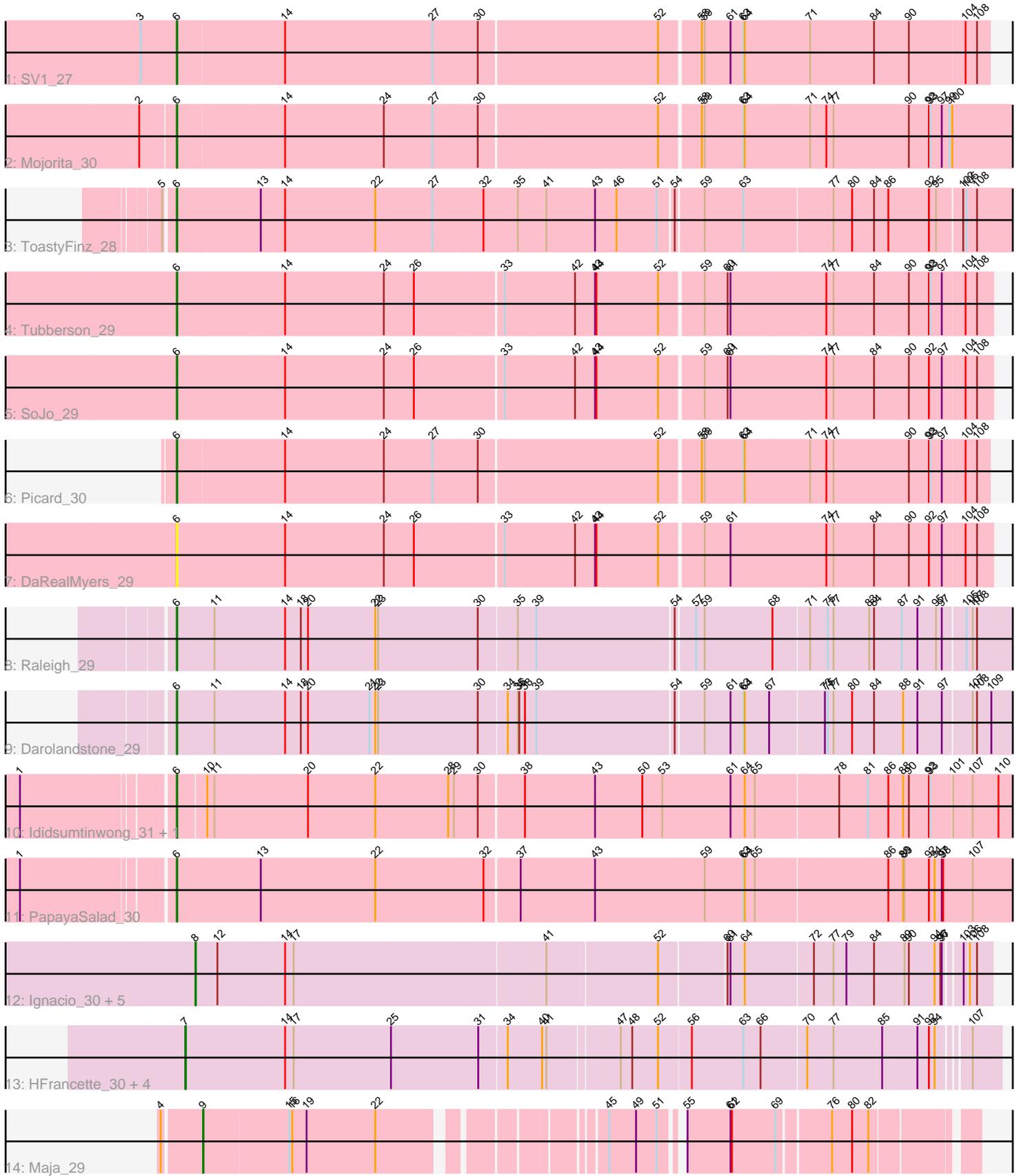


Pham 291483



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 291483 Report

This analysis was run 03/28/26 on database version 641.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 291483 has 24 members, 1 are drafts.

Phages represented in each track:

- Track 1 : SV1\_27
- Track 2 : Mojorita\_30
- Track 3 : ToastyFinz\_28
- Track 4 : Tubberson\_29
- Track 5 : SoJo\_29
- Track 6 : Picard\_30
- Track 7 : DaRealMyers\_29
- Track 8 : Raleigh\_29
- Track 9 : Darolandstone\_29
- Track 10 : Ididsumtinwong\_31, Bioscum\_31
- Track 11 : PapayaSalad\_30
- Track 12 : Ignacio\_30, FrumpyGal\_30, Eastland\_29, AxeJC\_29, Piccadilly\_29, Eklok\_30
- Track 13 : HFrancette\_30, Schlegelian\_31, ArizonaGT\_30, Cumberbatch\_30, Vondra\_28
- Track 14 : Maja\_29

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

The start number called the most often in the published annotations is 6, it was called in 11 of the 23 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Bioscum\_31, DaRealMyers\_29, Darolandstone\_29, Ididsumtinwong\_31, Mojorita\_30, PapayaSalad\_30, Picard\_30, Raleigh\_29, SV1\_27, SoJo\_29, ToastyFinz\_28, Tubberson\_29,

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

-

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

- ArizonaGT\_30, AxeJC\_29, Cumberbatch\_30, Eastland\_29, Eklok\_30, FrumpyGal\_30, HFrancette\_30, Ignacio\_30, Maja\_29, Piccadilly\_29, Schlegelian\_31, Vondra\_28,

### Summary by start number:

Start 6:

- Found in 12 of 24 ( 50.0% ) of genes in pham
- Manual Annotations of this start: 11 of 23
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bioscum\_31 (BC3), DaRealMyers\_29 (BC1), Darolandstone\_29 (BC2), Ididsumtinwong\_31 (BC3), Moajorita\_30 (BC1), PapayaSalad\_30 (BC3), Picard\_30 (BC1), Raleigh\_29 (BC2), SV1\_27 (BC1), SoJo\_29 (BC1), ToastyFinz\_28 (BC1), Tubberson\_29 (BC1),

Start 7:

- Found in 5 of 24 ( 20.8% ) of genes in pham
- Manual Annotations of this start: 5 of 23
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArizonaGT\_30 (BP), Cumberbatch\_30 (BP), HFrancette\_30 (BP), Schlegelian\_31 (BP), Vondra\_28 (BP),

Start 8:

- Found in 6 of 24 ( 25.0% ) of genes in pham
- Manual Annotations of this start: 6 of 23
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AxeJC\_29 (BP), Eastland\_29 (BP), Eklok\_30 (BP), FrumpyGal\_30 (BP), Ignacio\_30 (BP), Piccadilly\_29 (BP),

Start 9:

- Found in 1 of 24 ( 4.2% ) of genes in pham
- Manual Annotations of this start: 1 of 23
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maja\_29 (FO),

### Summary by clusters:

There are 5 clusters represented in this pham: BC3, BP, BC1, BC2, FO,

Info for manual annotations of cluster BC1:

- Start number 6 was manually annotated 6 times for cluster BC1.

Info for manual annotations of cluster BC2:

- Start number 6 was manually annotated 2 times for cluster BC2.

Info for manual annotations of cluster BC3:

- Start number 6 was manually annotated 3 times for cluster BC3.

Info for manual annotations of cluster BP:

- Start number 7 was manually annotated 5 times for cluster BP.
- Start number 8 was manually annotated 6 times for cluster BP.

Info for manual annotations of cluster FO:

- Start number 9 was manually annotated 1 time for cluster FO.

**Gene Information:**

Gene: ArizonaGT\_30 Start: 22964, Stop: 21345, Start Num: 7

Candidate Starts for ArizonaGT\_30:

(Start: 7 @22964 has 5 MA's), (14, 22760), (17, 22742), (25, 22538), (31, 22355), (34, 22304), (40, 22238), (41, 22229), (47, 22088), (48, 22064), (52, 22010), (56, 21944), (63, 21839), (66, 21803), (70, 21716), (77, 21662), (85, 21560), (91, 21491), (92, 21467), (94, 21455), (107, 21404),

Gene: AxeJC\_29 Start: 22952, Stop: 21372, Start Num: 8

Candidate Starts for AxeJC\_29:

(Start: 8 @22952 has 6 MA's), (12, 22907), (14, 22772), (17, 22754), (41, 22241), (52, 22013), (60, 21884), (61, 21878), (64, 21848), (72, 21716), (77, 21677), (79, 21650), (84, 21593), (89, 21533), (90, 21524), (94, 21470), (96, 21458), (97, 21455), (103, 21425), (106, 21416), (108, 21401),

Gene: Bioscum\_31 Start: 23000, Stop: 21264, Start Num: 6

Candidate Starts for Bioscum\_31:

(1, 23297), (Start: 6 @23000 has 11 MA's), (10, 22943), (11, 22928), (20, 22736), (22, 22595), (28, 22445), (29, 22433), (30, 22385), (38, 22295), (43, 22151), (50, 22052), (53, 22010), (61, 21869), (64, 21839), (65, 21818), (78, 21653), (81, 21593), (86, 21551), (88, 21521), (90, 21509), (92, 21467), (93, 21464), (101, 21422), (107, 21386), (110, 21332),

Gene: Cumberbatch\_30 Start: 22964, Stop: 21345, Start Num: 7

Candidate Starts for Cumberbatch\_30:

(Start: 7 @22964 has 5 MA's), (14, 22760), (17, 22742), (25, 22538), (31, 22355), (34, 22304), (40, 22238), (41, 22229), (47, 22088), (48, 22064), (52, 22010), (56, 21944), (63, 21839), (66, 21803), (70, 21716), (77, 21662), (85, 21560), (91, 21491), (92, 21467), (94, 21455), (107, 21404),

Gene: DaRealMyers\_29 Start: 24708, Stop: 23053, Start Num: 6

Candidate Starts for DaRealMyers\_29:

(Start: 6 @24708 has 11 MA's), (14, 24489), (24, 24282), (26, 24222), (33, 24042), (42, 23898), (43, 23859), (44, 23856), (52, 23727), (59, 23643), (61, 23589), (74, 23391), (77, 23376), (84, 23292), (90, 23223), (92, 23181), (97, 23154), (104, 23109), (108, 23085),

Gene: Darolandstone\_29 Start: 24567, Stop: 22855, Start Num: 6

Candidate Starts for Darolandstone\_29:

(Start: 6 @24567 has 11 MA's), (11, 24492), (14, 24351), (18, 24318), (20, 24303), (21, 24174), (22, 24162), (23, 24156), (30, 23952), (34, 23895), (35, 23874), (36, 23871), (38, 23859), (39, 23838), (54, 23559), (59, 23505), (61, 23451), (63, 23424), (64, 23421), (67, 23370), (73, 23262), (75, 23256), (77, 23244), (80, 23205), (84, 23160), (88, 23103), (91, 23073), (97, 23022), (107, 22968), (108, 22959), (109, 22929),

Gene: Eastland\_29 Start: 22937, Stop: 21357, Start Num: 8

Candidate Starts for Eastland\_29:

(Start: 8 @22937 has 6 MA's), (12, 22892), (14, 22757), (17, 22739), (41, 22226), (52, 21998), (60, 21869), (61, 21863), (64, 21833), (72, 21701), (77, 21662), (79, 21635), (84, 21578), (89, 21518), (90, 21509), (94, 21455), (96, 21443), (97, 21440), (103, 21410), (106, 21401), (108, 21386),

Gene: Eklok\_30 Start: 22952, Stop: 21372, Start Num: 8

Candidate Starts for Eklok\_30:

(Start: 8 @22952 has 6 MA's), (12, 22907), (14, 22772), (17, 22754), (41, 22241), (52, 22013), (60, 21884), (61, 21878), (64, 21848), (72, 21716), (77, 21677), (79, 21650), (84, 21593), (89, 21533), (90, 21524), (94, 21470), (96, 21458), (97, 21455), (103, 21425), (106, 21416), (108, 21401),

Gene: FrumpyGal\_30 Start: 22937, Stop: 21357, Start Num: 8

Candidate Starts for FrumpyGal\_30:

(Start: 8 @22937 has 6 MA's), (12, 22892), (14, 22757), (17, 22739), (41, 22226), (52, 21998), (60, 21869), (61, 21863), (64, 21833), (72, 21701), (77, 21662), (79, 21635), (84, 21578), (89, 21518), (90, 21509), (94, 21455), (96, 21443), (97, 21440), (103, 21410), (106, 21401), (108, 21386),

Gene: HFrancette\_30 Start: 23607, Stop: 21988, Start Num: 7

Candidate Starts for HFrancette\_30:

(Start: 7 @23607 has 5 MA's), (14, 23403), (17, 23385), (25, 23181), (31, 22998), (34, 22947), (40, 22881), (41, 22872), (47, 22731), (48, 22707), (52, 22653), (56, 22587), (63, 22482), (66, 22446), (70, 22359), (77, 22305), (85, 22203), (91, 22134), (92, 22110), (94, 22098), (107, 22047),

Gene: Ididsumtinwong\_31 Start: 23000, Stop: 21264, Start Num: 6

Candidate Starts for Ididsumtinwong\_31:

(1, 23297), (Start: 6 @23000 has 11 MA's), (10, 22943), (11, 22928), (20, 22736), (22, 22595), (28, 22445), (29, 22433), (30, 22385), (38, 22295), (43, 22151), (50, 22052), (53, 22010), (61, 21869), (64, 21839), (65, 21818), (78, 21653), (81, 21593), (86, 21551), (88, 21521), (90, 21509), (92, 21467), (93, 21464), (101, 21422), (107, 21386), (110, 21332),

Gene: Ignacio\_30 Start: 23614, Stop: 22034, Start Num: 8

Candidate Starts for Ignacio\_30:

(Start: 8 @23614 has 6 MA's), (12, 23569), (14, 23434), (17, 23416), (41, 22903), (52, 22675), (60, 22546), (61, 22540), (64, 22510), (72, 22378), (77, 22339), (79, 22312), (84, 22255), (89, 22195), (90, 22186), (94, 22132), (96, 22120), (97, 22117), (103, 22087), (106, 22078), (108, 22063),

Gene: Maja\_29 Start: 25557, Stop: 24160, Start Num: 9

Candidate Starts for Maja\_29:

(4, 25635), (Start: 9 @25557 has 1 MA's), (15, 25380), (16, 25374), (19, 25344), (22, 25200), (45, 24819), (49, 24765), (51, 24723), (55, 24696), (61, 24609), (62, 24606), (69, 24519), (76, 24423), (80, 24384), (82, 24351),

Gene: Mojarita\_30 Start: 23368, Stop: 21647, Start Num: 6

Candidate Starts for Mojarita\_30:

(2, 23440), (Start: 6 @23368 has 11 MA's), (14, 23155), (24, 22948), (27, 22849), (30, 22756), (52, 22393), (58, 22315), (59, 22309), (63, 22228), (64, 22225), (71, 22090), (74, 22057), (77, 22042), (90, 21889), (92, 21847), (93, 21844), (97, 21820), (99, 21805), (100, 21799),

Gene: PapayaSalad\_30 Start: 23309, Stop: 21576, Start Num: 6

Candidate Starts for PapayaSalad\_30:

(1, 23606), (Start: 6 @23309 has 11 MA's), (13, 23135), (22, 22898), (32, 22676), (37, 22607), (43, 22457), (59, 22229), (63, 22148), (64, 22145), (65, 22124), (86, 21857), (88, 21827), (89, 21824), (92, 21773), (94, 21761), (97, 21746), (98, 21743), (107, 21683),

Gene: Picard\_30 Start: 23566, Stop: 21923, Start Num: 6

Candidate Starts for Picard\_30:

(Start: 6 @23566 has 11 MA's), (14, 23353), (24, 23146), (27, 23047), (30, 22954), (52, 22591), (58, 22513), (59, 22507), (63, 22426), (64, 22423), (71, 22288), (74, 22255), (77, 22240), (90, 22087), (92, 22045), (93, 22042), (97, 22018), (104, 21973), (108, 21949),

Gene: Piccadilly\_29 Start: 22936, Stop: 21356, Start Num: 8

Candidate Starts for Piccadilly\_29:

(Start: 8 @22936 has 6 MA's), (12, 22891), (14, 22756), (17, 22738), (41, 22225), (52, 21997), (60, 21868), (61, 21862), (64, 21832), (72, 21700), (77, 21661), (79, 21634), (84, 21577), (89, 21517), (90, 21508), (94, 21454), (96, 21442), (97, 21439), (103, 21409), (106, 21400), (108, 21385),

Gene: Raleigh\_29 Start: 25082, Stop: 23370, Start Num: 6

Candidate Starts for Raleigh\_29:

(Start: 6 @25082 has 11 MA's), (11, 25007), (14, 24866), (18, 24833), (20, 24818), (22, 24677), (23, 24671), (30, 24467), (35, 24389), (39, 24353), (54, 24074), (57, 24038), (59, 24020), (68, 23879), (71, 23807), (75, 23771), (77, 23759), (83, 23684), (84, 23675), (87, 23621), (91, 23588), (95, 23549), (97, 23537), (105, 23495), (107, 23483), (108, 23474),

Gene: SV1\_27 Start: 22294, Stop: 20651, Start Num: 6

Candidate Starts for SV1\_27:

(3, 22366), (Start: 6 @22294 has 11 MA's), (14, 22081), (27, 21775), (30, 21682), (52, 21319), (58, 21241), (59, 21235), (61, 21181), (63, 21154), (64, 21151), (71, 21016), (84, 20884), (90, 20815), (104, 20701), (108, 20677),

Gene: Schlegelian\_31 Start: 23332, Stop: 21713, Start Num: 7

Candidate Starts for Schlegelian\_31:

(Start: 7 @23332 has 5 MA's), (14, 23128), (17, 23110), (25, 22906), (31, 22723), (34, 22672), (40, 22606), (41, 22597), (47, 22456), (48, 22432), (52, 22378), (56, 22312), (63, 22207), (66, 22171), (70, 22084), (77, 22030), (85, 21928), (91, 21859), (92, 21835), (94, 21823), (107, 21772),

Gene: SoJo\_29 Start: 24703, Stop: 23048, Start Num: 6

Candidate Starts for SoJo\_29:

(Start: 6 @24703 has 11 MA's), (14, 24484), (24, 24277), (26, 24217), (33, 24037), (42, 23893), (43, 23854), (44, 23851), (52, 23722), (59, 23638), (60, 23590), (61, 23584), (74, 23386), (77, 23371), (84, 23287), (90, 23218), (92, 23176), (97, 23149), (104, 23104), (108, 23080),

Gene: ToastyFinz\_28 Start: 24644, Stop: 22878, Start Num: 6

Candidate Starts for ToastyFinz\_28:

(5, 24662), (Start: 6 @24644 has 11 MA's), (13, 24473), (14, 24425), (22, 24236), (27, 24119), (32, 24014), (35, 23942), (41, 23885), (43, 23783), (46, 23738), (51, 23654), (54, 23624), (59, 23570), (63, 23489), (77, 23309), (80, 23270), (84, 23225), (86, 23198), (92, 23114), (95, 23099), (102, 23051), (105, 23045), (108, 23024),

Gene: Tubberson\_29 Start: 24708, Stop: 23053, Start Num: 6

Candidate Starts for Tubberson\_29:

(Start: 6 @24708 has 11 MA's), (14, 24489), (24, 24282), (26, 24222), (33, 24042), (42, 23898), (43, 23859), (44, 23856), (52, 23727), (59, 23643), (60, 23595), (61, 23589), (74, 23391), (77, 23376), (84, 23292), (90, 23223), (92, 23181), (93, 23178), (97, 23154), (104, 23109), (108, 23085),

Gene: Vondra\_28 Start: 22771, Stop: 21152, Start Num: 7

Candidate Starts for Vondra\_28:

(Start: 7 @22771 has 5 MA's), (14, 22567), (17, 22549), (25, 22345), (31, 22162), (34, 22111), (40, 22045), (41, 22036), (47, 21895), (48, 21871), (52, 21817), (56, 21751), (63, 21646), (66, 21610), (70, 21523), (77, 21469), (85, 21367), (91, 21298), (92, 21274), (94, 21262), (107, 21211),