Pham 347458


1: EastWest_13
2: NathanVaag_11 + 3
3: King2_11
4: Brent_11 + 1
5: Grekaycon_12 + 8
6: Timinator_12 + 5
7: Pippa_12
8: Sicarius2_13 + 1
9: Abba_11
10: Nostromo_11
11: JayCookie_15 + 14
12: KBurrousTX_15
13: Lymara_15
14: Colucci_14
15: DrYang_15
16: ArV1_012
17: MoyaNatalis_15
18: Argena_40 + 15
19: Beted_42 + 1
20: UBSmoodge_43
21: FruityLoops_40
22: FlyingTortilla_41 + 1
23: Oogie_43
24: DalanDe_36 + 1
25: GMA6_26
26: Klevey_11 + 4
27: Bumble_11
28: Nandito_11
29: Altadena_11
30: Circuit_11
31: Music_13 + 3
32: Divya_12
33: BlackJade_17
34: Vitus_13
35: SunnyJune_13
36: Jinkies_13
37: AirForce1_12
38: Vibaki_13
39: Orkz_15
40: Bubbykins_14
41: Cantare_17
42: Lukepolites_11

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 347458 Report

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

Pham number 347458 has 99 members, 19 are drafts.

Phages represented in each track:
• Track 1 : EastWest_13
• Track 2 : NathanVaag_11, Piccoletto_11, Beans_11, Jawnski_11
• Track 3 : King2_11
• Track 4 : Brent_11, Franzy_11
• Track 5 : Grekaycon_12, Shade_12, Zartrosa_12, Martha_12, JKerns_12, Sonny_12, Jordan_12, BossLady_12, TaeYoung_12
• Track 6 : Timinator_12, BarretLemon_12, GravityBall_12, LeeroyJ_12, BigDome_12, StevieBAY_12
• Track 7 : Pippa_12
• Track 8 : Sicarius2_13, Wyborn_13
• Track 9 : Abba_11
• Track 10 : Nostromo_11
• Track 11 : JayCookie_15, JaNo_15, Linus_15, HumptyDumpty_15, Chocolat_15, RosiePosie_15, Mordred_15, Conboy_15, Chubster_15, Chipper1996_150, EdgarPoe_15, Tophat_15, Scavito_15, Kabreeze_15, PrincessTrina_15
• Track 12 : KBurrousTX_15
• Track 13 : Lymara_15
• Track 14 : Colucci_14
• Track 15 : DrYang_15
• Track 16 : ArV1_012
• Track 17 : MoyaNatalis_15
• Track 18 : Argena_40, EmoNemo_40, Hanem_42, Twin_40, Pakusa_40, Amoonguss_40, Mikronejon_42, Schomber_41, MintFritos_40, Aloki_42, Toneprano_40, ChisanaKitsune_38, Gray_42, Chidiebere_42, Farrylious_41, Kabocha_43
• Track 19 : Beted_42, Lenoshki_42
• Track 20 : UBSmoodge_43
• Track 21 : FruityLoops_40
• Track 22 : FlyingTortilla_41, ScarletRaider_41
• Track 23 : Oogie_43
• Track 24 : DalanDe_36, Thales_35
• Track 25 : GMA6_26
• Track 26 : Klevey_11, Bolt007_11, CalWood4100_11, Prairie_11, Lilmac1015_11
• Track 27 : Bumble_11
• Track 28 : Nandito_11
• Track 29 : Altadena_11
• Track 30 : Circuit_11

• Track 31 : Music_13, GoldDust_13, Gooberta_13, Hirko_12
• Track 32 : Divya_12
• Track 33 : BlackJade_17
• Track 34 : Vitus_13
• Track 35 : SunnyJune_13
• Track 36 : Jinkies_13
• Track 37 : AirForce1_12
• Track 38 : Vibaki_13
• Track 39 : Orkz_15
• Track 40 : Bubbykins_14
• Track 41 : Cantare_17
• Track 42 : Lukepolites_11

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

The start number called the most often in the published annotations is 13, it was called in 51 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AirForce1_12, Aloki_42, Altadena_11, Amoonguss_40, Argena_40, BarretLemon_12, Beans_11, BigDome_12, Bolt007_11, BossLady_12, Brent_11, Bumble_11, CalWood4100_11, Cantare_17, Chidiebere_42, ChisanaKitsune_38, Circuit_11, Divya_12, EastWest_13, EmoNemo_40, Farrylious_41, FlyingTortilla_41, Franzy_11, GravityBall_12, Gray_42, Grekaycon_12, Hanem_42, JKerns_12, Jawnski_11, Jinkies_13, Jordan_12, Kabocha_43, King2_11, Klevey_11, LeeroyJ_12, Lilmac1015_11, Martha_12, Mikronejon_42, MintFritos_40, Nandito_11, NathanVaag_11, Oogie_43, Orkz_15, Pakusa_40, Piccoletto_11, Pippa_12, Prairie_11, ScarletRaider_41, Schomber_41, Shade_12, Sicarius2_13, Sonny_12, StevieBAY_12, SunnyJune_13, TaeYoung_12, Timinator_12, Toneprano_40, Twin_40, UBSmoodge_43, Wyborn_13, Zartrosa_12,

Genes that have the "Most Annotated" start but do not call it:
• Beted_42, FruityLoops_40, Lenoshki_42,

Genes that do not have the "Most Annotated" start:
• Abba_11, ArV1_012, BlackJade_17, Bubbykins_14, Chipper1996_150, Chocolat_15, Chubster_15, Colucci_14, Conboy_15, DalanDe_36, DrYang_15, EdgarPoe_15, GMA6_26, GoldDust_13, Gooberta_13, Hirko_12, HumptyDumpty_15, JaNo_15, JayCookie_15, KBurrousTX_15, Kabreeze_15, Linus_15, Lukepolites_11, Lymara_15, Mordred_15, MoyaNatalis_15, Music_13, Nostromo_11, PrincessTrina_15, RosiePosie_15, Scavito_15, Thales_35, Tophat_15, Vibaki_13, Vitus_13,

Summary by start number:

Start 10:
• Found in 3 of 99 (3.0%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 66.7% of time when present
• Phage (with cluster) where this start called: DalanDe_36 (DQ), Thales_35 (DQ),

Start 11:
• Found in 7 of 99 (7.1%) of genes in pham
• Manual Annotations of this start: 5 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlackJade_17 (FL), GoldDust_13 (FL), Gooberta_13 (FL), Hirko_12 (FL), Music_13 (FL), Vibaki_13 (FL), Vitus_13 (FL),

Start 12:
• Found in 22 of 99 (22.2%) of genes in pham
• Manual Annotations of this start: 20 of 80
• Called 95.5% of time when present
• Phage (with cluster) where this start called: ArV1_012 (AR), Bubbykins_14 (UNK), Chipper1996_150 (AR), Chocolat_15 (AR), Chubster_15 (AR), Colucci_14 (AR), Conboy_15 (AR), DrYang_15 (AR), EdgarPoe_15 (AR), HumptyDumpty_15 (AR), JaNo_15 (AR), JayCookie_15 (AR), KBurrousTX_15 (AR), Kabreeze_15 (AR), Linus_15 (AR), Lymara_15 (AR), Mordred_15 (AR), PrincessTrina_15 (AR), RosiePosie_15 (AR), Scavito_15 (AR), Tophat_15 (AR),

Start 13:
• Found in 64 of 99 (64.6%) of genes in pham
• Manual Annotations of this start: 51 of 80
• Called 95.3% of time when present
• Phage (with cluster) where this start called: AirForce1_12 (FL), Aloki_42 (DQ), Altadena_11 (FH), Amoonguss_40 (DQ), Argena_40 (DQ), BarretLemon_12 (AO2), Beans_11 (AO1), BigDome_12 (AO2), Bolt007_11 (FH), BossLady_12 (AO2), Brent_11 (AO1), Bumble_11 (FH), CalWood4100_11 (FH), Cantare_17 (singleton), Chidiebere_42 (DQ), ChisanaKitsune_38 (DQ), Circuit_11 (FH), Divya_12 (FL), EastWest_13 (AO), EmoNemo_40 (DQ), Farrylious_41 (DQ), FlyingTortilla_41 (DQ), Franzy_11 (AO1), GravityBall_12 (AO2), Gray_42 (DQ), Grekaycon_12 (AO2), Hanem_42 (DQ), JKerns_12 (AO2), Jawnski_11 (AO1), Jinkies_13 (FL), Jordan_12 (AO2), Kabocha_43 (DQ), King2_11 (AO1), Klevey_11 (FH), LeeroyJ_12 (AO2), Lilmac1015_11 (FH), Martha_12 (AO2), Mikronejon_42 (DQ), MintFritos_40 (DQ), Nandito_11 (FH), NathanVaag_11 (AO1), Oogie_43 (DQ), Orkz_15 (FL), Pakusa_40 (DQ), Piccoletto_11 (AO1), Pippa_12 (AO2), Prairie_11 (FH), ScarletRaider_41 (DQ), Schomber_41 (DQ), Shade_12 (AO2), Sicarius2_13 (AO2), Sonny_12 (AO2), StevieBAY_12 (AO2), SunnyJune_13 (FL), TaeYoung_12 (AO2), Timinator_12 (AO2), Toneprano_40 (DQ), Twin_40 (DQ), UBSmoodge_43 (DQ), Wyborn_13 (AO2), Zartrosa_12 (AO2),

Start 14:
• Found in 1 of 99 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Nostromo_11 (AO3),

Start 15:
• Found in 1 of 99 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Abba_11 (AO3),

Start 16:

• Found in 6 of 99 (6.1%) of genes in pham
• No Manual Annotations of this start.
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Lukepolites_11 (singleton),

Start 17:
• Found in 30 of 99 (30.3%) of genes in pham
• No Manual Annotations of this start.
• Called 3.3% of time when present
• Phage (with cluster) where this start called: MoyaNatalis_15 (AR),

Start 19:
• Found in 23 of 99 (23.2%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 13.0% of time when present
• Phage (with cluster) where this start called: Beted_42 (DQ), FruityLoops_40 (DQ), Lenoshki_42 (DQ),

Start 28:
• Found in 65 of 99 (65.7%) of genes in pham
• No Manual Annotations of this start.
• Called 1.5% of time when present
• Phage (with cluster) where this start called: GMA6_26 (DQ),

Summary by clusters:

There are 10 clusters represented in this pham: singleton, AO, AR, AO3, AO2, AO1, FH, UNK, FL, DQ,

Info for manual annotations of cluster AO:
•Start number 13 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:
•Start number 13 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:
•Start number 13 was manually annotated 18 times for cluster AO2.

Info for manual annotations of cluster AO3:
•Start number 14 was manually annotated 1 time for cluster AO3.
•Start number 15 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster AR:
•Start number 12 was manually annotated 19 times for cluster AR.

Info for manual annotations of cluster DQ:
•Start number 10 was manually annotated 1 time for cluster DQ.
•Start number 13 was manually annotated 13 times for cluster DQ.
•Start number 19 was manually annotated 1 time for cluster DQ.

Info for manual annotations of cluster FH:
•Start number 13 was manually annotated 7 times for cluster FH.

Info for manual annotations of cluster FL:
•Start number 11 was manually annotated 5 times for cluster FL.
•Start number 13 was manually annotated 4 times for cluster FL.

Info for manual annotations of cluster UNK:
•Start number 12 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: Abba_11 Start: 9301, Stop: 9762, Start Num: 15
Candidate Starts for Abba_11:
(Start: 15 @9301 has 1 MA's), (21, 9346), (27, 9391), (28, 9400), (46, 9565), (47, 9571), (62, 9667), (71, 9718), (72, 9727),

Gene: AirForce1_12 Start: 8829, Stop: 9296, Start Num: 13
Candidate Starts for AirForce1_12:
(Start: 13 @8829 has 51 MA's), (28, 8931), (29, 8937), (31, 8946), (32, 8952), (40, 9060), (42, 9066), (46, 9093), (47, 9099), (54, 9138), (62, 9195), (76, 9285),

Gene: Aloki_42 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Aloki_42:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: Altadena_11 Start: 8980, Stop: 9444, Start Num: 13
Candidate Starts for Altadena_11:
(Start: 13 @8980 has 51 MA's), (46, 9247), (48, 9256), (54, 9292), (62, 9349), (71, 9400),

Gene: Amoonguss_40 Start: 29830, Stop: 30285, Start Num: 13
Candidate Starts for Amoonguss_40:
(9, 29767), (Start: 13 @29830 has 51 MA's), (Start: 19 @29851 has 1 MA's), (22, 29881), (28, 29932), (30, 29944), (32, 29956), (35, 30010), (39, 30055), (42, 30067), (43, 30082), (51, 30115), (73, 30253),

Gene: ArV1_012 Start: 9861, Stop: 10331, Start Num: 12
Candidate Starts for ArV1_012:
(Start: 12 @9861 has 20 MA's), (17, 9873), (20, 9909), (21, 9912), (28, 9966), (34, 10035), (41, 10101), (44, 10122), (46, 10131), (54, 10176), (57, 10194), (62, 10233), (63, 10248), (64, 10251), (74, 10311), (76, 10323),

Gene: Argena_40 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Argena_40:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: BarretLemon_12 Start: 9514, Stop: 9981, Start Num: 13
Candidate Starts for BarretLemon_12:
(7, 9421), (8, 9430), (Start: 13 @9514 has 51 MA's), (17, 9523), (28, 9616), (46, 9784), (57, 9847), (62, 9886),

Gene: Beans_11 Start: 9204, Stop: 9668, Start Num: 13
Candidate Starts for Beans_11:

(Start: 13 @9204 has 51 MA's), (20, 9249), (21, 9252), (28, 9306), (31, 9321), (38, 9420), (56, 9522), (62, 9573),

Gene: Beted_42 Start: 31528, Stop: 31962, Start Num: 19
Candidate Starts for Beted_42:
(9, 31444), (Start: 13 @31507 has 51 MA's), (Start: 19 @31528 has 1 MA's), (22, 31558), (28, 31609), (30, 31621), (32, 31633), (35, 31687), (39, 31732), (41, 31741), (43, 31759), (51, 31792), (73, 31930),

Gene: BigDome_12 Start: 9502, Stop: 9969, Start Num: 13
Candidate Starts for BigDome_12:
(7, 9409), (8, 9418), (Start: 13 @9502 has 51 MA's), (17, 9511), (28, 9604), (46, 9772), (57, 9835), (62, 9874),

Gene: BlackJade_17 Start: 11161, Stop: 11634, Start Num: 11
Candidate Starts for BlackJade_17:
(Start: 11 @11161 has 5 MA's), (21, 11209), (22, 11212), (28, 11263), (38, 11380), (41, 11401), (42, 11404), (46, 11431), (54, 11476), (62, 11533), (76, 11623),

Gene: Bolt007_11 Start: 8922, Stop: 9386, Start Num: 13
Candidate Starts for Bolt007_11:
(Start: 13 @8922 has 51 MA's), (46, 9189), (55, 9237), (62, 9291), (71, 9342),

Gene: BossLady_12 Start: 9517, Stop: 9984, Start Num: 13
Candidate Starts for BossLady_12:
(Start: 13 @9517 has 51 MA's), (20, 9562), (21, 9565), (28, 9619), (42, 9760), (46, 9787), (47, 9793), (62, 9889),

Gene: Brent_11 Start: 9186, Stop: 9650, Start Num: 13
Candidate Starts for Brent_11:
(Start: 13 @9186 has 51 MA's), (20, 9231), (21, 9234), (28, 9288), (31, 9303), (38, 9402), (56, 9504), (57, 9516), (62, 9555),

Gene: Bubbykins_14 Start: 11072, Stop: 11542, Start Num: 12
Candidate Starts for Bubbykins_14:
(Start: 12 @11072 has 20 MA's), (28, 11177), (41, 11312), (46, 11342), (52, 11372), (54, 11387), (57, 11405), (62, 11444), (70, 11489), (74, 11522), (76, 11534),

Gene: Bumble_11 Start: 8987, Stop: 9451, Start Num: 13
Candidate Starts for Bumble_11:
(1, 8507), (2, 8684), (5, 8843), (Start: 13 @8987 has 51 MA's), (42, 9227), (48, 9263), (54, 9299), (62, 9356), (71, 9407),

Gene: CalWood4100_11 Start: 8905, Stop: 9369, Start Num: 13
Candidate Starts for CalWood4100_11:
(Start: 13 @8905 has 51 MA's), (46, 9172), (55, 9220), (62, 9274), (71, 9325),

Gene: Cantare_17 Start: 16184, Stop: 16657, Start Num: 13
Candidate Starts for Cantare_17:
(Start: 13 @16184 has 51 MA's), (18, 16196), (23, 16235), (26, 16274), (42, 16421), (43, 16436), (49, 16463), (58, 16523), (65, 16580), (73, 16625),

Gene: Chidiebere_42 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Chidiebere_42:

(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: Chipper1996_150 Start: 11510, Stop: 11980, Start Num: 12
Candidate Starts for Chipper1996_150:
(Start: 12 @11510 has 20 MA's), (17, 11522), (21, 11561), (22, 11564), (31, 11630), (32, 11636), (43, 11768), (50, 11801), (54, 11825), (57, 11843), (62, 11882), (70, 11927), (74, 11960), (76, 11972),

Gene: ChisanaKitsune_38 Start: 28618, Stop: 29073, Start Num: 13
Candidate Starts for ChisanaKitsune_38:
(9, 28555), (Start: 13 @28618 has 51 MA's), (Start: 19 @28639 has 1 MA's), (22, 28669), (28, 28720), (30, 28732), (32, 28744), (35, 28798), (39, 28843), (42, 28855), (43, 28870), (51, 28903), (73, 29041),

Gene: Chocolat_15 Start: 11511, Stop: 11981, Start Num: 12
Candidate Starts for Chocolat_15:
(Start: 12 @11511 has 20 MA's), (17, 11523), (21, 11562), (22, 11565), (31, 11631), (32, 11637), (43, 11769), (50, 11802), (54, 11826), (57, 11844), (62, 11883), (70, 11928), (74, 11961), (76, 11973),

Gene: Chubster_15 Start: 11281, Stop: 11751, Start Num: 12
Candidate Starts for Chubster_15:
(Start: 12 @11281 has 20 MA's), (17, 11293), (21, 11332), (22, 11335), (31, 11401), (32, 11407), (43, 11539), (50, 11572), (54, 11596), (57, 11614), (62, 11653), (70, 11698), (74, 11731), (76, 11743),

Gene: Circuit_11 Start: 8973, Stop: 9437, Start Num: 13
Candidate Starts for Circuit_11:
(1, 8493), (2, 8670), (5, 8829), (Start: 13 @8973 has 51 MA's), (42, 9213), (48, 9249), (54, 9285), (62, 9342), (71, 9393),

Gene: Colucci_14 Start: 11015, Stop: 11482, Start Num: 12
Candidate Starts for Colucci_14:
(Start: 12 @11015 has 20 MA's), (17, 11027), (21, 11066), (41, 11252), (44, 11273), (50, 11303), (57, 11345), (62, 11384), (64, 11402), (74, 11462),

Gene: Conboy_15 Start: 11509, Stop: 11979, Start Num: 12
Candidate Starts for Conboy_15:
(Start: 12 @11509 has 20 MA's), (17, 11521), (21, 11560), (22, 11563), (31, 11629), (32, 11635), (43, 11767), (50, 11800), (54, 11824), (57, 11842), (62, 11881), (70, 11926), (74, 11959), (76, 11971),

Gene: DalanDe_36 Start: 32484, Stop: 32954, Start Num: 10
Candidate Starts for DalanDe_36:
(Start: 10 @32484 has 1 MA's), (24, 32541), (25, 32559), (28, 32583), (30, 32595), (35, 32661), (49, 32760), (69, 32898),

Gene: Divya_12 Start: 8715, Stop: 9185, Start Num: 13
Candidate Starts for Divya_12:
(3, 8532), (8, 8637), (Start: 13 @8715 has 51 MA's), (21, 8763), (28, 8817), (32, 8841), (38, 8931), (41, 8952), (42, 8955), (46, 8982), (53, 9024), (54, 9027), (62, 9084), (76, 9174),

Gene: DrYang_15 Start: 11464, Stop: 11934, Start Num: 12
Candidate Starts for DrYang_15:
(Start: 12 @11464 has 20 MA's), (17, 11476), (21, 11515), (22, 11518), (32, 11590), (43, 11722), (54, 11779), (57, 11797), (62, 11836), (64, 11854), (74, 11914), (76, 11926),

Gene: EastWest_13 Start: 9545, Stop: 10018, Start Num: 13
Candidate Starts for EastWest_13:
(Start: 13 @9545 has 51 MA's), (17, 9554), (62, 9917), (63, 9932), (71, 9968),

Gene: EdgarPoe_15 Start: 11509, Stop: 11979, Start Num: 12
Candidate Starts for EdgarPoe_15:
(Start: 12 @11509 has 20 MA's), (17, 11521), (21, 11560), (22, 11563), (31, 11629), (32, 11635), (43, 11767), (50, 11800), (54, 11824), (57, 11842), (62, 11881), (70, 11926), (74, 11959), (76, 11971),

Gene: EmoNemo_40 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for EmoNemo_40:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: Farrylious_41 Start: 29603, Stop: 30058, Start Num: 13
Candidate Starts for Farrylious_41:
(9, 29540), (Start: 13 @29603 has 51 MA's), (Start: 19 @29624 has 1 MA's), (22, 29654), (28, 29705), (30, 29717), (32, 29729), (35, 29783), (39, 29828), (42, 29840), (43, 29855), (51, 29888), (73, 30026),

Gene: FlyingTortilla_41 Start: 32692, Stop: 33147, Start Num: 13
Candidate Starts for FlyingTortilla_41:
(Start: 13 @32692 has 51 MA's), (16, 32698), (Start: 19 @32713 has 1 MA's), (28, 32794), (30, 32806), (33, 32833), (35, 32872), (41, 32926), (43, 32944), (69, 33091), (73, 33115),

Gene: Franzy_11 Start: 9186, Stop: 9650, Start Num: 13
Candidate Starts for Franzy_11:
(Start: 13 @9186 has 51 MA's), (20, 9231), (21, 9234), (28, 9288), (31, 9303), (38, 9402), (56, 9504), (57, 9516), (62, 9555),

Gene: FruityLoops_40 Start: 32727, Stop: 33161, Start Num: 19
Candidate Starts for FruityLoops_40:
(Start: 13 @32706 has 51 MA's), (16, 32712), (Start: 19 @32727 has 1 MA's), (28, 32808), (30, 32820), (33, 32847), (41, 32940), (43, 32958), (69, 33105), (73, 33129),

Gene: GMA6_26 Start: 20625, Stop: 20996, Start Num: 28
Candidate Starts for GMA6_26:
(Start: 10 @20523 has 1 MA's), (28, 20625), (32, 20649), (36, 20721), (37, 20733), (41, 20757), (43, 20775), (60, 20871), (61, 20883), (66, 20919), (68, 20925), (69, 20937),

Gene: GoldDust_13 Start: 11102, Stop: 11572, Start Num: 11
Candidate Starts for GoldDust_13:
(Start: 11 @11102 has 5 MA's), (28, 11204), (46, 11369), (47, 11375), (54, 11414), (62, 11471), (64, 11489),

Gene: Gooberta_13 Start: 11102, Stop: 11572, Start Num: 11
Candidate Starts for Gooberta_13:
(Start: 11 @11102 has 5 MA's), (28, 11204), (46, 11369), (47, 11375), (54, 11414), (62, 11471), (64, 11489),

Gene: GravityBall_12 Start: 9513, Stop: 9980, Start Num: 13
Candidate Starts for GravityBall_12:
(7, 9420), (8, 9429), (Start: 13 @9513 has 51 MA's), (17, 9522), (28, 9615), (46, 9783), (57, 9846), (62, 9885),

Gene: Gray_42 Start: 29828, Stop: 30283, Start Num: 13
Candidate Starts for Gray_42:
(9, 29765), (Start: 13 @29828 has 51 MA's), (Start: 19 @29849 has 1 MA's), (22, 29879), (28, 29930), (30, 29942), (32, 29954), (35, 30008), (39, 30053), (42, 30065), (43, 30080), (51, 30113), (73, 30251),

Gene: Grekaycon_12 Start: 9526, Stop: 9993, Start Num: 13
Candidate Starts for Grekaycon_12:
(Start: 13 @9526 has 51 MA's), (20, 9571), (21, 9574), (28, 9628), (42, 9769), (46, 9796), (47, 9802), (62, 9898),

Gene: Hanem_42 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Hanem_42:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: Hirko_12 Start: 10525, Stop: 10995, Start Num: 11
Candidate Starts for Hirko_12:
(Start: 11 @10525 has 5 MA's), (28, 10627), (46, 10792), (47, 10798), (54, 10837), (62, 10894), (64, 10912),

Gene: HumptyDumpty_15 Start: 11508, Stop: 11978, Start Num: 12
Candidate Starts for HumptyDumpty_15:
(Start: 12 @11508 has 20 MA's), (17, 11520), (21, 11559), (22, 11562), (31, 11628), (32, 11634), (43, 11766), (50, 11799), (54, 11823), (57, 11841), (62, 11880), (70, 11925), (74, 11958), (76, 11970),

Gene: JKerns_12 Start: 9553, Stop: 10020, Start Num: 13
Candidate Starts for JKerns_12:
(Start: 13 @9553 has 51 MA's), (20, 9598), (21, 9601), (28, 9655), (42, 9796), (46, 9823), (47, 9829), (62, 9925),

Gene: JaNo_15 Start: 11508, Stop: 11978, Start Num: 12
Candidate Starts for JaNo_15:
(Start: 12 @11508 has 20 MA's), (17, 11520), (21, 11559), (22, 11562), (31, 11628), (32, 11634), (43, 11766), (50, 11799), (54, 11823), (57, 11841), (62, 11880), (70, 11925), (74, 11958), (76, 11970),

Gene: Jawnski_11 Start: 9199, Stop: 9663, Start Num: 13
Candidate Starts for Jawnski_11:
(Start: 13 @9199 has 51 MA's), (20, 9244), (21, 9247), (28, 9301), (31, 9316), (38, 9415), (56, 9517), (62, 9568),

Gene: JayCookie_15 Start: 11511, Stop: 11981, Start Num: 12
Candidate Starts for JayCookie_15:
(Start: 12 @11511 has 20 MA's), (17, 11523), (21, 11562), (22, 11565), (31, 11631), (32, 11637), (43, 11769), (50, 11802), (54, 11826), (57, 11844), (62, 11883), (70, 11928), (74, 11961), (76, 11973),

Gene: Jinkies_13 Start: 9830, Stop: 10297, Start Num: 13
Candidate Starts for Jinkies_13:
(Start: 13 @9830 has 51 MA's), (28, 9932), (29, 9938), (31, 9947), (40, 10061), (42, 10067), (46, 10094), (47, 10100), (54, 10139), (62, 10196), (63, 10211), (76, 10286),

Gene: Jordan_12 Start: 9523, Stop: 9990, Start Num: 13
Candidate Starts for Jordan_12:

(Start: 13 @9523 has 51 MA's), (20, 9568), (21, 9571), (28, 9625), (42, 9766), (46, 9793), (47, 9799), (62, 9895),

Gene: KBurrousTX_15 Start: 11282, Stop: 11752, Start Num: 12
Candidate Starts for KBurrousTX_15:
(Start: 12 @11282 has 20 MA's), (17, 11294), (20, 11330), (21, 11333), (35, 11468), (41, 11522), (44, 11543), (46, 11552), (50, 11573), (54, 11597), (57, 11615), (62, 11654), (64, 11672), (74, 11732), (76, 11744),

Gene: Kabocha_43 Start: 30640, Stop: 31095, Start Num: 13
Candidate Starts for Kabocha_43:
(9, 30577), (Start: 13 @30640 has 51 MA's), (Start: 19 @30661 has 1 MA's), (22, 30691), (28, 30742), (30, 30754), (32, 30766), (35, 30820), (39, 30865), (42, 30877), (43, 30892), (51, 30925), (73, 31063),

Gene: Kabreeze_15 Start: 11508, Stop: 11978, Start Num: 12
Candidate Starts for Kabreeze_15:
(Start: 12 @11508 has 20 MA's), (17, 11520), (21, 11559), (22, 11562), (31, 11628), (32, 11634), (43, 11766), (50, 11799), (54, 11823), (57, 11841), (62, 11880), (70, 11925), (74, 11958), (76, 11970),

Gene: King2_11 Start: 9188, Stop: 9652, Start Num: 13
Candidate Starts for King2_11:
(Start: 13 @9188 has 51 MA's), (20, 9233), (21, 9236), (28, 9290), (38, 9404), (56, 9506), (62, 9557),

Gene: Klevey_11 Start: 8915, Stop: 9379, Start Num: 13
Candidate Starts for Klevey_11:
(Start: 13 @8915 has 51 MA's), (46, 9182), (55, 9230), (62, 9284), (71, 9335),

Gene: LeeroyJ_12 Start: 9513, Stop: 9980, Start Num: 13
Candidate Starts for LeeroyJ_12:
(7, 9420), (8, 9429), (Start: 13 @9513 has 51 MA's), (17, 9522), (28, 9615), (46, 9783), (57, 9846), (62, 9885),

Gene: Lenoshki_42 Start: 31528, Stop: 31962, Start Num: 19
Candidate Starts for Lenoshki_42:
(9, 31444), (Start: 13 @31507 has 51 MA's), (Start: 19 @31528 has 1 MA's), (22, 31558), (28, 31609), (30, 31621), (32, 31633), (35, 31687), (39, 31732), (41, 31741), (43, 31759), (51, 31792), (73, 31930),

Gene: Lilmac1015_11 Start: 8905, Stop: 9369, Start Num: 13
Candidate Starts for Lilmac1015_11:
(Start: 13 @8905 has 51 MA's), (46, 9172), (55, 9220), (62, 9274), (71, 9325),

Gene: Linus_15 Start: 11508, Stop: 11978, Start Num: 12
Candidate Starts for Linus_15:
(Start: 12 @11508 has 20 MA's), (17, 11520), (21, 11559), (22, 11562), (31, 11628), (32, 11634), (43, 11766), (50, 11799), (54, 11823), (57, 11841), (62, 11880), (70, 11925), (74, 11958), (76, 11970),

Gene: Lukepolites_11 Start: 9217, Stop: 9681, Start Num: 16
Candidate Starts for Lukepolites_11:
(16, 9217), (41, 9448), (50, 9499), (54, 9523), (55, 9526), (59, 9562), (62, 9580), (72, 9646), (73, 9649),

Gene: Lymara_15 Start: 11510, Stop: 11980, Start Num: 12
Candidate Starts for Lymara_15:

(Start: 12 @11510 has 20 MA's), (17, 11522), (21, 11561), (22, 11564), (32, 11636), (41, 11750), (43, 11768), (50, 11801), (54, 11825), (57, 11843), (62, 11882), (70, 11927), (74, 11960), (76, 11972),

Gene: Martha_12 Start: 9464, Stop: 9931, Start Num: 13
Candidate Starts for Martha_12:
(Start: 13 @9464 has 51 MA's), (20, 9509), (21, 9512), (28, 9566), (42, 9707), (46, 9734), (47, 9740), (62, 9836),

Gene: Mikronejon_42 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Mikronejon_42:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: MintFritos_40 Start: 29828, Stop: 30283, Start Num: 13
Candidate Starts for MintFritos_40:
(9, 29765), (Start: 13 @29828 has 51 MA's), (Start: 19 @29849 has 1 MA's), (22, 29879), (28, 29930), (30, 29942), (32, 29954), (35, 30008), (39, 30053), (42, 30065), (43, 30080), (51, 30113), (73, 30251),

Gene: Mordred_15 Start: 11508, Stop: 11978, Start Num: 12
Candidate Starts for Mordred_15:
(Start: 12 @11508 has 20 MA's), (17, 11520), (21, 11559), (22, 11562), (31, 11628), (32, 11634), (43, 11766), (50, 11799), (54, 11823), (57, 11841), (62, 11880), (70, 11925), (74, 11958), (76, 11970),

Gene: MoyaNatalis_15 Start: 11523, Stop: 11981, Start Num: 17
Candidate Starts for MoyaNatalis_15:
(Start: 12 @11511 has 20 MA's), (17, 11523), (21, 11562), (22, 11565), (31, 11631), (32, 11637), (43, 11769), (50, 11802), (54, 11826), (57, 11844), (62, 11883), (70, 11928), (74, 11961), (76, 11973),

Gene: Music_13 Start: 10972, Stop: 11442, Start Num: 11
Candidate Starts for Music_13:
(Start: 11 @10972 has 5 MA's), (28, 11074), (46, 11239), (47, 11245), (54, 11284), (62, 11341), (64, 11359),

Gene: Nandito_11 Start: 8929, Stop: 9393, Start Num: 13
Candidate Starts for Nandito_11:
(Start: 13 @8929 has 51 MA's), (46, 9196), (48, 9205), (52, 9226), (54, 9241), (56, 9247), (62, 9298), (67, 9325), (71, 9349),

Gene: NathanVaag_11 Start: 9192, Stop: 9656, Start Num: 13
Candidate Starts for NathanVaag_11:
(Start: 13 @9192 has 51 MA's), (20, 9237), (21, 9240), (28, 9294), (31, 9309), (38, 9408), (56, 9510), (62, 9561),

Gene: Nostromo_11 Start: 9503, Stop: 9970, Start Num: 14
Candidate Starts for Nostromo_11:
(Start: 14 @9503 has 1 MA's), (21, 9548), (27, 9593), (28, 9602), (46, 9767), (47, 9773), (62, 9869), (63, 9884), (71, 9920), (72, 9929), (75, 9950),

Gene: Oogie_43 Start: 31533, Stop: 31988, Start Num: 13
Candidate Starts for Oogie_43:
(9, 31470), (Start: 13 @31533 has 51 MA's), (Start: 19 @31554 has 1 MA's), (22, 31584), (28, 31635), (30, 31647), (32, 31659), (35, 31713), (39, 31758), (41, 31767), (43, 31785), (51, 31818), (73, 31956),

Gene: Orkz_15 Start: 9588, Stop: 10061, Start Num: 13
Candidate Starts for Orkz_15:
(Start: 13 @9588 has 51 MA's), (21, 9636), (28, 9690), (32, 9714), (41, 9828), (46, 9858), (54, 9903), (62, 9960), (63, 9975), (76, 10050),

Gene: Pakusa_40 Start: 29569, Stop: 30024, Start Num: 13
Candidate Starts for Pakusa_40:
(9, 29506), (Start: 13 @29569 has 51 MA's), (Start: 19 @29590 has 1 MA's), (22, 29620), (28, 29671), (30, 29683), (32, 29695), (35, 29749), (39, 29794), (42, 29806), (43, 29821), (51, 29854), (73, 29992),

Gene: Piccoletto_11 Start: 9193, Stop: 9657, Start Num: 13
Candidate Starts for Piccoletto_11:
(Start: 13 @9193 has 51 MA's), (20, 9238), (21, 9241), (28, 9295), (31, 9310), (38, 9409), (56, 9511), (62, 9562),

Gene: Pippa_12 Start: 9563, Stop: 10030, Start Num: 13
Candidate Starts for Pippa_12:
(Start: 13 @9563 has 51 MA's), (20, 9608), (21, 9611), (28, 9665), (42, 9806), (46, 9833), (47, 9839), (62, 9935),

Gene: Prairie_11 Start: 8912, Stop: 9376, Start Num: 13
Candidate Starts for Prairie_11:
(Start: 13 @8912 has 51 MA's), (46, 9179), (55, 9227), (62, 9281), (71, 9332),

Gene: PrincessTrina_15 Start: 11511, Stop: 11981, Start Num: 12
Candidate Starts for PrincessTrina_15:
(Start: 12 @11511 has 20 MA's), (17, 11523), (21, 11562), (22, 11565), (31, 11631), (32, 11637), (43, 11769), (50, 11802), (54, 11826), (57, 11844), (62, 11883), (70, 11928), (74, 11961), (76, 11973),

Gene: RosiePosie_15 Start: 11511, Stop: 11981, Start Num: 12
Candidate Starts for RosiePosie_15:
(Start: 12 @11511 has 20 MA's), (17, 11523), (21, 11562), (22, 11565), (31, 11631), (32, 11637), (43, 11769), (50, 11802), (54, 11826), (57, 11844), (62, 11883), (70, 11928), (74, 11961), (76, 11973),

Gene: ScarletRaider_41 Start: 32719, Stop: 33174, Start Num: 13
Candidate Starts for ScarletRaider_41:
(Start: 13 @32719 has 51 MA's), (16, 32725), (Start: 19 @32740 has 1 MA's), (28, 32821), (30, 32833), (33, 32860), (35, 32899), (41, 32953), (43, 32971), (69, 33118), (73, 33142),

Gene: Scavito_15 Start: 11508, Stop: 11978, Start Num: 12
Candidate Starts for Scavito_15:
(Start: 12 @11508 has 20 MA's), (17, 11520), (21, 11559), (22, 11562), (31, 11628), (32, 11634), (43, 11766), (50, 11799), (54, 11823), (57, 11841), (62, 11880), (70, 11925), (74, 11958), (76, 11970),

Gene: Schomber_41 Start: 29577, Stop: 30032, Start Num: 13
Candidate Starts for Schomber_41:
(9, 29514), (Start: 13 @29577 has 51 MA's), (Start: 19 @29598 has 1 MA's), (22, 29628), (28, 29679), (30, 29691), (32, 29703), (35, 29757), (39, 29802), (42, 29814), (43, 29829), (51, 29862), (73, 30000),

Gene: Shade_12 Start: 9502, Stop: 9969, Start Num: 13
Candidate Starts for Shade_12:
(Start: 13 @9502 has 51 MA's), (20, 9547), (21, 9550), (28, 9604), (42, 9745), (46, 9772), (47, 9778), (62, 9874),

Gene: Sicarius2_13 Start: 10002, Stop: 10475, Start Num: 13
Candidate Starts for Sicarius2_13:
(Start: 13 @10002 has 51 MA's), (17, 10011), (27, 10095), (46, 10272), (50, 10293), (62, 10374), (71, 10425),

Gene: Sonny_12 Start: 9523, Stop: 9990, Start Num: 13
Candidate Starts for Sonny_12:
(Start: 13 @9523 has 51 MA's), (20, 9568), (21, 9571), (28, 9625), (42, 9766), (46, 9793), (47, 9799), (62, 9895),

Gene: StevieBAY_12 Start: 9513, Stop: 9980, Start Num: 13
Candidate Starts for StevieBAY_12:
(7, 9420), (8, 9429), (Start: 13 @9513 has 51 MA's), (17, 9522), (28, 9615), (46, 9783), (57, 9846), (62, 9885),

Gene: SunnyJune_13 Start: 10212, Stop: 10679, Start Num: 13
Candidate Starts for SunnyJune_13:
(Start: 13 @10212 has 51 MA's), (28, 10314), (29, 10320), (31, 10329), (41, 10446), (45, 10473), (46, 10476), (47, 10482), (54, 10521), (62, 10578), (76, 10668),

Gene: TaeYoung_12 Start: 9527, Stop: 9994, Start Num: 13
Candidate Starts for TaeYoung_12:
(Start: 13 @9527 has 51 MA's), (20, 9572), (21, 9575), (28, 9629), (42, 9770), (46, 9797), (47, 9803), (62, 9899),

Gene: Thales_35 Start: 31400, Stop: 31870, Start Num: 10
Candidate Starts for Thales_35:
(Start: 10 @31400 has 1 MA's), (24, 31457), (25, 31475), (28, 31499), (30, 31511), (35, 31577), (49, 31676), (69, 31814),

Gene: Timinator_12 Start: 9513, Stop: 9980, Start Num: 13
Candidate Starts for Timinator_12:
(7, 9420), (8, 9429), (Start: 13 @9513 has 51 MA's), (17, 9522), (28, 9615), (46, 9783), (57, 9846), (62, 9885),

Gene: Toneprano_40 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Toneprano_40:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: Tophat_15 Start: 11510, Stop: 11980, Start Num: 12
Candidate Starts for Tophat_15:
(Start: 12 @11510 has 20 MA's), (17, 11522), (21, 11561), (22, 11564), (31, 11630), (32, 11636), (43, 11768), (50, 11801), (54, 11825), (57, 11843), (62, 11882), (70, 11927), (74, 11960), (76, 11972),

Gene: Twin_40 Start: 29827, Stop: 30282, Start Num: 13
Candidate Starts for Twin_40:
(9, 29764), (Start: 13 @29827 has 51 MA's), (Start: 19 @29848 has 1 MA's), (22, 29878), (28, 29929), (30, 29941), (32, 29953), (35, 30007), (39, 30052), (42, 30064), (43, 30079), (51, 30112), (73, 30250),

Gene: UBSmoodge_43 Start: 32453, Stop: 32908, Start Num: 13
Candidate Starts for UBSmoodge_43:

(4, 32291), (Start: 13 @32453 has 51 MA's), (16, 32459), (Start: 19 @32474 has 1 MA's), (28, 32555), (30, 32567), (33, 32594), (41, 32687), (43, 32705), (69, 32852), (73, 32876),

Gene: Vibaki_13 Start: 10981, Stop: 11451, Start Num: 11
Candidate Starts for Vibaki_13:
(Start: 11 @10981 has 5 MA's), (28, 11083), (42, 11221), (46, 11248), (47, 11254), (54, 11293), (62, 11350), (64, 11368),

Gene: Vitus_13 Start: 10783, Stop: 11253, Start Num: 11
Candidate Starts for Vitus_13:
(6, 10687), (Start: 11 @10783 has 5 MA's), (16, 10789), (21, 10831), (28, 10885), (47, 11056), (54, 11095), (62, 11152),

Gene: Wyborn_13 Start: 9863, Stop: 10336, Start Num: 13
Candidate Starts for Wyborn_13:
(Start: 13 @9863 has 51 MA's), (17, 9872), (27, 9956), (46, 10133), (50, 10154), (62, 10235), (71, 10286),

Gene: Zartrosa_12 Start: 9526, Stop: 9993, Start Num: 13
Candidate Starts for Zartrosa_12:
(Start: 13 @9526 has 51 MA's), (20, 9571), (21, 9574), (28, 9628), (42, 9769), (46, 9796), (47, 9802), (62, 9898),