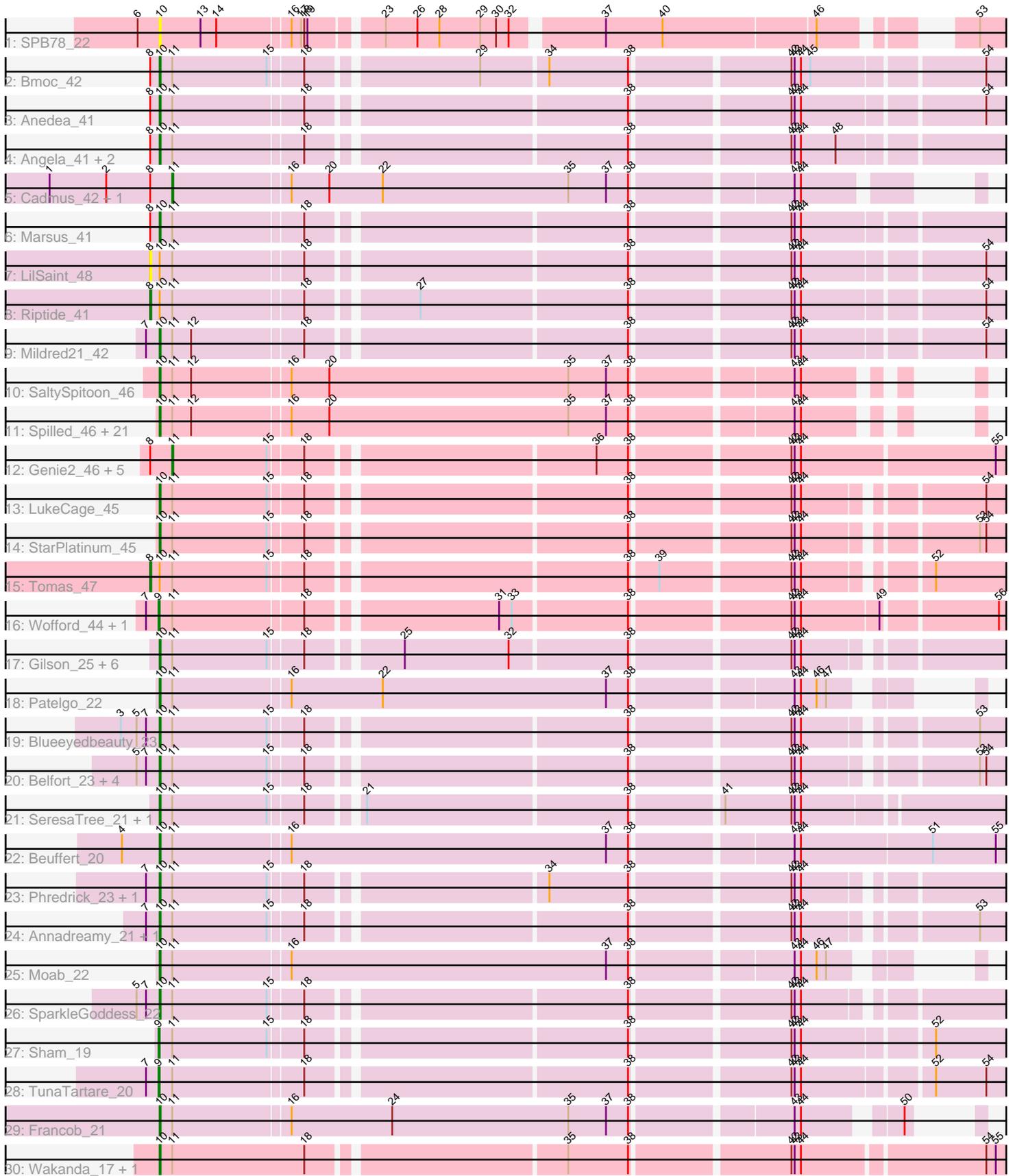# Zoomed Pham 283755

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 283755 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283755 has 74 members, 7 are drafts.

Phages represented in each track:
• Track 1 : SPB78_22
• Track 2 : Bmoc_42
• Track 3 : Anedea_41
• Track 4 : Angela_41, LilMartin_41, MulchMansion_41
• Track 5 : Cadmus_42, Daubenski_45
• Track 6 : Marsus_41
• Track 7 : LilSaint_48
• Track 8 : Riptide_41
• Track 9 : Mildred21_42
• Track 10 : SaltySpitoon_46
• Track 11 : Spilled_46, Birchlyn_43, KentuckyRacer_46, CeilingFan_45, Jollison_45, Amabiko_46, Karimac_45, Bordeaux_44, AcciDwight_50, IchabodCrane_43, MindFlayer_44, Wipeout_44, Brizzy_45, Spelly_46, Gibbi_49, PumpkinSpice_45, Battuta_44, Starbow_44, JimJam_46, TomSawyer_44, Rikishi_46, Quaran19_46
• Track 12 : Genie2_46, AngryGiraffe_45, Stanimal_46, Sollertia_46, BoomerJR_46, Yaboi_46
• Track 13 : LukeCage_45
• Track 14 : StarPlatinum_45
• Track 15 : Tomas_47
• Track 16 : Wofford_44, Elmer_48
• Track 17 : Gilson_25, Forrest_25, Emma1919_25, DeluluLabubu_23, Maupel_25, Jada_23, MeganTheeKilla_23
• Track 18 : Patelgo_22
• Track 19 : Blueeyedbeauty_23
• Track 20 : Belfort_23, Karp_21, Westy_22, Comrade_22, Stigma_22
• Track 21 : SeresaTree_21, Faust_21
• Track 22 : Beuffert_20
• Track 23 : Phredrick_23, Kenrey_25
• Track 24 : Annadreamy_21, Limpid_21
• Track 25 : Moab_22
• Track 26 : SparkleGoddess_22
• Track 27 : Sham_19
• Track 28 : TunaTartare_20
• Track 29 : Francob_21
• Track 30 : Wakanda_17, Muntaha_17

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 53 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AcciDwight_50, Amabiko_46, Anedea_41, Angela_41, Annadreamy_21, Battuta_44, Belfort_23, Beuffert_20, Birchlyn_43, Blueeyedbeauty_23, Bmoc_42, Bordeaux_44, Brizzy_45, CeilingFan_45, Comrade_22, DeluluLabubu_23, Emma1919_25, Faust_21, Forrest_25, Francob_21, Gibbi_49, Gilson_25, IchabodCrane_43, Jada_23, JimJam_46, Jollison_45, Karimac_45, Karp_21, Kenrey_25, KentuckyRacer_46, LilMartin_41, Limpid_21, LukeCage_45, Marsus_41, Maupel_25, MeganTheeKilla_23, Mildred21_42, MindFlayer_44, Moab_22, MulchMansion_41, Muntaha_17, Patelgo_22, Phredrick_23, PumpkinSpice_45, Quaran19_46, Rikishi_46, SPB78_22, SaltySpitoon_46, SeresaTree_21, SparkleGoddess_22, Spelly_46, Spilled_46, StarPlatinum_45, Starbow_44, Stigma_22, TomSawyer_44, Wakanda_17, Westy_22, Wipeout_44,

Genes that have the "Most Annotated" start but do not call it:
• LilSaint_48, Riptide_41, Tomas_47,

Genes that do not have the "Most Annotated" start:
• AngryGiraffe_45, BoomerJR_46, Cadmus_42, Daubenski_45, Elmer_48, Genie2_46, Sham_19, Sollertia_46, Stanimal_46, TunaTartare_20, Wofford_44, Yaboi_46,

Summary by start number:

Start 8:
• Found in 17 of 74 (23.0%) of genes in pham
• Manual Annotations of this start: 2 of 67
• Called 17.6% of time when present
• Phage (with cluster) where this start called: LilSaint_48 (BE1), Riptide_41 (BE1), Tomas_47 (BE2),

Start 9:
• Found in 4 of 74 (5.4%) of genes in pham
• Manual Annotations of this start: 4 of 67
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elmer_48 (BE2), Sham_19 (BK1), TunaTartare_20 (BK1), Wofford_44 (BE2),

Start 10:
• Found in 62 of 74 (83.8%) of genes in pham
• Manual Annotations of this start: 53 of 67
• Called 95.2% of time when present
• Phage (with cluster) where this start called: AcciDwight_50 (BE2), Amabiko_46 (BE2), Anedea_41 (BE1), Angela_41 (BE1), Annadreamy_21 (BK1), Battuta_44 (BE2), Belfort_23 (BK1), Beuffert_20 (BK1), Birchlyn_43 (BE2), Blueeyedbeauty_23 (BK1), Bmoc_42 (BE1), Bordeaux_44 (BE2), Brizzy_45 (BE2), CeilingFan_45 (BE2), Comrade_22 (BK1), DeluluLabubu_23 (BK1), Emma1919_25 (BK1), Faust_21 (BK1), Forrest_25 (BK1), Francob_21 (BK1), Gibbi_49 (BE2), Gilson_25 (BK1),

IchabodCrane_43 (BE2), Jada_23 (BK1), JimJam_46 (BE2), Jollison_45 (BE2), Karimac_45 (BE2), Karp_21 (BK1), Kenrey_25 (BK1), KentuckyRacer_46 (BE2), LilMartin_41 (BE1), Limpid_21 (BK1), LukeCage_45 (BE2), Marsus_41 (BE1), Maupel_25 (BK1), MeganTheeKilla_23 (BK1), Mildred21_42 (BE1), MindFlayer_44 (BE2), Moab_22 (BK1), MulchMansion_41 (BE1), Muntaha_17 (BK2), Patelgo_22 (BK1), Phredrick_23 (BK1), PumpkinSpice_45 (BE2), Quaran19_46 (BE2), Rikishi_46 (BE2), SPB78_22 (BA), SaltySpitoon_46 (BE2), SeresaTree_21 (BK1), SparkleGoddess_22 (BK1), Spelly_46 (BE2), Spilled_46 (BE2), StarPlatinum_45 (BE2), Starbow_44 (BE2), Stigma_22 (BK1), TomSawyer_44 (BE2), Wakanda_17 (BK2), Westy_22 (BK1), Wipeout_44 (BE2),

Start 11:
• Found in 73 of 74 (98.6%) of genes in pham
• Manual Annotations of this start: 8 of 67
• Called 11.0% of time when present
• Phage (with cluster) where this start called: AngryGiraffe_45 (BE2), BoomerJR_46 (BE2), Cadmus_42 (BE1), Daubenski_45 (BE1), Genie2_46 (BE2), Sollertia_46 (BE2), Stanimal_46 (BE2), Yaboi_46 (BE2),

Summary by clusters:

There are 5 clusters represented in this pham: BE2, BE1, BK1, BK2, BA,

Info for manual annotations of cluster BE1:
•Start number 8 was manually annotated 1 time for cluster BE1.
•Start number 10 was manually annotated 7 times for cluster BE1.
•Start number 11 was manually annotated 2 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 8 was manually annotated 1 time for cluster BE2.
•Start number 9 was manually annotated 2 times for cluster BE2.
•Start number 10 was manually annotated 23 times for cluster BE2.
•Start number 11 was manually annotated 6 times for cluster BE2.

Info for manual annotations of cluster BK1:
•Start number 9 was manually annotated 2 times for cluster BK1.
•Start number 10 was manually annotated 21 times for cluster BK1.

Info for manual annotations of cluster BK2:
•Start number 10 was manually annotated 2 times for cluster BK2.

Gene Information:

Gene: AcciDwight_50 Start: 21515, Stop: 22396, Start Num: 10
Candidate Starts for AcciDwight_50:
(Start: 10 @21515 has 53 MA's), (Start: 11 @21527 has 8 MA's), (12, 21545), (16, 21635), (20, 21671), (35, 21899), (37, 21935), (38, 21956), (43, 22097), (44, 22103), (61, 22214), (65, 22259), (66, 22313),

Gene: Amabiko_46 Start: 21560, Stop: 22441, Start Num: 10
Candidate Starts for Amabiko_46:

(Start: 10 @21560 has 53 MA's), (Start: 11 @21572 has 8 MA's), (12, 21590), (16, 21680), (20, 21716), (35, 21944), (37, 21980), (38, 22001), (43, 22142), (44, 22148), (61, 22259), (65, 22304), (66, 22358),

Gene: Anedea_41 Start: 20439, Stop: 21461, Start Num: 10
Candidate Starts for Anedea_41:
(Start: 8 @20430 has 2 MA's), (Start: 10 @20439 has 53 MA's), (Start: 11 @20451 has 8 MA's), (18, 20571), (38, 20856), (42, 20997), (43, 21000), (44, 21006), (54, 21168), (61, 21270), (66, 21369),

Gene: Angela_41 Start: 20420, Stop: 21442, Start Num: 10
Candidate Starts for Angela_41:
(Start: 8 @20411 has 2 MA's), (Start: 10 @20420 has 53 MA's), (Start: 11 @20432 has 8 MA's), (18, 20552), (38, 20837), (42, 20978), (43, 20981), (44, 20987), (48, 21020), (61, 21251), (66, 21350),

Gene: AngryGiraffe_45 Start: 21514, Stop: 22407, Start Num: 11
Candidate Starts for AngryGiraffe_45:
(Start: 8 @21493 has 2 MA's), (Start: 11 @21514 has 8 MA's), (15, 21604), (18, 21634), (36, 21889), (38, 21919), (42, 22060), (43, 22063), (44, 22069), (55, 22249),

Gene: Annadreamy_21 Start: 9808, Stop: 10824, Start Num: 10
Candidate Starts for Annadreamy_21:
(7, 9796), (Start: 10 @9808 has 53 MA's), (Start: 11 @9820 has 8 MA's), (15, 9910), (18, 9940), (38, 10225), (42, 10366), (43, 10369), (44, 10375), (53, 10519), (62, 10630), (63, 10660), (67, 10768),

Gene: Battuta_44 Start: 21536, Stop: 22417, Start Num: 10
Candidate Starts for Battuta_44:
(Start: 10 @21536 has 53 MA's), (Start: 11 @21548 has 8 MA's), (12, 21566), (16, 21656), (20, 21692), (35, 21920), (37, 21956), (38, 21977), (43, 22118), (44, 22124), (61, 22235), (65, 22280), (66, 22334),

Gene: Belfort_23 Start: 10560, Stop: 11573, Start Num: 10
Candidate Starts for Belfort_23:
(5, 10539), (7, 10548), (Start: 10 @10560 has 53 MA's), (Start: 11 @10572 has 8 MA's), (15, 10662), (18, 10692), (38, 10977), (42, 11118), (43, 11121), (44, 11127), (53, 11271), (54, 11277), (62, 11379), (64, 11418), (66, 11478), (67, 11517),

Gene: Beuffert_20 Start: 9455, Stop: 10507, Start Num: 10
Candidate Starts for Beuffert_20:
(4, 9419), (Start: 10 @9455 has 53 MA's), (Start: 11 @9467 has 8 MA's), (16, 9575), (37, 9875), (38, 9896), (43, 10037), (44, 10043), (51, 10166), (55, 10226), (61, 10313), (67, 10451),

Gene: Birchlyn_43 Start: 19417, Stop: 20298, Start Num: 10
Candidate Starts for Birchlyn_43:
(Start: 10 @19417 has 53 MA's), (Start: 11 @19429 has 8 MA's), (12, 19447), (16, 19537), (20, 19573), (35, 19801), (37, 19837), (38, 19858), (43, 19999), (44, 20005), (61, 20116), (65, 20161), (66, 20215),

Gene: Blueeyedbeauty_23 Start: 10302, Stop: 11318, Start Num: 10
Candidate Starts for Blueeyedbeauty_23:
(3, 10266), (5, 10281), (7, 10290), (Start: 10 @10302 has 53 MA's), (Start: 11 @10314 has 8 MA's), (15, 10404), (18, 10434), (38, 10719), (42, 10860), (43, 10863), (44, 10869), (53, 11013), (58, 11079), (62, 11124),

Gene: Bmoc_42 Start: 20722, Stop: 21744, Start Num: 10
Candidate Starts for Bmoc_42:

(Start: 8 @20713 has 2 MA's), (Start: 10 @20722 has 53 MA's), (Start: 11 @20734 has 8 MA's), (15, 20824), (18, 20854), (29, 21004), (34, 21064), (38, 21139), (42, 21280), (43, 21283), (44, 21289), (45, 21298), (54, 21451), (61, 21553), (66, 21652),

Gene: BoomerJR_46 Start: 21403, Stop: 22296, Start Num: 11
Candidate Starts for BoomerJR_46:
(Start: 8 @21382 has 2 MA's), (Start: 11 @21403 has 8 MA's), (15, 21493), (18, 21523), (36, 21778), (38, 21808), (42, 21949), (43, 21952), (44, 21958), (55, 22138),

Gene: Bordeaux_44 Start: 21689, Stop: 22570, Start Num: 10
Candidate Starts for Bordeaux_44:
(Start: 10 @21689 has 53 MA's), (Start: 11 @21701 has 8 MA's), (12, 21719), (16, 21809), (20, 21845), (35, 22073), (37, 22109), (38, 22130), (43, 22271), (44, 22277), (61, 22388), (65, 22433), (66, 22487),

Gene: Brizzy_45 Start: 21210, Stop: 22091, Start Num: 10
Candidate Starts for Brizzy_45:
(Start: 10 @21210 has 53 MA's), (Start: 11 @21222 has 8 MA's), (12, 21240), (16, 21330), (20, 21366), (35, 21594), (37, 21630), (38, 21651), (43, 21792), (44, 21798), (61, 21909), (65, 21954), (66, 22008),

Gene: Cadmus_42 Start: 21195, Stop: 22091, Start Num: 11
Candidate Starts for Cadmus_42:
(1, 21078), (2, 21132), (Start: 8 @21174 has 2 MA's), (Start: 11 @21195 has 8 MA's), (16, 21303), (20, 21339), (22, 21390), (35, 21567), (37, 21603), (38, 21624), (43, 21765), (44, 21771), (61, 21897), (66, 21996),

Gene: CeilingFan_45 Start: 21449, Stop: 22330, Start Num: 10
Candidate Starts for CeilingFan_45:
(Start: 10 @21449 has 53 MA's), (Start: 11 @21461 has 8 MA's), (12, 21479), (16, 21569), (20, 21605), (35, 21833), (37, 21869), (38, 21890), (43, 22031), (44, 22037), (61, 22148), (65, 22193), (66, 22247),

Gene: Comrade_22 Start: 10175, Stop: 11188, Start Num: 10
Candidate Starts for Comrade_22:
(5, 10154), (7, 10163), (Start: 10 @10175 has 53 MA's), (Start: 11 @10187 has 8 MA's), (15, 10277), (18, 10307), (38, 10592), (42, 10733), (43, 10736), (44, 10742), (53, 10886), (54, 10892), (62, 10994), (64, 11033), (66, 11093), (67, 11132),

Gene: Daubenski_45 Start: 21959, Stop: 22855, Start Num: 11
Candidate Starts for Daubenski_45:
(1, 21842), (2, 21896), (Start: 8 @21938 has 2 MA's), (Start: 11 @21959 has 8 MA's), (16, 22067), (20, 22103), (22, 22154), (35, 22331), (37, 22367), (38, 22388), (43, 22529), (44, 22535), (61, 22661), (66, 22760),

Gene: DeluluLabubu_23 Start: 10056, Stop: 11072, Start Num: 10
Candidate Starts for DeluluLabubu_23:
(Start: 10 @10056 has 53 MA's), (Start: 11 @10068 has 8 MA's), (15, 10158), (18, 10188), (25, 10266), (32, 10365), (38, 10473), (42, 10614), (43, 10617), (44, 10623), (62, 10878), (67, 11016),

Gene: Elmer_48 Start: 22460, Stop: 23479, Start Num: 9
Candidate Starts for Elmer_48:
(7, 22448), (Start: 9 @22460 has 4 MA's), (Start: 11 @22472 has 8 MA's), (18, 22592), (31, 22760), (33, 22772), (38, 22877), (42, 23018), (43, 23021), (44, 23027), (49, 23099), (56, 23201), (61, 23285), (68, 23435),

Gene: Emma1919_25 Start: 10751, Stop: 11767, Start Num: 10
Candidate Starts for Emma1919_25:
(Start: 10 @10751 has 53 MA's), (Start: 11 @10763 has 8 MA's), (15, 10853), (18, 10883), (25, 10961), (32, 11060), (38, 11168), (42, 11309), (43, 11312), (44, 11318), (62, 11573), (67, 11711),

Gene: Faust_21 Start: 10072, Stop: 10977, Start Num: 10
Candidate Starts for Faust_21:
(Start: 10 @10072 has 53 MA's), (Start: 11 @10084 has 8 MA's), (15, 10174), (18, 10204), (21, 10246), (38, 10489), (41, 10567), (42, 10630), (43, 10633), (44, 10639), (57, 10828),

Gene: Forrest_25 Start: 10874, Stop: 11890, Start Num: 10
Candidate Starts for Forrest_25:
(Start: 10 @10874 has 53 MA's), (Start: 11 @10886 has 8 MA's), (15, 10976), (18, 11006), (25, 11084), (32, 11183), (38, 11291), (42, 11432), (43, 11435), (44, 11441), (62, 11696), (67, 11834),

Gene: Francob_21 Start: 9667, Stop: 10566, Start Num: 10
Candidate Starts for Francob_21:
(Start: 10 @9667 has 53 MA's), (Start: 11 @9679 has 8 MA's), (16, 9787), (24, 9883), (35, 10051), (37, 10087), (38, 10108), (43, 10249), (44, 10255), (50, 10330), (61, 10372), (66, 10471),

Gene: Genie2_46 Start: 21517, Stop: 22410, Start Num: 11
Candidate Starts for Genie2_46:
(Start: 8 @21496 has 2 MA's), (Start: 11 @21517 has 8 MA's), (15, 21607), (18, 21637), (36, 21892), (38, 21922), (42, 22063), (43, 22066), (44, 22072), (55, 22252),

Gene: Gibbi_49 Start: 21309, Stop: 22190, Start Num: 10
Candidate Starts for Gibbi_49:
(Start: 10 @21309 has 53 MA's), (Start: 11 @21321 has 8 MA's), (12, 21339), (16, 21429), (20, 21465), (35, 21693), (37, 21729), (38, 21750), (43, 21891), (44, 21897), (61, 22008), (65, 22053), (66, 22107),

Gene: Gilson_25 Start: 10704, Stop: 11720, Start Num: 10
Candidate Starts for Gilson_25:
(Start: 10 @10704 has 53 MA's), (Start: 11 @10716 has 8 MA's), (15, 10806), (18, 10836), (25, 10914), (32, 11013), (38, 11121), (42, 11262), (43, 11265), (44, 11271), (62, 11526), (67, 11664),

Gene: IchabodCrane_43 Start: 21263, Stop: 22144, Start Num: 10
Candidate Starts for IchabodCrane_43:
(Start: 10 @21263 has 53 MA's), (Start: 11 @21275 has 8 MA's), (12, 21293), (16, 21383), (20, 21419), (35, 21647), (37, 21683), (38, 21704), (43, 21845), (44, 21851), (61, 21962), (65, 22007), (66, 22061),

Gene: Jada_23 Start: 10056, Stop: 11072, Start Num: 10
Candidate Starts for Jada_23:
(Start: 10 @10056 has 53 MA's), (Start: 11 @10068 has 8 MA's), (15, 10158), (18, 10188), (25, 10266), (32, 10365), (38, 10473), (42, 10614), (43, 10617), (44, 10623), (62, 10878), (67, 11016),

Gene: JimJam_46 Start: 21637, Stop: 22518, Start Num: 10
Candidate Starts for JimJam_46:
(Start: 10 @21637 has 53 MA's), (Start: 11 @21649 has 8 MA's), (12, 21667), (16, 21757), (20, 21793), (35, 22021), (37, 22057), (38, 22078), (43, 22219), (44, 22225), (61, 22336), (65, 22381), (66, 22435),

Gene: Jollison_45 Start: 21517, Stop: 22398, Start Num: 10
Candidate Starts for Jollison_45:

(Start: 10 @21517 has 53 MA's), (Start: 11 @21529 has 8 MA's), (12, 21547), (16, 21637), (20, 21673), (35, 21901), (37, 21937), (38, 21958), (43, 22099), (44, 22105), (61, 22216), (65, 22261), (66, 22315),

Gene: Karimac_45 Start: 21666, Stop: 22547, Start Num: 10
Candidate Starts for Karimac_45:
(Start: 10 @21666 has 53 MA's), (Start: 11 @21678 has 8 MA's), (12, 21696), (16, 21786), (20, 21822), (35, 22050), (37, 22086), (38, 22107), (43, 22248), (44, 22254), (61, 22365), (65, 22410), (66, 22464),

Gene: Karp_21 Start: 9776, Stop: 10789, Start Num: 10
Candidate Starts for Karp_21:
(5, 9755), (7, 9764), (Start: 10 @9776 has 53 MA's), (Start: 11 @9788 has 8 MA's), (15, 9878), (18, 9908), (38, 10193), (42, 10334), (43, 10337), (44, 10343), (53, 10487), (54, 10493), (62, 10595), (64, 10634), (66, 10694), (67, 10733),

Gene: Kenrey_25 Start: 10757, Stop: 11773, Start Num: 10
Candidate Starts for Kenrey_25:
(7, 10745), (Start: 10 @10757 has 53 MA's), (Start: 11 @10769 has 8 MA's), (15, 10859), (18, 10889), (34, 11099), (38, 11174), (42, 11315), (43, 11318), (44, 11324), (62, 11579), (67, 11717),

Gene: KentuckyRacer_46 Start: 21450, Stop: 22331, Start Num: 10
Candidate Starts for KentuckyRacer_46:
(Start: 10 @21450 has 53 MA's), (Start: 11 @21462 has 8 MA's), (12, 21480), (16, 21570), (20, 21606), (35, 21834), (37, 21870), (38, 21891), (43, 22032), (44, 22038), (61, 22149), (65, 22194), (66, 22248),

Gene: LilMartin_41 Start: 20368, Stop: 21390, Start Num: 10
Candidate Starts for LilMartin_41:
(Start: 8 @20359 has 2 MA's), (Start: 10 @20368 has 53 MA's), (Start: 11 @20380 has 8 MA's), (18, 20500), (38, 20785), (42, 20926), (43, 20929), (44, 20935), (48, 20968), (61, 21199), (66, 21298),

Gene: LilSaint_48 Start: 20604, Stop: 21635, Start Num: 8
Candidate Starts for LilSaint_48:
(Start: 8 @20604 has 2 MA's), (Start: 10 @20613 has 53 MA's), (Start: 11 @20625 has 8 MA's), (18, 20745), (38, 21030), (42, 21171), (43, 21174), (44, 21180), (54, 21342), (61, 21444), (66, 21543),

Gene: Limpid_21 Start: 9807, Stop: 10823, Start Num: 10
Candidate Starts for Limpid_21:
(7, 9795), (Start: 10 @9807 has 53 MA's), (Start: 11 @9819 has 8 MA's), (15, 9909), (18, 9939), (38, 10224), (42, 10365), (43, 10368), (44, 10374), (53, 10518), (62, 10629), (63, 10659), (67, 10767),

Gene: LukeCage_45 Start: 21302, Stop: 22297, Start Num: 10
Candidate Starts for LukeCage_45:
(Start: 10 @21302 has 53 MA's), (Start: 11 @21314 has 8 MA's), (15, 21404), (18, 21434), (38, 21719), (42, 21860), (43, 21863), (44, 21869), (54, 22019), (62, 22115), (65, 22160), (66, 22214),

Gene: Marsus_41 Start: 20139, Stop: 21161, Start Num: 10
Candidate Starts for Marsus_41:
(Start: 8 @20130 has 2 MA's), (Start: 10 @20139 has 53 MA's), (Start: 11 @20151 has 8 MA's), (18, 20271), (38, 20556), (42, 20697), (43, 20700), (44, 20706), (61, 20970), (66, 21069),

Gene: Maupel_25 Start: 10704, Stop: 11720, Start Num: 10
Candidate Starts for Maupel_25:
(Start: 10 @10704 has 53 MA's), (Start: 11 @10716 has 8 MA's), (15, 10806), (18, 10836), (25, 10914), (32, 11013), (38, 11121), (42, 11262), (43, 11265), (44, 11271), (62, 11526), (67, 11664),

Gene: MeganTheeKilla_23 Start: 10065, Stop: 11081, Start Num: 10
Candidate Starts for MeganTheeKilla_23:
(Start: 10 @10065 has 53 MA's), (Start: 11 @10077 has 8 MA's), (15, 10167), (18, 10197), (25, 10275),
(32, 10374), (38, 10482), (42, 10623), (43, 10626), (44, 10632), (62, 10887), (67, 11025),

Gene: Mildred21_42 Start: 20566, Stop: 21576, Start Num: 10
Candidate Starts for Mildred21_42:
(7, 20554), (Start: 10 @20566 has 53 MA's), (Start: 11 @20578 has 8 MA's), (12, 20596), (18, 20698),
(38, 20983), (42, 21124), (43, 21127), (44, 21133), (54, 21295), (61, 21394), (65, 21439), (66, 21493),

Gene: MindFlayer_44 Start: 21170, Stop: 22051, Start Num: 10
Candidate Starts for MindFlayer_44:
(Start: 10 @21170 has 53 MA's), (Start: 11 @21182 has 8 MA's), (12, 21200), (16, 21290), (20, 21326),
(35, 21554), (37, 21590), (38, 21611), (43, 21752), (44, 21758), (61, 21869), (65, 21914), (66, 21968),

Gene: Moab_22 Start: 10215, Stop: 11114, Start Num: 10
Candidate Starts for Moab_22:
(Start: 10 @10215 has 53 MA's), (Start: 11 @10227 has 8 MA's), (16, 10335), (37, 10635), (38, 10656),
(43, 10797), (44, 10803), (46, 10818), (47, 10827), (61, 10920), (66, 11019),

Gene: MulchMansion_41 Start: 20368, Stop: 21390, Start Num: 10
Candidate Starts for MulchMansion_41:
(Start: 8 @20359 has 2 MA's), (Start: 10 @20368 has 53 MA's), (Start: 11 @20380 has 8 MA's), (18,
20500), (38, 20785), (42, 20926), (43, 20929), (44, 20935), (48, 20968), (61, 21199), (66, 21298),

Gene: Muntaha_17 Start: 8933, Stop: 9943, Start Num: 10
Candidate Starts for Muntaha_17:
(Start: 10 @8933 has 53 MA's), (Start: 11 @8945 has 8 MA's), (18, 9071), (35, 9299), (38, 9356), (42,
9497), (43, 9500), (44, 9506), (54, 9665), (55, 9674), (60, 9752), (61, 9761), (66, 9860),

Gene: Patelgo_22 Start: 9829, Stop: 10728, Start Num: 10
Candidate Starts for Patelgo_22:
(Start: 10 @9829 has 53 MA's), (Start: 11 @9841 has 8 MA's), (16, 9949), (22, 10036), (37, 10249),
(38, 10270), (43, 10411), (44, 10417), (46, 10432), (47, 10441), (61, 10534), (66, 10633),

Gene: Phredrick_23 Start: 9963, Stop: 10979, Start Num: 10
Candidate Starts for Phredrick_23:
(7, 9951), (Start: 10 @9963 has 53 MA's), (Start: 11 @9975 has 8 MA's), (15, 10065), (18, 10095), (34,
10305), (38, 10380), (42, 10521), (43, 10524), (44, 10530), (62, 10785), (67, 10923),

Gene: PumpkinSpice_45 Start: 21560, Stop: 22441, Start Num: 10
Candidate Starts for PumpkinSpice_45:
(Start: 10 @21560 has 53 MA's), (Start: 11 @21572 has 8 MA's), (12, 21590), (16, 21680), (20, 21716),
(35, 21944), (37, 21980), (38, 22001), (43, 22142), (44, 22148), (61, 22259), (65, 22304), (66, 22358),

Gene: Quaran19_46 Start: 21551, Stop: 22432, Start Num: 10
Candidate Starts for Quaran19_46:
(Start: 10 @21551 has 53 MA's), (Start: 11 @21563 has 8 MA's), (12, 21581), (16, 21671), (20, 21707),
(35, 21935), (37, 21971), (38, 21992), (43, 22133), (44, 22139), (61, 22250), (65, 22295), (66, 22349),

Gene: Rikishi_46 Start: 21466, Stop: 22347, Start Num: 10
Candidate Starts for Rikishi_46:

(Start: 10 @21466 has 53 MA's), (Start: 11 @21478 has 8 MA's), (12, 21496), (16, 21586), (20, 21622), (35, 21850), (37, 21886), (38, 21907), (43, 22048), (44, 22054), (61, 22165), (65, 22210), (66, 22264),

Gene: Riptide_41 Start: 20156, Stop: 21187, Start Num: 8
Candidate Starts for Riptide_41:
(Start: 8 @20156 has 2 MA's), (Start: 10 @20165 has 53 MA's), (Start: 11 @20177 has 8 MA's), (18, 20297), (27, 20390), (38, 20582), (42, 20723), (43, 20726), (44, 20732), (54, 20894), (61, 20996), (66, 21095),

Gene: SPB78_22 Start: 19359, Stop: 20186, Start Num: 10
Candidate Starts for SPB78_22:
(6, 19338), (Start: 10 @19359 has 53 MA's), (13, 19398), (14, 19413), (16, 19479), (17, 19488), (18, 19491), (19, 19494), (23, 19554), (26, 19584), (28, 19605), (29, 19644), (30, 19659), (32, 19671), (37, 19749), (40, 19803), (46, 19944), (53, 20043),

Gene: SaltySpitoon_46 Start: 21560, Stop: 22441, Start Num: 10
Candidate Starts for SaltySpitoon_46:
(Start: 10 @21560 has 53 MA's), (Start: 11 @21572 has 8 MA's), (12, 21590), (16, 21680), (20, 21716), (35, 21944), (37, 21980), (38, 22001), (43, 22142), (44, 22148), (61, 22259), (65, 22304), (66, 22358),

Gene: SeresaTree_21 Start: 9462, Stop: 10367, Start Num: 10
Candidate Starts for SeresaTree_21:
(Start: 10 @9462 has 53 MA's), (Start: 11 @9474 has 8 MA's), (15, 9564), (18, 9594), (21, 9636), (38, 9879), (41, 9957), (42, 10020), (43, 10023), (44, 10029), (57, 10218),

Gene: Sham_19 Start: 9266, Stop: 10291, Start Num: 9
Candidate Starts for Sham_19:
(Start: 9 @9266 has 4 MA's), (Start: 11 @9278 has 8 MA's), (15, 9368), (18, 9398), (38, 9683), (42, 9824), (43, 9827), (44, 9833), (52, 9947), (61, 10100),

Gene: Sollertia_46 Start: 21517, Stop: 22410, Start Num: 11
Candidate Starts for Sollertia_46:
(Start: 8 @21496 has 2 MA's), (Start: 11 @21517 has 8 MA's), (15, 21607), (18, 21637), (36, 21892), (38, 21922), (42, 22063), (43, 22066), (44, 22072), (55, 22252),

Gene: SparkleGoddess_22 Start: 10174, Stop: 11190, Start Num: 10
Candidate Starts for SparkleGoddess_22:
(5, 10153), (7, 10162), (Start: 10 @10174 has 53 MA's), (Start: 11 @10186 has 8 MA's), (15, 10276), (18, 10306), (38, 10591), (42, 10732), (43, 10735), (44, 10741), (62, 10996), (64, 11035), (66, 11095), (67, 11134),

Gene: Spelly_46 Start: 21515, Stop: 22396, Start Num: 10
Candidate Starts for Spelly_46:
(Start: 10 @21515 has 53 MA's), (Start: 11 @21527 has 8 MA's), (12, 21545), (16, 21635), (20, 21671), (35, 21899), (37, 21935), (38, 21956), (43, 22097), (44, 22103), (61, 22214), (65, 22259), (66, 22313),

Gene: Spilled_46 Start: 21269, Stop: 22150, Start Num: 10
Candidate Starts for Spilled_46:
(Start: 10 @21269 has 53 MA's), (Start: 11 @21281 has 8 MA's), (12, 21299), (16, 21389), (20, 21425), (35, 21653), (37, 21689), (38, 21710), (43, 21851), (44, 21857), (61, 21968), (65, 22013), (66, 22067),

Gene: Stanimal_46 Start: 21406, Stop: 22299, Start Num: 11
Candidate Starts for Stanimal_46:

(Start: 8 @21385 has 2 MA's), (Start: 11 @21406 has 8 MA's), (15, 21496), (18, 21526), (36, 21781), (38, 21811), (42, 21952), (43, 21955), (44, 21961), (55, 22141),

Gene: StarPlatinum_45 Start: 21511, Stop: 22506, Start Num: 10
Candidate Starts for StarPlatinum_45:
(Start: 10 @21511 has 53 MA's), (Start: 11 @21523 has 8 MA's), (15, 21613), (18, 21643), (38, 21928), (42, 22069), (43, 22072), (44, 22078), (53, 22222), (54, 22228), (62, 22324), (65, 22369), (66, 22423),

Gene: Starbow_44 Start: 21536, Stop: 22417, Start Num: 10
Candidate Starts for Starbow_44:
(Start: 10 @21536 has 53 MA's), (Start: 11 @21548 has 8 MA's), (12, 21566), (16, 21656), (20, 21692), (35, 21920), (37, 21956), (38, 21977), (43, 22118), (44, 22124), (61, 22235), (65, 22280), (66, 22334),

Gene: Stigma_22 Start: 10178, Stop: 11191, Start Num: 10
Candidate Starts for Stigma_22:
(5, 10157), (7, 10166), (Start: 10 @10178 has 53 MA's), (Start: 11 @10190 has 8 MA's), (15, 10280), (18, 10310), (38, 10595), (42, 10736), (43, 10739), (44, 10745), (53, 10889), (54, 10895), (62, 10997), (64, 11036), (66, 11096), (67, 11135),

Gene: TomSawyer_44 Start: 21154, Stop: 22035, Start Num: 10
Candidate Starts for TomSawyer_44:
(Start: 10 @21154 has 53 MA's), (Start: 11 @21166 has 8 MA's), (12, 21184), (16, 21274), (20, 21310), (35, 21538), (37, 21574), (38, 21595), (43, 21736), (44, 21742), (61, 21853), (65, 21898), (66, 21952),

Gene: Tomas_47 Start: 23372, Stop: 24385, Start Num: 8
Candidate Starts for Tomas_47:
(Start: 8 @23372 has 2 MA's), (Start: 10 @23381 has 53 MA's), (Start: 11 @23393 has 8 MA's), (15, 23483), (18, 23513), (38, 23798), (39, 23822), (42, 23939), (43, 23942), (44, 23948), (52, 24050), (59, 24164), (62, 24206), (66, 24305),

Gene: TunaTartare_20 Start: 9544, Stop: 10569, Start Num: 9
Candidate Starts for TunaTartare_20:
(7, 9532), (Start: 9 @9544 has 4 MA's), (Start: 11 @9556 has 8 MA's), (18, 9676), (38, 9961), (42, 10102), (43, 10105), (44, 10111), (52, 10225), (54, 10273), (61, 10378), (66, 10486),

Gene: Wakanda_17 Start: 9090, Stop: 10106, Start Num: 10
Candidate Starts for Wakanda_17:
(Start: 10 @9090 has 53 MA's), (Start: 11 @9102 has 8 MA's), (18, 9228), (35, 9456), (38, 9513), (42, 9654), (43, 9657), (44, 9663), (54, 9828), (55, 9837), (60, 9915), (61, 9924), (66, 10023),

Gene: Westy_22 Start: 10178, Stop: 11191, Start Num: 10
Candidate Starts for Westy_22:
(5, 10157), (7, 10166), (Start: 10 @10178 has 53 MA's), (Start: 11 @10190 has 8 MA's), (15, 10280), (18, 10310), (38, 10595), (42, 10736), (43, 10739), (44, 10745), (53, 10889), (54, 10895), (62, 10997), (64, 11036), (66, 11096), (67, 11135),

Gene: Wipeout_44 Start: 21905, Stop: 22786, Start Num: 10
Candidate Starts for Wipeout_44:
(Start: 10 @21905 has 53 MA's), (Start: 11 @21917 has 8 MA's), (12, 21935), (16, 22025), (20, 22061), (35, 22289), (37, 22325), (38, 22346), (43, 22487), (44, 22493), (61, 22604), (65, 22649), (66, 22703),

Gene: Wofford_44 Start: 21938, Stop: 22957, Start Num: 9
Candidate Starts for Wofford_44:

(7, 21926), (Start: 9 @21938 has 4 MA's), (Start: 11 @21950 has 8 MA's), (18, 22070), (31, 22238), (33, 22250), (38, 22355), (42, 22496), (43, 22499), (44, 22505), (49, 22577), (56, 22679), (61, 22763), (68, 22913),

Gene: Yaboi_46 Start: 21494, Stop: 22387, Start Num: 11
Candidate Starts for Yaboi_46:
(Start: 8 @21473 has 2 MA's), (Start: 11 @21494 has 8 MA's), (15, 21584), (18, 21614), (36, 21869), (38, 21899), (42, 22040), (43, 22043), (44, 22049), (55, 22229),