



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 326969 Report

This analysis was run 09/05/26 on database version 662.

Pham number 326969 has 78 members, 1 are drafts.

Phages represented in each track:

- Track 1 : ActinUp\_78, Jarvi\_77, Asayake\_77, CallaLilly\_77, Capricorn\_77, Twitch\_77, Adonis\_78, Beezoo\_81, Tiri\_78, Spock\_77, Joy99\_78, Jeckyll\_77, Homura\_76, Clipper\_81, BaghaKamala\_76, Veliki\_78, Ganymede\_78, Blizzard\_77, QuincyRose\_76, MacKat\_73, Rosmarinus\_77, Hyperbowlee\_76, Zabiza\_73, CREW\_76, Lunahalos\_77, Atiba\_78, Geraldini\_80, Belladonna\_77, Boiii\_77, Adephagia\_76, BEEST\_77, Padfoot\_77, Piatt\_76, Durfee\_77, Llorens\_77, Topper\_77, Peel\_77, ShiaSurprise\_78, BGlluviae\_77, Tachez\_77, JAWS\_76, Dalmuri\_77, HedwigODU\_77, Inky\_77, MeaningOfLife\_80, AlishaPH\_76, CaseJules\_79
- Track 2 : Jayhawk\_80, CheetoDust\_77, Dole\_81, Devera\_84, Ageofdapage\_82, TruffulaTree\_79, Deby\_77, Zavala\_80, Megsy\_82, Illumine\_82, Rapunzel97\_80, TaiwanKao\_78, LaterM\_78, Murucutumbu\_78, Mynx\_79, CrimD\_78, BarrelRoll\_78, Pokerus\_78, Slimphazie\_79
- Track 3 : Emerson\_80, Padpat\_81, Angelica\_75, Sulley\_75, Ramen\_78
- Track 4 : Prithvi\_80, TreyKay\_80, LindNT\_76
- Track 5 : YoureAdopted\_77, Stinson\_79
- Track 6 : Anaya\_81
- Track 7 : Apocalypse\_80

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

The start number called the most often in the published annotations is 2, it was called in 77 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- ActinUp\_78, Adephagia\_76, Adonis\_78, Ageofdapage\_82, AlishaPH\_76, Anaya\_81, Angelica\_75, Apocalypse\_80, Asayake\_77, Atiba\_78, BEEST\_77, BGlluviae\_77, BaghaKamala\_76, BarrelRoll\_78, Beezoo\_81, Belladonna\_77, Blizzard\_77, Boiii\_77, CREW\_76, CallaLilly\_77, Capricorn\_77, CaseJules\_79, CheetoDust\_77, Clipper\_81, CrimD\_78, Dalmuri\_77, Deby\_77, Devera\_84, Dole\_81, Durfee\_77, Emerson\_80, Ganymede\_78, Geraldini\_80, HedwigODU\_77, Homura\_76, Hyperbowlee\_76, Illumine\_82, Inky\_77, JAWS\_76, Jarvi\_77, Jayhawk\_80, Jeckyll\_77, Joy99\_78, LaterM\_78, LindNT\_76, Llorens\_77, Lunahalos\_77, MacKat\_73, MeaningOfLife\_80, Megsy\_82, Murucutumbu\_78, Mynx\_79, Padfoot\_77, Padpat\_81, Peel\_77, Piatt\_76,

Pokerus\_78, Prithvi\_80, QuincyRose\_76, Ramen\_78, Rapunzel97\_80, Rosmarinus\_77, ShiaSurprise\_78, Slimphazie\_79, Spock\_77, Stinson\_79, Sulley\_75, Tachez\_77, TaiwanKao\_78, Tiri\_78, Topper\_77, TreyKay\_80, TruffulaTree\_79, Twitch\_77, Veliki\_78, YoureAdopted\_77, Zabiza\_73, Zavala\_80,

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

- 

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

- 

### Summary by start number:

Start 2:

- Found in 78 of 78 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 77 of 77
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ActinUp\_78 (K1), Adephagia\_76 (K1), Adonis\_78 (K1), Ageofdapage\_82 (K1), AlishaPH\_76 (K1), Anaya\_81 (K1), Angelica\_75 (K1), Apocalypse\_80 (K1), Asayake\_77 (K1), Atiba\_78 (K1), BEEST\_77 (K1), BGIluvia\_77 (K1), BaghaKamala\_76 (K1), BarrelRoll\_78 (K1), Beezoo\_81 (K1), Belladonna\_77 (K1), Blizzard\_77 (K1), Boiii\_77 (K1), CREW\_76 (K1), CallaLilly\_77 (K1), Capricorn\_77 (K1), CaseJules\_79 (K1), CheetoDust\_77 (K1), Clipper\_81 (K1), CrimD\_78 (K1), Dalmuri\_77 (K1), Deby\_77 (K1), Devera\_84 (K1), Dole\_81 (K1), Durfee\_77 (K1), Emerson\_80 (K1), Ganymede\_78 (K1), Geraldini\_80 (K1), HedwigODU\_77 (K1), Homura\_76 (K1), Hyperbowlee\_76 (K1), Illumine\_82 (K1), Inky\_77 (K1), JAWS\_76 (K1), Jarvi\_77 (K1), Jayhawk\_80 (K1), Jeckyll\_77 (K1), Joy99\_78 (K1), LaterM\_78 (K1), LindNT\_76 (K1), Llorens\_77 (K1), Lunahalos\_77 (K1), MacKat\_73 (K1), MeaningOfLife\_80 (K1), Megsy\_82 (K1), Murucutumbu\_78 (K1), Mynx\_79 (K1), Padfoot\_77 (K1), Padpat\_81 (K1), Peel\_77 (K1), Piatt\_76 (K1), Pokerus\_78 (K1), Prithvi\_80 (K1), QuincyRose\_76 (K1), Ramen\_78 (K1), Rapunzel97\_80 (K1), Rosmarinus\_77 (K1), ShiaSurprise\_78 (K1), Slimphazie\_79 (K1), Spock\_77 (K1), Stinson\_79 (K1), Sulley\_75 (K1), Tachez\_77 (K1), TaiwanKao\_78 (K1), Tiri\_78 (K1), Topper\_77 (K1), TreyKay\_80 (K1), TruffulaTree\_79 (K1), Twitch\_77 (K1), Veliki\_78 (K1), YoureAdopted\_77 (K1), Zabiza\_73 (K1), Zavala\_80 (K1),

### Summary by clusters:

There is one cluster represented in this pham: K1

Info for manual annotations of cluster K1:

- Start number 2 was manually annotated 77 times for cluster K1.

### Gene Information:

Gene: ActinUp\_78 Start: 51092, Stop: 51367, Start Num: 2

Candidate Starts for ActinUp\_78:

(Start: 2 @51092 has 77 MA's), (3, 51155), (5, 51215), (6, 51245),

Gene: Adephagia\_76 Start: 50929, Stop: 51204, Start Num: 2

Candidate Starts for Adephagia\_76:  
(Start: 2 @50929 has 77 MA's), (3, 50992), (5, 51052), (6, 51082),

Gene: Adonis\_78 Start: 51396, Stop: 51671, Start Num: 2  
Candidate Starts for Adonis\_78:  
(Start: 2 @51396 has 77 MA's), (3, 51459), (5, 51519), (6, 51549),

Gene: Ageofdapage\_82 Start: 52310, Stop: 52585, Start Num: 2  
Candidate Starts for Ageofdapage\_82:  
(Start: 2 @52310 has 77 MA's), (3, 52373), (5, 52433),

Gene: AlishaPH\_76 Start: 51190, Stop: 51465, Start Num: 2  
Candidate Starts for AlishaPH\_76:  
(Start: 2 @51190 has 77 MA's), (3, 51253), (5, 51313), (6, 51343),

Gene: Anaya\_81 Start: 51979, Stop: 52251, Start Num: 2  
Candidate Starts for Anaya\_81:  
(Start: 2 @51979 has 77 MA's), (3, 52039), (5, 52099), (7, 52150),

Gene: Angelica\_75 Start: 50513, Stop: 50788, Start Num: 2  
Candidate Starts for Angelica\_75:  
(Start: 2 @50513 has 77 MA's), (5, 50636), (7, 50687),

Gene: Apocalypse\_80 Start: 51724, Stop: 52002, Start Num: 2  
Candidate Starts for Apocalypse\_80:  
(1, 51661), (Start: 2 @51724 has 77 MA's), (3, 51790), (4, 51844), (5, 51850),

Gene: Asayake\_77 Start: 51244, Stop: 51519, Start Num: 2  
Candidate Starts for Asayake\_77:  
(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Atiba\_78 Start: 50892, Stop: 51167, Start Num: 2  
Candidate Starts for Atiba\_78:  
(Start: 2 @50892 has 77 MA's), (3, 50955), (5, 51015), (6, 51045),

Gene: BEEST\_77 Start: 51244, Stop: 51519, Start Num: 2  
Candidate Starts for BEEST\_77:  
(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: BGlluviae\_77 Start: 51047, Stop: 51322, Start Num: 2  
Candidate Starts for BGlluviae\_77:  
(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: BaghaKamala\_76 Start: 50478, Stop: 50753, Start Num: 2  
Candidate Starts for BaghaKamala\_76:  
(Start: 2 @50478 has 77 MA's), (3, 50541), (5, 50601), (6, 50631),

Gene: BarrelRoll\_78 Start: 51441, Stop: 51719, Start Num: 2  
Candidate Starts for BarrelRoll\_78:  
(Start: 2 @51441 has 77 MA's), (3, 51507), (5, 51567),

Gene: Beezoo\_81 Start: 52057, Stop: 52332, Start Num: 2  
Candidate Starts for Beezoo\_81:

(Start: 2 @52057 has 77 MA's), (3, 52120), (5, 52180), (6, 52210),

Gene: Belladonna\_77 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Belladonna\_77:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: Blizzard\_77 Start: 51244, Stop: 51519, Start Num: 2

Candidate Starts for Blizzard\_77:

(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Boiiii\_77 Start: 51246, Stop: 51521, Start Num: 2

Candidate Starts for Boiiii\_77:

(Start: 2 @51246 has 77 MA's), (3, 51309), (5, 51369), (6, 51399),

Gene: CREW\_76 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for CREW\_76:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: CallaLilly\_77 Start: 50970, Stop: 51245, Start Num: 2

Candidate Starts for CallaLilly\_77:

(Start: 2 @50970 has 77 MA's), (3, 51033), (5, 51093), (6, 51123),

Gene: Capricorn\_77 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Capricorn\_77:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: CaseJules\_79 Start: 51244, Stop: 51519, Start Num: 2

Candidate Starts for CaseJules\_79:

(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: CheetoDust\_77 Start: 50636, Stop: 50914, Start Num: 2

Candidate Starts for CheetoDust\_77:

(Start: 2 @50636 has 77 MA's), (3, 50702), (5, 50762),

Gene: Clipper\_81 Start: 51610, Stop: 51885, Start Num: 2

Candidate Starts for Clipper\_81:

(Start: 2 @51610 has 77 MA's), (3, 51673), (5, 51733), (6, 51763),

Gene: CrimD\_78 Start: 51499, Stop: 51777, Start Num: 2

Candidate Starts for CrimD\_78:

(Start: 2 @51499 has 77 MA's), (3, 51565), (5, 51625),

Gene: Dalmuri\_77 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Dalmuri\_77:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: Deby\_77 Start: 51408, Stop: 51686, Start Num: 2

Candidate Starts for Deby\_77:

(Start: 2 @51408 has 77 MA's), (3, 51474), (5, 51534),

Gene: Devera\_84 Start: 52293, Stop: 52568, Start Num: 2

Candidate Starts for Devera\_84:

(Start: 2 @52293 has 77 MA's), (3, 52356), (5, 52416),

Gene: Dole\_81 Start: 52296, Stop: 52571, Start Num: 2

Candidate Starts for Dole\_81:

(Start: 2 @52296 has 77 MA's), (3, 52359), (5, 52419),

Gene: Durfee\_77 Start: 51244, Stop: 51519, Start Num: 2

Candidate Starts for Durfee\_77:

(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Emerson\_80 Start: 51474, Stop: 51749, Start Num: 2

Candidate Starts for Emerson\_80:

(Start: 2 @51474 has 77 MA's), (5, 51597), (7, 51648),

Gene: Ganymede\_78 Start: 51485, Stop: 51760, Start Num: 2

Candidate Starts for Ganymede\_78:

(Start: 2 @51485 has 77 MA's), (3, 51548), (5, 51608), (6, 51638),

Gene: Geraldini\_80 Start: 51505, Stop: 51780, Start Num: 2

Candidate Starts for Geraldini\_80:

(Start: 2 @51505 has 77 MA's), (3, 51568), (5, 51628), (6, 51658),

Gene: HedwigODU\_77 Start: 51092, Stop: 51367, Start Num: 2

Candidate Starts for HedwigODU\_77:

(Start: 2 @51092 has 77 MA's), (3, 51155), (5, 51215), (6, 51245),

Gene: Homura\_76 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Homura\_76:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: Hyperbowlee\_76 Start: 51244, Stop: 51519, Start Num: 2

Candidate Starts for Hyperbowlee\_76:

(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Illumine\_82 Start: 52295, Stop: 52570, Start Num: 2

Candidate Starts for Illumine\_82:

(Start: 2 @52295 has 77 MA's), (3, 52358), (5, 52418),

Gene: Inky\_77 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Inky\_77:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: JAWS\_76 Start: 51009, Stop: 51284, Start Num: 2

Candidate Starts for JAWS\_76:

(Start: 2 @51009 has 77 MA's), (3, 51072), (5, 51132), (6, 51162),

Gene: Jarvi\_77 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Jarvi\_77:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: Jayhawk\_80 Start: 51501, Stop: 51779, Start Num: 2

Candidate Starts for Jayhawk\_80:

(Start: 2 @51501 has 77 MA's), (3, 51567), (5, 51627),

Gene: Jeckyll\_77 Start: 51047, Stop: 51322, Start Num: 2  
Candidate Starts for Jeckyll\_77:  
(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: Joy99\_78 Start: 51176, Stop: 51451, Start Num: 2  
Candidate Starts for Joy99\_78:  
(Start: 2 @51176 has 77 MA's), (3, 51239), (5, 51299), (6, 51329),

Gene: LaterM\_78 Start: 51728, Stop: 52003, Start Num: 2  
Candidate Starts for LaterM\_78:  
(Start: 2 @51728 has 77 MA's), (3, 51791), (5, 51851),

Gene: LindNT\_76 Start: 51505, Stop: 51783, Start Num: 2  
Candidate Starts for LindNT\_76:  
(1, 51442), (Start: 2 @51505 has 77 MA's), (3, 51571), (5, 51631),

Gene: Llorens\_77 Start: 51047, Stop: 51322, Start Num: 2  
Candidate Starts for Llorens\_77:  
(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: Lunahalos\_77 Start: 51047, Stop: 51322, Start Num: 2  
Candidate Starts for Lunahalos\_77:  
(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: MacKat\_73 Start: 46494, Stop: 46769, Start Num: 2  
Candidate Starts for MacKat\_73:  
(Start: 2 @46494 has 77 MA's), (3, 46557), (5, 46617), (6, 46647),

Gene: MeaningOfLife\_80 Start: 52031, Stop: 52306, Start Num: 2  
Candidate Starts for MeaningOfLife\_80:  
(Start: 2 @52031 has 77 MA's), (3, 52094), (5, 52154), (6, 52184),

Gene: Megsy\_82 Start: 51681, Stop: 51956, Start Num: 2  
Candidate Starts for Megsy\_82:  
(Start: 2 @51681 has 77 MA's), (3, 51744), (5, 51804),

Gene: Murucutumbu\_78 Start: 52281, Stop: 52556, Start Num: 2  
Candidate Starts for Murucutumbu\_78:  
(Start: 2 @52281 has 77 MA's), (3, 52344), (5, 52404),

Gene: Mynx\_79 Start: 51778, Stop: 52062, Start Num: 2  
Candidate Starts for Mynx\_79:  
(Start: 2 @51778 has 77 MA's), (3, 51850), (5, 51910),

Gene: Padfoot\_77 Start: 51244, Stop: 51519, Start Num: 2  
Candidate Starts for Padfoot\_77:  
(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Padpat\_81 Start: 51474, Stop: 51749, Start Num: 2  
Candidate Starts for Padpat\_81:  
(Start: 2 @51474 has 77 MA's), (5, 51597), (7, 51648),

Gene: Peel\_77 Start: 51049, Stop: 51324, Start Num: 2

Candidate Starts for Peel\_77:

(Start: 2 @51049 has 77 MA's), (3, 51112), (5, 51172), (6, 51202),

Gene: Piatt\_76 Start: 51244, Stop: 51519, Start Num: 2

Candidate Starts for Piatt\_76:

(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Pokerus\_78 Start: 51484, Stop: 51762, Start Num: 2

Candidate Starts for Pokerus\_78:

(Start: 2 @51484 has 77 MA's), (3, 51550), (5, 51610),

Gene: Prithvi\_80 Start: 51505, Stop: 51783, Start Num: 2

Candidate Starts for Prithvi\_80:

(1, 51442), (Start: 2 @51505 has 77 MA's), (3, 51571), (5, 51631),

Gene: QuincyRose\_76 Start: 51485, Stop: 51760, Start Num: 2

Candidate Starts for QuincyRose\_76:

(Start: 2 @51485 has 77 MA's), (3, 51548), (5, 51608), (6, 51638),

Gene: Ramen\_78 Start: 50804, Stop: 51082, Start Num: 2

Candidate Starts for Ramen\_78:

(Start: 2 @50804 has 77 MA's), (5, 50930), (7, 50981),

Gene: Rapunzel97\_80 Start: 51456, Stop: 51734, Start Num: 2

Candidate Starts for Rapunzel97\_80:

(Start: 2 @51456 has 77 MA's), (3, 51522), (5, 51582),

Gene: Rosmarinus\_77 Start: 51035, Stop: 51310, Start Num: 2

Candidate Starts for Rosmarinus\_77:

(Start: 2 @51035 has 77 MA's), (3, 51098), (5, 51158), (6, 51188),

Gene: ShiaSurprise\_78 Start: 51244, Stop: 51519, Start Num: 2

Candidate Starts for ShiaSurprise\_78:

(Start: 2 @51244 has 77 MA's), (3, 51307), (5, 51367), (6, 51397),

Gene: Slimphazie\_79 Start: 51456, Stop: 51734, Start Num: 2

Candidate Starts for Slimphazie\_79:

(Start: 2 @51456 has 77 MA's), (3, 51522), (5, 51582),

Gene: Spock\_77 Start: 51048, Stop: 51323, Start Num: 2

Candidate Starts for Spock\_77:

(Start: 2 @51048 has 77 MA's), (3, 51111), (5, 51171), (6, 51201),

Gene: Stinson\_79 Start: 51663, Stop: 51938, Start Num: 2

Candidate Starts for Stinson\_79:

(Start: 2 @51663 has 77 MA's), (3, 51726), (4, 51780), (5, 51786),

Gene: Sulley\_75 Start: 50539, Stop: 50814, Start Num: 2

Candidate Starts for Sulley\_75:

(Start: 2 @50539 has 77 MA's), (5, 50662), (7, 50713),

Gene: Tachez\_77 Start: 50892, Stop: 51167, Start Num: 2

Candidate Starts for Tachez\_77:



(Start: 2 @50892 has 77 MA's), (3, 50955), (5, 51015), (6, 51045),

Gene: TaiwanKao\_78 Start: 51029, Stop: 51304, Start Num: 2

Candidate Starts for TaiwanKao\_78:

(Start: 2 @51029 has 77 MA's), (3, 51092), (5, 51152),

Gene: Tiri\_78 Start: 50977, Stop: 51252, Start Num: 2

Candidate Starts for Tiri\_78:

(Start: 2 @50977 has 77 MA's), (3, 51040), (5, 51100), (6, 51130),

Gene: Topper\_77 Start: 51047, Stop: 51322, Start Num: 2

Candidate Starts for Topper\_77:

(Start: 2 @51047 has 77 MA's), (3, 51110), (5, 51170), (6, 51200),

Gene: TreyKay\_80 Start: 51505, Stop: 51783, Start Num: 2

Candidate Starts for TreyKay\_80:

(1, 51442), (Start: 2 @51505 has 77 MA's), (3, 51571), (5, 51631),

Gene: TruffulaTree\_79 Start: 51452, Stop: 51730, Start Num: 2

Candidate Starts for TruffulaTree\_79:

(Start: 2 @51452 has 77 MA's), (3, 51518), (5, 51578),

Gene: Twitch\_77 Start: 51049, Stop: 51324, Start Num: 2

Candidate Starts for Twitch\_77:

(Start: 2 @51049 has 77 MA's), (3, 51112), (5, 51172), (6, 51202),

Gene: Veliki\_78 Start: 51000, Stop: 51275, Start Num: 2

Candidate Starts for Veliki\_78:

(Start: 2 @51000 has 77 MA's), (3, 51063), (5, 51123), (6, 51153),

Gene: YoureAdopted\_77 Start: 51270, Stop: 51545, Start Num: 2

Candidate Starts for YoureAdopted\_77:

(Start: 2 @51270 has 77 MA's), (3, 51333), (4, 51387), (5, 51393),

Gene: Zabiza\_73 Start: 47397, Stop: 47672, Start Num: 2

Candidate Starts for Zabiza\_73:

(Start: 2 @47397 has 77 MA's), (3, 47460), (5, 47520), (6, 47550),

Gene: Zavala\_80 Start: 51530, Stop: 51808, Start Num: 2

Candidate Starts for Zavala\_80:

(Start: 2 @51530 has 77 MA's), (3, 51596), (5, 51656),