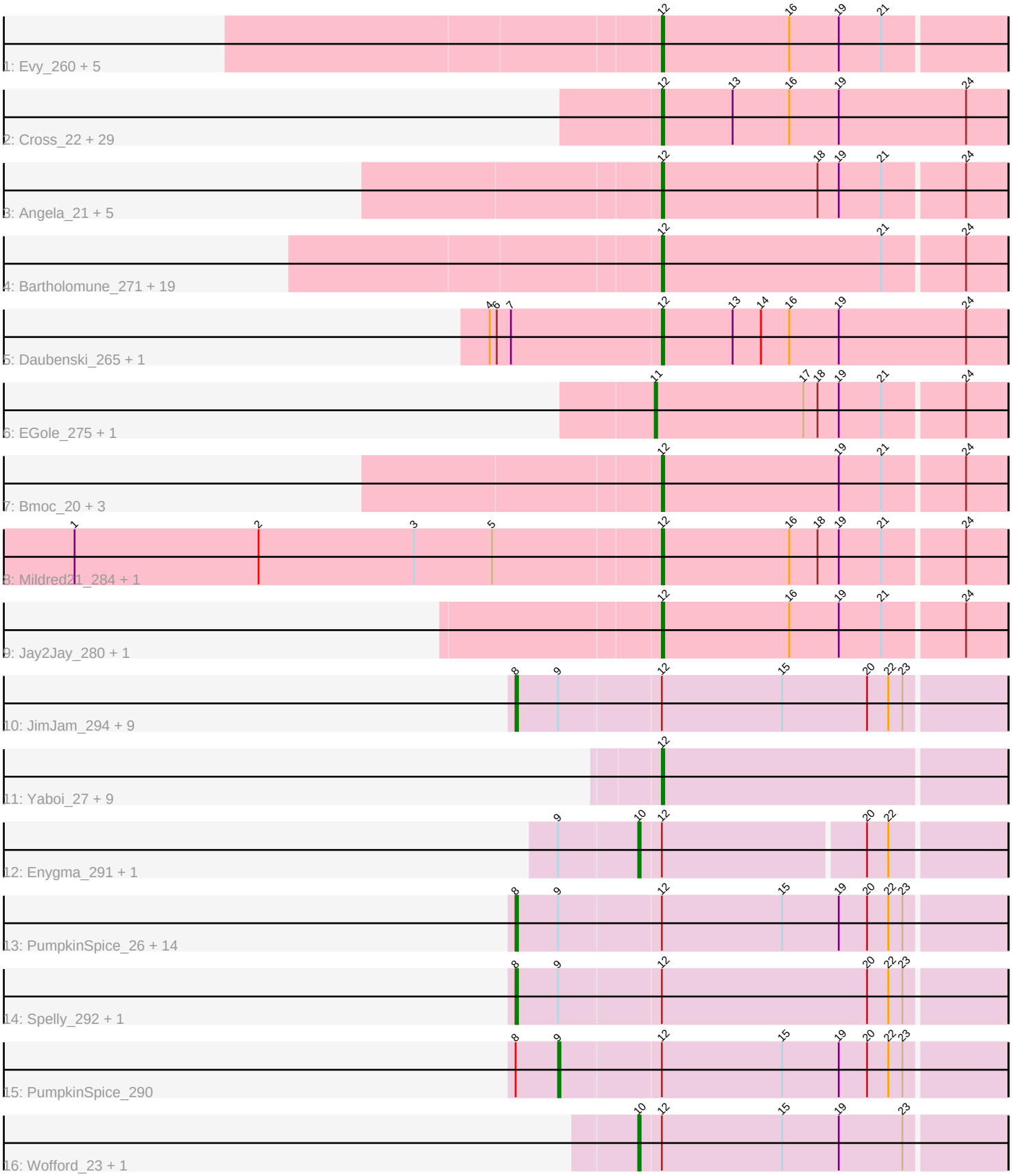
Pham 150226


1: Evy_260 + 5
12 16 19 21
2: Cross_22 + 29
12 13 16 19 24
3: Angela_21 + 5
12 18 19 21 24
4: Bartholomune_271 + 19
12 21 24
5: Daubenski_265 + 1
4 6 7 12 13 14 16 19 24
6: EGole_275 + 1
11 17 18 19 21 24
7: Bmoc_20 + 3
12 19 21 24
8: Mildred21_284 + 1
1 2 3 5 12 16 18 19 21 24
9: Jay2Jay_280 + 1
12 16 19 21 24
10: JimJam_294 + 9
8 9 12 15 20 22 23
11: Yaboi_27 + 9
12
12: Enygma_291 + 1
9 10 12 20 22
13: PumpkinSpice_26 + 14
8 9 12 15 19 20 22 23
14: Spelly_292 + 1
8 9 12 20 22 23
15: PumpkinSpice_290
8 9 12 15 19 20 22 23
16: Wofford_23 + 1
10 12 15 19 23

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 150226 Report

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

Pham number 150226 has 116 members, 22 are drafts.

Phages represented in each track:
• Track 1 : Evy_260, Warpy_277, Warpy_25, Evy_22, Targaryen_271, Targaryen_20
• Track 2 : Cross_22, Watermoore_22, Leo04_273, Cross_270, BlueOtter_276, Peebs_269, Peebs_22, Lululemon_24, Pepperwood_23, Cursive_274, Samisti12_20, Larnav_27, Pepperwood_272, Sushi23_23, Samisti12_271, Teutsch_268, HangryHippo_276, BlueOtter_24, Cursive_20, Lululemon_274, Watermoore_269, Leo04_22, HangryHippo_24, Sushi23_273, Teutsch_21, Tribute_21, PacManQ_275, PacManQ_24, Larnav_286, Tribute_267
• Track 3 : Angela_21, LilMartin_273, Angela_278, MulchMansion_21, MulchMansion_277, LilMartin_21
• Track 4 : Bartholomune_271, NootNoot_21, Persimmon_20, Navo_22, Squillium_21, WhereRU_22, Navo_272, Bartholomune_21, PinkiePie_21, NootNoot_266, Braelyn_266, Squillium_273, Liandry_270, Paradiddles_262, Paradiddles_21, Liandry_21, PinkiePie_271, WhereRU_278, Braelyn_21, Persimmon_271
• Track 5 : Daubenski_265, Daubenski_21
• Track 6 : EGole_275, EGole_21
• Track 7 : Bmoc_20, Anedea_282, Bmoc_276, Anedea_20
• Track 8 : Mildred21_284, Mildred21_21
• Track 9 : Jay2Jay_280, Jay2Jay_25
• Track 10 : JimJam_294, LukeCage_26, JimJam_26, LukeCage_289, Jollison_30, Jollison_294, Spilled_25, StarPlatinum_25, Spilled_293, StarPlatinum_295
• Track 11 : Yaboi_27, BoomerJR_282, Stanimal_282, BoomerJR_27, Sollertia_283, Genie2_282, Genie2_27, Stanimal_27, Sollertia_27, Yaboi_287
• Track 12 : Enygma_291, Enygma_23
• Track 13 : PumpkinSpice_26, Karimac_284, KentuckyRacer_29, CeilingFan_303, Wipeout_25, Quaran19_26, CeilingFan_29, KentuckyRacer_303, Birchlyn_283, Birchlyn_23, IchabodCrane_278, SaltySpitoon_26, Karimac_26, Amabiko_26, Amabiko_290
• Track 14 : Spelly_292, Spelly_26
• Track 15 : PumpkinSpice_290
• Track 16 : Wofford_23, Wofford_281

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

The start number called the most often in the published annotations is 12, it was called in 66 of the 94 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Anedea_20, Anedea_282, Angela_21, Angela_278, Bartholomune_21, Bartholomune_271, BlueOtter_24, BlueOtter_276, Bmoc_20, Bmoc_276, BoomerJR_27, BoomerJR_282, Braelyn_21, Braelyn_266, Cross_22, Cross_270, Cursive_20, Cursive_274, Daubenski_21, Daubenski_265, Evy_22, Evy_260, Genie2_27, Genie2_282, HangryHippo_24, HangryHippo_276, Jay2Jay_25, Jay2Jay_280, Larnav_27, Larnav_286, Leo04_22, Leo04_273, Liandry_21, Liandry_270, LilMartin_21, LilMartin_273, Lululemon_24, Lululemon_274, Mildred21_21, Mildred21_284, MulchMansion_21, MulchMansion_277, Navo_22, Navo_272, NootNoot_21, NootNoot_266, PacManQ_24, PacManQ_275, Paradiddles_21, Paradiddles_262, Peebs_22, Peebs_269, Pepperwood_23, Pepperwood_272, Persimmon_20, Persimmon_271, PinkiePie_21, PinkiePie_271, Samisti12_20, Samisti12_271, Sollertia_27, Sollertia_283, Squillium_21, Squillium_273, Stanimal_27, Stanimal_282, Sushi23_23, Sushi23_273, Targaryen_20, Targaryen_271, Teutsch_21, Teutsch_268, Tribute_21, Tribute_267, Warpy_25, Warpy_277, Watermoore_22, Watermoore_269, WhereRU_22, WhereRU_278, Yaboi_27, Yaboi_287,

Genes that have the "Most Annotated" start but do not call it:
• Amabiko_26, Amabiko_290, Birchlyn_23, Birchlyn_283, CeilingFan_29, CeilingFan_303, Enygma_23, Enygma_291, IchabodCrane_278, JimJam_26, JimJam_294, Jollison_294, Jollison_30, Karimac_26, Karimac_284, KentuckyRacer_29, KentuckyRacer_303, LukeCage_26, LukeCage_289, PumpkinSpice_26, PumpkinSpice_290, Quaran19_26, SaltySpitoon_26, Spelly_26, Spelly_292, Spilled_25, Spilled_293, StarPlatinum_25, StarPlatinum_295, Wipeout_25, Wofford_23, Wofford_281,

Genes that do not have the "Most Annotated" start:
• EGole_21, EGole_275,

Summary by start number:

Start 8:
• Found in 28 of 116 (24.1%) of genes in pham
• Manual Annotations of this start: 21 of 94
• Called 96.4% of time when present
• Phage (with cluster) where this start called: Amabiko_26 (BE2), Amabiko_290 (BE2), Birchlyn_23 (BE2), Birchlyn_283 (BE2), CeilingFan_29 (BE2), CeilingFan_303 (BE2), IchabodCrane_278 (BE2), JimJam_26 (BE2), JimJam_294 (BE2), Jollison_294 (BE2), Jollison_30 (BE2), Karimac_26 (BE2), Karimac_284 (BE2), KentuckyRacer_29 (BE2), KentuckyRacer_303 (BE2), LukeCage_26 (BE2), LukeCage_289 (BE2), PumpkinSpice_26 (BE2), Quaran19_26 (BE2), SaltySpitoon_26 (BE2), Spelly_26 (BE2), Spelly_292 (BE2), Spilled_25 (BE2), Spilled_293 (BE2), StarPlatinum_25 (BE2), StarPlatinum_295 (BE2), Wipeout_25 (BE2),

Start 9:
• Found in 30 of 116 (25.9%) of genes in pham
• Manual Annotations of this start: 1 of 94
• Called 3.3% of time when present

• Phage (with cluster) where this start called: PumpkinSpice_290 (BE2),

Start 10:
• Found in 4 of 116 (3.4%) of genes in pham
• Manual Annotations of this start: 4 of 94
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Enygma_23 (BE2), Enygma_291 (BE2), Wofford_23 (BE2), Wofford_281 (BE2),

Start 11:
• Found in 2 of 116 (1.7%) of genes in pham
• Manual Annotations of this start: 2 of 94
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EGole_21 (BE1), EGole_275 (BE1),

Start 12:
• Found in 114 of 116 (98.3%) of genes in pham
• Manual Annotations of this start: 66 of 94
• Called 71.9% of time when present
• Phage (with cluster) where this start called: Anedea_20 (BE1), Anedea_282 (BE1), Angela_21 (BE1), Angela_278 (BE1), Bartholomune_21 (BE1), Bartholomune_271 (BE1), BlueOtter_24 (BE1), BlueOtter_276 (BE1), Bmoc_20 (BE1), Bmoc_276 (BE1), BoomerJR_27 (BE2), BoomerJR_282 (BE2), Braelyn_21 (BE1), Braelyn_266 (BE1), Cross_22 (BE1), Cross_270 (BE1), Cursive_20 (BE1), Cursive_274 (BE1), Daubenski_21 (BE1), Daubenski_265 (BE1), Evy_22 (BE1), Evy_260 (BE1), Genie2_27 (BE2), Genie2_282 (BE2), HangryHippo_24 (BE1), HangryHippo_276 (BE1), Jay2Jay_25 (BE1), Jay2Jay_280 (BE1), Larnav_27 (BE1), Larnav_286 (BE1), Leo04_22 (BE1), Leo04_273 (BE1), Liandry_21 (BE1), Liandry_270 (BE1), LilMartin_21 (BE1), LilMartin_273 (BE1), Lululemon_24 (BE1), Lululemon_274 (BE1), Mildred21_21 (BE1), Mildred21_284 (BE1), MulchMansion_21 (BE1), MulchMansion_277 (BE1), Navo_22 (BE1), Navo_272 (BE1), NootNoot_21 (BE1), NootNoot_266 (BE1), PacManQ_24 (BE1), PacManQ_275 (BE1), Paradiddles_21 (BE1), Paradiddles_262 (BE1), Peebs_22 (BE1), Peebs_269 (BE1), Pepperwood_23 (BE1), Pepperwood_272 (BE1), Persimmon_20 (BE1), Persimmon_271 (BE1), PinkiePie_21 (BE1), PinkiePie_271 (BE1), Samisti12_20 (BE1), Samisti12_271 (BE1), Sollertia_27 (BE2), Sollertia_283 (BE2), Squillium_21 (BE1), Squillium_273 (BE1), Stanimal_27 (BE2), Stanimal_282 (BE2), Sushi23_23 (BE1), Sushi23_273 (BE1), Targaryen_20 (BE1), Targaryen_271 (BE1), Teutsch_21 (BE1), Teutsch_268 (BE1), Tribute_21 (BE1), Tribute_267 (BE1), Warpy_25 (BE1), Warpy_277 (BE1), Watermoore_22 (BE1), Watermoore_269 (BE1), WhereRU_22 (BE1), WhereRU_278 (BE1), Yaboi_27 (BE2), Yaboi_287 (BE2),

Summary by clusters:

There are 2 clusters represented in this pham: BE2, BE1,

Info for manual annotations of cluster BE1:
•Start number 11 was manually annotated 2 times for cluster BE1.
•Start number 12 was manually annotated 56 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 8 was manually annotated 21 times for cluster BE2.
•Start number 9 was manually annotated 1 time for cluster BE2.

•Start number 10 was manually annotated 4 times for cluster BE2.
•Start number 12 was manually annotated 10 times for cluster BE2.

Gene Information:

Gene: Amabiko_26 Start: 11579, Stop: 11376, Start Num: 8
Candidate Starts for Amabiko_26:
(Start: 8 @11579 has 21 MA's), (Start: 9 @11561 has 1 MA's), (Start: 12 @11519 has 66 MA's), (15, 11468), (19, 11444), (20, 11432), (22, 11423), (23, 11417),

Gene: Amabiko_290 Start: 130405, Stop: 130202, Start Num: 8
Candidate Starts for Amabiko_290:
(Start: 8 @130405 has 21 MA's), (Start: 9 @130387 has 1 MA's), (Start: 12 @130345 has 66 MA's), (15, 130294), (19, 130270), (20, 130258), (22, 130249), (23, 130243),

Gene: Anedea_282 Start: 132378, Stop: 132235, Start Num: 12
Candidate Starts for Anedea_282:
(Start: 12 @132378 has 66 MA's), (19, 132303), (21, 132285), (24, 132252),

Gene: Anedea_20 Start: 9329, Stop: 9186, Start Num: 12
Candidate Starts for Anedea_20:
(Start: 12 @9329 has 66 MA's), (19, 9254), (21, 9236), (24, 9203),

Gene: Angela_21 Start: 10177, Stop: 10034, Start Num: 12
Candidate Starts for Angela_21:
(Start: 12 @10177 has 66 MA's), (18, 10111), (19, 10102), (21, 10084), (24, 10051),

Gene: Angela_278 Start: 132580, Stop: 132437, Start Num: 12
Candidate Starts for Angela_278:
(Start: 12 @132580 has 66 MA's), (18, 132514), (19, 132505), (21, 132487), (24, 132454),

Gene: Bartholomune_271 Start: 130869, Stop: 130726, Start Num: 12
Candidate Starts for Bartholomune_271:
(Start: 12 @130869 has 66 MA's), (21, 130776), (24, 130743),

Gene: Bartholomune_21 Start: 9770, Stop: 9627, Start Num: 12
Candidate Starts for Bartholomune_21:
(Start: 12 @9770 has 66 MA's), (21, 9677), (24, 9644),

Gene: Birchlyn_283 Start: 125515, Stop: 125312, Start Num: 8
Candidate Starts for Birchlyn_283:
(Start: 8 @125515 has 21 MA's), (Start: 9 @125497 has 1 MA's), (Start: 12 @125455 has 66 MA's), (15, 125404), (19, 125380), (20, 125368), (22, 125359), (23, 125353),

Gene: Birchlyn_23 Start: 9424, Stop: 9221, Start Num: 8
Candidate Starts for Birchlyn_23:
(Start: 8 @9424 has 21 MA's), (Start: 9 @9406 has 1 MA's), (Start: 12 @9364 has 66 MA's), (15, 9313), (19, 9289), (20, 9277), (22, 9268), (23, 9262),

Gene: BlueOtter_276 Start: 131120, Stop: 130974, Start Num: 12
Candidate Starts for BlueOtter_276:

(Start: 12 @131120 has 66 MA's), (13, 131090), (16, 131066), (19, 131045), (24, 130991),

Gene: BlueOtter_24 Start: 10033, Stop: 9887, Start Num: 12
Candidate Starts for BlueOtter_24:
(Start: 12 @10033 has 66 MA's), (13, 10003), (16, 9979), (19, 9958), (24, 9904),

Gene: Bmoc_20 Start: 9992, Stop: 9849, Start Num: 12
Candidate Starts for Bmoc_20:
(Start: 12 @9992 has 66 MA's), (19, 9917), (21, 9899), (24, 9866),

Gene: Bmoc_276 Start: 131814, Stop: 131671, Start Num: 12
Candidate Starts for Bmoc_276:
(Start: 12 @131814 has 66 MA's), (19, 131739), (21, 131721), (24, 131688),

Gene: BoomerJR_282 Start: 130205, Stop: 130062, Start Num: 12
Candidate Starts for BoomerJR_282:
(Start: 12 @130205 has 66 MA's),

Gene: BoomerJR_27 Start: 11417, Stop: 11274, Start Num: 12
Candidate Starts for BoomerJR_27:
(Start: 12 @11417 has 66 MA's),

Gene: Braelyn_266 Start: 130224, Stop: 130081, Start Num: 12
Candidate Starts for Braelyn_266:
(Start: 12 @130224 has 66 MA's), (21, 130131), (24, 130098),

Gene: Braelyn_21 Start: 9814, Stop: 9671, Start Num: 12
Candidate Starts for Braelyn_21:
(Start: 12 @9814 has 66 MA's), (21, 9721), (24, 9688),

Gene: CeilingFan_303 Start: 131982, Stop: 131779, Start Num: 8
Candidate Starts for CeilingFan_303:
(Start: 8 @131982 has 21 MA's), (Start: 9 @131964 has 1 MA's), (Start: 12 @131922 has 66 MA's), (15, 131871), (19, 131847), (20, 131835), (22, 131826), (23, 131820),

Gene: CeilingFan_29 Start: 11375, Stop: 11172, Start Num: 8
Candidate Starts for CeilingFan_29:
(Start: 8 @11375 has 21 MA's), (Start: 9 @11357 has 1 MA's), (Start: 12 @11315 has 66 MA's), (15, 11264), (19, 11240), (20, 11228), (22, 11219), (23, 11213),

Gene: Cross_22 Start: 10034, Stop: 9888, Start Num: 12
Candidate Starts for Cross_22:
(Start: 12 @10034 has 66 MA's), (13, 10004), (16, 9980), (19, 9959), (24, 9905),

Gene: Cross_270 Start: 131766, Stop: 131620, Start Num: 12
Candidate Starts for Cross_270:
(Start: 12 @131766 has 66 MA's), (13, 131736), (16, 131712), (19, 131691), (24, 131637),

Gene: Cursive_274 Start: 130860, Stop: 130714, Start Num: 12
Candidate Starts for Cursive_274:
(Start: 12 @130860 has 66 MA's), (13, 130830), (16, 130806), (19, 130785), (24, 130731),

Gene: Cursive_20 Start: 8851, Stop: 8705, Start Num: 12

Candidate Starts for Cursive_20:
(Start: 12 @8851 has 66 MA's), (13, 8821), (16, 8797), (19, 8776), (24, 8722),

Gene: Daubenski_265 Start: 132056, Stop: 131910, Start Num: 12
Candidate Starts for Daubenski_265:
(4, 132128), (6, 132125), (7, 132119), (Start: 12 @132056 has 66 MA's), (13, 132026), (14, 132014), (16, 132002), (19, 131981), (24, 131927),

Gene: Daubenski_21 Start: 9680, Stop: 9534, Start Num: 12
Candidate Starts for Daubenski_21:
(4, 9752), (6, 9749), (7, 9743), (Start: 12 @9680 has 66 MA's), (13, 9650), (14, 9638), (16, 9626), (19, 9605), (24, 9551),

Gene: EGole_275 Start: 134640, Stop: 134494, Start Num: 11
Candidate Starts for EGole_275:
(Start: 11 @134640 has 2 MA's), (17, 134577), (18, 134571), (19, 134562), (21, 134544), (24, 134511),

Gene: EGole_21 Start: 10328, Stop: 10182, Start Num: 11
Candidate Starts for EGole_21:
(Start: 11 @10328 has 2 MA's), (17, 10265), (18, 10259), (19, 10250), (21, 10232), (24, 10199),

Gene: Enygma_291 Start: 132953, Stop: 132804, Start Num: 10
Candidate Starts for Enygma_291:
(Start: 9 @132986 has 1 MA's), (Start: 10 @132953 has 4 MA's), (Start: 12 @132944 has 66 MA's), (20, 132860), (22, 132851),

Gene: Enygma_23 Start: 10529, Stop: 10380, Start Num: 10
Candidate Starts for Enygma_23:
(Start: 9 @10562 has 1 MA's), (Start: 10 @10529 has 4 MA's), (Start: 12 @10520 has 66 MA's), (20, 10436), (22, 10427),

Gene: Evy_260 Start: 131968, Stop: 131825, Start Num: 12
Candidate Starts for Evy_260:
(Start: 12 @131968 has 66 MA's), (16, 131914), (19, 131893), (21, 131875),

Gene: Evy_22 Start: 10239, Stop: 10096, Start Num: 12
Candidate Starts for Evy_22:
(Start: 12 @10239 has 66 MA's), (16, 10185), (19, 10164), (21, 10146),

Gene: Genie2_282 Start: 130318, Stop: 130175, Start Num: 12
Candidate Starts for Genie2_282:
(Start: 12 @130318 has 66 MA's),

Gene: Genie2_27 Start: 11417, Stop: 11274, Start Num: 12
Candidate Starts for Genie2_27:
(Start: 12 @11417 has 66 MA's),

Gene: HangryHippo_276 Start: 131120, Stop: 130974, Start Num: 12
Candidate Starts for HangryHippo_276:
(Start: 12 @131120 has 66 MA's), (13, 131090), (16, 131066), (19, 131045), (24, 130991),

Gene: HangryHippo_24 Start: 10033, Stop: 9887, Start Num: 12

Candidate Starts for HangryHippo_24:
(Start: 12 @10033 has 66 MA's), (13, 10003), (16, 9979), (19, 9958), (24, 9904),

Gene: IchabodCrane_278 Start: 129721, Stop: 129518, Start Num: 8
Candidate Starts for IchabodCrane_278:
(Start: 8 @129721 has 21 MA's), (Start: 9 @129703 has 1 MA's), (Start: 12 @129661 has 66 MA's), (15, 129610), (19, 129586), (20, 129574), (22, 129565), (23, 129559),

Gene: Jay2Jay_280 Start: 132521, Stop: 132378, Start Num: 12
Candidate Starts for Jay2Jay_280:
(Start: 12 @132521 has 66 MA's), (16, 132467), (19, 132446), (21, 132428), (24, 132395),

Gene: Jay2Jay_25 Start: 10428, Stop: 10285, Start Num: 12
Candidate Starts for Jay2Jay_25:
(Start: 12 @10428 has 66 MA's), (16, 10374), (19, 10353), (21, 10335), (24, 10302),

Gene: JimJam_294 Start: 133114, Stop: 132911, Start Num: 8
Candidate Starts for JimJam_294:
(Start: 8 @133114 has 21 MA's), (Start: 9 @133096 has 1 MA's), (Start: 12 @133054 has 66 MA's), (15, 133003), (20, 132967), (22, 132958), (23, 132952),

Gene: JimJam_26 Start: 11578, Stop: 11375, Start Num: 8
Candidate Starts for JimJam_26:
(Start: 8 @11578 has 21 MA's), (Start: 9 @11560 has 1 MA's), (Start: 12 @11518 has 66 MA's), (15, 11467), (20, 11431), (22, 11422), (23, 11416),

Gene: Jollison_30 Start: 11579, Stop: 11376, Start Num: 8
Candidate Starts for Jollison_30:
(Start: 8 @11579 has 21 MA's), (Start: 9 @11561 has 1 MA's), (Start: 12 @11519 has 66 MA's), (15, 11468), (20, 11432), (22, 11423), (23, 11417),

Gene: Jollison_294 Start: 130254, Stop: 130051, Start Num: 8
Candidate Starts for Jollison_294:
(Start: 8 @130254 has 21 MA's), (Start: 9 @130236 has 1 MA's), (Start: 12 @130194 has 66 MA's), (15, 130143), (20, 130107), (22, 130098), (23, 130092),

Gene: Karimac_284 Start: 130900, Stop: 130697, Start Num: 8
Candidate Starts for Karimac_284:
(Start: 8 @130900 has 21 MA's), (Start: 9 @130882 has 1 MA's), (Start: 12 @130840 has 66 MA's), (15, 130789), (19, 130765), (20, 130753), (22, 130744), (23, 130738),

Gene: Karimac_26 Start: 11581, Stop: 11378, Start Num: 8
Candidate Starts for Karimac_26:
(Start: 8 @11581 has 21 MA's), (Start: 9 @11563 has 1 MA's), (Start: 12 @11521 has 66 MA's), (15, 11470), (19, 11446), (20, 11434), (22, 11425), (23, 11419),

Gene: KentuckyRacer_29 Start: 11376, Stop: 11173, Start Num: 8
Candidate Starts for KentuckyRacer_29:
(Start: 8 @11376 has 21 MA's), (Start: 9 @11358 has 1 MA's), (Start: 12 @11316 has 66 MA's), (15, 11265), (19, 11241), (20, 11229), (22, 11220), (23, 11214),

Gene: KentuckyRacer_303 Start: 132827, Stop: 132624, Start Num: 8
Candidate Starts for KentuckyRacer_303:

(Start: 8 @132827 has 21 MA's), (Start: 9 @132809 has 1 MA's), (Start: 12 @132767 has 66 MA's), (15, 132716), (19, 132692), (20, 132680), (22, 132671), (23, 132665),

Gene: Larnav_27 Start: 10034, Stop: 9888, Start Num: 12
Candidate Starts for Larnav_27:
(Start: 12 @10034 has 66 MA's), (13, 10004), (16, 9980), (19, 9959), (24, 9905),

Gene: Larnav_286 Start: 132039, Stop: 131893, Start Num: 12
Candidate Starts for Larnav_286:
(Start: 12 @132039 has 66 MA's), (13, 132009), (16, 131985), (19, 131964), (24, 131910),

Gene: Leo04_273 Start: 132150, Stop: 132004, Start Num: 12
Candidate Starts for Leo04_273:
(Start: 12 @132150 has 66 MA's), (13, 132120), (16, 132096), (19, 132075), (24, 132021),

Gene: Leo04_22 Start: 10032, Stop: 9886, Start Num: 12
Candidate Starts for Leo04_22:
(Start: 12 @10032 has 66 MA's), (13, 10002), (16, 9978), (19, 9957), (24, 9903),

Gene: Liandry_270 Start: 131290, Stop: 131147, Start Num: 12
Candidate Starts for Liandry_270:
(Start: 12 @131290 has 66 MA's), (21, 131197), (24, 131164),

Gene: Liandry_21 Start: 9769, Stop: 9626, Start Num: 12
Candidate Starts for Liandry_21:
(Start: 12 @9769 has 66 MA's), (21, 9676), (24, 9643),

Gene: LilMartin_273 Start: 131468, Stop: 131325, Start Num: 12
Candidate Starts for LilMartin_273:
(Start: 12 @131468 has 66 MA's), (18, 131402), (19, 131393), (21, 131375), (24, 131342),

Gene: LilMartin_21 Start: 10124, Stop: 9981, Start Num: 12
Candidate Starts for LilMartin_21:
(Start: 12 @10124 has 66 MA's), (18, 10058), (19, 10049), (21, 10031), (24, 9998),

Gene: LukeCage_26 Start: 11328, Stop: 11125, Start Num: 8
Candidate Starts for LukeCage_26:
(Start: 8 @11328 has 21 MA's), (Start: 9 @11310 has 1 MA's), (Start: 12 @11268 has 66 MA's), (15, 11217), (20, 11181), (22, 11172), (23, 11166),

Gene: LukeCage_289 Start: 132232, Stop: 132029, Start Num: 8
Candidate Starts for LukeCage_289:
(Start: 8 @132232 has 21 MA's), (Start: 9 @132214 has 1 MA's), (Start: 12 @132172 has 66 MA's), (15, 132121), (20, 132085), (22, 132076), (23, 132070),

Gene: Lululemon_24 Start: 9413, Stop: 9267, Start Num: 12
Candidate Starts for Lululemon_24:
(Start: 12 @9413 has 66 MA's), (13, 9383), (16, 9359), (19, 9338), (24, 9284),

Gene: Lululemon_274 Start: 130305, Stop: 130159, Start Num: 12
Candidate Starts for Lululemon_274:
(Start: 12 @130305 has 66 MA's), (13, 130275), (16, 130251), (19, 130230), (24, 130176),

Gene: Mildred21_284 Start: 130962, Stop: 130819, Start Num: 12
Candidate Starts for Mildred21_284:
(1, 131208), (2, 131130), (3, 131064), (5, 131031), (Start: 12 @130962 has 66 MA's), (16, 130908), (18, 130896), (19, 130887), (21, 130869), (24, 130836),

Gene: Mildred21_21 Start: 9804, Stop: 9661, Start Num: 12
Candidate Starts for Mildred21_21:
(1, 10050), (2, 9972), (3, 9906), (5, 9873), (Start: 12 @9804 has 66 MA's), (16, 9750), (18, 9738), (19, 9729), (21, 9711), (24, 9678),

Gene: MulchMansion_21 Start: 10125, Stop: 9982, Start Num: 12
Candidate Starts for MulchMansion_21:
(Start: 12 @10125 has 66 MA's), (18, 10059), (19, 10050), (21, 10032), (24, 9999),

Gene: MulchMansion_277 Start: 133103, Stop: 132960, Start Num: 12
Candidate Starts for MulchMansion_277:
(Start: 12 @133103 has 66 MA's), (18, 133037), (19, 133028), (21, 133010), (24, 132977),

Gene: Navo_22 Start: 9568, Stop: 9425, Start Num: 12
Candidate Starts for Navo_22:
(Start: 12 @9568 has 66 MA's), (21, 9475), (24, 9442),

Gene: Navo_272 Start: 129193, Stop: 129050, Start Num: 12
Candidate Starts for Navo_272:
(Start: 12 @129193 has 66 MA's), (21, 129100), (24, 129067),

Gene: NootNoot_21 Start: 9780, Stop: 9637, Start Num: 12
Candidate Starts for NootNoot_21:
(Start: 12 @9780 has 66 MA's), (21, 9687), (24, 9654),

Gene: NootNoot_266 Start: 130079, Stop: 129936, Start Num: 12
Candidate Starts for NootNoot_266:
(Start: 12 @130079 has 66 MA's), (21, 129986), (24, 129953),

Gene: PacManQ_275 Start: 130305, Stop: 130159, Start Num: 12
Candidate Starts for PacManQ_275:
(Start: 12 @130305 has 66 MA's), (13, 130275), (16, 130251), (19, 130230), (24, 130176),

Gene: PacManQ_24 Start: 9413, Stop: 9267, Start Num: 12
Candidate Starts for PacManQ_24:
(Start: 12 @9413 has 66 MA's), (13, 9383), (16, 9359), (19, 9338), (24, 9284),

Gene: Paradiddles_262 Start: 132476, Stop: 132333, Start Num: 12
Candidate Starts for Paradiddles_262:
(Start: 12 @132476 has 66 MA's), (21, 132383), (24, 132350),

Gene: Paradiddles_21 Start: 9768, Stop: 9625, Start Num: 12
Candidate Starts for Paradiddles_21:
(Start: 12 @9768 has 66 MA's), (21, 9675), (24, 9642),

Gene: Peebs_269 Start: 132006, Stop: 131860, Start Num: 12
Candidate Starts for Peebs_269:
(Start: 12 @132006 has 66 MA's), (13, 131976), (16, 131952), (19, 131931), (24, 131877),

Gene: Peebs_22 Start: 10031, Stop: 9885, Start Num: 12
Candidate Starts for Peebs_22:
(Start: 12 @10031 has 66 MA's), (13, 10001), (16, 9977), (19, 9956), (24, 9902),

Gene: Pepperwood_23 Start: 10186, Stop: 10040, Start Num: 12
Candidate Starts for Pepperwood_23:
(Start: 12 @10186 has 66 MA's), (13, 10156), (16, 10132), (19, 10111), (24, 10057),

Gene: Pepperwood_272 Start: 131971, Stop: 131825, Start Num: 12
Candidate Starts for Pepperwood_272:
(Start: 12 @131971 has 66 MA's), (13, 131941), (16, 131917), (19, 131896), (24, 131842),

Gene: Persimmon_20 Start: 9600, Stop: 9457, Start Num: 12
Candidate Starts for Persimmon_20:
(Start: 12 @9600 has 66 MA's), (21, 9507), (24, 9474),

Gene: Persimmon_271 Start: 130411, Stop: 130268, Start Num: 12
Candidate Starts for Persimmon_271:
(Start: 12 @130411 has 66 MA's), (21, 130318), (24, 130285),

Gene: PinkiePie_21 Start: 9770, Stop: 9627, Start Num: 12
Candidate Starts for PinkiePie_21:
(Start: 12 @9770 has 66 MA's), (21, 9677), (24, 9644),

Gene: PinkiePie_271 Start: 131291, Stop: 131148, Start Num: 12
Candidate Starts for PinkiePie_271:
(Start: 12 @131291 has 66 MA's), (21, 131198), (24, 131165),

Gene: PumpkinSpice_26 Start: 11579, Stop: 11376, Start Num: 8
Candidate Starts for PumpkinSpice_26:
(Start: 8 @11579 has 21 MA's), (Start: 9 @11561 has 1 MA's), (Start: 12 @11519 has 66 MA's), (15, 11468), (19, 11444), (20, 11432), (22, 11423), (23, 11417),

Gene: PumpkinSpice_290 Start: 131453, Stop: 131268, Start Num: 9
Candidate Starts for PumpkinSpice_290:
(Start: 8 @131471 has 21 MA's), (Start: 9 @131453 has 1 MA's), (Start: 12 @131411 has 66 MA's), (15, 131360), (19, 131336), (20, 131324), (22, 131315), (23, 131309),

Gene: Quaran19_26 Start: 11570, Stop: 11367, Start Num: 8
Candidate Starts for Quaran19_26:
(Start: 8 @11570 has 21 MA's), (Start: 9 @11552 has 1 MA's), (Start: 12 @11510 has 66 MA's), (15, 11459), (19, 11435), (20, 11423), (22, 11414), (23, 11408),

Gene: SaltySpitoon_26 Start: 11579, Stop: 11376, Start Num: 8
Candidate Starts for SaltySpitoon_26:
(Start: 8 @11579 has 21 MA's), (Start: 9 @11561 has 1 MA's), (Start: 12 @11519 has 66 MA's), (15, 11468), (19, 11444), (20, 11432), (22, 11423), (23, 11417),

Gene: Samisti12_20 Start: 9634, Stop: 9488, Start Num: 12
Candidate Starts for Samisti12_20:
(Start: 12 @9634 has 66 MA's), (13, 9604), (16, 9580), (19, 9559), (24, 9505),

Gene: Samisti12_271 Start: 132678, Stop: 132532, Start Num: 12
Candidate Starts for Samisti12_271:
(Start: 12 @132678 has 66 MA's), (13, 132648), (16, 132624), (19, 132603), (24, 132549),

Gene: Sollertia_283 Start: 130307, Stop: 130164, Start Num: 12
Candidate Starts for Sollertia_283:
(Start: 12 @130307 has 66 MA's),

Gene: Sollertia_27 Start: 11417, Stop: 11274, Start Num: 12
Candidate Starts for Sollertia_27:
(Start: 12 @11417 has 66 MA's),

Gene: Spelly_292 Start: 130383, Stop: 130180, Start Num: 8
Candidate Starts for Spelly_292:
(Start: 8 @130383 has 21 MA's), (Start: 9 @130365 has 1 MA's), (Start: 12 @130323 has 66 MA's), (20, 130236), (22, 130227), (23, 130221),

Gene: Spelly_26 Start: 11579, Stop: 11376, Start Num: 8
Candidate Starts for Spelly_26:
(Start: 8 @11579 has 21 MA's), (Start: 9 @11561 has 1 MA's), (Start: 12 @11519 has 66 MA's), (20, 11432), (22, 11423), (23, 11417),

Gene: Spilled_25 Start: 11189, Stop: 10986, Start Num: 8
Candidate Starts for Spilled_25:
(Start: 8 @11189 has 21 MA's), (Start: 9 @11171 has 1 MA's), (Start: 12 @11129 has 66 MA's), (15, 11078), (20, 11042), (22, 11033), (23, 11027),

Gene: Spilled_293 Start: 131658, Stop: 131455, Start Num: 8
Candidate Starts for Spilled_293:
(Start: 8 @131658 has 21 MA's), (Start: 9 @131640 has 1 MA's), (Start: 12 @131598 has 66 MA's), (15, 131547), (20, 131511), (22, 131502), (23, 131496),

Gene: Squillium_21 Start: 9769, Stop: 9626, Start Num: 12
Candidate Starts for Squillium_21:
(Start: 12 @9769 has 66 MA's), (21, 9676), (24, 9643),

Gene: Squillium_273 Start: 131293, Stop: 131150, Start Num: 12
Candidate Starts for Squillium_273:
(Start: 12 @131293 has 66 MA's), (21, 131200), (24, 131167),

Gene: Stanimal_282 Start: 130691, Stop: 130548, Start Num: 12
Candidate Starts for Stanimal_282:
(Start: 12 @130691 has 66 MA's),

Gene: Stanimal_27 Start: 11417, Stop: 11274, Start Num: 12
Candidate Starts for Stanimal_27:
(Start: 12 @11417 has 66 MA's),

Gene: StarPlatinum_25 Start: 11233, Stop: 11030, Start Num: 8
Candidate Starts for StarPlatinum_25:
(Start: 8 @11233 has 21 MA's), (Start: 9 @11215 has 1 MA's), (Start: 12 @11173 has 66 MA's), (15, 11122), (20, 11086), (22, 11077), (23, 11071),

Gene: StarPlatinum_295 Start: 132920, Stop: 132717, Start Num: 8
Candidate Starts for StarPlatinum_295:
(Start: 8 @132920 has 21 MA's), (Start: 9 @132902 has 1 MA's), (Start: 12 @132860 has 66 MA's), (15, 132809), (20, 132773), (22, 132764), (23, 132758),

Gene: Sushi23_23 Start: 10033, Stop: 9887, Start Num: 12
Candidate Starts for Sushi23_23:
(Start: 12 @10033 has 66 MA's), (13, 10003), (16, 9979), (19, 9958), (24, 9904),

Gene: Sushi23_273 Start: 132876, Stop: 132730, Start Num: 12
Candidate Starts for Sushi23_273:
(Start: 12 @132876 has 66 MA's), (13, 132846), (16, 132822), (19, 132801), (24, 132747),

Gene: Targaryen_271 Start: 133911, Stop: 133768, Start Num: 12
Candidate Starts for Targaryen_271:
(Start: 12 @133911 has 66 MA's), (16, 133857), (19, 133836), (21, 133818),

Gene: Targaryen_20 Start: 10235, Stop: 10092, Start Num: 12
Candidate Starts for Targaryen_20:
(Start: 12 @10235 has 66 MA's), (16, 10181), (19, 10160), (21, 10142),

Gene: Teutsch_268 Start: 131844, Stop: 131698, Start Num: 12
Candidate Starts for Teutsch_268:
(Start: 12 @131844 has 66 MA's), (13, 131814), (16, 131790), (19, 131769), (24, 131715),

Gene: Teutsch_21 Start: 9635, Stop: 9489, Start Num: 12
Candidate Starts for Teutsch_21:
(Start: 12 @9635 has 66 MA's), (13, 9605), (16, 9581), (19, 9560), (24, 9506),

Gene: Tribute_21 Start: 9886, Stop: 9740, Start Num: 12
Candidate Starts for Tribute_21:
(Start: 12 @9886 has 66 MA's), (13, 9856), (16, 9832), (19, 9811), (24, 9757),

Gene: Tribute_267 Start: 132430, Stop: 132284, Start Num: 12
Candidate Starts for Tribute_267:
(Start: 12 @132430 has 66 MA's), (13, 132400), (16, 132376), (19, 132355), (24, 132301),

Gene: Warpy_277 Start: 131987, Stop: 131844, Start Num: 12
Candidate Starts for Warpy_277:
(Start: 12 @131987 has 66 MA's), (16, 131933), (19, 131912), (21, 131894),

Gene: Warpy_25 Start: 10449, Stop: 10306, Start Num: 12
Candidate Starts for Warpy_25:
(Start: 12 @10449 has 66 MA's), (16, 10395), (19, 10374), (21, 10356),

Gene: Watermoore_22 Start: 10034, Stop: 9888, Start Num: 12
Candidate Starts for Watermoore_22:
(Start: 12 @10034 has 66 MA's), (13, 10004), (16, 9980), (19, 9959), (24, 9905),

Gene: Watermoore_269 Start: 132630, Stop: 132484, Start Num: 12
Candidate Starts for Watermoore_269:
(Start: 12 @132630 has 66 MA's), (13, 132600), (16, 132576), (19, 132555), (24, 132501),

Gene: WhereRU_22 Start: 9600, Stop: 9457, Start Num: 12
Candidate Starts for WhereRU_22:
(Start: 12 @9600 has 66 MA's), (21, 9507), (24, 9474),

Gene: WhereRU_278 Start: 130745, Stop: 130602, Start Num: 12
Candidate Starts for WhereRU_278:
(Start: 12 @130745 has 66 MA's), (21, 130652), (24, 130619),

Gene: Wipeout_25 Start: 11195, Stop: 10992, Start Num: 8
Candidate Starts for Wipeout_25:
(Start: 8 @11195 has 21 MA's), (Start: 9 @11177 has 1 MA's), (Start: 12 @11135 has 66 MA's), (15, 11084), (19, 11060), (20, 11048), (22, 11039), (23, 11033),

Gene: Wofford_23 Start: 10193, Stop: 10041, Start Num: 10
Candidate Starts for Wofford_23:
(Start: 10 @10193 has 4 MA's), (Start: 12 @10184 has 66 MA's), (15, 10133), (19, 10109), (23, 10082),

Gene: Wofford_281 Start: 131986, Stop: 131834, Start Num: 10
Candidate Starts for Wofford_281:
(Start: 10 @131986 has 4 MA's), (Start: 12 @131977 has 66 MA's), (15, 131926), (19, 131902), (23, 131875),

Gene: Yaboi_27 Start: 11417, Stop: 11274, Start Num: 12
Candidate Starts for Yaboi_27:
(Start: 12 @11417 has 66 MA's),

Gene: Yaboi_287 Start: 130235, Stop: 130092, Start Num: 12
Candidate Starts for Yaboi_287:
(Start: 12 @130235 has 66 MA's),