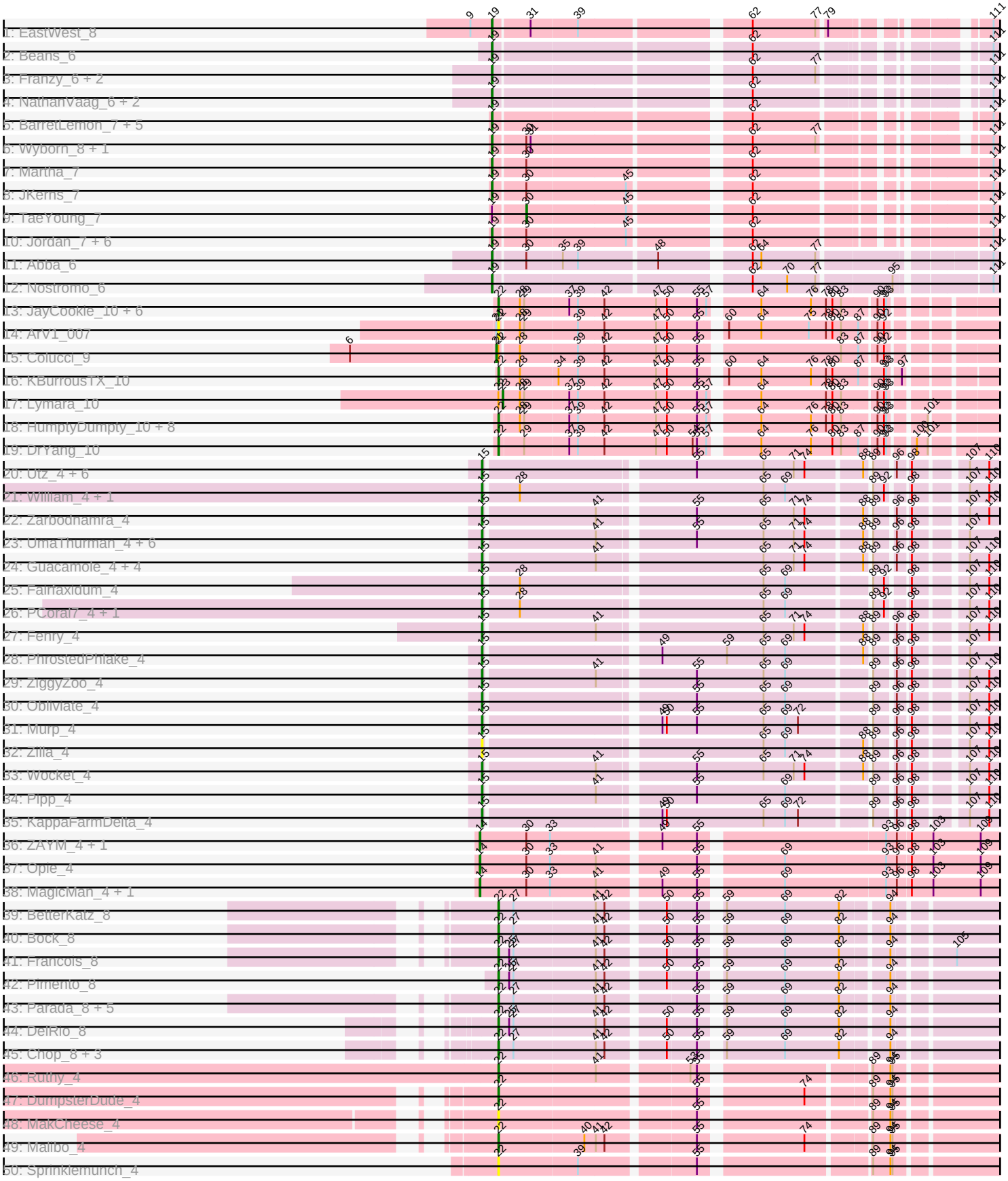
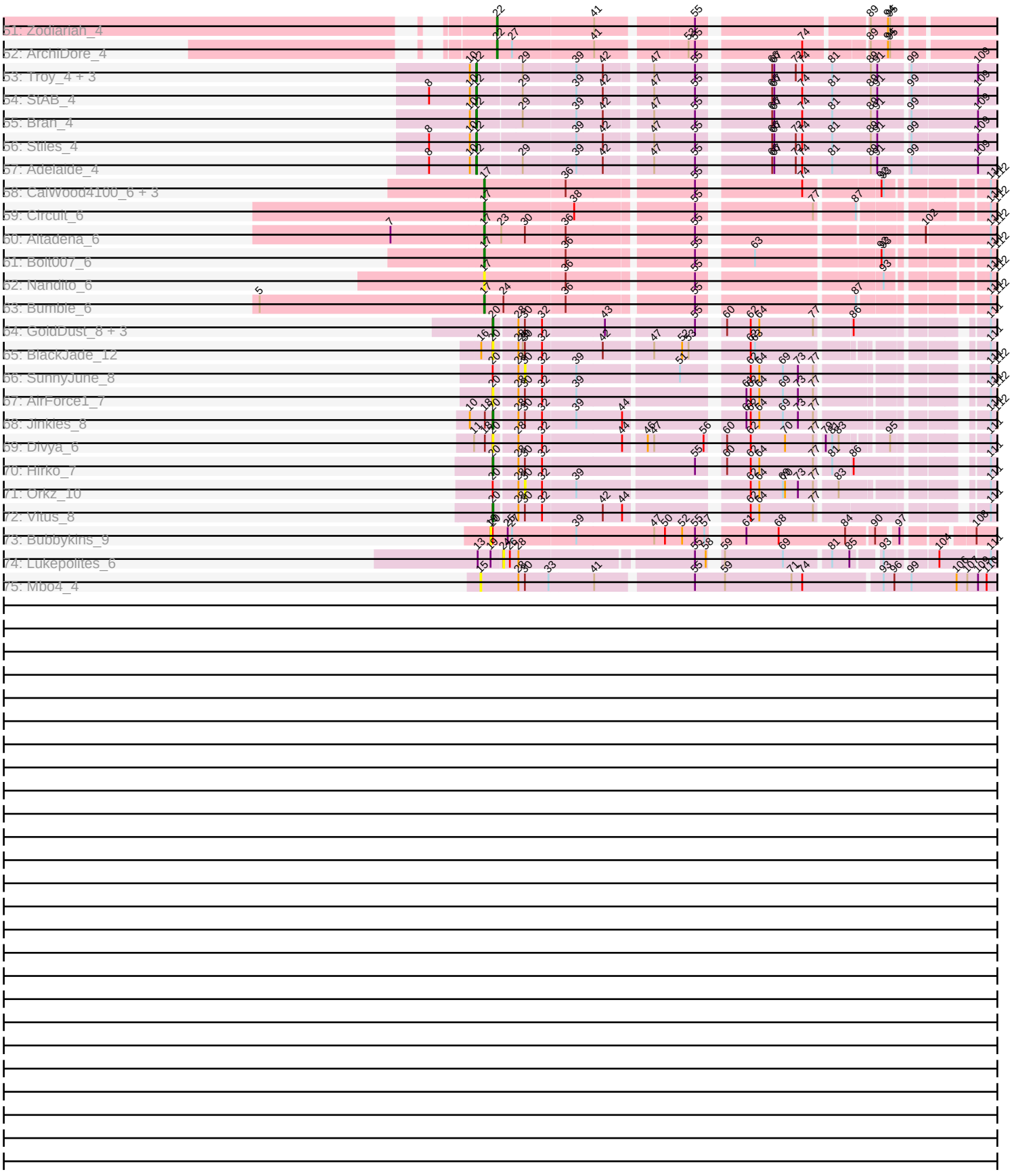
Zoomed Pham 283579



Zoomed Pham 283579



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 283579 Report

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

Pham number 283579 has 142 members, 20 are drafts.

Phages represented in each track:
• Track 1 : EastWest_8
• Track 2 : Beans_6
• Track 3 : Franzy_6, Brent_6, King2_6
• Track 4 : NathanVaag_6, Jawnski_6, Piccoletto_6
• Track 5 : BarretLemon_7, GravityBall_7, BigDome_7, Timinator_7, StevieBAY_7, LeeroyJ_7
• Track 6 : Wyborn_8, Sicarius2_8
• Track 7 : Martha_7
• Track 8 : JKerns_7
• Track 9 : TaeYoung_7
• Track 10 : Jordan_7, BossLady_7, Zartrosa_7, Pippa_7, Sonny_7, Shade_7, Grekaycon_7
• Track 11 : Abba_6
• Track 12 : Nostromo_6
• Track 13 : JayCookie_10, Linus_10, Chocolat_10, RosiePosie_10, MoyaNatalis_10, Chubster_10, PrincessTrina_10
• Track 14 : ArV1_007
• Track 15 : Colucci_9
• Track 16 : KBurrousTX_10
• Track 17 : Lymara_10
• Track 18 : HumptyDumpty_10, Mordred_10, Conboy_10, JaNo_10, EdgarPoe_10, Chipper1996_100, Tophat_10, Scavito_10, Kabreeze_10
• Track 19 : DrYang_10
• Track 20 : Utz_4, Lysidious_4, Jalammah_4, Mellie_4, Samba_4, BlingBling_4, Hitter_4
• Track 21 : William_4, PrincePatrick_4
• Track 22 : Zarbodnamra_4
• Track 23 : UmaThurman_4, MintFen_4, Melba_4, Barco_4, Archis_4, CaptainKirk2_4, Delian_4
• Track 24 : Guacamole_4, Malachai_4, Begonia_4, Wisp_4, JasperJr_4
• Track 25 : Fairfaxidum_4
• Track 26 : PCoral7_4, Toast_4
• Track 27 : Fenry_4
• Track 28 : PhrostedPhlake_4
• Track 29 : ZiggyZoo_4
• Track 30 : Obliviate_4
• Track 31 : Murp_4

• Track 32 : Zilla_4
• Track 33 : Wocket_4
• Track 34 : Pipp_4
• Track 35 : KappaFarmDelta_4
• Track 36 : ZAYM_4, TaronosaurasRx_4
• Track 37 : Opie_4
• Track 38 : MagicMan_4, Schnabeltier_4
• Track 39 : BetterKatz_8
• Track 40 : Bock_8
• Track 41 : Francois_8
• Track 42 : Pimento_8
• Track 43 : Parada_8, Nadeem_8, WheatThin_8, Brylie_8, NancyRae_8, Mulch_8
• Track 44 : DelRio_8
• Track 45 : Chop_8, Ayotoya_8, GrandSlam_8, Hamood_8
• Track 46 : Ruthy_4
• Track 47 : DumpsterDude_4
• Track 48 : MakCheese_4
• Track 49 : Malibo_4
• Track 50 : Sprinklemunch_4
• Track 51 : Zodiariah_4
• Track 52 : ArchiDore_4
• Track 53 : Troy_4, Lederberg_4, SamW_4, Dina_4
• Track 54 : StAB_4
• Track 55 : Bran_4
• Track 56 : Stiles_4
• Track 57 : Adelaide_4
• Track 58 : CalWood4100_6, Lilmac1015_6, Klevey_6, Prairie_6
• Track 59 : Circuit_6
• Track 60 : Altadena_6
• Track 61 : Bolt007_6
• Track 62 : Nandito_6
• Track 63 : Bumble_6
• Track 64 : GoldDust_8, Vibaki_8, Gooberta_8, Music_8
• Track 65 : BlackJade_12
• Track 66 : SunnyJune_8
• Track 67 : AirForce1_7
• Track 68 : Jinkies_8
• Track 69 : Divya_6
• Track 70 : Hirko_7
• Track 71 : Orkz_10
• Track 72 : Vitus_8
• Track 73 : Bubbykins_9
• Track 74 : Lukepolites_6
• Track 75 : Mbo4_4

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

The start number called the most often in the published annotations is 22, it was called in 37 of the 122 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ArV1_007, ArchiDore_4, Ayotoya_8, BetterKatz_8, Bock_8, Brylie_8, Chipper1996_100, Chocolat_10, Chop_8, Chubster_10, Conboy_10, DelRio_8, DrYang_10, DumpsterDude_4, EdgarPoe_10, Francois_8, GrandSlam_8, Hamood_8, HumptyDumpty_10, JaNo_10, JayCookie_10, KBurrousTX_10, Kabreeze_10, Linus_10, MakCheese_4, Malibo_4, Mordred_10, MoyaNatalis_10, Mulch_8, Nadeem_8, NancyRae_8, Parada_8, Pimento_8, PrincessTrina_10, RosiePosie_10, Ruthy_4, Scavito_10, Sprinklemunch_4, Tophat_10, WheatThin_8, Zodiariah_4,

Genes that have the "Most Annotated" start but do not call it:
• Colucci_9, Lymara_10,

Genes that do not have the "Most Annotated" start:
• Abba_6, Adelaide_4, AirForce1_7, Altadena_6, Archis_4, Barco_4, BarretLemon_7, Beans_6, Begonia_4, BigDome_7, BlackJade_12, BlingBling_4, Bolt007_6, BossLady_7, Bran_4, Brent_6, Bubbykins_9, Bumble_6, CalWood4100_6, CaptainKirk2_4, Circuit_6, Delian_4, Dina_4, Divya_6, EastWest_8, Fairfaxidum_4, Fenry_4, Franzy_6, GoldDust_8, Gooberta_8, GravityBall_7, Grekaycon_7, Guacamole_4, Hirko_7, Hitter_4, JKerns_7, Jalammah_4, JasperJr_4, Jawnski_6, Jinkies_8, Jordan_7, KappaFarmDelta_4, King2_6, Klevey_6, Lederberg_4, LeeroyJ_7, Lilmac1015_6, Lukepolites_6, Lysidious_4, MagicMan_4, Malachai_4, Martha_7, Mbo4_4, Melba_4, Mellie_4, MintFen_4, Murp_4, Music_8, Nandito_6, NathanVaag_6, Nostromo_6, Obliviate_4, Opie_4, Orkz_10, PCoral7_4, PhrostedPhlake_4, Piccoletto_6, Pipp_4, Pippa_7, Prairie_6, PrincePatrick_4, SamW_4, Samba_4, Schnabeltier_4, Shade_7, Sicarius2_8, Sonny_7, StAB_4, StevieBAY_7, Stiles_4, SunnyJune_8, TaeYoung_7, TaronosaurasRx_4, Timinator_7, Toast_4, Troy_4, UmaThurman_4, Utz_4, Vibaki_8, Vitus_8, William_4, Wisp_4, Wocket_4, Wyborn_8, ZAYM_4, Zarbodnamra_4, Zartrosa_7, ZiggyZoo_4, Zilla_4,

Summary by start number:

Start 12:
• Found in 8 of 142 (5.6%) of genes in pham
• Manual Annotations of this start: 8 of 122
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adelaide_4 (EP), Bran_4 (EP), Dina_4 (EP), Lederberg_4 (EP), SamW_4 (EP), StAB_4 (EP), Stiles_4 (EP), Troy_4 (EP),

Start 14:
• Found in 5 of 142 (3.5%) of genes in pham
• Manual Annotations of this start: 4 of 122
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MagicMan_4 (DB), Opie_4 (DB), Schnabeltier_4 (DB), TaronosaurasRx_4 (DB), ZAYM_4 (DB),

Start 15:
• Found in 35 of 142 (24.6%) of genes in pham
• Manual Annotations of this start: 32 of 122
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archis_4 (CV), Barco_4 (CV), Begonia_4 (CV), BlingBling_4 (CV), CaptainKirk2_4 (CV), Delian_4 (CV), Fairfaxidum_4 (CV),

Fenry_4 (CV), Guacamole_4 (CV), Hitter_4 (CV), Jalammah_4 (CV), JasperJr_4 (CV), KappaFarmDelta_4 (CV), Lysidious_4 (CV), Malachai_4 (CV), Mbo4_4 (singleton), Melba_4 (CV), Mellie_4 (CV), MintFen_4 (CV), Murp_4 (CV), Obliviate_4 (CV), PCoral7_4 (CV), PhrostedPhlake_4 (CV), Pipp_4 (CV), PrincePatrick_4 (CV), Samba_4 (CV), Toast_4 (CV), UmaThurman_4 (CV), Utz_4 (CV), William_4 (CV), Wisp_4 (CV), Wocket_4 (CV), Zarbodnamra_4 (CV), ZiggyZoo_4 (CV), Zilla_4 (CV),

Start 17:
• Found in 9 of 142 (6.3%) of genes in pham
• Manual Annotations of this start: 7 of 122
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Altadena_6 (FH), Bolt007_6 (FH), Bumble_6 (FH), CalWood4100_6 (FH), Circuit_6 (FH), Klevey_6 (FH), Lilmac1015_6 (FH), Nandito_6 (FH), Prairie_6 (FH),

Start 19:
• Found in 30 of 142 (21.1%) of genes in pham
• Manual Annotations of this start: 26 of 122
• Called 93.3% of time when present
• Phage (with cluster) where this start called: Abba_6 (AO3), BarretLemon_7 (AO2), Beans_6 (AO1), BigDome_7 (AO2), BossLady_7 (AO2), Brent_6 (AO1), Bubbykins_9 (UNK), EastWest_8 (AO), Franzy_6 (AO1), GravityBall_7 (AO2), Grekaycon_7 (AO2), JKerns_7 (AO2), Jawnski_6 (AO1), Jordan_7 (AO2), King2_6 (AO1), LeeroyJ_7 (AO2), Martha_7 (AO2), NathanVaag_6 (AO1), Nostromo_6 (AO3), Piccoletto_6 (AO1), Pippa_7 (AO2), Shade_7 (AO2), Sicarius2_8 (AO2), Sonny_7 (AO2), StevieBAY_7 (AO2), Timinator_7 (AO2), Wyborn_8 (AO2), Zartrosa_7 (AO2),

Start 20:
• Found in 13 of 142 (9.2%) of genes in pham
• Manual Annotations of this start: 5 of 122
• Called 76.9% of time when present
• Phage (with cluster) where this start called: AirForce1_7 (FL), BlackJade_12 (FL), Divya_6 (FL), GoldDust_8 (FL), Gooberta_8 (FL), Hirko_7 (FL), Jinkies_8 (FL), Music_8 (FL), Vibaki_8 (FL), Vitus_8 (FL),

Start 21:
• Found in 2 of 142 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 122
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Colucci_9 (AR),

Start 22:
• Found in 43 of 142 (30.3%) of genes in pham
• Manual Annotations of this start: 37 of 122
• Called 95.3% of time when present
• Phage (with cluster) where this start called: ArV1_007 (AR), ArchiDore_4 (DW), Ayotoya_8 (DI), BetterKatz_8 (DI), Bock_8 (DI), Brylie_8 (DI), Chipper1996_100 (AR), Chocolat_10 (AR), Chop_8 (DI), Chubster_10 (AR), Conboy_10 (AR), DelRio_8 (DI), DrYang_10 (AR), DumpsterDude_4 (DW), EdgarPoe_10 (AR), Francois_8 (DI), GrandSlam_8 (DI), Hamood_8 (DI), HumptyDumpty_10 (AR), JaNo_10 (AR), JayCookie_10 (AR), KBurrousTX_10 (AR), Kabreeze_10 (AR), Linus_10 (AR), MakCheese_4 (DW), Malibo_4 (DW), Mordred_10 (AR), MoyaNatalis_10 (AR), Mulch_8 (DI), Nadeem_8 (DI), NancyRae_8 (DI), Parada_8 (DI), Pimento_8 (DI),

PrincessTrina_10 (AR), RosiePosie_10 (AR), Ruthy_4 (DW), Scavito_10 (AR), Sprinklemunch_4 (DW), Tophat_10 (AR), WheatThin_8 (DI), Zodiariah_4 (DW),

Start 23:
• Found in 2 of 142 (1.4%) of genes in pham
• Manual Annotations of this start: 1 of 122
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Lymara_10 (AR),

Start 24:
• Found in 2 of 142 (1.4%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Lukepolites_6 (singleton),

Start 30:
• Found in 31 of 142 (21.8%) of genes in pham
• Manual Annotations of this start: 1 of 122
• Called 9.7% of time when present
• Phage (with cluster) where this start called: Orkz_10 (FL), SunnyJune_8 (FL), TaeYoung_7 (AO2),

Summary by clusters:

There are 14 clusters represented in this pham: singleton, DI, DB, AO, EP, AR, AO3, AO2, AO1, FH, DW, UNK, FL, CV,

Info for manual annotations of cluster AO:
•Start number 19 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:
•Start number 19 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:
•Start number 19 was manually annotated 16 times for cluster AO2.
•Start number 30 was manually annotated 1 time for cluster AO2.

Info for manual annotations of cluster AO3:
•Start number 19 was manually annotated 2 times for cluster AO3.

Info for manual annotations of cluster AR:
•Start number 21 was manually annotated 1 time for cluster AR.
•Start number 22 was manually annotated 17 times for cluster AR.
•Start number 23 was manually annotated 1 time for cluster AR.

Info for manual annotations of cluster CV:
•Start number 15 was manually annotated 32 times for cluster CV.

Info for manual annotations of cluster DB:
•Start number 14 was manually annotated 4 times for cluster DB.

Info for manual annotations of cluster DI:
•Start number 22 was manually annotated 15 times for cluster DI.

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

Info for manual annotations of cluster EP:
•Start number 12 was manually annotated 8 times for cluster EP.

Info for manual annotations of cluster FH:
•Start number 17 was manually annotated 7 times for cluster FH.

Info for manual annotations of cluster FL:
•Start number 20 was manually annotated 5 times for cluster FL.

Gene Information:

Gene: Abba_6 Start: 5801, Stop: 6952, Start Num: 19
Candidate Starts for Abba_6:
(Start: 19 @5801 has 26 MA's), (Start: 30 @5840 has 1 MA's), (35, 5888), (39, 5909), (48, 6011), (62, 6122), (64, 6134), (77, 6209), (111, 6416), (153, 6656), (156, 6680),

Gene: Adelaide_4 Start: 3258, Stop: 4631, Start Num: 12
Candidate Starts for Adelaide_4:
(8, 3192), (10, 3249), (Start: 12 @3258 has 8 MA's), (29, 3318), (39, 3390), (42, 3426), (47, 3483), (55, 3540), (66, 3627), (67, 3630), (72, 3660), (74, 3669), (81, 3711), (89, 3765), (91, 3774), (99, 3813), (109, 3903), (135, 4110), (142, 4197), (143, 4206), (158, 4326), (165, 4431), (172, 4464), (178, 4503), (179, 4515), (180, 4521), (189, 4608),

Gene: AirForce1_7 Start: 5524, Stop: 6627, Start Num: 20
Candidate Starts for AirForce1_7:
(Start: 20 @5524 has 5 MA's), (28, 5554), (Start: 30 @5563 has 1 MA's), (32, 5587), (39, 5632), (61, 5839), (62, 5845), (64, 5857), (69, 5890), (73, 5911), (77, 5932), (111, 6121), (112, 6130), (155, 6346), (156, 6358),

Gene: Altadena_6 Start: 5581, Stop: 6747, Start Num: 17
Candidate Starts for Altadena_6:
(7, 5452), (Start: 17 @5581 has 7 MA's), (Start: 23 @5605 has 1 MA's), (Start: 30 @5638 has 1 MA's), (36, 5692), (55, 5857), (102, 6127), (111, 6211), (112, 6220), (127, 6301), (155, 6463),

Gene: ArV1_007 Start: 6192, Stop: 7631, Start Num: 22
Candidate Starts for ArV1_007:
(Start: 21 @6189 has 1 MA's), (Start: 22 @6192 has 37 MA's), (28, 6216), (29, 6222), (39, 6294), (42, 6330), (47, 6402), (50, 6417), (55, 6459), (60, 6483), (64, 6528), (75, 6594), (78, 6618), (80, 6627), (83, 6639), (87, 6663), (90, 6684), (92, 6693), (113, 6825), (114, 6828), (120, 6873), (121, 6882), (128, 6918), (134, 6966), (145, 7074), (150, 7113), (170, 7296), (176, 7329), (181, 7368), (183, 7395), (184, 7404), (195, 7527), (196, 7530), (199, 7551),

Gene: ArchiDore_4 Start: 3443, Stop: 4939, Start Num: 22
Candidate Starts for ArchiDore_4:
(Start: 22 @3443 has 37 MA's), (27, 3464), (41, 3575), (53, 3689), (55, 3698), (74, 3827), (89, 3905), (94, 3929), (95, 3932), (116, 4082), (117, 4088), (134, 4226), (137, 4268), (140, 4310), (158, 4463),

(159, 4466), (177, 4658), (184, 4724), (193, 4820),

Gene: Archis_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Archis_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Ayotoya_8 Start: 5183, Stop: 6661, Start Num: 22
Candidate Starts for Ayotoya_8:
(Start: 22 @5183 has 37 MA's), (27, 5204), (41, 5315), (42, 5327), (50, 5399), (55, 5438), (59, 5459), (69, 5540), (82, 5615), (94, 5675), (116, 5825), (128, 5918), (140, 6041), (159, 6194), (173, 6350), (177, 6380), (184, 6446), (203, 6638),

Gene: Barco_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Barco_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: BarretLemon_7 Start: 5958, Stop: 7103, Start Num: 19
Candidate Starts for BarretLemon_7:
(Start: 19 @5958 has 26 MA's), (62, 6282), (111, 6534), (152, 6798), (154, 6813), (156, 6828), (176, 6981),

Gene: Beans_6 Start: 5622, Stop: 6770, Start Num: 19
Candidate Starts for Beans_6:
(Start: 19 @5622 has 26 MA's), (62, 5946), (111, 6198), (152, 6462), (155, 6480), (156, 6492),

Gene: Begonia_4 Start: 3316, Stop: 4731, Start Num: 15
Candidate Starts for Begonia_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4612), (194, 4624),

Gene: BetterKatz_8 Start: 5151, Stop: 6629, Start Num: 22
Candidate Starts for BetterKatz_8:
(Start: 22 @5151 has 37 MA's), (27, 5172), (41, 5283), (42, 5295), (50, 5367), (55, 5406), (59, 5427), (69, 5508), (82, 5583), (94, 5643), (116, 5793), (140, 6009), (159, 6162), (173, 6318), (177, 6348), (184, 6414), (203, 6606),

Gene: BigDome_7 Start: 5954, Stop: 7090, Start Num: 19
Candidate Starts for BigDome_7:
(Start: 19 @5954 has 26 MA's), (62, 6278), (111, 6530), (152, 6785), (154, 6800), (156, 6815), (176, 6968),

Gene: BlackJade_12 Start: 7839, Stop: 8957, Start Num: 20
Candidate Starts for BlackJade_12:
(16, 7824), (Start: 20 @7839 has 5 MA's), (28, 7869), (29, 7875), (Start: 30 @7878 has 1 MA's), (32, 7902), (42, 7983), (47, 8046), (52, 8085), (53, 8094), (62, 8160), (63, 8166), (111, 8427), (155, 8676), (156, 8688), (180, 8871),

Gene: BlingBling_4 Start: 3316, Stop: 4728, Start Num: 15

Candidate Starts for BlingBling_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Bock_8 Start: 4901, Stop: 6379, Start Num: 22
Candidate Starts for Bock_8:
(Start: 22 @4901 has 37 MA's), (27, 4922), (41, 5033), (42, 5045), (50, 5117), (55, 5156), (59, 5177), (69, 5258), (82, 5333), (94, 5393), (116, 5543), (128, 5636), (140, 5759), (159, 5912), (173, 6068), (177, 6098), (184, 6164), (203, 6356),

Gene: Bolt007_6 Start: 5542, Stop: 6699, Start Num: 17
Candidate Starts for Bolt007_6:
(Start: 17 @5542 has 7 MA's), (36, 5653), (55, 5818), (63, 5881), (92, 6043), (93, 6046), (111, 6160), (112, 6169), (122, 6223), (151, 6394),

Gene: BossLady_7 Start: 5943, Stop: 7118, Start Num: 19
Candidate Starts for BossLady_7:
(Start: 19 @5943 has 26 MA's), (Start: 30 @5985 has 1 MA's), (45, 6120), (62, 6267), (111, 6540), (144, 6789), (152, 6810), (153, 6816), (155, 6828), (156, 6840),

Gene: Bran_4 Start: 3260, Stop: 4636, Start Num: 12
Candidate Starts for Bran_4:
(10, 3251), (Start: 12 @3260 has 8 MA's), (29, 3320), (39, 3392), (42, 3428), (47, 3485), (55, 3542), (66, 3629), (67, 3632), (74, 3671), (81, 3713), (89, 3767), (91, 3776), (99, 3815), (109, 3905), (135, 4112), (142, 4199), (143, 4208), (158, 4331), (165, 4436), (172, 4469), (178, 4508), (179, 4520), (180, 4526), (189, 4613),

Gene: Brent_6 Start: 5617, Stop: 6768, Start Num: 19
Candidate Starts for Brent_6:
(Start: 19 @5617 has 26 MA's), (62, 5941), (77, 6028), (111, 6193), (152, 6460), (155, 6478), (156, 6490), (163, 6553),

Gene: Brylie_8 Start: 4898, Stop: 6376, Start Num: 22
Candidate Starts for Brylie_8:
(Start: 22 @4898 has 37 MA's), (27, 4919), (41, 5030), (42, 5042), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6065), (177, 6095), (184, 6161), (203, 6353),

Gene: Bubbykins_9 Start: 7378, Stop: 8835, Start Num: 19
Candidate Starts for Bubbykins_9:
(Start: 19 @7378 has 26 MA's), (Start: 20 @7381 has 5 MA's), (25, 7402), (27, 7408), (39, 7495), (47, 7603), (50, 7618), (52, 7642), (55, 7660), (57, 7672), (61, 7711), (68, 7756), (84, 7849), (90, 7882), (97, 7906), (108, 7987), (131, 8122), (133, 8152), (145, 8266), (150, 8305), (171, 8512), (174, 8527), (176, 8542), (182, 8584), (192, 8707), (195, 8740),

Gene: Bumble_6 Start: 5596, Stop: 6753, Start Num: 17
Candidate Starts for Bumble_6:
(5, 5284), (Start: 17 @5596 has 7 MA's), (24, 5620), (36, 5704), (55, 5869), (87, 6064), (111, 6211), (112, 6220), (147, 6448), (175, 6628),

Gene: CalWood4100_6 Start: 5536, Stop: 6678, Start Num: 17
Candidate Starts for CalWood4100_6:

(Start: 17 @5536 has 7 MA's), (36, 5647), (55, 5812), (74, 5941), (92, 6037), (93, 6040), (111, 6154), (112, 6163),

Gene: CaptainKirk2_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for CaptainKirk2_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Chipper1996_100 Start: 7819, Stop: 9273, Start Num: 22
Candidate Starts for Chipper1996_100:
(Start: 22 @7819 has 37 MA's), (28, 7846), (29, 7852), (37, 7912), (39, 7924), (42, 7960), (47, 8032), (50, 8047), (55, 8089), (57, 8101), (64, 8158), (76, 8227), (78, 8248), (80, 8257), (83, 8269), (90, 8311), (92, 8320), (93, 8323), (101, 8365), (113, 8449), (114, 8452), (120, 8497), (125, 8533), (131, 8554), (136, 8620), (145, 8698), (150, 8737), (171, 8944), (174, 8959), (176, 8974), (184, 9049), (188, 9094), (200, 9205),

Gene: Chocolat_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for Chocolat_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (180, 9002), (184, 9047), (188, 9092), (200, 9203),

Gene: Chop_8 Start: 4931, Stop: 6409, Start Num: 22
Candidate Starts for Chop_8:
(Start: 22 @4931 has 37 MA's), (27, 4952), (41, 5063), (42, 5075), (50, 5147), (55, 5186), (59, 5207), (69, 5288), (82, 5363), (94, 5423), (116, 5573), (128, 5666), (140, 5789), (159, 5942), (173, 6098), (177, 6128), (184, 6194), (203, 6386),

Gene: Chubster_10 Start: 7587, Stop: 9041, Start Num: 22
Candidate Starts for Chubster_10:
(Start: 22 @7587 has 37 MA's), (28, 7614), (29, 7620), (37, 7680), (39, 7692), (42, 7728), (47, 7800), (50, 7815), (55, 7857), (57, 7869), (64, 7926), (76, 7995), (78, 8016), (80, 8025), (83, 8037), (90, 8079), (92, 8088), (93, 8091), (113, 8217), (114, 8220), (120, 8265), (125, 8301), (131, 8322), (136, 8388), (145, 8466), (150, 8505), (171, 8712), (174, 8727), (176, 8742), (180, 8772), (184, 8817), (188, 8862), (200, 8973),

Gene: Circuit_6 Start: 5584, Stop: 6744, Start Num: 17
Candidate Starts for Circuit_6:
(Start: 17 @5584 has 7 MA's), (38, 5707), (55, 5860), (77, 6004), (87, 6055), (111, 6202), (112, 6211),

Gene: Colucci_9 Start: 7314, Stop: 8774, Start Num: 21
Candidate Starts for Colucci_9:
(6, 7113), (Start: 21 @7314 has 1 MA's), (Start: 22 @7317 has 37 MA's), (28, 7341), (39, 7419), (42, 7455), (47, 7527), (50, 7542), (55, 7584), (83, 7764), (87, 7788), (90, 7809), (92, 7818), (113, 7947), (120, 7995), (131, 8052), (134, 8088), (138, 8130), (145, 8196), (150, 8235), (170, 8439), (176, 8472), (182, 8514), (191, 8613), (192, 8637), (199, 8694), (200, 8703),

Gene: Conboy_10 Start: 7818, Stop: 9272, Start Num: 22
Candidate Starts for Conboy_10:

(Start: 22 @7818 has 37 MA's), (28, 7845), (29, 7851), (37, 7911), (39, 7923), (42, 7959), (47, 8031), (50, 8046), (55, 8088), (57, 8100), (64, 8157), (76, 8226), (78, 8247), (80, 8256), (83, 8268), (90, 8310), (92, 8319), (93, 8322), (101, 8364), (113, 8448), (114, 8451), (120, 8496), (125, 8532), (131, 8553), (136, 8619), (145, 8697), (150, 8736), (171, 8943), (174, 8958), (176, 8973), (184, 9048), (188, 9093), (200, 9204),

Gene: DelRio_8 Start: 5192, Stop: 6673, Start Num: 22
Candidate Starts for DelRio_8:
(Start: 22 @5192 has 37 MA's), (25, 5207), (27, 5213), (41, 5324), (42, 5336), (50, 5408), (55, 5447), (59, 5468), (69, 5549), (82, 5624), (94, 5684), (116, 5834), (128, 5927), (140, 6050), (159, 6206), (173, 6362), (177, 6392), (184, 6458), (203, 6650),

Gene: Delian_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Delian_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Dina_4 Start: 3258, Stop: 4631, Start Num: 12
Candidate Starts for Dina_4:
(10, 3249), (Start: 12 @3258 has 8 MA's), (29, 3318), (39, 3390), (42, 3426), (47, 3483), (55, 3540), (66, 3627), (67, 3630), (72, 3660), (74, 3669), (81, 3711), (89, 3765), (91, 3774), (99, 3813), (109, 3903), (135, 4110), (142, 4197), (143, 4206), (158, 4326), (165, 4431), (172, 4464), (178, 4503), (179, 4515), (180, 4521), (189, 4608),

Gene: Divya_6 Start: 5216, Stop: 6289, Start Num: 20
Candidate Starts for Divya_6:
(11, 5192), (18, 5207), (Start: 20 @5216 has 5 MA's), (28, 5246), (32, 5279), (44, 5387), (46, 5414), (47, 5423), (56, 5492), (60, 5504), (62, 5537), (70, 5585), (77, 5624), (79, 5633), (81, 5642), (83, 5651), (95, 5705), (111, 5804), (141, 5963), (154, 6005), (156, 6020), (162, 6047),

Gene: DrYang_10 Start: 7773, Stop: 9206, Start Num: 22
Candidate Starts for DrYang_10:
(Start: 22 @7773 has 37 MA's), (29, 7806), (37, 7866), (39, 7878), (42, 7914), (47, 7986), (50, 8001), (54, 8037), (55, 8043), (57, 8055), (64, 8112), (76, 8181), (80, 8211), (83, 8223), (87, 8247), (90, 8268), (92, 8277), (93, 8280), (100, 8307), (101, 8322), (113, 8406), (114, 8409), (120, 8454), (131, 8511), (134, 8547), (145, 8655), (150, 8694), (171, 8877), (176, 8907), (183, 8973), (185, 8985), (200, 9138),

Gene: DumpsterDude_4 Start: 3443, Stop: 4948, Start Num: 22
Candidate Starts for DumpsterDude_4:
(1, 2396), (2, 2516), (3, 2558), (Start: 22 @3443 has 37 MA's), (55, 3698), (74, 3827), (89, 3905), (94, 3929), (95, 3932), (117, 4088), (134, 4226), (137, 4268), (140, 4310), (152, 4409), (158, 4463), (159, 4466), (177, 4667), (184, 4733),

Gene: EastWest_8 Start: 6051, Stop: 7193, Start Num: 19
Candidate Starts for EastWest_8:
(9, 6021), (Start: 19 @6051 has 26 MA's), (31, 6099), (39, 6162), (62, 6375), (77, 6462), (79, 6471), (111, 6633), (152, 6891), (156, 6921),

Gene: EdgarPoe_10 Start: 7818, Stop: 9272, Start Num: 22
Candidate Starts for EdgarPoe_10:
(Start: 22 @7818 has 37 MA's), (28, 7845), (29, 7851), (37, 7911), (39, 7923), (42, 7959), (47, 8031), (50, 8046), (55, 8088), (57, 8100), (64, 8157), (76, 8226), (78, 8247), (80, 8256), (83, 8268), (90, 8310),

(92, 8319), (93, 8322), (101, 8364), (113, 8448), (114, 8451), (120, 8496), (125, 8532), (131, 8553), (136, 8619), (145, 8697), (150, 8736), (171, 8943), (174, 8958), (176, 8973), (184, 9048), (188, 9093), (200, 9204),

Gene: Fairfaxidum_4 Start: 3317, Stop: 4723, Start Num: 15
Candidate Starts for Fairfaxidum_4:
(Start: 15 @3317 has 32 MA's), (28, 3362), (65, 3680), (69, 3710), (89, 3815), (92, 3830), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (119, 4001), (122, 4019), (123, 4025), (139, 4160), (146, 4214), (162, 4328), (194, 4616),

Gene: Fenry_4 Start: 3317, Stop: 4729, Start Num: 15
Candidate Starts for Fenry_4:
(Start: 15 @3317 has 32 MA's), (41, 3467), (65, 3680), (71, 3722), (74, 3737), (88, 3809), (89, 3815), (96, 3839), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (118, 3986), (122, 4019), (123, 4025), (129, 4055), (130, 4061), (139, 4160), (146, 4214), (193, 4610), (194, 4622),

Gene: Francois_8 Start: 4897, Stop: 6378, Start Num: 22
Candidate Starts for Francois_8:
(Start: 22 @4897 has 37 MA's), (25, 4912), (27, 4918), (41, 5029), (42, 5041), (50, 5113), (55, 5152), (59, 5173), (69, 5254), (82, 5329), (94, 5389), (105, 5461), (116, 5539), (128, 5632), (140, 5755), (159, 5908), (173, 6067), (177, 6097), (184, 6163), (198, 6304), (203, 6355),

Gene: Franzy_6 Start: 5617, Stop: 6768, Start Num: 19
Candidate Starts for Franzy_6:
(Start: 19 @5617 has 26 MA's), (62, 5941), (77, 6028), (111, 6193), (152, 6460), (155, 6478), (156, 6490), (163, 6553),

Gene: GoldDust_8 Start: 7745, Stop: 8875, Start Num: 20
Candidate Starts for GoldDust_8:
(Start: 20 @7745 has 5 MA's), (28, 7775), (Start: 30 @7784 has 1 MA's), (32, 7808), (43, 7892), (55, 8009), (60, 8033), (62, 8066), (64, 8078), (77, 8153), (86, 8198), (111, 8348), (156, 8603),

Gene: Gooberta_8 Start: 7745, Stop: 8875, Start Num: 20
Candidate Starts for Gooberta_8:
(Start: 20 @7745 has 5 MA's), (28, 7775), (Start: 30 @7784 has 1 MA's), (32, 7808), (43, 7892), (55, 8009), (60, 8033), (62, 8066), (64, 8078), (77, 8153), (86, 8198), (111, 8348), (156, 8603),

Gene: GrandSlam_8 Start: 4931, Stop: 6409, Start Num: 22
Candidate Starts for GrandSlam_8:
(Start: 22 @4931 has 37 MA's), (27, 4952), (41, 5063), (42, 5075), (50, 5147), (55, 5186), (59, 5207), (69, 5288), (82, 5363), (94, 5423), (116, 5573), (128, 5666), (140, 5789), (159, 5942), (173, 6098), (177, 6128), (184, 6194), (203, 6386),

Gene: GravityBall_7 Start: 5958, Stop: 7103, Start Num: 19
Candidate Starts for GravityBall_7:
(Start: 19 @5958 has 26 MA's), (62, 6282), (111, 6534), (152, 6798), (154, 6813), (156, 6828), (176, 6981),

Gene: Grekaycon_7 Start: 5943, Stop: 7127, Start Num: 19
Candidate Starts for Grekaycon_7:
(Start: 19 @5943 has 26 MA's), (Start: 30 @5985 has 1 MA's), (45, 6120), (62, 6267), (111, 6540), (144, 6798), (152, 6819), (153, 6825), (155, 6837), (156, 6849),

Gene: Guacamole_4 Start: 3317, Stop: 4732, Start Num: 15
Candidate Starts for Guacamole_4:
(Start: 15 @3317 has 32 MA's), (41, 3467), (65, 3680), (71, 3722), (74, 3737), (88, 3809), (89, 3815), (96, 3839), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (118, 3986), (122, 4019), (123, 4025), (129, 4055), (130, 4061), (139, 4160), (146, 4214), (193, 4613), (194, 4625),

Gene: Hamood_8 Start: 4931, Stop: 6409, Start Num: 22
Candidate Starts for Hamood_8:
(Start: 22 @4931 has 37 MA's), (27, 4952), (41, 5063), (42, 5075), (50, 5147), (55, 5186), (59, 5207), (69, 5288), (82, 5363), (94, 5423), (116, 5573), (128, 5666), (140, 5789), (159, 5942), (173, 6098), (177, 6128), (184, 6194), (203, 6386),

Gene: Hirko_7 Start: 7143, Stop: 8291, Start Num: 20
Candidate Starts for Hirko_7:
(Start: 20 @7143 has 5 MA's), (28, 7173), (Start: 30 @7182 has 1 MA's), (32, 7206), (55, 7407), (60, 7431), (62, 7464), (64, 7476), (77, 7551), (81, 7569), (86, 7596), (111, 7746), (156, 8019), (180, 8202), (187, 8259),

Gene: Hitter_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Hitter_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: HumptyDumpty_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for HumptyDumpty_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (101, 8363), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (184, 9047), (188, 9092), (200, 9203),

Gene: JKerns_7 Start: 5940, Stop: 7157, Start Num: 19
Candidate Starts for JKerns_7:
(Start: 19 @5940 has 26 MA's), (Start: 30 @5982 has 1 MA's), (45, 6117), (62, 6264), (111, 6537), (144, 6798), (149, 6828), (152, 6849), (153, 6855), (155, 6867), (156, 6879),

Gene: JaNo_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for JaNo_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (101, 8363), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (184, 9047), (188, 9092), (200, 9203),

Gene: Jalammah_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Jalammah_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: JasperJr_4 Start: 3317, Stop: 4732, Start Num: 15
Candidate Starts for JasperJr_4:

(Start: 15 @3317 has 32 MA's), (41, 3467), (65, 3680), (71, 3722), (74, 3737), (88, 3809), (89, 3815), (96, 3839), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (118, 3986), (122, 4019), (123, 4025), (129, 4055), (130, 4061), (139, 4160), (146, 4214), (193, 4613), (194, 4625),

Gene: Jawnski_6 Start: 5617, Stop: 6765, Start Num: 19
Candidate Starts for Jawnski_6:
(Start: 19 @5617 has 26 MA's), (62, 5941), (111, 6193), (152, 6457), (155, 6475), (156, 6487),

Gene: JayCookie_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for JayCookie_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (180, 9002), (184, 9047), (188, 9092), (200, 9203),

Gene: Jinkies_8 Start: 6526, Stop: 7632, Start Num: 20
Candidate Starts for Jinkies_8:
(10, 6496), (18, 6517), (Start: 20 @6526 has 5 MA's), (28, 6556), (Start: 30 @6565 has 1 MA's), (32, 6589), (39, 6634), (44, 6697), (61, 6841), (62, 6847), (64, 6859), (69, 6892), (73, 6913), (77, 6934), (111, 7123), (112, 7132), (155, 7351), (156, 7363), (180, 7546),

Gene: Jordan_7 Start: 5940, Stop: 7127, Start Num: 19
Candidate Starts for Jordan_7:
(Start: 19 @5940 has 26 MA's), (Start: 30 @5982 has 1 MA's), (45, 6117), (62, 6264), (111, 6537), (144, 6798), (152, 6819), (153, 6825), (155, 6837), (156, 6849),

Gene: KBurrousTX_10 Start: 7618, Stop: 9051, Start Num: 22
Candidate Starts for KBurrousTX_10:
(Start: 22 @7618 has 37 MA's), (28, 7642), (34, 7693), (39, 7720), (42, 7756), (47, 7828), (50, 7843), (55, 7885), (60, 7909), (64, 7954), (76, 8023), (78, 8044), (80, 8053), (87, 8089), (92, 8119), (93, 8122), (97, 8137), (113, 8245), (120, 8293), (121, 8302), (131, 8350), (145, 8500), (150, 8539), (170, 8722), (186, 8845), (195, 8953), (202, 9028),

Gene: Kabreeze_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for Kabreeze_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (101, 8363), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (184, 9047), (188, 9092), (200, 9203),

Gene: KappaFarmDelta_4 Start: 3301, Stop: 4713, Start Num: 15
Candidate Starts for KappaFarmDelta_4:
(Start: 15 @3301 has 32 MA's), (49, 3523), (50, 3529), (65, 3664), (69, 3694), (72, 3712), (89, 3799), (96, 3823), (98, 3838), (107, 3898), (110, 3925), (116, 3958), (118, 3970), (122, 4003), (123, 4009), (129, 4039), (130, 4045), (146, 4198), (193, 4594), (194, 4606),

Gene: King2_6 Start: 5619, Stop: 6770, Start Num: 19
Candidate Starts for King2_6:
(Start: 19 @5619 has 26 MA's), (62, 5943), (77, 6030), (111, 6195), (152, 6462), (155, 6480), (156, 6492), (163, 6555),

Gene: Klevey_6 Start: 5536, Stop: 6687, Start Num: 17
Candidate Starts for Klevey_6:
(Start: 17 @5536 has 7 MA's), (36, 5647), (55, 5812), (74, 5941), (92, 6037), (93, 6040), (111, 6154), (112, 6163),

Gene: Lederberg_4 Start: 3258, Stop: 4631, Start Num: 12
Candidate Starts for Lederberg_4:
(10, 3249), (Start: 12 @3258 has 8 MA's), (29, 3318), (39, 3390), (42, 3426), (47, 3483), (55, 3540), (66, 3627), (67, 3630), (72, 3660), (74, 3669), (81, 3711), (89, 3765), (91, 3774), (99, 3813), (109, 3903), (135, 4110), (142, 4197), (143, 4206), (158, 4326), (165, 4431), (172, 4464), (178, 4503), (179, 4515), (180, 4521), (189, 4608),

Gene: LeeroyJ_7 Start: 5957, Stop: 7102, Start Num: 19
Candidate Starts for LeeroyJ_7:
(Start: 19 @5957 has 26 MA's), (62, 6281), (111, 6533), (152, 6797), (154, 6812), (156, 6827), (176, 6980),

Gene: Lilmac1015_6 Start: 5536, Stop: 6678, Start Num: 17
Candidate Starts for Lilmac1015_6:
(Start: 17 @5536 has 7 MA's), (36, 5647), (55, 5812), (74, 5941), (92, 6037), (93, 6040), (111, 6154), (112, 6163),

Gene: Linus_10 Start: 7814, Stop: 9268, Start Num: 22
Candidate Starts for Linus_10:
(Start: 22 @7814 has 37 MA's), (28, 7841), (29, 7847), (37, 7907), (39, 7919), (42, 7955), (47, 8027), (50, 8042), (55, 8084), (57, 8096), (64, 8153), (76, 8222), (78, 8243), (80, 8252), (83, 8264), (90, 8306), (92, 8315), (93, 8318), (113, 8444), (114, 8447), (120, 8492), (125, 8528), (131, 8549), (136, 8615), (145, 8693), (150, 8732), (171, 8939), (174, 8954), (176, 8969), (180, 8999), (184, 9044), (188, 9089), (200, 9200),

Gene: Lukepolites_6 Start: 5706, Stop: 6890, Start Num: 24
Candidate Starts for Lukepolites_6:
(13, 5673), (Start: 19 @5691 has 26 MA's), (24, 5706), (26, 5715), (28, 5727), (55, 5955), (58, 5970), (59, 5976), (69, 6057), (81, 6117), (85, 6141), (93, 6174), (104, 6234), (111, 6300), (153, 6591), (156, 6615), (168, 6735), (169, 6738), (187, 6858),

Gene: Lymara_10 Start: 7816, Stop: 9258, Start Num: 23
Candidate Starts for Lymara_10:
(Start: 22 @7810 has 37 MA's), (Start: 23 @7816 has 1 MA's), (28, 7840), (29, 7846), (37, 7906), (39, 7918), (42, 7954), (47, 8026), (50, 8041), (55, 8083), (57, 8095), (64, 8152), (78, 8242), (80, 8251), (83, 8263), (90, 8305), (92, 8314), (93, 8317), (113, 8443), (114, 8446), (120, 8491), (125, 8527), (136, 8614), (145, 8692), (150, 8731), (174, 8944), (176, 8959), (184, 9034), (188, 9079), (200, 9190),

Gene: Lysidious_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Lysidious_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: MagicMan_4 Start: 3593, Stop: 5035, Start Num: 14
Candidate Starts for MagicMan_4:
(Start: 14 @3593 has 4 MA's), (Start: 30 @3656 has 1 MA's), (33, 3689), (41, 3749), (49, 3827), (55, 3875), (69, 3977), (93, 4115), (96, 4130), (98, 4148), (103, 4178), (109, 4244), (115, 4283), (117,

4295), (122, 4349), (124, 4361), (146, 4550), (165, 4706), (191, 4868), (200, 4955),

Gene: MakCheese_4 Start: 3438, Stop: 4937, Start Num: 22
Candidate Starts for MakCheese_4:
(1, 2397), (2, 2517), (3, 2559), (Start: 22 @3438 has 37 MA's), (55, 3693), (89, 3903), (94, 3927), (95, 3930), (118, 4092), (132, 4212), (134, 4224), (140, 4308), (158, 4464), (159, 4467), (161, 4476), (164, 4578), (173, 4626), (177, 4656), (184, 4722), (190, 4785),

Gene: Malachai_4 Start: 3316, Stop: 4731, Start Num: 15
Candidate Starts for Malachai_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4612), (194, 4624),

Gene: Malibo_4 Start: 3443, Stop: 4954, Start Num: 22
Candidate Starts for Malibo_4:
(Start: 22 @3443 has 37 MA's), (40, 3560), (41, 3575), (42, 3587), (55, 3698), (74, 3827), (89, 3905), (94, 3929), (95, 3932), (116, 4082), (117, 4088), (122, 4142), (123, 4148), (126, 4169), (140, 4307), (159, 4463), (161, 4472), (166, 4607), (167, 4613), (173, 4643), (177, 4673), (184, 4739),

Gene: Martha_7 Start: 5943, Stop: 7064, Start Num: 19
Candidate Starts for Martha_7:
(Start: 19 @5943 has 26 MA's), (Start: 30 @5985 has 1 MA's), (62, 6267), (111, 6540), (144, 6735), (152, 6756), (153, 6762), (155, 6774), (156, 6786),

Gene: Mbo4_4 Start: 3494, Stop: 4975, Start Num: 15
Candidate Starts for Mbo4_4:
(Start: 15 @3494 has 32 MA's), (28, 3545), (Start: 30 @3554 has 1 MA's), (33, 3587), (41, 3647), (55, 3773), (59, 3815), (71, 3908), (74, 3923), (93, 4028), (96, 4043), (99, 4067), (106, 4130), (107, 4145), (109, 4160), (110, 4172), (122, 4265), (146, 4469), (157, 4553), (190, 4817), (191, 4820), (196, 4880), (201, 4919),

Gene: Melba_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Melba_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Mellie_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Mellie_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: MintFen_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for MintFen_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Mordred_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for Mordred_10:

(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (101, 8363), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (184, 9047), (188, 9092), (200, 9203),

Gene: MoyaNatalis_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for MoyaNatalis_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (180, 9002), (184, 9047), (188, 9092), (200, 9203),

Gene: Mulch_8 Start: 4898, Stop: 6376, Start Num: 22
Candidate Starts for Mulch_8:
(Start: 22 @4898 has 37 MA's), (27, 4919), (41, 5030), (42, 5042), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6065), (177, 6095), (184, 6161), (203, 6353),

Gene: Murp_4 Start: 3304, Stop: 4716, Start Num: 15
Candidate Starts for Murp_4:
(Start: 15 @3304 has 32 MA's), (49, 3526), (50, 3532), (55, 3574), (65, 3667), (69, 3697), (72, 3715), (89, 3802), (96, 3826), (98, 3841), (107, 3901), (110, 3928), (116, 3961), (118, 3973), (122, 4006), (123, 4012), (129, 4042), (130, 4048), (146, 4201), (194, 4609),

Gene: Music_8 Start: 7615, Stop: 8745, Start Num: 20
Candidate Starts for Music_8:
(Start: 20 @7615 has 5 MA's), (28, 7645), (Start: 30 @7654 has 1 MA's), (32, 7678), (43, 7762), (55, 7879), (60, 7903), (62, 7936), (64, 7948), (77, 8023), (86, 8068), (111, 8218), (156, 8473),

Gene: Nadeem_8 Start: 4898, Stop: 6376, Start Num: 22
Candidate Starts for Nadeem_8:
(Start: 22 @4898 has 37 MA's), (27, 4919), (41, 5030), (42, 5042), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6065), (177, 6095), (184, 6161), (203, 6353),

Gene: NancyRae_8 Start: 4898, Stop: 6376, Start Num: 22
Candidate Starts for NancyRae_8:
(Start: 22 @4898 has 37 MA's), (27, 4919), (41, 5030), (42, 5042), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6065), (177, 6095), (184, 6161), (203, 6353),

Gene: Nandito_6 Start: 5532, Stop: 6701, Start Num: 17
Candidate Starts for Nandito_6:
(Start: 17 @5532 has 7 MA's), (36, 5643), (55, 5808), (93, 6036), (111, 6150), (112, 6159), (127, 6240), (151, 6396), (175, 6576),

Gene: NathanVaag_6 Start: 5622, Stop: 6770, Start Num: 19
Candidate Starts for NathanVaag_6:
(Start: 19 @5622 has 26 MA's), (62, 5946), (111, 6198), (152, 6462), (155, 6480), (156, 6492),

Gene: Nostromo_6 Start: 5972, Stop: 7126, Start Num: 19

Candidate Starts for Nostromo_6:
(Start: 19 @5972 has 26 MA's), (62, 6293), (70, 6341), (77, 6380), (95, 6476), (111, 6590), (153, 6830), (156, 6854),

Gene: Obliviate_4 Start: 3316, Stop: 4752, Start Num: 15
Candidate Starts for Obliviate_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (69, 3709), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (146, 4213), (193, 4633), (194, 4645),

Gene: Opie_4 Start: 3599, Stop: 5044, Start Num: 14
Candidate Starts for Opie_4:
(Start: 14 @3599 has 4 MA's), (Start: 30 @3662 has 1 MA's), (33, 3695), (41, 3755), (55, 3881), (69, 3983), (93, 4124), (96, 4139), (98, 4157), (103, 4187), (109, 4253), (115, 4292), (117, 4304), (122, 4358), (124, 4370), (146, 4559), (191, 4877), (200, 4964),

Gene: Orkz_10 Start: 6292, Stop: 7383, Start Num: 30
Candidate Starts for Orkz_10:
(Start: 20 @6253 has 5 MA's), (28, 6283), (Start: 30 @6292 has 1 MA's), (32, 6316), (39, 6361), (62, 6574), (64, 6586), (69, 6619), (70, 6622), (73, 6640), (77, 6661), (83, 6688), (111, 6850), (148, 7081), (154, 7099), (156, 7114), (169, 7237),

Gene: PCoral7_4 Start: 3317, Stop: 4723, Start Num: 15
Candidate Starts for PCoral7_4:
(Start: 15 @3317 has 32 MA's), (28, 3362), (65, 3680), (69, 3710), (89, 3815), (92, 3830), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (119, 4001), (122, 4019), (123, 4025), (139, 4160), (146, 4214), (194, 4616),

Gene: Parada_8 Start: 4898, Stop: 6376, Start Num: 22
Candidate Starts for Parada_8:
(Start: 22 @4898 has 37 MA's), (27, 4919), (41, 5030), (42, 5042), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6065), (177, 6095), (184, 6161), (203, 6353),

Gene: PhrostedPhlake_4 Start: 3317, Stop: 4750, Start Num: 15
Candidate Starts for PhrostedPhlake_4:
(Start: 15 @3317 has 32 MA's), (49, 3539), (59, 3629), (65, 3680), (69, 3710), (88, 3809), (89, 3815), (96, 3839), (98, 3854), (107, 3914), (115, 3968), (116, 3974), (118, 3986), (122, 4019), (123, 4025), (129, 4055), (130, 4061), (146, 4214), (194, 4643),

Gene: Piccoletto_6 Start: 5623, Stop: 6771, Start Num: 19
Candidate Starts for Piccoletto_6:
(Start: 19 @5623 has 26 MA's), (62, 5947), (111, 6199), (152, 6463), (155, 6481), (156, 6493),

Gene: Pimento_8 Start: 4898, Stop: 6373, Start Num: 22
Candidate Starts for Pimento_8:
(Start: 22 @4898 has 37 MA's), (25, 4913), (27, 4919), (41, 5030), (42, 5042), (50, 5114), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6062), (177, 6092), (184, 6158), (203, 6350),

Gene: Pipp_4 Start: 3315, Stop: 4751, Start Num: 15
Candidate Starts for Pipp_4:

(Start: 15 @3315 has 32 MA's), (41, 3465), (55, 3585), (69, 3708), (89, 3813), (96, 3837), (98, 3852), (107, 3912), (110, 3939), (116, 3972), (118, 3984), (122, 4017), (123, 4023), (129, 4053), (130, 4059), (146, 4212), (193, 4632), (194, 4644), (198, 4677),

Gene: Pippa_7 Start: 5973, Stop: 7157, Start Num: 19
Candidate Starts for Pippa_7:
(Start: 19 @5973 has 26 MA's), (Start: 30 @6015 has 1 MA's), (45, 6150), (62, 6297), (111, 6570), (144, 6828), (152, 6849), (153, 6855), (155, 6867), (156, 6879),

Gene: Prairie_6 Start: 5536, Stop: 6687, Start Num: 17
Candidate Starts for Prairie_6:
(Start: 17 @5536 has 7 MA's), (36, 5647), (55, 5812), (74, 5941), (92, 6037), (93, 6040), (111, 6154), (112, 6163),

Gene: PrincePatrick_4 Start: 3318, Stop: 4724, Start Num: 15
Candidate Starts for PrincePatrick_4:
(4, 2580), (Start: 15 @3318 has 32 MA's), (28, 3363), (65, 3681), (69, 3711), (89, 3816), (92, 3831), (98, 3855), (107, 3915), (110, 3942), (116, 3975), (119, 4002), (122, 4020), (123, 4026), (139, 4161), (146, 4215), (194, 4617),

Gene: PrincessTrina_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for PrincessTrina_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (180, 9002), (184, 9047), (188, 9092), (200, 9203),

Gene: RosiePosie_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for RosiePosie_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (180, 9002), (184, 9047), (188, 9092), (200, 9203),

Gene: Ruthy_4 Start: 3515, Stop: 5017, Start Num: 22
Candidate Starts for Ruthy_4:
(2, 2516), (3, 2558), (Start: 22 @3515 has 37 MA's), (41, 3647), (53, 3761), (55, 3770), (89, 3977), (94, 4001), (95, 4004), (117, 4160), (132, 4286), (134, 4298), (137, 4340), (140, 4382), (158, 4535), (159, 4538), (177, 4736), (184, 4802),

Gene: SamW_4 Start: 3258, Stop: 4631, Start Num: 12
Candidate Starts for SamW_4:
(10, 3249), (Start: 12 @3258 has 8 MA's), (29, 3318), (39, 3390), (42, 3426), (47, 3483), (55, 3540), (66, 3627), (67, 3630), (72, 3660), (74, 3669), (81, 3711), (89, 3765), (91, 3774), (99, 3813), (109, 3903), (135, 4110), (142, 4197), (143, 4206), (158, 4326), (165, 4431), (172, 4464), (178, 4503), (179, 4515), (180, 4521), (189, 4608),

Gene: Samba_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Samba_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024),

(129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Scavito_10 Start: 7817, Stop: 9271, Start Num: 22
Candidate Starts for Scavito_10:
(Start: 22 @7817 has 37 MA's), (28, 7844), (29, 7850), (37, 7910), (39, 7922), (42, 7958), (47, 8030), (50, 8045), (55, 8087), (57, 8099), (64, 8156), (76, 8225), (78, 8246), (80, 8255), (83, 8267), (90, 8309), (92, 8318), (93, 8321), (101, 8363), (113, 8447), (114, 8450), (120, 8495), (125, 8531), (131, 8552), (136, 8618), (145, 8696), (150, 8735), (171, 8942), (174, 8957), (176, 8972), (184, 9047), (188, 9092), (200, 9203),

Gene: Schnabeltier_4 Start: 3594, Stop: 5036, Start Num: 14
Candidate Starts for Schnabeltier_4:
(Start: 14 @3594 has 4 MA's), (Start: 30 @3657 has 1 MA's), (33, 3690), (41, 3750), (49, 3828), (55, 3876), (69, 3978), (93, 4116), (96, 4131), (98, 4149), (103, 4179), (109, 4245), (115, 4284), (117, 4296), (122, 4350), (124, 4362), (146, 4551), (165, 4707), (191, 4869), (200, 4956),

Gene: Shade_7 Start: 5940, Stop: 7106, Start Num: 19
Candidate Starts for Shade_7:
(Start: 19 @5940 has 26 MA's), (Start: 30 @5982 has 1 MA's), (45, 6117), (62, 6264), (111, 6537), (144, 6777), (152, 6798), (153, 6804), (155, 6816), (156, 6828),

Gene: Sicarius2_8 Start: 6515, Stop: 7660, Start Num: 19
Candidate Starts for Sicarius2_8:
(Start: 19 @6515 has 26 MA's), (Start: 30 @6557 has 1 MA's), (31, 6563), (62, 6839), (77, 6926), (111, 7094), (156, 7388),

Gene: Sonny_7 Start: 5940, Stop: 7127, Start Num: 19
Candidate Starts for Sonny_7:
(Start: 19 @5940 has 26 MA's), (Start: 30 @5982 has 1 MA's), (45, 6117), (62, 6264), (111, 6537), (144, 6798), (152, 6819), (153, 6825), (155, 6837), (156, 6849),

Gene: Sprinklemunch_4 Start: 3442, Stop: 4938, Start Num: 22
Candidate Starts for Sprinklemunch_4:
(Start: 22 @3442 has 37 MA's), (39, 3550), (55, 3697), (89, 3907), (94, 3931), (95, 3934), (116, 4084), (118, 4096), (132, 4216), (134, 4228), (140, 4312), (159, 4468), (161, 4477), (164, 4576), (173, 4627), (177, 4657), (184, 4723), (190, 4786),

Gene: StAB_4 Start: 3260, Stop: 4636, Start Num: 12
Candidate Starts for StAB_4:
(8, 3194), (10, 3251), (Start: 12 @3260 has 8 MA's), (29, 3320), (39, 3392), (42, 3428), (47, 3485), (55, 3542), (66, 3629), (67, 3632), (74, 3671), (81, 3713), (89, 3767), (91, 3776), (99, 3815), (109, 3905), (135, 4112), (142, 4199), (143, 4208), (158, 4331), (165, 4436), (172, 4469), (178, 4508), (179, 4520), (180, 4526), (189, 4613),

Gene: StevieBAY_7 Start: 5958, Stop: 7103, Start Num: 19
Candidate Starts for StevieBAY_7:
(Start: 19 @5958 has 26 MA's), (62, 6282), (111, 6534), (152, 6798), (154, 6813), (156, 6828), (176, 6981),

Gene: Stiles_4 Start: 3260, Stop: 4636, Start Num: 12
Candidate Starts for Stiles_4:
(8, 3194), (10, 3251), (Start: 12 @3260 has 8 MA's), (39, 3392), (42, 3428), (47, 3485), (55, 3542), (66, 3629), (67, 3632), (72, 3662), (74, 3671), (81, 3713), (89, 3767), (91, 3776), (99, 3815), (109, 3905),

(135, 4112), (142, 4199), (143, 4208), (158, 4331), (165, 4436), (172, 4469), (178, 4508), (179, 4520), (180, 4526), (189, 4613),

Gene: SunnyJune_8 Start: 6886, Stop: 7962, Start Num: 30
Candidate Starts for SunnyJune_8:
(Start: 20 @6847 has 5 MA's), (28, 6877), (Start: 30 @6886 has 1 MA's), (32, 6910), (39, 6955), (51, 7090), (62, 7168), (64, 7180), (69, 7213), (73, 7234), (77, 7255), (111, 7444), (112, 7453), (155, 7681), (156, 7693), (180, 7876),

Gene: TaeYoung_7 Start: 5985, Stop: 7127, Start Num: 30
Candidate Starts for TaeYoung_7:
(Start: 19 @5943 has 26 MA's), (Start: 30 @5985 has 1 MA's), (45, 6120), (62, 6267), (111, 6540), (144, 6798), (152, 6819), (153, 6825), (155, 6837), (156, 6849),

Gene: TaronosaurasRx_4 Start: 3595, Stop: 5043, Start Num: 14
Candidate Starts for TaronosaurasRx_4:
(Start: 14 @3595 has 4 MA's), (Start: 30 @3658 has 1 MA's), (33, 3691), (49, 3829), (55, 3877), (93, 4117), (96, 4132), (98, 4150), (103, 4180), (109, 4246), (115, 4285), (117, 4297), (122, 4351), (124, 4363), (146, 4552), (191, 4870), (200, 4957),

Gene: Timinator_7 Start: 5957, Stop: 7102, Start Num: 19
Candidate Starts for Timinator_7:
(Start: 19 @5957 has 26 MA's), (62, 6281), (111, 6533), (152, 6797), (154, 6812), (156, 6827), (176, 6980),

Gene: Toast_4 Start: 3317, Stop: 4723, Start Num: 15
Candidate Starts for Toast_4:
(Start: 15 @3317 has 32 MA's), (28, 3362), (65, 3680), (69, 3710), (89, 3815), (92, 3830), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (119, 4001), (122, 4019), (123, 4025), (139, 4160), (146, 4214), (194, 4616),

Gene: Tophat_10 Start: 7819, Stop: 9273, Start Num: 22
Candidate Starts for Tophat_10:
(Start: 22 @7819 has 37 MA's), (28, 7846), (29, 7852), (37, 7912), (39, 7924), (42, 7960), (47, 8032), (50, 8047), (55, 8089), (57, 8101), (64, 8158), (76, 8227), (78, 8248), (80, 8257), (83, 8269), (90, 8311), (92, 8320), (93, 8323), (101, 8365), (113, 8449), (114, 8452), (120, 8497), (125, 8533), (131, 8554), (136, 8620), (145, 8698), (150, 8737), (171, 8944), (174, 8959), (176, 8974), (184, 9049), (188, 9094), (200, 9205),

Gene: Troy_4 Start: 3258, Stop: 4631, Start Num: 12
Candidate Starts for Troy_4:
(10, 3249), (Start: 12 @3258 has 8 MA's), (29, 3318), (39, 3390), (42, 3426), (47, 3483), (55, 3540), (66, 3627), (67, 3630), (72, 3660), (74, 3669), (81, 3711), (89, 3765), (91, 3774), (99, 3813), (109, 3903), (135, 4110), (142, 4197), (143, 4206), (158, 4326), (165, 4431), (172, 4464), (178, 4503), (179, 4515), (180, 4521), (189, 4608),

Gene: UmaThurman_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for UmaThurman_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Utz_4 Start: 3316, Stop: 4728, Start Num: 15

Candidate Starts for Utz_4:
(Start: 15 @3316 has 32 MA's), (55, 3586), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Vibaki_8 Start: 7645, Stop: 8781, Start Num: 20
Candidate Starts for Vibaki_8:
(Start: 20 @7645 has 5 MA's), (28, 7675), (Start: 30 @7684 has 1 MA's), (32, 7708), (43, 7792), (55, 7909), (60, 7933), (62, 7966), (64, 7978), (77, 8053), (86, 8098), (111, 8248), (156, 8509),

Gene: Vitus_8 Start: 7420, Stop: 8574, Start Num: 20
Candidate Starts for Vitus_8:
(Start: 20 @7420 has 5 MA's), (28, 7450), (Start: 30 @7459 has 1 MA's), (32, 7483), (42, 7564), (44, 7591), (62, 7741), (64, 7753), (77, 7828), (111, 8023), (160, 8317),

Gene: WheatThin_8 Start: 4898, Stop: 6376, Start Num: 22
Candidate Starts for WheatThin_8:
(Start: 22 @4898 has 37 MA's), (27, 4919), (41, 5030), (42, 5042), (55, 5153), (59, 5174), (69, 5255), (82, 5330), (94, 5390), (116, 5540), (128, 5633), (140, 5756), (159, 5909), (173, 6065), (177, 6095), (184, 6161), (203, 6353),

Gene: William_4 Start: 3317, Stop: 4723, Start Num: 15
Candidate Starts for William_4:
(4, 2579), (Start: 15 @3317 has 32 MA's), (28, 3362), (65, 3680), (69, 3710), (89, 3815), (92, 3830), (98, 3854), (107, 3914), (110, 3941), (116, 3974), (119, 4001), (122, 4019), (123, 4025), (139, 4160), (146, 4214), (194, 4616),

Gene: Wisp_4 Start: 3316, Stop: 4728, Start Num: 15
Candidate Starts for Wisp_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (65, 3679), (71, 3721), (74, 3736), (88, 3808), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (139, 4159), (146, 4213), (193, 4609), (194, 4621),

Gene: Wocket_4 Start: 3307, Stop: 4719, Start Num: 15
Candidate Starts for Wocket_4:
(Start: 15 @3307 has 32 MA's), (41, 3457), (55, 3577), (65, 3670), (71, 3712), (74, 3727), (88, 3799), (89, 3805), (96, 3829), (98, 3844), (107, 3904), (110, 3931), (116, 3964), (118, 3976), (122, 4009), (123, 4015), (129, 4045), (130, 4051), (139, 4150), (146, 4204), (193, 4600), (194, 4612), (197, 4636),

Gene: Wyborn_8 Start: 6376, Stop: 7521, Start Num: 19
Candidate Starts for Wyborn_8:
(Start: 19 @6376 has 26 MA's), (Start: 30 @6418 has 1 MA's), (31, 6424), (62, 6700), (77, 6787), (111, 6955), (156, 7249),

Gene: ZAYM_4 Start: 3594, Stop: 5036, Start Num: 14
Candidate Starts for ZAYM_4:
(Start: 14 @3594 has 4 MA's), (Start: 30 @3657 has 1 MA's), (33, 3690), (49, 3828), (55, 3876), (93, 4116), (96, 4131), (98, 4149), (103, 4179), (109, 4245), (115, 4284), (117, 4296), (122, 4350), (124, 4362), (146, 4551), (191, 4869), (200, 4956),

Gene: Zarbodnamra_4 Start: 3315, Stop: 4727, Start Num: 15
Candidate Starts for Zarbodnamra_4:

(Start: 15 @3315 has 32 MA's), (41, 3465), (55, 3585), (65, 3678), (71, 3720), (74, 3735), (88, 3807), (89, 3813), (96, 3837), (98, 3852), (107, 3912), (110, 3939), (116, 3972), (118, 3984), (122, 4017), (123, 4023), (129, 4053), (139, 4158), (146, 4212), (193, 4608), (194, 4620),

Gene: Zartrosa_7 Start: 5940, Stop: 7127, Start Num: 19
Candidate Starts for Zartrosa_7:
(Start: 19 @5940 has 26 MA's), (Start: 30 @5982 has 1 MA's), (45, 6117), (62, 6264), (111, 6537), (144, 6798), (152, 6819), (153, 6825), (155, 6837), (156, 6849),

Gene: ZiggyZoo_4 Start: 3316, Stop: 4752, Start Num: 15
Candidate Starts for ZiggyZoo_4:
(Start: 15 @3316 has 32 MA's), (41, 3466), (55, 3586), (65, 3679), (69, 3709), (89, 3814), (96, 3838), (98, 3853), (107, 3913), (110, 3940), (116, 3973), (118, 3985), (122, 4018), (123, 4024), (129, 4054), (130, 4060), (146, 4213), (193, 4633), (194, 4645),

Gene: Zilla_4 Start: 3304, Stop: 4719, Start Num: 15
Candidate Starts for Zilla_4:
(Start: 15 @3304 has 32 MA's), (65, 3667), (69, 3697), (88, 3796), (89, 3802), (96, 3826), (98, 3841), (107, 3901), (110, 3928), (116, 3961), (119, 3988), (122, 4006), (123, 4012), (129, 4042), (130, 4048), (146, 4201), (193, 4600), (194, 4612),

Gene: Zodiariah_4 Start: 3443, Stop: 4942, Start Num: 22
Candidate Starts for Zodiariah_4:
(1, 2396), (2, 2516), (3, 2558), (Start: 22 @3443 has 37 MA's), (41, 3575), (55, 3698), (89, 3908), (94, 3932), (95, 3935), (118, 4097), (132, 4217), (134, 4229), (140, 4313), (158, 4469), (159, 4472), (161, 4481), (164, 4583), (173, 4631), (177, 4661), (184, 4727), (190, 4790),