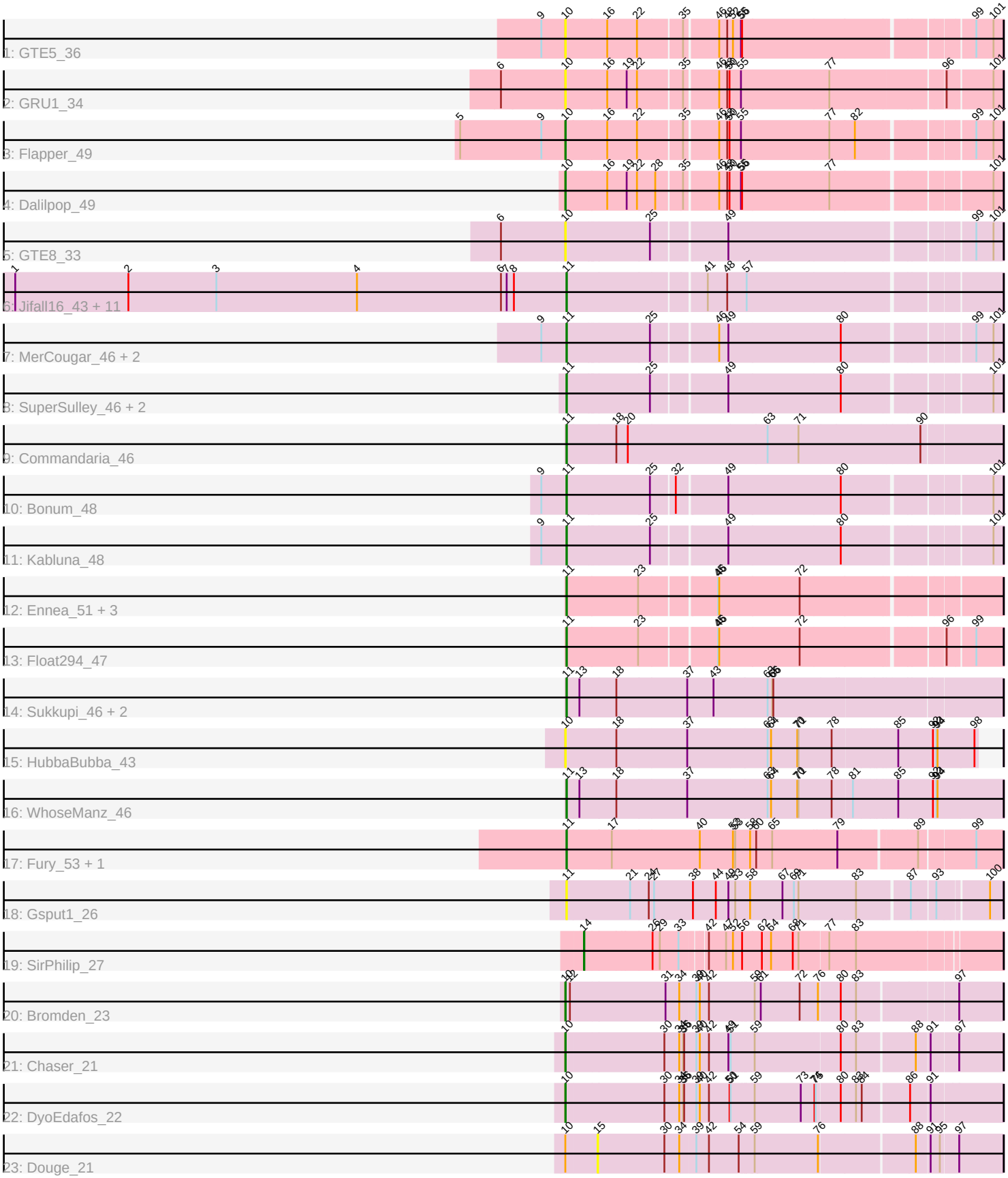
# Pham 163711


1: GTE5_36
2: GRU1_34
3: Flapper_49
4: Dalilpop_49
5: GTE8_33
6: Jifall16_43 + 11
7: MerCougar_46 + 2
8: SuperSulley_46 + 2
9: Commandaria_46
10: Bonum_48
11: Kabluna_48
12: Ennea_51 + 3
13: Float294_47
14: Sukkupi_46 + 2
15: HubbaBubba_43
16: WhoseManz_46
17: Fury_53 + 1
18: Gsput1_26
19: SirPhilip_27
20: Bromden_23
21: Chaser_21
22: DyoEdafos_22
23: Douge_21

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 163711 Report

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

Pham number 163711 has 44 members, 7 are drafts.

Phages represented in each track:
• Track 1 : GTE5_36
• Track 2 : GRU1_34
• Track 3 : Flapper_49
• Track 4 : Dalilpop_49
• Track 5 : GTE8_33
• Track 6 : Jifall16_43, Tracker_44, Arti_44, Foxboro_45, Phomeo_43, Emianna_44, Kurt_44, NatB6_44, Wheezy_44, GrootJr_46, KidneyBean_44, NovumRegina_44
• Track 7 : MerCougar_46, StarStruck_46, Outis_46
• Track 8 : SuperSulley_46, NosilaM_48, Buggaboo_46
• Track 9 : Commandaria_46
• Track 10 : Bonum_48
• Track 11 : Kabluna_48
• Track 12 : Ennea_51, Patio_48, Skysand_47, Lollipop1437_50
• Track 13 : Float294_47
• Track 14 : Sukkupi_46, Yndexa_46, BiPauneto_47
• Track 15 : HubbaBubba_43
• Track 16 : WhoseManz_46
• Track 17 : Fury_53, Pleakley_53
• Track 18 : Gsput1_26
• Track 19 : SirPhilip_27
• Track 20 : Bromden_23
• Track 21 : Chaser_21
• Track 22 : DyoEdafos_22
• Track 23 : Douge_21

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

The start number called the most often in the published annotations is 11, it was called in 31 of the 37 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Arti_44, BiPauneto_47, Bonum_48, Buggaboo_46, Commandaria_46, Emianna_44, Ennea_51, Float294_47, Foxboro_45, Fury_53, GrootJr_46, Gsput1_26, Jifall16_43, Kabluna_48, KidneyBean_44, Kurt_44, Lollipop1437_50, MerCougar_46, NatB6_44,

NosilaM_48, NovumRegina_44, Outis_46, Patio_48, Phomeo_43, Pleakley_53, Skysand_47, StarStruck_46, Sukkupi_46, SuperSulley_46, Tracker_44, Wheezy_44, WhoseManz_46, Yndexa_46,

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

Genes that do not have the "Most Annotated" start:
• Bromden_23, Chaser_21, Dalilpop_49, Douge_21, DyoEdafos_22, Flapper_49, GRU1_34, GTE5_36, GTE8_33, HubbaBubba_43, SirPhilip_27,

**Summary by start number:**

Start 10:
• Found in 10 of 44 ( 22.7% ) of genes in pham
• Manual Annotations of this start: 5 of 37
• Called 90.0% of time when present
• Phage (with cluster) where this start called: Bromden_23 (L4), Chaser_21 (L4), Dalilpop_49 (CR1), DyoEdafos_22 (L4), Flapper_49 (CR1), GRU1_34 (CR1), GTE5_36 (CR1), GTE8_33 (CR2), HubbaBubba_43 (CR4),

Start 11:
• Found in 33 of 44 ( 75.0% ) of genes in pham
• Manual Annotations of this start: 31 of 37
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Arti_44 (CR2), BiPauneto_47 (CR4), Bonum_48 (CR2), Buggaboo_46 (CR2), Commandaria_46 (CR2), Emianna_44 (CR2), Ennea_51 (CR3), Float294_47 (CR3), Foxboro_45 (CR2), Fury_53 (CR5), GrootJr_46 (CR2), Gsput1_26 (CU2), Jifall16_43 (CR2), Kabluna_48 (CR2), KidneyBean_44 (CR2), Kurt_44 (CR2), Lollipop1437_50 (CR3), MerCougar_46 (CR2), NatB6_44 (CR2), NosilaM_48 (CR2), NovumRegina_44 (CR2), Outis_46 (CR2), Patio_48 (CR3), Phomeo_43 (CR2), Pleakley_53 (CR5), Skysand_47 (CR3), StarStruck_46 (CR2), Sukkupi_46 (CR4), SuperSulley_46 (CR2), Tracker_44 (CR2), Wheezy_44 (CR2), WhoseManz_46 (CR4), Yndexa_46 (CR4),

Start 14:
• Found in 1 of 44 ( 2.3% ) of genes in pham
• Manual Annotations of this start: 1 of 37
• Called 100.0% of time when present
• Phage (with cluster) where this start called: SirPhilip_27 (K6),

Start 15:
• Found in 1 of 44 ( 2.3% ) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Douge_21 (L4),

**Summary by clusters:**

There are 8 clusters represented in this pham: CR2, CR3, CR1, CU2, CR4, CR5, L4, K6,

Info for manual annotations of cluster CR1:

•Start number 10 was manually annotated 2 times for cluster CR1.

Info for manual annotations of cluster CR2:
•Start number 11 was manually annotated 20 times for cluster CR2.

Info for manual annotations of cluster CR3:
•Start number 11 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:
•Start number 11 was manually annotated 4 times for cluster CR4.

Info for manual annotations of cluster CR5:
•Start number 11 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster K6:
•Start number 14 was manually annotated 1 time for cluster K6.

Info for manual annotations of cluster L4:
•Start number 10 was manually annotated 3 times for cluster L4.

### *Gene Information:*

Gene: Arti_44 Start: 34961, Stop: 36019, Start Num: 11
Candidate Starts for Arti_44:
(1, 33521), (2, 33818), (3, 34049), (4, 34418), (6, 34796), (7, 34811), (8, 34829), (Start: 11 @34961 has 31 MA's), (41, 35306), (48, 35357), (57, 35405),

Gene: BiPauneto_47 Start: 34721, Stop: 35812, Start Num: 11
Candidate Starts for BiPauneto_47:
(Start: 11 @34721 has 31 MA's), (13, 34754), (18, 34850), (37, 35033), (43, 35102), (63, 35240), (65, 35252), (66, 35255),

Gene: Bonum_48 Start: 35639, Stop: 36694, Start Num: 11
Candidate Starts for Bonum_48:
(9, 35576), (Start: 11 @35639 has 31 MA's), (25, 35852), (32, 35909), (49, 36035), (80, 36323), (101, 36668),

Gene: Bromden_23 Start: 22120, Stop: 23205, Start Num: 10
Candidate Starts for Bromden_23:
(Start: 10 @22120 has 5 MA's), (12, 22132), (31, 22375), (34, 22411), (39, 22450), (40, 22459), (42, 22483), (59, 22594), (61, 22609), (72, 22711), (76, 22756), (80, 22810), (83, 22849), (97, 23092),

Gene: Buggaboo_46 Start: 36118, Stop: 37173, Start Num: 11
Candidate Starts for Buggaboo_46:
(Start: 11 @36118 has 31 MA's), (25, 36331), (49, 36514), (80, 36802), (101, 37147),

Gene: Chaser_21 Start: 21531, Stop: 22616, Start Num: 10
Candidate Starts for Chaser_21:
(Start: 10 @21531 has 5 MA's), (30, 21783), (34, 21822), (35, 21831), (36, 21834), (39, 21861), (40, 21870), (42, 21894), (49, 21945), (51, 21951), (59, 22005), (80, 22221), (83, 22260), (88, 22401), (91,

22434), (97, 22503),

Gene: Commandaria_46 Start: 36317, Stop: 37420, Start Num: 11
Candidate Starts for Commandaria_46:
(Start: 11 @36317 has 31 MA's), (18, 36446), (20, 36476), (63, 36836), (71, 36917), (90, 37220),

Gene: Dalilpop_49 Start: 37250, Stop: 38311, Start Num: 10
Candidate Starts for Dalilpop_49:
(Start: 10 @37250 has 5 MA's), (16, 37358), (19, 37409), (22, 37436), (28, 37481), (35, 37544), (46, 37628), (48, 37649), (50, 37655), (55, 37682), (56, 37685), (77, 37910), (101, 38285),

Gene: Douge_21 Start: 21547, Stop: 22554, Start Num: 15
Candidate Starts for Douge_21:
(Start: 10 @21469 has 5 MA's), (15, 21547), (30, 21721), (34, 21760), (39, 21799), (42, 21832), (54, 21910), (59, 21943), (76, 22105), (88, 22339), (91, 22372), (95, 22396), (97, 22441),

Gene: DyoEdafos_22 Start: 21679, Stop: 22761, Start Num: 10
Candidate Starts for DyoEdafos_22:
(Start: 10 @21679 has 5 MA's), (30, 21931), (34, 21970), (35, 21979), (36, 21982), (39, 22009), (40, 22018), (42, 22042), (50, 22096), (51, 22099), (59, 22153), (73, 22273), (74, 22306), (75, 22309), (80, 22369), (83, 22408), (84, 22423), (86, 22534), (91, 22582),

Gene: Emianna_44 Start: 35974, Stop: 37032, Start Num: 11
Candidate Starts for Emianna_44:
(1, 34534), (2, 34831), (3, 35062), (4, 35431), (6, 35809), (7, 35824), (8, 35842), (Start: 11 @35974 has 31 MA's), (41, 36319), (48, 36370), (57, 36418),

Gene: Ennea_51 Start: 36974, Stop: 38035, Start Num: 11
Candidate Starts for Ennea_51:
(Start: 11 @36974 has 31 MA's), (23, 37160), (45, 37346), (46, 37349), (72, 37559),

Gene: Flapper_49 Start: 36682, Stop: 37743, Start Num: 10
Candidate Starts for Flapper_49:
(5, 36406), (9, 36619), (Start: 10 @36682 has 5 MA's), (16, 36790), (22, 36868), (35, 36976), (46, 37060), (48, 37081), (50, 37087), (55, 37114), (77, 37342), (82, 37408), (99, 37672), (101, 37717),

Gene: Float294_47 Start: 36416, Stop: 37477, Start Num: 11
Candidate Starts for Float294_47:
(Start: 11 @36416 has 31 MA's), (23, 36602), (45, 36788), (46, 36791), (72, 37001), (96, 37340), (99, 37406),

Gene: Foxboro_45 Start: 36480, Stop: 37538, Start Num: 11
Candidate Starts for Foxboro_45:
(1, 35040), (2, 35337), (3, 35568), (4, 35937), (6, 36315), (7, 36330), (8, 36348), (Start: 11 @36480 has 31 MA's), (41, 36825), (48, 36876), (57, 36924),

Gene: Fury_53 Start: 35397, Stop: 36479, Start Num: 11
Candidate Starts for Fury_53:
(Start: 11 @35397 has 31 MA's), (17, 35514), (40, 35742), (52, 35826), (53, 35832), (58, 35871), (60, 35886), (65, 35928), (79, 36093), (89, 36273), (99, 36411),

Gene: GRU1_34 Start: 28214, Stop: 29290, Start Num: 10
Candidate Starts for GRU1_34:

(6, 28052), (Start: 10 @28214 has 5 MA's), (16, 28322), (19, 28373), (22, 28400), (35, 28508), (46, 28592), (48, 28613), (50, 28619), (55, 28646), (77, 28874), (96, 29153), (101, 29264),

Gene: GTE5_36 Start: 29539, Stop: 30600, Start Num: 10
Candidate Starts for GTE5_36:
(9, 29476), (Start: 10 @29539 has 5 MA's), (16, 29647), (22, 29725), (35, 29833), (46, 29917), (48, 29938), (52, 29950), (55, 29971), (56, 29974), (99, 30529), (101, 30574),

Gene: GTE8_33 Start: 29229, Stop: 30287, Start Num: 10
Candidate Starts for GTE8_33:
(6, 29067), (Start: 10 @29229 has 5 MA's), (25, 29445), (49, 29628), (99, 30216), (101, 30261),

Gene: GrootJr_46 Start: 35356, Stop: 36414, Start Num: 11
Candidate Starts for GrootJr_46:
(1, 33916), (2, 34213), (3, 34444), (4, 34813), (6, 35191), (7, 35206), (8, 35224), (Start: 11 @35356 has 31 MA's), (41, 35701), (48, 35752), (57, 35800),

Gene: Gsput1_26 Start: 21693, Stop: 22775, Start Num: 11
Candidate Starts for Gsput1_26:
(Start: 11 @21693 has 31 MA's), (21, 21855), (24, 21903), (27, 21915), (38, 22017), (44, 22077), (49, 22110), (53, 22125), (58, 22164), (67, 22248), (69, 22278), (71, 22290), (83, 22437), (87, 22563), (93, 22620), (100, 22743),

Gene: HubbaBubba_43 Start: 31720, Stop: 32760, Start Num: 10
Candidate Starts for HubbaBubba_43:
(Start: 10 @31720 has 5 MA's), (18, 31852), (37, 32035), (63, 32242), (64, 32251), (70, 32320), (71, 32323), (78, 32407), (85, 32560), (92, 32644), (93, 32653), (94, 32656), (98, 32752),

Gene: Jifall16_43 Start: 35628, Stop: 36686, Start Num: 11
Candidate Starts for Jifall16_43:
(1, 34188), (2, 34485), (3, 34716), (4, 35085), (6, 35463), (7, 35478), (8, 35496), (Start: 11 @35628 has 31 MA's), (41, 35973), (48, 36024), (57, 36072),

Gene: Kabluna_48 Start: 35054, Stop: 36109, Start Num: 11
Candidate Starts for Kabluna_48:
(9, 34991), (Start: 11 @35054 has 31 MA's), (25, 35267), (49, 35450), (80, 35738), (101, 36083),

Gene: KidneyBean_44 Start: 35752, Stop: 36810, Start Num: 11
Candidate Starts for KidneyBean_44:
(1, 34312), (2, 34609), (3, 34840), (4, 35209), (6, 35587), (7, 35602), (8, 35620), (Start: 11 @35752 has 31 MA's), (41, 36097), (48, 36148), (57, 36196),

Gene: Kurt_44 Start: 35989, Stop: 37047, Start Num: 11
Candidate Starts for Kurt_44:
(1, 34549), (2, 34846), (3, 35077), (4, 35446), (6, 35824), (7, 35839), (8, 35857), (Start: 11 @35989 has 31 MA's), (41, 36334), (48, 36385), (57, 36433),

Gene: Lollipop1437_50 Start: 36962, Stop: 38023, Start Num: 11
Candidate Starts for Lollipop1437_50:
(Start: 11 @36962 has 31 MA's), (23, 37148), (45, 37334), (46, 37337), (72, 37547),

Gene: MerCougar_46 Start: 36238, Stop: 37293, Start Num: 11
Candidate Starts for MerCougar_46:

(9, 36175), (Start: 11 @36238 has 31 MA's), (25, 36451), (46, 36610), (49, 36634), (80, 36922), (99, 37222), (101, 37267),

Gene: NatB6_44 Start: 35025, Stop: 36083, Start Num: 11
Candidate Starts for NatB6_44:
(1, 33585), (2, 33882), (3, 34113), (4, 34482), (6, 34860), (7, 34875), (8, 34893), (Start: 11 @35025 has 31 MA's), (41, 35370), (48, 35421), (57, 35469),

Gene: NosilaM_48 Start: 35951, Stop: 37006, Start Num: 11
Candidate Starts for NosilaM_48:
(Start: 11 @35951 has 31 MA's), (25, 36164), (49, 36347), (80, 36635), (101, 36980),

Gene: NovumRegina_44 Start: 35355, Stop: 36413, Start Num: 11
Candidate Starts for NovumRegina_44:
(1, 33915), (2, 34212), (3, 34443), (4, 34812), (6, 35190), (7, 35205), (8, 35223), (Start: 11 @35355 has 31 MA's), (41, 35700), (48, 35751), (57, 35799),

Gene: Outis_46 Start: 35932, Stop: 36987, Start Num: 11
Candidate Starts for Outis_46:
(9, 35869), (Start: 11 @35932 has 31 MA's), (25, 36145), (46, 36304), (49, 36328), (80, 36616), (99, 36916), (101, 36961),

Gene: Patio_48 Start: 36198, Stop: 37259, Start Num: 11
Candidate Starts for Patio_48:
(Start: 11 @36198 has 31 MA's), (23, 36384), (45, 36570), (46, 36573), (72, 36783),

Gene: Phomeo_43 Start: 35624, Stop: 36682, Start Num: 11
Candidate Starts for Phomeo_43:
(1, 34184), (2, 34481), (3, 34712), (4, 35081), (6, 35459), (7, 35474), (8, 35492), (Start: 11 @35624 has 31 MA's), (41, 35969), (48, 36020), (57, 36068),

Gene: Pleakley_53 Start: 35398, Stop: 36480, Start Num: 11
Candidate Starts for Pleakley_53:
(Start: 11 @35398 has 31 MA's), (17, 35515), (40, 35743), (52, 35827), (53, 35833), (58, 35872), (60, 35887), (65, 35929), (79, 36094), (89, 36274), (99, 36412),

Gene: SirPhilip_27 Start: 22229, Stop: 23257, Start Num: 14
Candidate Starts for SirPhilip_27:
(Start: 14 @22229 has 1 MA's), (26, 22400), (29, 22418), (33, 22466), (42, 22526), (47, 22568), (52, 22586), (56, 22610), (62, 22661), (64, 22685), (68, 22742), (71, 22757), (77, 22829), (83, 22898),

Gene: Skysand_47 Start: 36418, Stop: 37479, Start Num: 11
Candidate Starts for Skysand_47:
(Start: 11 @36418 has 31 MA's), (23, 36604), (45, 36790), (46, 36793), (72, 37003),

Gene: StarStruck_46 Start: 35932, Stop: 36987, Start Num: 11
Candidate Starts for StarStruck_46:
(9, 35869), (Start: 11 @35932 has 31 MA's), (25, 36145), (46, 36304), (49, 36328), (80, 36616), (99, 36916), (101, 36961),

Gene: Sukkupi_46 Start: 34612, Stop: 35703, Start Num: 11
Candidate Starts for Sukkupi_46:

(Start: 11 @34612 has 31 MA's), (13, 34645), (18, 34741), (37, 34924), (43, 34993), (63, 35131), (65, 35143), (66, 35146),

Gene: SuperSulley_46 Start: 36118, Stop: 37173, Start Num: 11
Candidate Starts for SuperSulley_46:
(Start: 11 @36118 has 31 MA's), (25, 36331), (49, 36514), (80, 36802), (101, 37147),

Gene: Tracker_44 Start: 34752, Stop: 35810, Start Num: 11
Candidate Starts for Tracker_44:
(1, 33312), (2, 33609), (3, 33840), (4, 34209), (6, 34587), (7, 34602), (8, 34620), (Start: 11 @34752 has 31 MA's), (41, 35097), (48, 35148), (57, 35196),

Gene: Wheezy_44 Start: 34957, Stop: 36015, Start Num: 11
Candidate Starts for Wheezy_44:
(1, 33517), (2, 33814), (3, 34045), (4, 34414), (6, 34792), (7, 34807), (8, 34825), (Start: 11 @34957 has 31 MA's), (41, 35302), (48, 35353), (57, 35401),

Gene: WhoseManz_46 Start: 32658, Stop: 33761, Start Num: 11
Candidate Starts for WhoseManz_46:
(Start: 11 @32658 has 31 MA's), (13, 32691), (18, 32787), (37, 32970), (63, 33177), (64, 33186), (70, 33255), (71, 33258), (78, 33342), (81, 33393), (85, 33495), (92, 33579), (93, 33588), (94, 33591),

Gene: Yndexa_46 Start: 34612, Stop: 35703, Start Num: 11
Candidate Starts for Yndexa_46:
(Start: 11 @34612 has 31 MA's), (13, 34645), (18, 34741), (37, 34924), (43, 34993), (63, 35131), (65, 35143), (66, 35146),