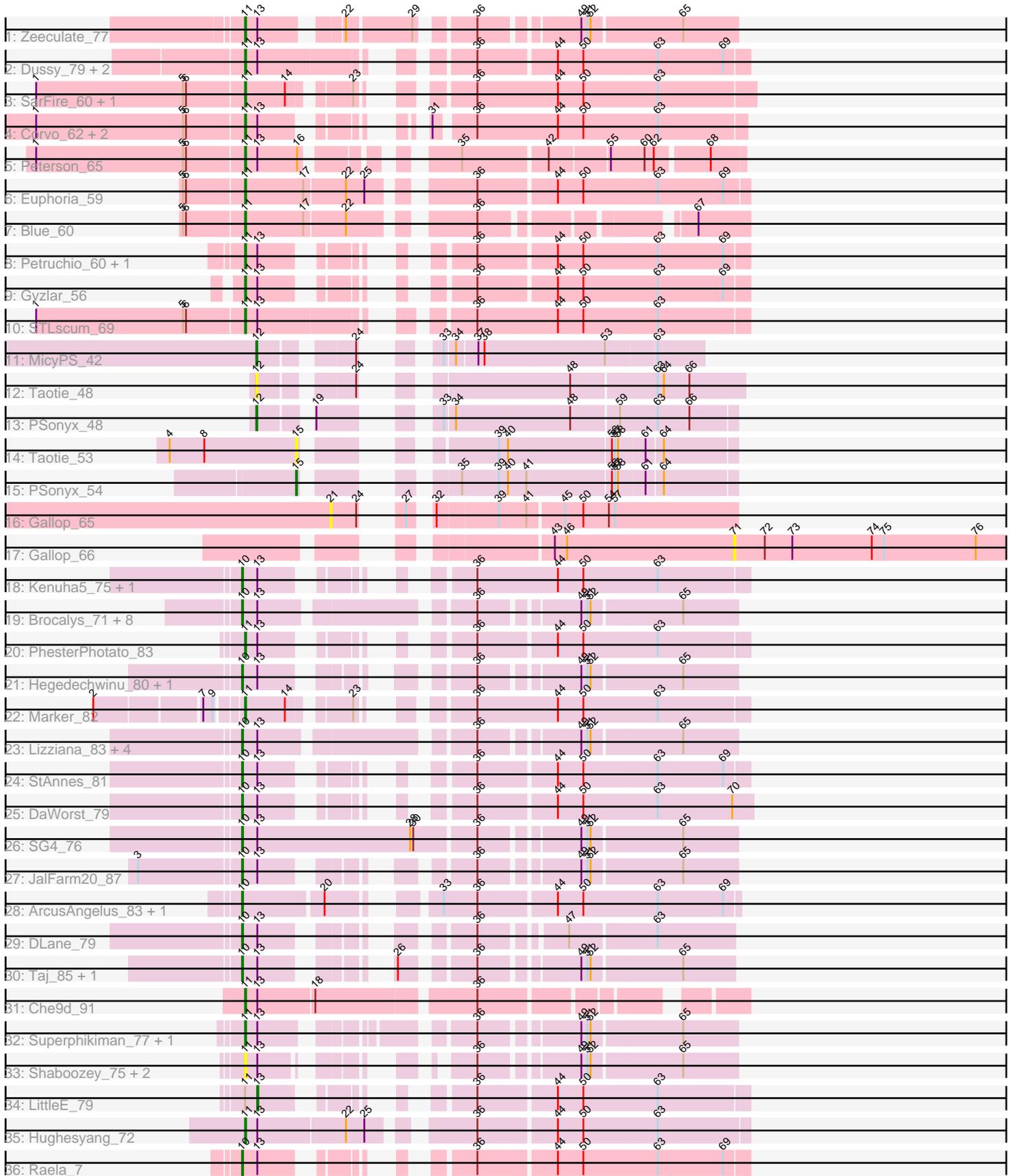


Pham 291179



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 291179 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291179 has 61 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Zeeculate_77
- Track 2 : Dussy_79, Kenmech_82, Abbyshoes_80
- Track 3 : SarFire_60, Thor_60
- Track 4 : Corvo_62, MetalQZJ_58, MaryBeth_59
- Track 5 : Peterson_65
- Track 6 : Euphoria_59
- Track 7 : Blue_60
- Track 8 : Petruccio_60, Simpliphy_43
- Track 9 : Gyzlar_56
- Track 10 : STLscum_69
- Track 11 : MicyPS_42
- Track 12 : Taotie_48
- Track 13 : PSonyx_48
- Track 14 : Taotie_53
- Track 15 : PSonyx_54
- Track 16 : Gallop_65
- Track 17 : Gallop_66
- Track 18 : Kenuha5_75, Gandalph_77
- Track 19 : Brocalys_71, Koella_70, Priscilla_76, Cabrinians_78, LastJedi_70, BobaPhett_81, FreddyB_88, NormanBulbieJr_75, SwagPiggett_82
- Track 20 : PhesterPhotato_83
- Track 21 : Hegedechwinu_80, Crumble_76
- Track 22 : Marker_82
- Track 23 : Lizziana_83, Flathead_78, Donkeykong_83, Saal_78, Gorge_80
- Track 24 : StAnnes_81
- Track 25 : DaWorst_79
- Track 26 : SG4_76
- Track 27 : JalFarm20_87
- Track 28 : ArcusAngelus_83, Chevrolet_86
- Track 29 : DLane_79
- Track 30 : Taj_85, Wee_84
- Track 31 : Che9d_91
- Track 32 : Superphikiman_77, Lucky2013_77
- Track 33 : Shaboozey_75, Nibley_69, BronnyJames_76
- Track 34 : LittleE_79
- Track 35 : Hughesyang_72
- Track 36 : Raela_7

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

The start number called the most often in the published annotations is 10, it was called in 28 of the 54 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ArcusAngelus_83, BobaPhett_81, Brocalys_71, Cabrinians_78, Chevrolet_86, Crumble_76, DLane_79, DaWorst_79, Donkeykong_83, Flathead_78, FreddyB_88, Gandalph_77, Gorge_80, Hegedechwinu_80, JalFarm20_87, Kenuha5_75, Koella_70, LastJedi_70, Lizziana_83, NormanBulbieJr_75, Priscilla_76, Raela_7, SG4_76, Saal_78, StAnnes_81, SwagPiggett_82, Taj_85, Wee_84,

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

-

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

- Abbyshoes_80, Blue_60, BronnyJames_76, Che9d_91, Corvo_62, Dussy_79, Euphoria_59, Gallop_65, Gallop_66, Gyzlar_56, Hughesyang_72, Kenmech_82, LittleE_79, Lucky2013_77, Marker_82, MaryBeth_59, MetalQZJ_58, MicyPS_42, Nibley_69, PSonyx_48, PSonyx_54, Peterson_65, Petruccio_60, PhesterPhotato_83, STLscum_69, SarFire_60, Shaboozey_75, Simpliphy_43, Superphikiman_77, Taotie_48, Taotie_53, Thor_60, Zeeculate_77,

Summary by start number:

Start 10:

- Found in 28 of 61 (45.9%) of genes in pham
- Manual Annotations of this start: 28 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArcusAngelus_83 (F1), BobaPhett_81 (F1), Brocalys_71 (F1), Cabrinians_78 (F1), Chevrolet_86 (F1), Crumble_76 (F1), DLane_79 (F1), DaWorst_79 (F1), Donkeykong_83 (F1), Flathead_78 (F1), FreddyB_88 (F1), Gandalph_77 (F1), Gorge_80 (F1), Hegedechwinu_80 (F1), JalFarm20_87 (F1), Kenuha5_75 (F1), Koella_70 (F1), LastJedi_70 (F1), Lizziana_83 (F1), NormanBulbieJr_75 (F1), Priscilla_76 (F1), Raela_7 (S), SG4_76 (F1), Saal_78 (F1), StAnnes_81 (F1), SwagPiggett_82 (F1), Taj_85 (F1), Wee_84 (F1),

Start 11:

- Found in 26 of 61 (42.6%) of genes in pham
- Manual Annotations of this start: 22 of 54
- Called 96.2% of time when present
- Phage (with cluster) where this start called: Abbyshoes_80 (A1), Blue_60 (A1), BronnyJames_76 (J), Che9d_91 (F2), Corvo_62 (A1), Dussy_79 (A1), Euphoria_59 (A1), Gyzlar_56 (A1), Hughesyang_72 (J), Kenmech_82 (A1), Lucky2013_77 (J), Marker_82 (F1), MaryBeth_59 (A1), MetalQZJ_58 (A1), Nibley_69 (J), Peterson_65 (A1), Petruccio_60 (A1), PhesterPhotato_83 (F1), STLscum_69 (A1), SarFire_60 (A1), Shaboozey_75 (J), Simpliphy_43 (E), Superphikiman_77 (J), Thor_60 (A1), Zeeculate_77 (A1),

Start 12:

- Found in 3 of 61 (4.9%) of genes in pham
- Manual Annotations of this start: 2 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MicyPS_42 (EQ), PSonyx_48 (EQ), Taotie_48 (EQ),

Start 13:

- Found in 47 of 61 (77.0%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 2.1% of time when present
- Phage (with cluster) where this start called: LittleE_79 (J),

Start 15:

- Found in 2 of 61 (3.3%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PSonyx_54 (EQ), Taotie_53 (EQ),

Start 21:

- Found in 1 of 61 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gallop_65 (ES),

Start 71:

- Found in 1 of 61 (1.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gallop_66 (ES),

Summary by clusters:

There are 8 clusters represented in this pham: F1, F2, E, J, A1, S, EQ, ES,

Info for manual annotations of cluster A1:

- Start number 11 was manually annotated 15 times for cluster A1.

Info for manual annotations of cluster E:

- Start number 11 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster EQ:

- Start number 12 was manually annotated 2 times for cluster EQ.
- Start number 15 was manually annotated 1 time for cluster EQ.

Info for manual annotations of cluster F1:

- Start number 10 was manually annotated 27 times for cluster F1.
- Start number 11 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 11 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster J:

- Start number 11 was manually annotated 3 times for cluster J.
- Start number 13 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster S:

- Start number 10 was manually annotated 1 time for cluster S.

Gene Information:

Gene: Abbysshoes_80 Start: 47965, Stop: 47543, Start Num: 11

Candidate Starts for Abbysshoes_80:

(Start: 11 @47965 has 22 MA's), (Start: 13 @47953 has 1 MA's), (36, 47797), (44, 47725), (50, 47701), (63, 47629), (69, 47566),

Gene: ArcusAngelus_83 Start: 49676, Stop: 50101, Start Num: 10

Candidate Starts for ArcusAngelus_83:

(Start: 10 @49676 has 28 MA's), (20, 49751), (33, 49823), (36, 49856), (44, 49928), (50, 49952), (63, 50024), (69, 50087),

Gene: Blue_60 Start: 41591, Stop: 41178, Start Num: 11

Candidate Starts for Blue_60:

(5, 41648), (6, 41645), (Start: 11 @41591 has 22 MA's), (17, 41534), (22, 41495), (36, 41399), (67, 41228),

Gene: BobaPhett_81 Start: 50730, Stop: 51155, Start Num: 10

Candidate Starts for BobaPhett_81:

(Start: 10 @50730 has 28 MA's), (Start: 13 @50745 has 1 MA's), (36, 50925), (49, 51009), (51, 51015), (52, 51018), (65, 51102),

Gene: Brocalys_71 Start: 46210, Stop: 46635, Start Num: 10

Candidate Starts for Brocalys_71:

(Start: 10 @46210 has 28 MA's), (Start: 13 @46225 has 1 MA's), (36, 46405), (49, 46489), (51, 46495), (52, 46498), (65, 46582),

Gene: BronnyJames_76 Start: 47637, Stop: 47275, Start Num: 11

Candidate Starts for BronnyJames_76:

(Start: 11 @47637 has 22 MA's), (Start: 13 @47625 has 1 MA's), (36, 47505), (49, 47421), (51, 47415), (52, 47412), (65, 47328),

Gene: Cabrinians_78 Start: 48130, Stop: 48555, Start Num: 10

Candidate Starts for Cabrinians_78:

(Start: 10 @48130 has 28 MA's), (Start: 13 @48145 has 1 MA's), (36, 48325), (49, 48409), (51, 48415), (52, 48418), (65, 48502),

Gene: Che9d_91 Start: 48600, Stop: 49028, Start Num: 11

Candidate Starts for Che9d_91:

(Start: 11 @48600 has 22 MA's), (Start: 13 @48612 has 1 MA's), (18, 48666), (36, 48810),

Gene: Chevrolet_86 Start: 49677, Stop: 50102, Start Num: 10

Candidate Starts for Chevrolet_86:

(Start: 10 @49677 has 28 MA's), (20, 49752), (33, 49824), (36, 49857), (44, 49929), (50, 49953), (63, 50025), (69, 50088),

Gene: Corvo_62 Start: 41848, Stop: 41459, Start Num: 11

Candidate Starts for Corvo_62:

(1, 42049), (5, 41905), (6, 41902), (Start: 11 @41848 has 22 MA's), (Start: 13 @41836 has 1 MA's), (31, 41749), (36, 41716), (44, 41638), (50, 41614), (63, 41542),

Gene: Crumble_76 Start: 44855, Stop: 45280, Start Num: 10

Candidate Starts for Crumble_76:

(Start: 10 @44855 has 28 MA's), (Start: 13 @44870 has 1 MA's), (36, 45050), (49, 45134), (51, 45140), (52, 45143), (65, 45227),

Gene: DLane_79 Start: 49141, Stop: 49515, Start Num: 10

Candidate Starts for DLane_79:

(Start: 10 @49141 has 28 MA's), (Start: 13 @49156 has 1 MA's), (36, 49291), (47, 49360), (63, 49441),

Gene: DaWorst_79 Start: 47793, Stop: 48188, Start Num: 10

Candidate Starts for DaWorst_79:

(Start: 10 @47793 has 28 MA's), (Start: 13 @47808 has 1 MA's), (36, 47928), (44, 48000), (50, 48024), (63, 48096), (70, 48168),

Gene: Donkeykong_83 Start: 49734, Stop: 50111, Start Num: 10

Candidate Starts for Donkeykong_83:

(Start: 10 @49734 has 28 MA's), (Start: 13 @49749 has 1 MA's), (36, 49884), (49, 49968), (51, 49974), (52, 49977), (65, 50061),

Gene: Dussy_79 Start: 47985, Stop: 47563, Start Num: 11

Candidate Starts for Dussy_79:

(Start: 11 @47985 has 22 MA's), (Start: 13 @47973 has 1 MA's), (36, 47817), (44, 47745), (50, 47721), (63, 47649), (69, 47586),

Gene: Euphoria_59 Start: 40555, Stop: 40109, Start Num: 11

Candidate Starts for Euphoria_59:

(5, 40612), (6, 40609), (Start: 11 @40555 has 22 MA's), (17, 40498), (22, 40459), (25, 40441), (36, 40363), (44, 40291), (50, 40267), (63, 40195), (69, 40132),

Gene: Flathead_78 Start: 47777, Stop: 48157, Start Num: 10

Candidate Starts for Flathead_78:

(Start: 10 @47777 has 28 MA's), (Start: 13 @47792 has 1 MA's), (36, 47927), (49, 48011), (51, 48017), (52, 48020), (65, 48104),

Gene: FreddyB_88 Start: 49777, Stop: 50202, Start Num: 10

Candidate Starts for FreddyB_88:

(Start: 10 @49777 has 28 MA's), (Start: 13 @49792 has 1 MA's), (36, 49972), (49, 50056), (51, 50062), (52, 50065), (65, 50149),

Gene: Gallop_65 Start: 43534, Stop: 43866, Start Num: 21

Candidate Starts for Gallop_65:

(21, 43534), (24, 43558), (27, 43570), (32, 43582), (39, 43639), (41, 43666), (45, 43699), (50, 43717), (54, 43741), (57, 43747),

Gene: Gallop_66 Start: 43863, Stop: 44246, Start Num: 71

Candidate Starts for Gallop_66:

(43, 43689), (46, 43701), (71, 43863), (72, 43893), (73, 43920), (74, 43998), (75, 44010), (76, 44100),

Gene: Gandalph_77 Start: 45404, Stop: 45799, Start Num: 10

Candidate Starts for Gandalph_77:

(Start: 10 @45404 has 28 MA's), (Start: 13 @45419 has 1 MA's), (36, 45539), (44, 45617), (50, 45641), (63, 45713),

Gene: Gorge_80 Start: 49405, Stop: 49830, Start Num: 10

Candidate Starts for Gorge_80:

(Start: 10 @49405 has 28 MA's), (Start: 13 @49420 has 1 MA's), (36, 49600), (49, 49684), (51, 49690), (52, 49693), (65, 49777),

Gene: Gyzlar_56 Start: 38713, Stop: 38327, Start Num: 11

Candidate Starts for Gyzlar_56:

(Start: 11 @38713 has 22 MA's), (Start: 13 @38701 has 1 MA's), (36, 38581), (44, 38509), (50, 38485), (63, 38413), (69, 38350),

Gene: Hegedechwinu_80 Start: 46978, Stop: 47358, Start Num: 10

Candidate Starts for Hegedechwinu_80:

(Start: 10 @46978 has 28 MA's), (Start: 13 @46993 has 1 MA's), (36, 47128), (49, 47212), (51, 47218), (52, 47221), (65, 47305),

Gene: Hughesyang_72 Start: 50943, Stop: 50497, Start Num: 11

Candidate Starts for Hughesyang_72:

(Start: 11 @50943 has 22 MA's), (Start: 13 @50931 has 1 MA's), (22, 50847), (25, 50829), (36, 50751), (44, 50679), (50, 50655), (63, 50583),

Gene: JalFarm20_87 Start: 48995, Stop: 49375, Start Num: 10

Candidate Starts for JalFarm20_87:

(3, 48899), (Start: 10 @48995 has 28 MA's), (Start: 13 @49010 has 1 MA's), (36, 49145), (49, 49229), (51, 49235), (52, 49238), (65, 49322),

Gene: Kenmech_82 Start: 49111, Stop: 48689, Start Num: 11

Candidate Starts for Kenmech_82:

(Start: 11 @49111 has 22 MA's), (Start: 13 @49099 has 1 MA's), (36, 48943), (44, 48871), (50, 48847), (63, 48775), (69, 48712),

Gene: Kenuha5_75 Start: 48762, Stop: 49157, Start Num: 10

Candidate Starts for Kenuha5_75:

(Start: 10 @48762 has 28 MA's), (Start: 13 @48777 has 1 MA's), (36, 48897), (44, 48975), (50, 48999), (63, 49071),

Gene: Koella_70 Start: 44029, Stop: 44454, Start Num: 10

Candidate Starts for Koella_70:

(Start: 10 @44029 has 28 MA's), (Start: 13 @44044 has 1 MA's), (36, 44224), (49, 44308), (51, 44314), (52, 44317), (65, 44401),

Gene: LastJedi_70 Start: 46604, Stop: 47029, Start Num: 10

Candidate Starts for LastJedi_70:

(Start: 10 @46604 has 28 MA's), (Start: 13 @46619 has 1 MA's), (36, 46799), (49, 46883), (51, 46889), (52, 46892), (65, 46976),

Gene: LittleE_79 Start: 51011, Stop: 50637, Start Num: 13

Candidate Starts for LittleE_79:

(Start: 11 @51023 has 22 MA's), (Start: 13 @51011 has 1 MA's), (36, 50891), (44, 50819), (50, 50795), (63, 50723),

Gene: Lizziana_83 Start: 49853, Stop: 50278, Start Num: 10

Candidate Starts for Lizziana_83:

(Start: 10 @49853 has 28 MA's), (Start: 13 @49868 has 1 MA's), (36, 50048), (49, 50132), (51, 50138), (52, 50141), (65, 50225),

Gene: Lucky2013_77 Start: 48582, Stop: 48184, Start Num: 11

Candidate Starts for Lucky2013_77:

(Start: 11 @48582 has 22 MA's), (Start: 13 @48570 has 1 MA's), (36, 48414), (49, 48330), (51, 48324), (52, 48321), (65, 48237),

Gene: Marker_82 Start: 48016, Stop: 48423, Start Num: 11

Candidate Starts for Marker_82:

(2, 47893), (7, 47986), (9, 47995), (Start: 11 @48016 has 22 MA's), (14, 48055), (23, 48100), (36, 48163), (44, 48241), (50, 48265), (63, 48337),

Gene: MaryBeth_59 Start: 41225, Stop: 40836, Start Num: 11

Candidate Starts for MaryBeth_59:

(1, 41426), (5, 41282), (6, 41279), (Start: 11 @41225 has 22 MA's), (Start: 13 @41213 has 1 MA's), (31, 41126), (36, 41093), (44, 41015), (50, 40991), (63, 40919),

Gene: MetalQZJ_58 Start: 41225, Stop: 40836, Start Num: 11

Candidate Starts for MetalQZJ_58:

(1, 41426), (5, 41282), (6, 41279), (Start: 11 @41225 has 22 MA's), (Start: 13 @41213 has 1 MA's), (31, 41126), (36, 41093), (44, 41015), (50, 40991), (63, 40919),

Gene: MicyPS_42 Start: 33832, Stop: 33485, Start Num: 12

Candidate Starts for MicyPS_42:

(Start: 12 @33832 has 2 MA's), (24, 33757), (33, 33727), (34, 33718), (37, 33700), (38, 33694), (53, 33577), (63, 33529),

Gene: Nibley_69 Start: 46726, Stop: 46364, Start Num: 11

Candidate Starts for Nibley_69:

(Start: 11 @46726 has 22 MA's), (Start: 13 @46714 has 1 MA's), (36, 46594), (49, 46510), (51, 46504), (52, 46501), (65, 46417),

Gene: NormanBulbieJr_75 Start: 48043, Stop: 48468, Start Num: 10

Candidate Starts for NormanBulbieJr_75:

(Start: 10 @48043 has 28 MA's), (Start: 13 @48058 has 1 MA's), (36, 48238), (49, 48322), (51, 48328), (52, 48331), (65, 48415),

Gene: PSonyx_48 Start: 34648, Stop: 34265, Start Num: 12

Candidate Starts for PSonyx_48:

(Start: 12 @34648 has 2 MA's), (19, 34609), (33, 34540), (34, 34531), (48, 34420), (59, 34375), (63, 34339), (66, 34309),

Gene: PSonyx_54 Start: 36309, Stop: 35962, Start Num: 15

Candidate Starts for PSonyx_54:

(Start: 15 @36309 has 1 MA's), (35, 36219), (39, 36183), (40, 36174), (41, 36156), (56, 36075), (57, 36072), (58, 36069), (61, 36045), (64, 36030),

Gene: Peterson_65 Start: 43369, Stop: 42962, Start Num: 11

Candidate Starts for Peterson_65:

(1, 43570), (5, 43426), (6, 43423), (Start: 11 @43369 has 22 MA's), (Start: 13 @43357 has 1 MA's), (16, 43318), (35, 43216), (42, 43138), (55, 43084), (60, 43051), (62, 43042), (68, 42994),

Gene: Petruccio_60 Start: 40166, Stop: 39780, Start Num: 11

Candidate Starts for Petruccio_60:

(Start: 11 @40166 has 22 MA's), (Start: 13 @40154 has 1 MA's), (36, 40034), (44, 39962), (50, 39938), (63, 39866), (69, 39803),

Gene: PhesterPhotato_83 Start: 48607, Stop: 48993, Start Num: 11

Candidate Starts for PhesterPhotato_83:

(Start: 11 @48607 has 22 MA's), (Start: 13 @48619 has 1 MA's), (36, 48739), (44, 48811), (50, 48835), (63, 48907),

Gene: Priscilla_76 Start: 48141, Stop: 48566, Start Num: 10

Candidate Starts for Priscilla_76:

(Start: 10 @48141 has 28 MA's), (Start: 13 @48156 has 1 MA's), (36, 48336), (49, 48420), (51, 48426), (52, 48429), (65, 48513),

Gene: Raela_7 Start: 2533, Stop: 2922, Start Num: 10

Candidate Starts for Raela_7:

(Start: 10 @2533 has 28 MA's), (Start: 13 @2548 has 1 MA's), (36, 2668), (44, 2740), (50, 2764), (63, 2836), (69, 2899),

Gene: SG4_76 Start: 47114, Stop: 47569, Start Num: 10

Candidate Starts for SG4_76:

(Start: 10 @47114 has 28 MA's), (Start: 13 @47129 has 1 MA's), (28, 47279), (30, 47282), (36, 47339), (49, 47423), (51, 47429), (52, 47432), (65, 47516),

Gene: STLscum_69 Start: 42972, Stop: 42544, Start Num: 11

Candidate Starts for STLscum_69:

(1, 43173), (5, 43029), (6, 43026), (Start: 11 @42972 has 22 MA's), (Start: 13 @42960 has 1 MA's), (36, 42804), (44, 42726), (50, 42702), (63, 42630),

Gene: Saal_78 Start: 49224, Stop: 49649, Start Num: 10

Candidate Starts for Saal_78:

(Start: 10 @49224 has 28 MA's), (Start: 13 @49239 has 1 MA's), (36, 49419), (49, 49503), (51, 49509), (52, 49512), (65, 49596),

Gene: SarFire_60 Start: 40901, Stop: 40488, Start Num: 11

Candidate Starts for SarFire_60:

(1, 41102), (5, 40958), (6, 40955), (Start: 11 @40901 has 22 MA's), (14, 40862), (23, 40817), (36, 40754), (44, 40676), (50, 40652), (63, 40580),

Gene: Shaboozey_75 Start: 47658, Stop: 47296, Start Num: 11

Candidate Starts for Shaboozey_75:

(Start: 11 @47658 has 22 MA's), (Start: 13 @47646 has 1 MA's), (36, 47526), (49, 47442), (51, 47436), (52, 47433), (65, 47349),

Gene: Simpliphy_43 Start: 34882, Stop: 34496, Start Num: 11

Candidate Starts for Simpliphy_43:

(Start: 11 @34882 has 22 MA's), (Start: 13 @34870 has 1 MA's), (36, 34750), (44, 34678), (50, 34654), (63, 34582), (69, 34519),

Gene: StAnnes_81 Start: 49578, Stop: 49967, Start Num: 10

Candidate Starts for StAnnes_81:

(Start: 10 @49578 has 28 MA's), (Start: 13 @49593 has 1 MA's), (36, 49713), (44, 49785), (50, 49809), (63, 49881), (69, 49944),

Gene: Superphikiman_77 Start: 48448, Stop: 48050, Start Num: 11

Candidate Starts for Superphikiman_77:

(Start: 11 @48448 has 22 MA's), (Start: 13 @48436 has 1 MA's), (36, 48280), (49, 48196), (51, 48190), (52, 48187), (65, 48103),

Gene: SwagPiggett_82 Start: 50360, Stop: 50785, Start Num: 10

Candidate Starts for SwagPiggett_82:

(Start: 10 @50360 has 28 MA's), (Start: 13 @50375 has 1 MA's), (36, 50555), (49, 50639), (51, 50645), (52, 50648), (65, 50732),

Gene: Taj_85 Start: 49957, Stop: 50334, Start Num: 10

Candidate Starts for Taj_85:

(Start: 10 @49957 has 28 MA's), (Start: 13 @49972 has 1 MA's), (26, 50050), (36, 50107), (49, 50191), (51, 50197), (52, 50200), (65, 50284),

Gene: Taotie_48 Start: 32717, Stop: 32328, Start Num: 12

Candidate Starts for Taotie_48:

(Start: 12 @32717 has 2 MA's), (24, 32642), (48, 32492), (63, 32411), (64, 32405), (66, 32381),

Gene: Taotie_53 Start: 33869, Stop: 33528, Start Num: 15

Candidate Starts for Taotie_53:

(4, 33992), (8, 33959), (Start: 15 @33869 has 1 MA's), (39, 33749), (40, 33740), (56, 33641), (57, 33638), (58, 33635), (61, 33611), (64, 33596),

Gene: Thor_60 Start: 40259, Stop: 39846, Start Num: 11

Candidate Starts for Thor_60:

(1, 40460), (5, 40316), (6, 40313), (Start: 11 @40259 has 22 MA's), (14, 40220), (23, 40175), (36, 40112), (44, 40034), (50, 40010), (63, 39938),

Gene: Wee_84 Start: 50033, Stop: 50410, Start Num: 10

Candidate Starts for Wee_84:

(Start: 10 @50033 has 28 MA's), (Start: 13 @50048 has 1 MA's), (26, 50126), (36, 50183), (49, 50267), (51, 50273), (52, 50276), (65, 50360),

Gene: Zeeculate_77 Start: 48542, Stop: 48138, Start Num: 11

Candidate Starts for Zeeculate_77:

(Start: 11 @48542 has 22 MA's), (Start: 13 @48530 has 1 MA's), (22, 48467), (29, 48410), (36, 48368), (49, 48284), (51, 48278), (52, 48275), (65, 48191),