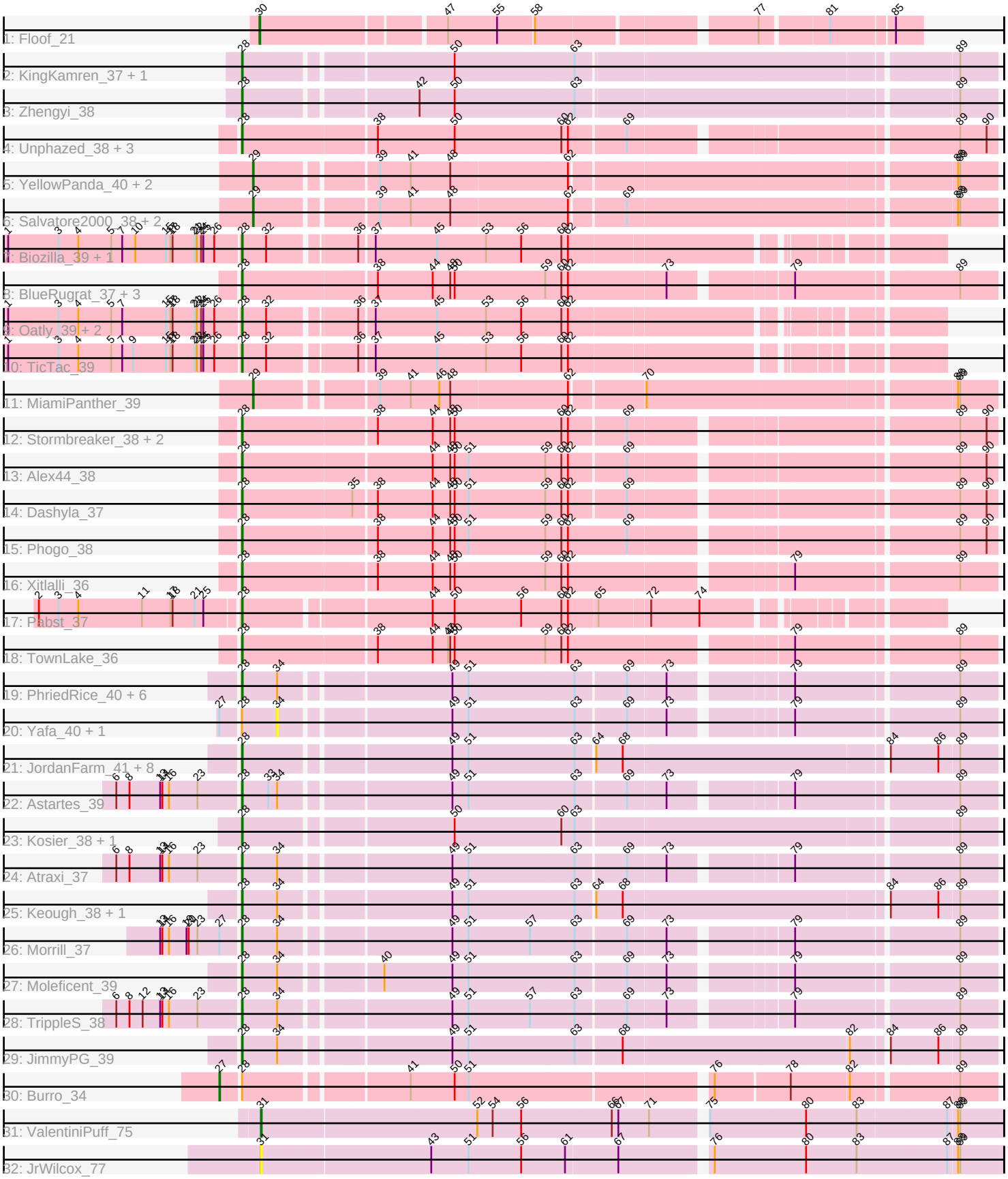
Pham 343998


1: Floof_21
2: KingKamren_37 + 1
3: Zhengyi_38
4: Unphazed_38 + 3
5: YellowPanda_40 + 2
6: Salvatore2000_38 + 2
7: Biozilla_39 + 1
8: BlueRugrat_37 + 3
9: Oatly_39 + 2
10: TicTac_39
11: MiamiPanther_39
12: Stormbreaker_38 + 2
13: Alex44_38
14: Dashyla_37
15: Phogo_38
16: Xitlalli_36
17: Pabst_37
18: TownLake_36
19: PhriedRice_40 + 6
20: Yafa_40 + 1
21: JordanFarm_41 + 8
22: Astartes_39
23: Kosier_38 + 1
24: Atraxi_37
25: Keough_38 + 1
26: Morrill_37
27: Moleficent_39
28: TrippleS_38
29: JimmyPG_39
30: Burro_34
31: ValentiniPuff_75
32: JrWilcox_77

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 343998 Report

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

Pham number 343998 has 65 members, 9 are drafts.

Phages represented in each track:
- Track 1 : Floof_21
- Track 2 : KingKamren_37, EugeneKrabs_38
- Track 3 : Zhengyi_38
- Track 4 : Unphazed_38, Birdfeeder_36, SwissCheezer_37, DumpQuist_37
- Track 5 : YellowPanda_40, JessellCookie_39, TinyTimothy_37
- Track 6 : Salvatore2000_38, Sorvannah_38, Wesak_38
- Track 7 : Biozilla_39, HitchHiker_40
- Track 8 : BlueRugrat_37, LesNorah_38, Conditioner_37, Corn21_37
- Track 9 : Oatly_39, PineapplePluto_40, CrunchyBoi_40
- Track 10 : TicTac_39
- Track 11 : MiamiPanther_39
- Track 12 : Stormbreaker_38, LilyLou_39, ArMaWen_37
- Track 13 : Alex44_38
- Track 14 : Dashyla_37
- Track 15 : Phogo_38
- Track 16 : Xitlalli_36
- Track 17 : Pabst_37
- Track 18 : TownLake_36
- Track 19 : PhriedRice_40, Pharky_39, Fullmetal_39, RicoCaldo_39, Phedro_39, StagePhright_39, Phractured_39
- Track 20 : Yafa_40, ThirteenKH_39
- Track 21 : JordanFarm_41, Barroma_38, Akoni_39, Waterlily_42, AloeVera_40, Ashton_40, SoilSleuth_41, ShyRosie_39, Truong_39
- Track 22 : Astartes_39
- Track 23 : Kosier_38, Fede_38
- Track 24 : Atraxi_37
- Track 25 : Keough_38, Mazun_40
- Track 26 : Morrill_37
- Track 27 : Moleficent_39
- Track 28 : TrippleS_38
- Track 29 : JimmyPG_39
- Track 30 : Burro_34
- Track 31 : ValentiniPuff_75
- Track 32 : JrWilcox_77

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

The start number called the most often in the published annotations is 28, it was called in 48 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Akoni_39, Alex44_38, AloeVera_40, ArMaWen_37, Ashton_40, Astartes_39, Atraxi_37, Barroma_38, Biozilla_39, Birdfeeder_36, BlueRugrat_37, Conditioner_37, Corn21_37, CrunchyBoi_40, Dashyla_37, DumpQuist_37, EugeneKrabs_38, Fede_38, Fullmetal_39, HitchHiker_40, JimmyPG_39, JordanFarm_41, Keough_38, KingKamren_37, Kosier_38, LesNorah_38, LilyLou_39, Mazun_40, Moleficent_39, Morrill_37, Oatly_39, Pabst_37, Pharky_39, Phedro_39, Phogo_38, Phractured_39, PhriedRice_40, PineapplePluto_40, RicoCaldo_39, ShyRosie_39, SoilSleuth_41, StagePhright_39, Stormbreaker_38, SwissCheezer_37, TicTac_39, TownLake_36, TrippleS_38, Truong_39, Unphazed_38, Waterlily_42, Xitlalli_36, Zhengyi_38,

Genes that have the "Most Annotated" start but do not call it:
• Burro_34, ThirteenKH_39, Yafa_40,

Genes that do not have the "Most Annotated" start:
• Floof_21, JessellCookie_39, JrWilcox_77, MiamiPanther_39, Salvatore2000_38, Sorvannah_38, TinyTimothy_37, ValentiniPuff_75, Wesak_38, YellowPanda_40,

Summary by start number:

Start 27:
• Found in 4 of 65 (6.2%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Burro_34 (EM1),

Start 28:
• Found in 55 of 65 (84.6%) of genes in pham
• Manual Annotations of this start: 48 of 56
• Called 94.5% of time when present
• Phage (with cluster) where this start called: Akoni_39 (EK2), Alex44_38 (EK1), AloeVera_40 (EK2), ArMaWen_37 (EK1), Ashton_40 (EK2), Astartes_39 (EK2), Atraxi_37 (EK2), Barroma_38 (EK2), Biozilla_39 (EK1), Birdfeeder_36 (EK1), BlueRugrat_37 (EK1), Conditioner_37 (EK1), Corn21_37 (EK1), CrunchyBoi_40 (EK1), Dashyla_37 (EK1), DumpQuist_37 (EK1), EugeneKrabs_38 (EK), Fede_38 (EK2), Fullmetal_39 (EK2), HitchHiker_40 (EK1), JimmyPG_39 (EK2), JordanFarm_41 (EK2), Keough_38 (EK2), KingKamren_37 (EK), Kosier_38 (EK2), LesNorah_38 (EK1), LilyLou_39 (EK1), Mazun_40 (EK2), Moleficent_39 (EK2), Morrill_37 (EK2), Oatly_39 (EK1), Pabst_37 (EK1), Pharky_39 (EK2), Phedro_39 (EK2), Phogo_38 (EK1), Phractured_39 (EK2), PhriedRice_40 (EK2), PineapplePluto_40 (EK1), RicoCaldo_39 (EK2), ShyRosie_39 (EK2), SoilSleuth_41 (EK2), StagePhright_39 (EK2), Stormbreaker_38 (EK1), SwissCheezer_37 (EK1), TicTac_39 (EK1), TownLake_36 (EK1), TrippleS_38 (EK2), Truong_39 (EK2), Unphazed_38 (EK1), Waterlily_42 (EK2), Xitlalli_36 (EK1), Zhengyi_38 (EK),

Start 29:
• Found in 7 of 65 (10.8%) of genes in pham

• Manual Annotations of this start: 5 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JessellCookie_39 (EK1), MiamiPanther_39 (EK1), Salvatore2000_38 (EK1), Sorvannah_38 (EK1), TinyTimothy_37 (EK1), Wesak_38 (EK1), YellowPanda_40 (EK1),

Start 30:
• Found in 1 of 65 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Floof_21 (EH),

Start 31:
• Found in 2 of 65 (3.1%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JrWilcox_77 (GL), ValentiniPuff_75 (GL),

Start 34:
• Found in 17 of 65 (26.2%) of genes in pham
• No Manual Annotations of this start.
• Called 11.8% of time when present
• Phage (with cluster) where this start called: ThirteenKH_39 (EK2), Yafa_40 (EK2),

Summary by clusters:

There are 6 clusters represented in this pham: EH, EK, EM1, GL, EK2, EK1,

Info for manual annotations of cluster EH:
•Start number 30 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster EK:
•Start number 28 was manually annotated 3 times for cluster EK.

Info for manual annotations of cluster EK1:
•Start number 28 was manually annotated 22 times for cluster EK1.
•Start number 29 was manually annotated 5 times for cluster EK1.

Info for manual annotations of cluster EK2:
•Start number 28 was manually annotated 23 times for cluster EK2.

Info for manual annotations of cluster EM1:
•Start number 27 was manually annotated 1 time for cluster EM1.

Info for manual annotations of cluster GL:
•Start number 31 was manually annotated 1 time for cluster GL.

Gene Information:

Gene: Akoni_39 Start: 40425, Stop: 41396, Start Num: 28
Candidate Starts for Akoni_39:

(Start: 28 @40425 has 48 MA's), (49, 40686), (51, 40707), (63, 40851), (64, 40875), (68, 40911), (84, 41256), (86, 41319), (89, 41346),

Gene: Alex44_38 Start: 38259, Stop: 39218, Start Num: 28
Candidate Starts for Alex44_38:
(Start: 28 @38259 has 48 MA's), (44, 38508), (48, 38532), (50, 38538), (51, 38556), (59, 38661), (60, 38682), (62, 38691), (69, 38766), (89, 39168), (90, 39204),

Gene: AloeVera_40 Start: 40639, Stop: 41610, Start Num: 28
Candidate Starts for AloeVera_40:
(Start: 28 @40639 has 48 MA's), (49, 40900), (51, 40921), (63, 41065), (64, 41089), (68, 41125), (84, 41470), (86, 41533), (89, 41560),

Gene: ArMaWen_37 Start: 37802, Stop: 38761, Start Num: 28
Candidate Starts for ArMaWen_37:
(Start: 28 @37802 has 48 MA's), (38, 37976), (44, 38051), (48, 38075), (50, 38081), (60, 38225), (62, 38234), (69, 38309), (89, 38711), (90, 38747),

Gene: Ashton_40 Start: 40638, Stop: 41609, Start Num: 28
Candidate Starts for Ashton_40:
(Start: 28 @40638 has 48 MA's), (49, 40899), (51, 40920), (63, 41064), (64, 41088), (68, 41124), (84, 41469), (86, 41532), (89, 41559),

Gene: Astartes_39 Start: 40190, Stop: 41137, Start Num: 28
Candidate Starts for Astartes_39:
(6, 40025), (8, 40043), (13, 40085), (14, 40088), (16, 40097), (23, 40136), (Start: 28 @40190 has 48 MA's), (33, 40226), (34, 40238), (49, 40451), (51, 40472), (63, 40616), (69, 40682), (73, 40733), (79, 40877), (89, 41087),

Gene: Atraxi_37 Start: 39982, Stop: 40929, Start Num: 28
Candidate Starts for Atraxi_37:
(6, 39817), (8, 39835), (13, 39877), (14, 39880), (16, 39889), (23, 39928), (Start: 28 @39982 has 48 MA's), (34, 40030), (49, 40243), (51, 40264), (63, 40408), (69, 40474), (73, 40525), (79, 40669), (89, 40879),

Gene: Barroma_38 Start: 40427, Stop: 41398, Start Num: 28
Candidate Starts for Barroma_38:
(Start: 28 @40427 has 48 MA's), (49, 40688), (51, 40709), (63, 40853), (64, 40877), (68, 40913), (84, 41258), (86, 41321), (89, 41348),

Gene: Biozilla_39 Start: 38289, Stop: 39149, Start Num: 28
Candidate Starts for Biozilla_39:
(1, 37974), (3, 38043), (4, 38070), (5, 38115), (7, 38130), (10, 38148), (15, 38190), (17, 38196), (18, 38199), (21, 38229), (22, 38232), (24, 38238), (25, 38241), (26, 38256), (Start: 28 @38289 has 48 MA's), (32, 38322), (36, 38427), (37, 38445), (45, 38529), (53, 38595), (56, 38643), (60, 38697), (62, 38706),

Gene: Birdfeeder_36 Start: 38015, Stop: 38974, Start Num: 28
Candidate Starts for Birdfeeder_36:
(Start: 28 @38015 has 48 MA's), (38, 38189), (50, 38294), (60, 38438), (62, 38447), (69, 38522), (89, 38924), (90, 38960),

Gene: BlueRugrat_37 Start: 38251, Stop: 39219, Start Num: 28

Candidate Starts for BlueRugrat_37:
(Start: 28 @38251 has 48 MA's), (38, 38425), (44, 38500), (48, 38524), (50, 38530), (59, 38653), (60, 38674), (62, 38683), (73, 38815), (79, 38959), (89, 39169),

Gene: Burro_34 Start: 40965, Stop: 41936, Start Num: 27
Candidate Starts for Burro_34:
(Start: 27 @40965 has 1 MA's), (Start: 28 @40989 has 48 MA's), (41, 41193), (50, 41253), (51, 41271), (76, 41580), (78, 41676), (82, 41754), (89, 41886),

Gene: Conditioner_37 Start: 38324, Stop: 39292, Start Num: 28
Candidate Starts for Conditioner_37:
(Start: 28 @38324 has 48 MA's), (38, 38498), (44, 38573), (48, 38597), (50, 38603), (59, 38726), (60, 38747), (62, 38756), (73, 38888), (79, 39032), (89, 39242),

Gene: Corn21_37 Start: 38329, Stop: 39297, Start Num: 28
Candidate Starts for Corn21_37:
(Start: 28 @38329 has 48 MA's), (38, 38503), (44, 38578), (48, 38602), (50, 38608), (59, 38731), (60, 38752), (62, 38761), (73, 38893), (79, 39037), (89, 39247),

Gene: CrunchyBoi_40 Start: 38144, Stop: 39004, Start Num: 28
Candidate Starts for CrunchyBoi_40:
(1, 37829), (3, 37898), (4, 37925), (5, 37970), (7, 37985), (15, 38045), (17, 38051), (18, 38054), (21, 38084), (22, 38087), (24, 38093), (25, 38096), (26, 38111), (Start: 28 @38144 has 48 MA's), (32, 38177), (36, 38282), (37, 38300), (45, 38384), (53, 38450), (56, 38498), (60, 38552), (62, 38561),

Gene: Dashyla_37 Start: 37933, Stop: 38892, Start Num: 28
Candidate Starts for Dashyla_37:
(Start: 28 @37933 has 48 MA's), (35, 38080), (38, 38107), (44, 38182), (48, 38206), (50, 38212), (51, 38230), (59, 38335), (60, 38356), (62, 38365), (69, 38440), (89, 38842), (90, 38878),

Gene: DumpQuist_37 Start: 37787, Stop: 38746, Start Num: 28
Candidate Starts for DumpQuist_37:
(Start: 28 @37787 has 48 MA's), (38, 37961), (50, 38066), (60, 38210), (62, 38219), (69, 38294), (89, 38696), (90, 38732),

Gene: EugeneKrabs_38 Start: 41581, Stop: 42549, Start Num: 28
Candidate Starts for EugeneKrabs_38:
(Start: 28 @41581 has 48 MA's), (50, 41845), (63, 42007), (89, 42499),

Gene: Fede_38 Start: 39191, Stop: 40159, Start Num: 28
Candidate Starts for Fede_38:
(Start: 28 @39191 has 48 MA's), (50, 39455), (60, 39599), (63, 39617), (89, 40109),

Gene: Floof_21 Start: 17890, Stop: 18708, Start Num: 30
Candidate Starts for Floof_21:
(Start: 30 @17890 has 1 MA's), (47, 18124), (55, 18190), (58, 18238), (77, 18508), (81, 18592), (85, 18673),

Gene: Fullmetal_39 Start: 40564, Stop: 41511, Start Num: 28
Candidate Starts for Fullmetal_39:
(Start: 28 @40564 has 48 MA's), (34, 40612), (49, 40825), (51, 40846), (63, 40990), (69, 41056), (73, 41107), (79, 41251), (89, 41461),

Gene: HitchHiker_40 Start: 38289, Stop: 39149, Start Num: 28
Candidate Starts for HitchHiker_40:
(1, 37974), (3, 38043), (4, 38070), (5, 38115), (7, 38130), (10, 38148), (15, 38190), (17, 38196), (18, 38199), (21, 38229), (22, 38232), (24, 38238), (25, 38241), (26, 38256), (Start: 28 @38289 has 48 MA's), (32, 38322), (36, 38427), (37, 38445), (45, 38529), (53, 38595), (56, 38643), (60, 38697), (62, 38706),

Gene: JessellCookie_39 Start: 39685, Stop: 40626, Start Num: 29
Candidate Starts for JessellCookie_39:
(Start: 29 @39685 has 5 MA's), (39, 39829), (41, 39871), (48, 39925), (62, 40081), (88, 40573), (89, 40576),

Gene: JimmyPG_39 Start: 40864, Stop: 41835, Start Num: 28
Candidate Starts for JimmyPG_39:
(Start: 28 @40864 has 48 MA's), (34, 40912), (49, 41125), (51, 41146), (63, 41290), (68, 41350), (82, 41653), (84, 41695), (86, 41758), (89, 41785),

Gene: JordanFarm_41 Start: 40639, Stop: 41610, Start Num: 28
Candidate Starts for JordanFarm_41:
(Start: 28 @40639 has 48 MA's), (49, 40900), (51, 40921), (63, 41065), (64, 41089), (68, 41125), (84, 41470), (86, 41533), (89, 41560),

Gene: JrWilcox_77 Start: 41624, Stop: 42604, Start Num: 31
Candidate Starts for JrWilcox_77:
(Start: 31 @41624 has 1 MA's), (43, 41849), (51, 41900), (56, 41972), (61, 42032), (67, 42101), (76, 42215), (80, 42338), (83, 42407), (87, 42530), (88, 42542), (89, 42545),

Gene: Keough_38 Start: 40297, Stop: 41268, Start Num: 28
Candidate Starts for Keough_38:
(Start: 28 @40297 has 48 MA's), (34, 40345), (49, 40558), (51, 40579), (63, 40723), (64, 40747), (68, 40783), (84, 41128), (86, 41191), (89, 41218),

Gene: KingKamren_37 Start: 41535, Stop: 42503, Start Num: 28
Candidate Starts for KingKamren_37:
(Start: 28 @41535 has 48 MA's), (50, 41799), (63, 41961), (89, 42453),

Gene: Kosier_38 Start: 39138, Stop: 40106, Start Num: 28
Candidate Starts for Kosier_38:
(Start: 28 @39138 has 48 MA's), (50, 39402), (60, 39546), (63, 39564), (89, 40056),

Gene: LesNorah_38 Start: 38648, Stop: 39616, Start Num: 28
Candidate Starts for LesNorah_38:
(Start: 28 @38648 has 48 MA's), (38, 38822), (44, 38897), (48, 38921), (50, 38927), (59, 39050), (60, 39071), (62, 39080), (73, 39212), (79, 39356), (89, 39566),

Gene: LilyLou_39 Start: 38251, Stop: 39210, Start Num: 28
Candidate Starts for LilyLou_39:
(Start: 28 @38251 has 48 MA's), (38, 38425), (44, 38500), (48, 38524), (50, 38530), (60, 38674), (62, 38683), (69, 38758), (89, 39160), (90, 39196),

Gene: Mazun_40 Start: 40886, Stop: 41857, Start Num: 28
Candidate Starts for Mazun_40:

(Start: 28 @40886 has 48 MA's), (34, 40934), (49, 41147), (51, 41168), (63, 41312), (64, 41336), (68, 41372), (84, 41717), (86, 41780), (89, 41807),

Gene: MiamiPanther_39 Start: 39685, Stop: 40626, Start Num: 29
Candidate Starts for MiamiPanther_39:
(Start: 29 @39685 has 5 MA's), (39, 39829), (41, 39871), (46, 39910), (48, 39925), (62, 40081), (70, 40171), (88, 40573), (89, 40576),

Gene: Moleficent_39 Start: 40571, Stop: 41518, Start Num: 28
Candidate Starts for Moleficent_39:
(Start: 28 @40571 has 48 MA's), (34, 40619), (40, 40739), (49, 40832), (51, 40853), (63, 40997), (69, 41063), (73, 41114), (79, 41258), (89, 41468),

Gene: Morrill_37 Start: 39963, Stop: 40910, Start Num: 28
Candidate Starts for Morrill_37:
(13, 39858), (14, 39861), (16, 39870), (19, 39894), (20, 39897), (23, 39909), (Start: 27 @39939 has 1 MA's), (Start: 28 @39963 has 48 MA's), (34, 40011), (49, 40224), (51, 40245), (57, 40329), (63, 40389), (69, 40455), (73, 40506), (79, 40650), (89, 40860),

Gene: Oatly_39 Start: 37849, Stop: 38709, Start Num: 28
Candidate Starts for Oatly_39:
(1, 37534), (3, 37603), (4, 37630), (5, 37675), (7, 37690), (15, 37750), (17, 37756), (18, 37759), (21, 37789), (22, 37792), (24, 37798), (25, 37801), (26, 37816), (Start: 28 @37849 has 48 MA's), (32, 37882), (36, 37987), (37, 38005), (45, 38089), (53, 38155), (56, 38203), (60, 38257), (62, 38266),

Gene: Pabst_37 Start: 37910, Stop: 38773, Start Num: 28
Candidate Starts for Pabst_37:
(2, 37643), (3, 37670), (4, 37697), (11, 37784), (17, 37823), (18, 37826), (21, 37856), (25, 37868), (Start: 28 @37910 has 48 MA's), (44, 38144), (50, 38174), (56, 38264), (60, 38318), (62, 38327), (65, 38366), (72, 38432), (74, 38498),

Gene: Pharky_39 Start: 40567, Stop: 41514, Start Num: 28
Candidate Starts for Pharky_39:
(Start: 28 @40567 has 48 MA's), (34, 40615), (49, 40828), (51, 40849), (63, 40993), (69, 41059), (73, 41110), (79, 41254), (89, 41464),

Gene: Phedro_39 Start: 40567, Stop: 41514, Start Num: 28
Candidate Starts for Phedro_39:
(Start: 28 @40567 has 48 MA's), (34, 40615), (49, 40828), (51, 40849), (63, 40993), (69, 41059), (73, 41110), (79, 41254), (89, 41464),

Gene: Phogo_38 Start: 38073, Stop: 39038, Start Num: 28
Candidate Starts for Phogo_38:
(Start: 28 @38073 has 48 MA's), (38, 38247), (44, 38322), (48, 38346), (50, 38352), (51, 38370), (59, 38475), (60, 38496), (62, 38505), (69, 38586), (89, 38988), (90, 39024),

Gene: Phractured_39 Start: 40567, Stop: 41514, Start Num: 28
Candidate Starts for Phractured_39:
(Start: 28 @40567 has 48 MA's), (34, 40615), (49, 40828), (51, 40849), (63, 40993), (69, 41059), (73, 41110), (79, 41254), (89, 41464),

Gene: PhriedRice_40 Start: 40671, Stop: 41618, Start Num: 28
Candidate Starts for PhriedRice_40:

(Start: 28 @40671 has 48 MA's), (34, 40719), (49, 40932), (51, 40953), (63, 41097), (69, 41163), (73, 41214), (79, 41358), (89, 41568),

Gene: PineapplePluto_40 Start: 38211, Stop: 39071, Start Num: 28
Candidate Starts for PineapplePluto_40:
(1, 37896), (3, 37965), (4, 37992), (5, 38037), (7, 38052), (15, 38112), (17, 38118), (18, 38121), (21, 38151), (22, 38154), (24, 38160), (25, 38163), (26, 38178), (Start: 28 @38211 has 48 MA's), (32, 38244), (36, 38349), (37, 38367), (45, 38451), (53, 38517), (56, 38565), (60, 38619), (62, 38628),

Gene: RicoCaldo_39 Start: 40649, Stop: 41596, Start Num: 28
Candidate Starts for RicoCaldo_39:
(Start: 28 @40649 has 48 MA's), (34, 40697), (49, 40910), (51, 40931), (63, 41075), (69, 41141), (73, 41192), (79, 41336), (89, 41546),

Gene: Salvatore2000_38 Start: 39685, Stop: 40626, Start Num: 29
Candidate Starts for Salvatore2000_38:
(Start: 29 @39685 has 5 MA's), (39, 39829), (41, 39871), (48, 39925), (62, 40081), (69, 40147), (88, 40573), (89, 40576),

Gene: ShyRosie_39 Start: 40647, Stop: 41618, Start Num: 28
Candidate Starts for ShyRosie_39:
(Start: 28 @40647 has 48 MA's), (49, 40908), (51, 40929), (63, 41073), (64, 41097), (68, 41133), (84, 41478), (86, 41541), (89, 41568),

Gene: SoilSleuth_41 Start: 40469, Stop: 41440, Start Num: 28
Candidate Starts for SoilSleuth_41:
(Start: 28 @40469 has 48 MA's), (49, 40730), (51, 40751), (63, 40895), (64, 40919), (68, 40955), (84, 41300), (86, 41363), (89, 41390),

Gene: Sorvannah_38 Start: 39685, Stop: 40626, Start Num: 29
Candidate Starts for Sorvannah_38:
(Start: 29 @39685 has 5 MA's), (39, 39829), (41, 39871), (48, 39925), (62, 40081), (69, 40147), (88, 40573), (89, 40576),

Gene: StagePhright_39 Start: 40567, Stop: 41514, Start Num: 28
Candidate Starts for StagePhright_39:
(Start: 28 @40567 has 48 MA's), (34, 40615), (49, 40828), (51, 40849), (63, 40993), (69, 41059), (73, 41110), (79, 41254), (89, 41464),

Gene: Stormbreaker_38 Start: 38167, Stop: 39126, Start Num: 28
Candidate Starts for Stormbreaker_38:
(Start: 28 @38167 has 48 MA's), (38, 38341), (44, 38416), (48, 38440), (50, 38446), (60, 38590), (62, 38599), (69, 38674), (89, 39076), (90, 39112),

Gene: SwissCheezer_37 Start: 37813, Stop: 38778, Start Num: 28
Candidate Starts for SwissCheezer_37:
(Start: 28 @37813 has 48 MA's), (38, 37987), (50, 38092), (60, 38236), (62, 38245), (69, 38326), (89, 38728), (90, 38764),

Gene: ThirteenKH_39 Start: 40021, Stop: 40920, Start Num: 34
Candidate Starts for ThirteenKH_39:
(Start: 27 @39949 has 1 MA's), (Start: 28 @39973 has 48 MA's), (34, 40021), (49, 40234), (51, 40255), (63, 40399), (69, 40465), (73, 40516), (79, 40660), (89, 40870),

Gene: TicTac_39 Start: 38210, Stop: 39070, Start Num: 28
Candidate Starts for TicTac_39:
(1, 37895), (3, 37964), (4, 37991), (5, 38036), (7, 38051), (9, 38066), (15, 38111), (17, 38117), (18, 38120), (21, 38150), (22, 38153), (24, 38159), (25, 38162), (26, 38177), (Start: 28 @38210 has 48 MA's), (32, 38243), (36, 38348), (37, 38366), (45, 38450), (53, 38516), (56, 38564), (60, 38618), (62, 38627),

Gene: TinyTimothy_37 Start: 39685, Stop: 40626, Start Num: 29
Candidate Starts for TinyTimothy_37:
(Start: 29 @39685 has 5 MA's), (39, 39829), (41, 39871), (48, 39925), (62, 40081), (88, 40573), (89, 40576),

Gene: TownLake_36 Start: 37938, Stop: 38906, Start Num: 28
Candidate Starts for TownLake_36:
(Start: 28 @37938 has 48 MA's), (38, 38112), (44, 38187), (47, 38208), (48, 38211), (50, 38217), (59, 38340), (60, 38361), (62, 38370), (79, 38646), (89, 38856),

Gene: TrippleS_38 Start: 40121, Stop: 41068, Start Num: 28
Candidate Starts for TrippleS_38:
(6, 39956), (8, 39974), (12, 39992), (13, 40016), (14, 40019), (16, 40028), (23, 40067), (Start: 28 @40121 has 48 MA's), (34, 40169), (49, 40382), (51, 40403), (57, 40487), (63, 40547), (69, 40613), (73, 40664), (79, 40808), (89, 41018),

Gene: Truong_39 Start: 40427, Stop: 41398, Start Num: 28
Candidate Starts for Truong_39:
(Start: 28 @40427 has 48 MA's), (49, 40688), (51, 40709), (63, 40853), (64, 40877), (68, 40913), (84, 41258), (86, 41321), (89, 41348),

Gene: Unphazed_38 Start: 38043, Stop: 39002, Start Num: 28
Candidate Starts for Unphazed_38:
(Start: 28 @38043 has 48 MA's), (38, 38217), (50, 38322), (60, 38466), (62, 38475), (69, 38550), (89, 38952), (90, 38988),

Gene: ValentiniPuff_75 Start: 42759, Stop: 43736, Start Num: 31
Candidate Starts for ValentiniPuff_75:
(Start: 31 @42759 has 1 MA's), (52, 43047), (54, 43068), (56, 43107), (66, 43230), (67, 43239), (71, 43281), (75, 43347), (80, 43473), (83, 43542), (87, 43662), (88, 43674), (89, 43677),

Gene: Waterlily_42 Start: 40681, Stop: 41652, Start Num: 28
Candidate Starts for Waterlily_42:
(Start: 28 @40681 has 48 MA's), (49, 40942), (51, 40963), (63, 41107), (64, 41131), (68, 41167), (84, 41512), (86, 41575), (89, 41602),

Gene: Wesak_38 Start: 39527, Stop: 40468, Start Num: 29
Candidate Starts for Wesak_38:
(Start: 29 @39527 has 5 MA's), (39, 39671), (41, 39713), (48, 39767), (62, 39923), (69, 39989), (88, 40415), (89, 40418),

Gene: Xitlalli_36 Start: 38035, Stop: 39003, Start Num: 28
Candidate Starts for Xitlalli_36:
(Start: 28 @38035 has 48 MA's), (38, 38209), (44, 38284), (48, 38308), (50, 38314), (59, 38437), (60, 38458), (62, 38467), (79, 38743), (89, 38953),

Gene: Yafa_40 Start: 39925, Stop: 40824, Start Num: 34
Candidate Starts for Yafa_40:
(Start: 27 @39853 has 1 MA's), (Start: 28 @39877 has 48 MA's), (34, 39925), (49, 40138), (51, 40159), (63, 40303), (69, 40369), (73, 40420), (79, 40564), (89, 40774),

Gene: YellowPanda_40 Start: 39408, Stop: 40349, Start Num: 29
Candidate Starts for YellowPanda_40:
(Start: 29 @39408 has 5 MA's), (39, 39552), (41, 39594), (48, 39648), (62, 39804), (88, 40296), (89, 40299),

Gene: Zhengyi_38 Start: 41630, Stop: 42598, Start Num: 28
Candidate Starts for Zhengyi_38:
(Start: 28 @41630 has 48 MA's), (42, 41846), (50, 41894), (63, 42056), (89, 42548),