

## LoRa Trasmission Test bed: detailed spots data daily

| TimeSlot<br>Nbr | unix time  | Time    | ENL  | RSSI    | SNR    | APRS_ENL                     | APRS_RSSI                            | APRS_SNR                         |
|-----------------|------------|---------|------|---------|--------|------------------------------|--------------------------------------|----------------------------------|
| i=0             | 1639353615 | 0:0:15  | -107 | -113    | -6     | -108<br>-108<br>-107         | -124.75<br>-124.25<br>-123.5         | -16.75<br>-16.25<br>-16.5        |
| i=1             | 1639353795 | 0:3:15  | -106 | -111.5  | -5.5   | -107<br>-109                 | -123.25<br>-126.25                   | -16.25<br>-17.25                 |
| i=2             | 1639353975 | 0:6:15  | -106 | -110    | -4     | -107                         | -122                                 | -15                              |
| i=3             | 1639354155 | 0:9:15  | -106 | -110.25 | -4.25  | -107                         | -122                                 | -15                              |
| i=4             | 1639354334 | 0:12:14 | -105 | -108.25 | -3.25  | -107                         | -123.25                              | -16.25                           |
| i=5             | 1639354515 | 0:15:15 | -106 | -110    | -4     | -108                         | -124.25                              | -16.25                           |
| i=6             | 1639354695 | 0:18:15 | -105 | -108.5  | -3.5   | -107<br>-107                 | -122.5<br>-122.5                     | -15.5<br>-15.5                   |
| i=7             | 1639354874 | 0:21:14 | -106 | -111.25 | -5.25  |                              |                                      |                                  |
| i=8             | 1639355055 | 0:24:15 | -107 | -112.5  | -5.5   |                              |                                      |                                  |
| i=9             | 1639355235 | 0:27:15 | -106 | -110    | -4     | -107<br>-106                 | -123<br>-121                         | -16<br>-15                       |
| i=10            | 1639355415 | 0:30:15 | -106 | -110    | -4     | -107                         | -122.25                              | -15.25                           |
| i=11            | 1639355594 | 0:33:14 | -106 | -110    | -4     | -107                         | -122.5                               | -15.5                            |
| i=12            | 1639355775 | 0:36:15 | -106 | -110.5  | -4.5   | -108<br>-107<br>-107<br>-108 | -124.25<br>-123<br>-122.75<br>-124.5 | -16.25<br>-16<br>-15.75<br>-16.5 |
| i=13            | 1639355954 | 0:39:14 | -107 | -111.75 | -4.75  | -107<br>-107                 | -122.5<br>-123.5                     | -15.5<br>-16.5                   |
| i=14            | 1639356134 | 0:42:14 | -107 | -114    | -7     | -108<br>-107<br>-107         | -124.75<br>-122.75<br>-122.75        | -16.75<br>-15.75<br>-15.75       |
| i=15            | 1639356314 | 0:45:14 | -109 | -116.5  | -7.5   |                              |                                      |                                  |
| i=16            | 1639356494 | 0:48:14 | -110 | -118.5  | -8.5   | -108<br>-107                 | -124<br>-122.75                      | -16<br>-15.75                    |
| i=17            | 1639356675 | 0:51:15 | -113 | -124    | -11    | -107                         | -123.25                              | -16.25                           |
| i=18            | 1639357016 | 0:56:56 |      |         |        | -109<br>-107                 | -126<br>-123.25                      | -17<br>-16.25                    |
| i=19            | 1639357035 | 0:57:15 | -117 | -132.75 | -15.75 | -108                         | -124.75                              | -16.75                           |
| i=20            | 1639357215 | 1:0:15  | -117 | -132.25 | -15.25 | -109                         | -126.5                               | -17.5                            |
| i=21            | 1639357394 | 1:3:14  | -114 | -126.75 | -12.75 | -109<br>-108                 | -127<br>-124.75                      | -18<br>-16.75                    |
| i=22            | 1639357575 | 1:6:15  | -113 | -123    | -10    | -108<br>-107                 | -124.5<br>-123.25                    | -16.5<br>-16.25                  |
| i=23            | 1639357754 | 1:9:14  | -112 | -121    | -9     | -107<br>-107                 | -122.5<br>-123                       | -15.5<br>-16                     |
| i=24            | 1639357935 | 1:12:15 | -109 | -115.75 | -6.75  | -107                         | -122.75                              | -15.75                           |
|                 |            |         |      |         |        |                              |                                      |                                  |

|      |            |         |      |         |       |      |         |        |
|------|------------|---------|------|---------|-------|------|---------|--------|
| i=25 | 1639358114 | 1:15:14 | -111 | -119    | -8    | -108 | -125.25 | -17.25 |
|      |            |         |      |         |       | -109 | -126.25 | -17.25 |
|      |            |         |      |         |       | -108 | -125.25 | -17.25 |
| i=26 | 1639358295 | 1:18:15 | -111 | -120.25 | -9.25 | -108 | -125.5  | -17.5  |
| i=27 | 1639358474 | 1:21:14 | -110 | -118    | -8    | -109 | -126.5  | -17.5  |
|      |            |         |      |         |       | -109 | -126.25 | -17.25 |
|      |            |         |      |         |       | -109 | -126.75 | -17.75 |
|      |            |         |      |         |       | -109 | -126.75 | -17.75 |
| i=28 | 1639358654 | 1:24:14 | -111 | -119.5  | -8.5  | -107 | -123.25 | -16.25 |
| i=29 | 1639358834 | 1:27:14 | -110 | -118.25 | -8.25 |      |         |        |
| i=30 | 1639359014 | 1:30:14 | -109 | -115.5  | -6.5  |      |         |        |
| i=31 | 1639359194 | 1:33:14 | -108 | -114.25 | -6.25 | -110 | -128.75 | -18.75 |
| i=32 | 1639359374 | 1:36:14 | -108 | -114.5  | -6.5  | -109 | -127.25 | -18.25 |
| i=33 | 1639359555 | 1:39:15 | -108 | -114    | -6    | -109 | -127.25 | -18.25 |
|      |            |         |      |         |       | -110 | -129    | -19    |
| i=34 | 1639359735 | 1:42:15 | -109 | -116    | -7    | -109 | -127    | -18    |
|      |            |         |      |         |       | -111 | -130.75 | -19.75 |
| i=35 | 1639359914 | 1:45:14 | -109 | -115    | -6    | -110 | -128.5  | -18.5  |
|      |            |         |      |         |       | -108 | -125    | -17    |
|      |            |         |      |         |       | -109 | -127    | -18    |
|      |            |         |      |         |       | -109 | -127.25 | -18.25 |
| i=36 | 1639360095 | 1:48:15 | -107 | -112.75 | -5.75 | -109 | -127    | -18    |
|      |            |         |      |         |       | -107 | -124    | -17    |
|      |            |         |      |         |       | -108 | -124.5  | -16.5  |
| i=37 | 1639360274 | 1:51:14 | -107 | -112    | -5    | -108 | -125.25 | -17.25 |
| i=38 | 1639360454 | 1:54:14 | -106 | -110    | -4    | -108 | -125.5  | -17.5  |
|      |            |         |      |         |       | -108 | -126    | -18    |
| i=39 | 1639360634 | 1:57:14 | -106 | -110    | -4    |      |         |        |
| i=40 | 1639360815 | 2:0:15  | -104 | -108    | -4    |      |         |        |
| i=41 | 1639360994 | 2:3:14  | -105 | -108.75 | -3.75 |      |         |        |
| i=42 | 1639361174 | 2:6:14  | -105 | -109.5  | -4.5  |      |         |        |
| i=43 | 1639361354 | 2:9:14  | -106 | -109.75 | -3.75 | -109 | -127.25 | -18.25 |
| i=44 | 1639361534 | 2:12:14 | -106 | -109.75 | -3.75 |      |         |        |
| i=45 | 1639361714 | 2:15:14 | -106 | -110.25 | -4.25 |      |         |        |
| i=46 | 1639361895 | 2:18:15 | -106 | -110.25 | -4.25 | -110 | -128.25 | -18.25 |
| i=47 | 1639362074 | 2:21:14 | -107 | -111.5  | -4.5  | -110 | -128.5  | -18.5  |
| i=48 | 1639362254 | 2:24:14 | -106 | -110    | -4    |      |         |        |
| i=49 | 1639362434 | 2:27:14 | -106 | -111.25 | -5.25 |      |         |        |
| i=50 | 1639362614 | 2:30:14 | -107 | -112.25 | -5.25 |      |         |        |
| i=51 | 1639362794 | 2:33:14 | -108 | -114.25 | -6.25 |      |         |        |
| i=52 | 1639362974 | 2:36:14 | -108 | -114.75 | -6.75 | -111 | -131.5  | -20.5  |
| i=53 | 1639363154 | 2:39:14 | -109 | -115.75 | -6.75 | -110 | -128.75 | -18.75 |
| i=54 | 1639363334 | 2:42:14 | -107 | -113.5  | -6.5  |      |         |        |
| i=55 | 1639363514 | 2:45:14 | -108 | -113.5  | -5.5  | -110 | -128.5  | -18.5  |
| i=56 | 1639363694 | 2:48:14 | -106 | -110.5  | -4.5  | -110 | -128.75 | -18.75 |
|      |            |         |      |         |       | -110 | -128.5  | -18.5  |
| i=57 | 1639363874 | 2:51:14 | -106 | -110.25 | -4.25 | -109 | -128    | -19    |

|      |            |         |      |         |       |  |                      |                             |                          |
|------|------------|---------|------|---------|-------|--|----------------------|-----------------------------|--------------------------|
|      |            |         |      |         |       |  | -109<br>-110         | -127<br>-128.5              | -18<br>-18.5             |
| i=58 | 1639364054 | 2:54:14 | -106 | -110.5  | -4.5  |  | -110<br>-109         | -128.5<br>-126.25           | -18.5<br>-17.25          |
| i=59 | 1639364235 | 2:57:15 | -106 | -110.75 | -4.75 |  | -109<br>-110<br>-110 | -127<br>-128.5<br>-129.5    | -18<br>-18.5<br>-19.5    |
| i=60 | 1639364414 | 3:0:14  | -106 | -110.5  | -4.5  |  | -110                 | -128.25                     | -18.25                   |
| i=61 | 1639364594 | 3:3:14  | -106 | -111.25 | -5.25 |  | -109                 | -126.75                     | -17.75                   |
| i=62 | 1639364774 | 3:6:14  | -105 | -108.75 | -3.75 |  |                      |                             |                          |
| i=63 | 1639364954 | 3:9:14  | -105 | -108    | -3    |  | -109                 | -127                        | -18                      |
| i=64 | 1639365134 | 3:12:14 | -105 | -108.25 | -3.25 |  |                      |                             |                          |
| i=65 | 1639365314 | 3:15:14 | -105 | -108    | -3    |  | -110                 | -128.75                     | -18.75                   |
| i=66 | 1639365494 | 3:18:14 | -105 | -108.5  | -3.5  |  | -109                 | -127.25                     | -18.25                   |
| i=67 | 1639365674 | 3:21:14 | -106 | -110.25 | -4.25 |  | -110<br>-110         | -128.25<br>-128.75          | -18.25<br>-18.75         |
| i=68 | 1639365854 | 3:24:14 | -107 | -112    | -5    |  | -111<br>-111         | -131.75<br>-131.5           | -20.75<br>-20.5          |
| i=69 | 1639366034 | 3:27:14 | -107 | -111.75 | -4.75 |  | -111<br>-110         | -130.5<br>-128.5            | -19.5<br>-18.5           |
| i=70 | 1639366214 | 3:30:14 | -108 | -114.25 | -6.25 |  | -110<br>-111         | -129.5<br>-130.25           | -19.5<br>-19.25          |
| i=71 | 1639366394 | 3:33:14 | -108 | -114    | -6    |  | -111<br>-110         | -131.25<br>-129.25          | -20.25<br>-19.25         |
| i=72 | 1639366574 | 3:36:14 | -108 | -113.75 | -5.75 |  | -111<br>-111         | -131<br>-131.25             | -20<br>-20.25            |
| i=73 | 1639366754 | 3:39:14 | -107 | -112    | -5    |  | -110<br>-109         | -129.25<br>-127             | -19.25<br>-18            |
| i=74 | 1639366934 | 3:42:14 | -108 | -114.5  | -6.5  |  | -110                 | -129                        | -19                      |
| i=75 | 1639367115 | 3:45:15 | -107 | -112.25 | -5.25 |  | -110<br>-110<br>-110 | -129<br>-128.25<br>-128.25  | -19<br>-18.25<br>-18.25  |
| i=76 | 1639367294 | 3:48:14 | -106 | -112.25 | -6.25 |  | -110<br>-110<br>-111 | -130<br>-128.75<br>-130.75  | -20<br>-18.75<br>-19.75  |
| i=77 | 1639367474 | 3:51:14 | -107 | -113    | -6    |  | -111                 | -130.75                     | -19.75                   |
| i=78 | 1639367656 | 3:54:16 | -109 | -115.75 | -6.75 |  | -110                 | -128.75                     | -18.75                   |
| i=79 | 1639367836 | 3:57:16 | -109 | -115.75 | -6.75 |  |                      |                             |                          |
| i=80 | 1639368016 | 4:0:16  | -108 | -114.5  | -6.5  |  | -109                 | -126.5                      | -17.5                    |
| i=81 | 1639368196 | 4:3:16  | -107 | -112    | -5    |  | -109<br>-109         | -126.5<br>-127              | -17.5<br>-18             |
| i=82 | 1639368376 | 4:6:16  | -107 | -112    | -5    |  | -109                 | -126.5                      | -17.5                    |
| i=83 | 1639368556 | 4:9:16  | -107 | -112    | -5    |  | -108<br>-108<br>-108 | -125.5<br>-125.25<br>-125.5 | -17.5<br>-17.25<br>-17.5 |
| i=84 | 1639368736 | 4:12:16 | -106 | -111.25 | -5.25 |  | -107<br>-107         | -123.5<br>-122.75           | -16.5<br>-15.75          |
| i=85 | 1639368916 | 4:15:16 | -106 | -110    | -4    |  | -107                 | -123                        | -16                      |

|       |            |         |  |      |         |       |                      |                              |                           |
|-------|------------|---------|--|------|---------|-------|----------------------|------------------------------|---------------------------|
|       |            |         |  |      |         |       | -107                 | -122.5                       | -15.5                     |
| i=86  | 1639369096 | 4:18:16 |  | -105 | -108.5  | -3.5  | -107                 | -122.75                      | -15.75                    |
| i=87  | 1639369276 | 4:21:16 |  | -105 | -108.75 | -3.75 | -107                 | -123.5                       | -16.5                     |
| i=88  | 1639369456 | 4:24:16 |  | -106 | -110    | -4    | -108<br>-109         | -125.5<br>-126.25            | -17.5<br>-17.25           |
| i=89  | 1639369636 | 4:27:16 |  | -105 | -108.5  | -3.5  | -108                 | -124.25                      | -16.25                    |
| i=90  | 1639369816 | 4:30:16 |  | -106 | -110.5  | -4.5  | -109                 | -126.75                      | -17.75                    |
| i=91  | 1639369995 | 4:33:15 |  | -105 | -108.75 | -3.75 | -110<br>-108         | -128.25<br>-125.25           | -18.25<br>-17.25          |
| i=92  | 1639370175 | 4:36:15 |  | -105 | -108.5  | -3.5  | -111                 | -130.25                      | -19.25                    |
| i=93  | 1639370355 | 4:39:15 |  | -106 | -109.5  | -3.5  | -111<br>-110         | -130.5<br>-129.25            | -19.5<br>-19.25           |
| i=94  | 1639370535 | 4:42:15 |  | -105 | -108.75 | -3.75 |                      |                              |                           |
| i=95  | 1639370715 | 4:45:15 |  | -107 | -111.75 | -4.75 | -113                 | -134.25                      | -21.25                    |
| i=96  | 1639370895 | 4:48:15 |  | -107 | -112.5  | -5.5  | -111<br>-111<br>-112 | -130.25<br>-131<br>-132.25   | -19.25<br>-20<br>-20.25   |
| i=97  | 1639371075 | 4:51:15 |  | -108 | -113.75 | -5.75 | -111<br>-111         | -130.5<br>-131               | -19.5<br>-20              |
| i=98  | 1639371255 | 4:54:15 |  | -108 | -114    | -6    | -112<br>-112<br>-111 | -132.75<br>-133<br>-131      | -20.75<br>-21<br>-20      |
| i=99  | 1639371435 | 4:57:15 |  | -109 | -115.75 | -6.75 | -112<br>-110         | -132.25<br>-129              | -20.25<br>-19             |
| i=100 | 1639371615 | 5:0:15  |  | -109 | -115.75 | -6.75 |                      |                              |                           |
| i=101 | 1639371795 | 5:3:15  |  | -107 | -112    | -5    | -112                 | -132.25                      | -20.25                    |
| i=102 | 1639371975 | 5:6:15  |  | -107 | -111.75 | -4.75 |                      |                              |                           |
| i=103 | 1639372155 | 5:9:15  |  | -106 | -109.75 | -3.75 | -111                 | -130.25                      | -19.25                    |
| i=104 | 1639372335 | 5:12:15 |  | -106 | -109.75 | -3.75 | -110<br>-110<br>-110 | -128.5<br>-128.75<br>-128.75 | -18.5<br>-18.75<br>-18.75 |
| i=105 | 1639372515 | 5:15:15 |  | -106 | -110    | -4    | -110                 | -129.25                      | -19.25                    |
| i=106 | 1639372695 | 5:18:15 |  | -106 | -109.75 | -3.75 | -111                 | -130.25                      | -19.25                    |
| i=107 | 1639372874 | 5:21:14 |  | -106 | -110.25 | -4.25 | -109                 | -126.5                       | -17.5                     |
| i=108 | 1639373055 | 5:24:15 |  | -106 | -109.75 | -3.75 | -109                 | -126.75                      | -17.75                    |
| i=109 | 1639373235 | 5:27:15 |  | -106 | -110.25 | -4.25 | -109<br>-109         | -126.75<br>-126.5            | -17.75<br>-17.5           |
| i=110 | 1639373415 | 5:30:15 |  | -106 | -110.25 | -4.25 | -108                 | -124.75                      | -16.75                    |
| i=111 | 1639373595 | 5:33:15 |  | -104 | -106.75 | -2.75 | -108<br>-108         | -124.5<br>-124.75            | -16.5<br>-16.75           |
| i=112 | 1639373775 | 5:36:15 |  | -105 | -108    | -3    | -108<br>-108         | -124.25<br>-124.75           | -16.25<br>-16.75          |
| i=113 | 1639373955 | 5:39:15 |  | -105 | -108    | -3    | -108<br>-107         | -124.25<br>-123.5            | -16.25<br>-16.5           |
| i=114 | 1639374135 | 5:42:15 |  | -104 | -106.5  | -2.5  | -107<br>-107         | -123<br>-122.75              | -16<br>-15.75             |
| i=115 | 1639374315 | 5:45:15 |  | -104 | -106.75 | -2.75 | -107<br>-107         | -123<br>-123.5               | -16<br>-16.5              |

|       |            |         |      |         |       |  |                      |                              |                           |
|-------|------------|---------|------|---------|-------|--|----------------------|------------------------------|---------------------------|
|       |            |         |      |         |       |  | -108                 | -124.25                      | -16.25                    |
| i=116 | 1639374495 | 5:48:15 | -105 | -108    | -3    |  | -108<br>-108         | -124.25<br>-124.75           | -16.25<br>-16.75          |
| i=117 | 1639374675 | 5:51:15 | -104 | -106    | -2    |  | -107<br>-107<br>-108 | -122.75<br>-123.25<br>-124.5 | -15.75<br>-16.25<br>-16.5 |
| i=118 | 1639374855 | 5:54:15 | -103 | -105.25 | -2.25 |  | -108                 | -124.75                      | -16.75                    |
| i=119 | 1639375035 | 5:57:15 | -103 | -105    | -2    |  |                      |                              |                           |
| i=120 | 1639375215 | 6:0:15  | -104 | -106.5  | -2.5  |  | -108                 | -124.75                      | -16.75                    |
| i=121 | 1639375395 | 6:3:15  | -105 | -108.5  | -3.5  |  |                      |                              |                           |
| i=122 | 1639375575 | 6:6:15  | -105 | -108.5  | -3.5  |  | -109                 | -127.25                      | -18.25                    |
| i=123 | 1639375755 | 6:9:15  | -107 | -112.25 | -5.25 |  | -109<br>-108         | -126.25<br>-125              | -17.25<br>-17             |
| i=124 | 1639375935 | 6:12:15 | -108 | -114    | -6    |  | -108                 | -125.5                       | -17.5                     |
| i=125 | 1639376115 | 6:15:15 | -106 | -110.75 | -4.75 |  | -109                 | -127.25                      | -18.25                    |
| i=126 | 1639376294 | 6:18:14 | -107 | -112    | -5    |  | -109<br>-105         | -127<br>-123.75              | -18<br>-18.75             |
| i=127 | 1639376475 | 6:21:15 | -109 | -115.5  | -6.5  |  |                      |                              |                           |
| i=128 | 1639376655 | 6:24:15 | -111 | -120    | -9    |  | -109                 | -126.5                       | -17.5                     |
| i=129 | 1639376835 | 6:27:15 | -109 | -115.5  | -6.5  |  | -108<br>-109<br>-109 | -124.5<br>-126.25<br>-126    | -16.5<br>-17.25<br>-17    |
| i=130 | 1639377015 | 6:30:15 | -109 | -115.75 | -6.75 |  | -110<br>-110<br>-110 | -128.25<br>-129<br>-128.5    | -18.25<br>-19<br>-18.5    |
| i=131 | 1639377195 | 6:33:15 | -109 | -117    | -8    |  | -111                 | -129.75                      | -18.75                    |
| i=132 | 1639377375 | 6:36:15 | -111 | -119.5  | -8.5  |  |                      |                              |                           |
| i=133 | 1639377555 | 6:39:15 | -111 | -120.25 | -9.25 |  |                      |                              |                           |
| i=134 | 1639377735 | 6:42:15 | -110 | -118.25 | -8.25 |  |                      |                              |                           |
| i=135 | 1639377915 | 6:45:15 | -109 | -116    | -7    |  | -109                 | -126.75                      | -17.75                    |
| i=136 | 1639378095 | 6:48:15 | -111 | -119.75 | -8.75 |  | -108                 | -125.25                      | -17.25                    |
| i=137 | 1639378275 | 6:51:15 | -110 | -118    | -8    |  | -110<br>-109         | -128.5<br>-127               | -18.5<br>-18              |
| i=138 | 1639378455 | 6:54:15 | -109 | -116.75 | -7.75 |  | -109<br>-109         | -127<br>-127.25              | -18<br>-18.25             |
| i=139 | 1639378634 | 6:57:14 | -108 | -113.75 | -5.75 |  |                      |                              |                           |
| i=140 | 1639378815 | 7:0:15  | -107 | -112.25 | -5.25 |  | -108<br>-108         | -125.25<br>-125              | -17.25<br>-17             |
| i=141 | 1639378995 | 7:3:15  | -108 | -114.5  | -6.5  |  | -108                 | -124.5                       | -16.5                     |
| i=142 | 1639379175 | 7:6:15  | -108 | -113.75 | -5.75 |  | -109<br>-109         | -126.5<br>-126.75            | -17.5<br>-17.75           |
| i=143 | 1639379355 | 7:9:15  | -108 | -114    | -6    |  | -108<br>-108<br>-108 | -124.75<br>-124.75<br>-125   | -16.75<br>-16.75<br>-17   |
| i=144 | 1639379535 | 7:12:15 | -107 | -113.5  | -6.5  |  | -108<br>-108<br>-108 | -124.5<br>-124.5<br>-124.75  | -16.5<br>-16.5<br>-16.75  |
| i=145 | 1639379715 | 7:15:15 | -107 | -113.25 | -6.25 |  | -108                 | -125                         | -17                       |

|       |            |         |      |         |        |                              |                                     |                                 |
|-------|------------|---------|------|---------|--------|------------------------------|-------------------------------------|---------------------------------|
| i=146 | 1639379895 | 7:18:15 | -108 | -113.75 | -5.75  |                              |                                     |                                 |
| i=147 | 1639380075 | 7:21:15 | -109 | -116.25 | -7.25  | -108                         | -125.25                             | -17.25                          |
| i=148 | 1639380254 | 7:24:14 | -109 | -116    | -7     | -109<br>-109<br>-109         | -127<br>-126.75<br>-126.75          | -18<br>-17.75<br>-17.75         |
| i=149 | 1639380435 | 7:27:15 | -110 | -118    | -8     | -110<br>-109                 | -128.75<br>-126.5                   | -18.75<br>-17.5                 |
| i=150 | 1639380615 | 7:30:15 | -109 | -117.25 | -8.25  | -109<br>-108<br>-108         | -126.25<br>-125<br>-124.75          | -17.25<br>-17<br>-16.75         |
| i=151 | 1639380795 | 7:33:15 | -108 | -114.5  | -6.5   | -109<br>-108                 | -126.5<br>-125                      | -17.5<br>-17                    |
| i=152 | 1639380974 | 7:36:14 | -108 | -114.25 | -6.25  | -108<br>-108<br>-108         | -124.75<br>-124.75<br>-125.25       | -16.75<br>-16.75<br>-17.25      |
| i=153 | 1639381154 | 7:39:14 | -107 | -112.5  | -5.5   | -109<br>-110                 | -127.75<br>-128.5                   | -18.75<br>-18.5                 |
| i=154 | 1639381334 | 7:42:14 | -108 | -113.5  | -5.5   | -109                         | -127.25                             | -18.25                          |
| i=155 | 1639381514 | 7:45:14 | -107 | -113.75 | -6.75  |                              |                                     |                                 |
| i=156 | 1639381695 | 7:48:15 | -109 | -117    | -8     | -109                         | -126.75                             | -17.75                          |
| i=157 | 1639381875 | 7:51:15 | -108 | -114    | -6     |                              |                                     |                                 |
| i=158 |            |         |      |         |        |                              |                                     |                                 |
| i=159 | 1639382235 | 7:57:15 | -109 | -116.5  | -7.5   |                              |                                     |                                 |
| i=160 | 1639382542 | 8:2:22  |      |         |        | -109                         | -128.25                             | -19.25                          |
| i=161 | 1639382595 | 8:3:15  | -113 | -123.5  | -10.5  | -111<br>-111                 | -130.25<br>-130.25                  | -19.25<br>-19.25                |
| i=162 | 1639382775 | 8:6:15  | -113 | -122.75 | -9.75  |                              |                                     |                                 |
| i=163 | 1639382954 | 8:9:14  | -111 | -120.25 | -9.25  | -110<br>-109<br>-110<br>-109 | -128.5<br>-127.5<br>-129<br>-127.25 | -18.5<br>-18.5<br>-19<br>-18.25 |
| i=164 | 1639383135 | 8:12:15 | -113 | -124.25 | -11.25 | -110<br>-110                 | -129.25<br>-129.5                   | -19.25<br>-19.5                 |
| i=165 | 1639383315 | 8:15:15 | -112 | -122    | -10    |                              |                                     |                                 |
| i=166 | 1639383494 | 8:18:14 | -111 | -121.25 | -10.25 |                              |                                     |                                 |
| i=167 | 1639383674 | 8:21:14 | -109 | -116.75 | -7.75  | -109<br>-109<br>-109         | -127.25<br>-126.5<br>-126.5         | -18.25<br>-17.5<br>-17.5        |
| i=168 | 1639383855 | 8:24:15 | -109 | -115.5  | -6.5   | -109<br>-109                 | -127<br>-126.5                      | -18<br>-17.5                    |
| i=169 | 1639384035 | 8:27:15 | -109 | -115.5  | -6.5   | -109<br>-108                 | -127<br>-125                        | -18<br>-17                      |
| i=170 | 1639384214 | 8:30:14 | -109 | -117    | -8     | -109<br>-109<br>-109         | -126.75<br>-126.75<br>-126          | -17.75<br>-17.75<br>-17         |
| i=171 | 1639384394 | 8:33:14 | -108 | -114.25 | -6.25  |                              |                                     |                                 |
| i=172 | 1639384575 | 8:36:15 | -108 | -114    | -6     | -108<br>-107                 | -123.75<br>-123.25                  | -15.75<br>-16.25                |
|       |            |         |      |         |        |                              |                                     |                                 |

|       |            |         |      |         |        |      |         |        |
|-------|------------|---------|------|---------|--------|------|---------|--------|
| i=173 | 1639384755 | 8:39:15 | -108 | -114.25 | -6.25  | -107 | -122.25 | -15.25 |
|       |            |         | -107 | -123    | -16    |      |         |        |
| i=174 | 1639384934 | 8:42:14 | -109 | -116    | -7     | -107 | -122.75 | -15.75 |
|       |            |         | -107 | -122.25 | -15.25 | -107 | -122.5  | -15.5  |
| i=175 | 1639385114 | 8:45:14 | -108 | -114.5  | -6.5   | -107 | -122.75 | -15.75 |
|       |            |         |      |         |        |      |         |        |
| i=176 | 1639385295 | 8:48:15 | -110 | -118    | -8     | -107 | -123    | -16    |
|       |            |         | -107 | -123    | -16    | -108 | -125.75 | -17.75 |
| i=177 | 1639385474 | 8:51:14 | -111 | -120.5  | -9.5   | -109 | -126.5  | -17.5  |
|       |            |         | -108 | -126.25 | -18.25 | -108 | -124.25 | -16.25 |
| i=178 | 1639385654 | 8:54:14 | -111 | -119.5  | -8.5   | -108 | -124.75 | -16.75 |
|       |            |         | -109 | -127.25 | -18.25 |      |         |        |
| i=179 | 1639385835 | 8:57:15 | -115 | -128.25 | -13.25 | -107 | -124    | -17    |
|       |            |         | -108 | -125    | -17    | -108 | -124.75 | -16.75 |
| i=180 | 1639386014 | 9:0:14  | -115 | -129    | -14    | -107 | -122.75 | -15.75 |
|       |            |         | -109 | -126.5  | -17.5  | -108 | -124.25 | -16.25 |
| i=181 | 1639386194 | 9:3:14  | -114 | -126.75 | -12.75 | -108 | -124.5  | -16.5  |
|       |            |         | -108 | -124.75 | -16.75 |      |         |        |
| i=182 | 1639386510 | 9:8:30  |      |         |        | -110 | -129    | -19    |
| i=183 | 1639386554 | 9:9:14  | -111 | -120.25 | -9.25  | -109 | -127.5  | -18.5  |
| i=184 | 1639386734 | 9:12:14 | -110 | -119    | -9     | -112 | -132.25 | -20.25 |
| i=185 | 1639386915 | 9:15:15 | -109 | -116.5  | -7.5   |      |         |        |
| i=186 |            |         |      |         |        |      |         |        |
| i=187 | 1639387275 | 9:21:15 | -109 | -116.5  | -7.5   |      |         |        |
| i=188 | 1639387455 | 9:24:15 | -109 | -116.5  | -7.5   |      |         |        |
| i=189 | 1639387635 | 9:27:15 | -111 | -120.5  | -9.5   |      |         |        |
| i=190 | 1639387815 | 9:30:15 | -113 | -123.75 | -10.75 |      |         |        |
| i=191 | 1639387995 | 9:33:15 | -113 | -123.75 | -10.75 |      |         |        |
| i=192 | 1639388175 | 9:36:15 | -111 | -119.75 | -8.75  |      |         |        |
| i=193 | 1639388354 | 9:39:14 | -111 | -119.75 | -8.75  |      |         |        |
| i=194 | 1639388534 | 9:42:14 | -109 | -116.5  | -7.5   | -112 | -132.75 | -20.75 |
|       |            |         | -111 | -130.5  | -19.5  | -111 | -130.75 | -19.75 |
|       |            |         | -112 | -132.5  | -20.5  |      |         |        |
| i=195 | 1639388714 | 9:45:14 | -109 | -117.75 | -8.75  | -109 | -126.25 | -17.25 |
| i=196 | 1639388895 | 9:48:15 | -108 | -114.5  | -6.5   | -109 | -127.5  | -18.5  |
| i=197 | 1639389074 | 9:51:14 | -109 | -115.5  | -6.5   | -108 | -125    | -17    |
| i=198 | 1639389254 | 9:54:14 | -108 | -116    | -8     | -109 | -126.75 | -17.75 |
| i=199 | 1639389434 | 9:57:14 | -105 | -109.75 | -4.75  | -108 | -124.25 | -16.25 |
| i=200 | 1639389615 | 10:0:15 | -107 | -112.25 | -5.25  | -108 | -124.25 | -16.25 |
|       |            |         | -108 | -123.75 | -15.75 |      |         |        |
| i=201 | 1639389794 | 10:3:14 | -106 | -112    | -6     | -109 | -125.75 | -16.75 |
| i=202 | 1639389974 | 10:6:14 | -109 | -115.75 | -6.75  | -110 | -129.25 | -19.25 |
| i=203 | 1639390155 | 10:9:15 | -109 | -116    | -7     |      |         |        |

|       |            |          |      |         |        |              |                    |                  |
|-------|------------|----------|------|---------|--------|--------------|--------------------|------------------|
| i=204 | 1639390334 | 10:12:14 | -108 | -114.25 | -6.25  |              |                    |                  |
| i=205 | 1639390514 | 10:15:14 | -108 | -113.75 | -5.75  |              |                    |                  |
| i=206 | 1639390694 | 10:18:14 | -107 | -112.25 | -5.25  |              |                    |                  |
| i=207 | 1639390874 | 10:21:14 | -105 | -108.5  | -3.5   |              |                    |                  |
| i=208 | 1639391054 | 10:24:14 | -105 | -108.5  | -3.5   |              |                    |                  |
| i=209 | 1639391234 | 10:27:14 | -105 | -108    | -3     | -108         | -125               | -17              |
| i=210 | 1639391414 | 10:30:14 | -105 | -108    | -3     |              |                    |                  |
| i=211 | 1639391594 | 10:33:14 | -104 | -106.75 | -2.75  |              |                    |                  |
| i=212 | 1639391774 | 10:36:14 | -104 | -106.25 | -2.25  |              |                    |                  |
| i=213 | 1639391954 | 10:39:14 | -104 | -106.5  | -2.5   | -109<br>-108 | -125.75<br>-124.75 | -16.75<br>-16.75 |
| i=214 | 1639392134 | 10:42:14 | -104 | -106.5  | -2.5   |              |                    |                  |
| i=215 | 1639392314 | 10:45:14 | -104 | -107.25 | -3.25  | -109         | -126.75            | -17.75           |
| i=216 | 1639392494 | 10:48:14 | -103 | -105.25 | -2.25  | -107         | -122.5             | -15.5            |
| i=217 | 1639392674 | 10:51:14 | -103 | -105.25 | -2.25  | -107         | -123.5             | -16.5            |
| i=218 | 1639392854 | 10:54:14 | -103 | -105    | -2     |              |                    |                  |
| i=219 | 1639393034 | 10:57:14 | -104 | -106    | -2     | -108<br>-107 | -125.5<br>-123.75  | -17.5<br>-16.75  |
| i=220 | 1639393214 | 11:0:14  | -106 | -124.75 | -18.75 |              |                    |                  |
| i=221 | 1639393394 | 11:3:14  | -103 | -107.25 | -4.25  | -106<br>-106 | -121.75<br>-124.75 | -15.75<br>-18.75 |
| i=222 | 1639393574 | 11:6:14  | -103 | -104.75 | -1.75  |              |                    |                  |
| i=223 | 1639393754 | 11:9:14  | -103 | -104.75 | -1.75  | -106         | -121               | -15              |
| i=224 | 1639393934 | 11:12:14 | -102 | -103.75 | -1.75  |              |                    |                  |
| i=225 | 1639394114 | 11:15:14 | -103 | -105    | -2     | -106         | -120.75            | -14.75           |
| i=226 | 1639394294 | 11:18:14 | -103 | -104.75 | -1.75  | -106<br>-106 | -120.75<br>-121    | -14.75<br>-15    |
| i=227 | 1639394474 | 11:21:14 | -102 | -103.75 | -1.75  | -105<br>-105 | -119.5<br>-119.25  | -14.5<br>-14.25  |
| i=228 | 1639394654 | 11:24:14 | -102 | -103    | -1     |              |                    |                  |
| i=229 | 1639394834 | 11:27:14 | -103 | -105.25 | -2.25  | -106         | -120.75            | -14.75           |
| i=230 | 1639395014 | 11:30:14 | -102 | -102.75 | -0.75  |              |                    |                  |
| i=231 | 1639395194 | 11:33:14 | -103 | -105.25 | -2.25  | -106         | -120.5             | -14.5            |
| i=232 | 1639395374 | 11:36:14 | -103 | -105.75 | -2.75  |              |                    |                  |
| i=233 | 1639395554 | 11:39:14 | -103 | -105    | -2     | -106         | -120.5             | -14.5            |
| i=234 | 1639395734 | 11:42:14 | -103 | -105    | -2     | -106         | -120.75            | -14.75           |
| i=235 | 1639395914 | 11:45:14 | -103 | -105.25 | -2.25  |              |                    |                  |
| i=236 | 1639396094 | 11:48:14 | -103 | -105    | -2     | -106         | -120.75            | -14.75           |
| i=237 | 1639396274 | 11:51:14 | -104 | -107.25 | -3.25  | -103<br>-106 | -120.5<br>-121     | -17.5<br>-15     |
| i=238 | 1639396454 | 11:54:14 | -103 | -105.25 | -2.25  | -106<br>-106 | -120.75<br>-121.25 | -14.75<br>-15.25 |
| i=239 | 1639396634 | 11:57:14 | -104 | -108.25 | -4.25  | -106<br>-105 | -112.75<br>-112.25 | -6.75<br>-7.25   |
| i=240 | 1639396814 | 12:0:14  | -105 | -105    | 2.75   | -106         | -112               | -6               |

|       |            |          |      |         |        |  |                      |                               |                            |
|-------|------------|----------|------|---------|--------|--|----------------------|-------------------------------|----------------------------|
|       |            |          |      |         |        |  | -107                 | -122                          | -15                        |
| i=241 | 1639396994 | 12:3:14  | -104 | -107    | -3     |  |                      |                               |                            |
| i=242 | 1639397174 | 12:6:14  | -105 | -108.5  | -3.5   |  |                      |                               |                            |
| i=243 | 1639397354 | 12:9:14  | -104 | -106.5  | -2.5   |  |                      |                               |                            |
| i=244 | 1639397534 | 12:12:14 | -104 | -106.25 | -2.25  |  | -105                 | -119.25                       | -14.25                     |
| i=245 | 1639397714 | 12:15:14 | -103 | -105.5  | -2.5   |  | -106                 | -121.5                        | -15.5                      |
| i=246 | 1639397894 | 12:18:14 | -104 | -106.75 | -2.75  |  | -106                 | -120.75                       | -14.75                     |
| i=247 | 1639398074 | 12:21:14 | -104 | -106.75 | -2.75  |  |                      |                               |                            |
| i=248 | 1639398254 | 12:24:14 | -103 | -105    | -2     |  |                      |                               |                            |
| i=249 | 1639398434 | 12:27:14 | -103 | -105    | -2     |  |                      |                               |                            |
| i=250 | 1639398614 | 12:30:14 | -104 | -106.25 | -2.25  |  | -107                 | -123                          | -16                        |
| i=251 | 1639398794 | 12:33:14 | -103 | -105    | -2     |  | -106                 | -120.25                       | -14.25                     |
| i=252 | 1639398974 | 12:36:14 | -103 | -105    | -2     |  |                      |                               |                            |
| i=253 | 1639399155 | 12:39:15 | -104 | -106.5  | -2.5   |  | -106                 | -120.75                       | -14.75                     |
| i=254 | 1639399335 | 12:42:15 | -103 | -105.5  | -2.5   |  |                      |                               |                            |
| i=255 | 1639399515 | 12:45:15 | -102 | -104    | -2     |  |                      |                               |                            |
| i=256 | 1639399804 | 12:50:4  |      |         |        |  | -105                 | -119                          | -14                        |
| i=257 | 1639399875 | 12:51:15 | -103 | -104.75 | -1.75  |  |                      |                               |                            |
| i=258 | 1639400055 | 12:54:15 | -103 | -106.25 | -3.25  |  |                      |                               |                            |
| i=259 | 1639400235 | 12:57:15 | -103 | -105.5  | -2.5   |  |                      |                               |                            |
| i=260 | 1639400415 | 13:0:15  | -104 | -106.5  | -2.5   |  |                      |                               |                            |
| i=261 | 1639400595 | 13:3:15  | -107 | -126.25 | -19.25 |  |                      |                               |                            |
| i=262 | 1639400775 | 13:6:15  | -103 | -105    | -2     |  |                      |                               |                            |
| i=263 | 1639400955 | 13:9:15  | -103 | -105    | -2     |  |                      |                               |                            |
| i=264 | 1639401135 | 13:12:15 | -106 | -124.75 | -18.75 |  |                      |                               |                            |
| i=265 | 1639401315 | 13:15:15 | -103 | -104.75 | -1.75  |  | -106<br>-106         | -120.25<br>-120.25            | -14.25<br>-14.25           |
| i=266 | 1639401495 | 13:18:15 | -103 | -104.25 | -1.25  |  |                      |                               |                            |
| i=267 | 1639401675 | 13:21:15 | -103 | -105    | -2     |  |                      |                               |                            |
| i=268 | 1639401855 | 13:24:15 | -103 | -105.5  | -2.5   |  |                      |                               |                            |
| i=269 | 1639402035 | 13:27:15 | -102 | -103.25 | -1.25  |  |                      |                               |                            |
| i=270 | 1639402215 | 13:30:15 | -103 | -104.75 | -1.75  |  |                      |                               |                            |
| i=271 | 1639402395 | 13:33:15 | -105 | -122.25 | -17.25 |  | -106<br>-106         | -120.75<br>-121.75            | -14.75<br>-15.75           |
| i=272 | 1639402575 | 13:36:15 | -102 | -104.25 | -2.25  |  | -106                 | -121                          | -15                        |
| i=273 | 1639402755 | 13:39:15 | -103 | -105.25 | -2.25  |  | -106<br>-106         | -120.25<br>-120.25            | -14.25<br>-14.25           |
| i=274 | 1639402935 | 13:42:15 | -103 | -104.25 | -1.25  |  | -106                 | -120                          | -14                        |
| i=275 | 1639403115 | 13:45:15 | -102 | -103    | -1     |  | -106<br>-104<br>-104 | -122.25<br>-117.25<br>-116.75 | -16.25<br>-13.25<br>-12.75 |
| i=276 | 1639403295 | 13:48:15 | -101 | -101.5  | -0.5   |  |                      |                               |                            |
| i=277 | 1639403475 | 13:51:15 | -102 | -102.75 | -0.75  |  | -103                 | -115                          | -12                        |
| i=278 | 1639403655 | 13:54:15 | -101 | -101.75 | -0.75  |  |                      |                               |                            |
| i=279 | 1639403835 | 13:57:15 | -101 | -101.5  | -0.5   |  | -104                 | -116                          | -12                        |

|       |            |          |      |         |        |                      |                               |                            |
|-------|------------|----------|------|---------|--------|----------------------|-------------------------------|----------------------------|
| i=280 | 1639404015 | 14:0:15  | -102 | -103.5  | -1.5   | -103<br>-104<br>-103 | -115<br>-116<br>-115.25       | -12<br>-12<br>-12.25       |
| i=281 | 1639404195 | 14:3:15  | -103 | -105.75 | -2.75  | -103<br>-103<br>-104 | -115<br>-115.25<br>-116.25    | -12<br>-12.25<br>-12.25    |
| i=282 | 1639404375 | 14:6:15  | -104 | -106.75 | -2.75  | -103<br>-102         | -114.5<br>-112.75             | -11.5<br>-10.75            |
| i=283 | 1639404555 | 14:9:15  | -103 | -105.5  | -2.5   | -102<br>-103<br>-102 | -113<br>-114.5<br>-113        | -11<br>-11.5<br>-11        |
| i=284 | 1639404735 | 14:12:15 | -104 | -107.25 | -3.25  |                      |                               |                            |
| i=285 | 1639404915 | 14:15:15 | -105 | -108.25 | -3.25  |                      |                               |                            |
| i=286 | 1639405095 | 14:18:15 | -104 | -106.25 | -2.25  |                      |                               |                            |
| i=287 | 1639405275 | 14:21:15 | -104 | -106.5  | -2.5   | -103<br>-103         | -114.5<br>-114.75             | -11.5<br>-11.75            |
| i=288 | 1639405455 | 14:24:15 | -103 | -105.5  | -2.5   |                      |                               |                            |
| i=289 | 1639405635 | 14:27:15 | -104 | -106    | -2     | -103<br>-103         | -114.5<br>-115                | -11.5<br>-12               |
| i=290 | 1639405815 | 14:30:15 | -104 | -106.75 | -2.75  | -103                 | -114.5                        | -11.5                      |
| i=291 | 1639405995 | 14:33:15 | -103 | -105    | -2     | -105<br>-104         | -117.5<br>-116.5              | -12.5<br>-12.5             |
| i=292 | 1639406175 | 14:36:15 | -106 | -109.75 | -3.75  | -105<br>-105<br>-106 | -118.75<br>-118.75<br>-119.75 | -13.75<br>-13.75<br>-13.75 |
| i=293 | 1639406355 | 14:39:15 | -107 | -112    | -5     | -105<br>-105<br>-105 | -118.75<br>-118.25<br>-118    | -13.75<br>-13.25<br>-13    |
| i=294 | 1639406535 | 14:42:15 | -107 | -112.25 | -5.25  | -105<br>-105         | -118<br>-118.25               | -13<br>-13.25              |
| i=295 | 1639406715 | 14:45:15 | -107 | -111.75 | -4.75  | -105<br>-106         | -118<br>-119.75               | -13<br>-13.75              |
| i=296 | 1639406895 | 14:48:15 | -109 | -116.75 | -7.75  | -106<br>-107         | -120.75<br>-121.25            | -14.75<br>-14.25           |
| i=297 | 1639407075 | 14:51:15 | -110 | -118.5  | -8.5   |                      |                               |                            |
| i=298 | 1639407255 | 14:54:15 | -112 | -120.5  | -8.5   |                      |                               |                            |
| i=299 | 1639407435 | 14:57:15 | -114 | -127    | -13    | -109<br>-110         | -126<br>-128.5                | -17<br>-18.5               |
| i=300 | 1639407615 | 15:0:15  | -113 | -125.5  | -12.5  | -108<br>-109<br>-108 | -124.75<br>-127<br>-125       | -16.75<br>-18<br>-17       |
| i=301 | 1639407795 | 15:3:15  | -113 | -123.5  | -10.5  | -107<br>-107         | -122.75<br>-121.75            | -15.75<br>-14.75           |
| i=302 | 1639407975 | 15:6:15  | -114 | -125.5  | -11.5  |                      |                               |                            |
| i=303 | 1639408155 | 15:9:15  | -114 | -125.25 | -11.25 |                      |                               |                            |
| i=304 | 1639408335 | 15:12:15 | -115 | -128.25 | -13.25 | -108<br>-108<br>-109 | -124.5<br>-124.75<br>-127.25  | -16.5<br>-16.75<br>-18.25  |
| i=305 | 1639408515 | 15:15:15 | -115 | -127.25 | -12.25 | -108                 | -124.75                       | -16.75                     |

|       |            |          |      |         |        |  |                              |                                    |                                |
|-------|------------|----------|------|---------|--------|--|------------------------------|------------------------------------|--------------------------------|
|       |            |          |      |         |        |  | -108                         | -125                               | -17                            |
| i=306 | 1639408695 | 15:18:15 | -114 | -125.75 | -11.75 |  | -108                         | -124.25                            | -16.25                         |
| i=307 | 1639408875 | 15:21:15 | -113 | -125.75 | -12.75 |  |                              |                                    |                                |
| i=308 | 1639409055 | 15:24:15 | -112 | -122    | -10    |  |                              |                                    |                                |
| i=309 | 1639409235 | 15:27:15 | -112 | -121.75 | -9.75  |  | -106                         | -120.75                            | -14.75                         |
| i=310 | 1639409415 | 15:30:15 | -112 | -121    | -9     |  | -104<br>-106<br>-106<br>-105 | -122.25<br>-120<br>-120<br>-118.75 | -18.25<br>-14<br>-14<br>-13.75 |
| i=311 | 1639409595 | 15:33:15 | -108 | -113.75 | -5.75  |  | -105                         | -118.5                             | -13.5                          |
| i=312 | 1639409775 | 15:36:15 | -109 | -115.5  | -6.5   |  | -106<br>-106<br>-106         | -120.25<br>-120.25<br>-120.75      | -14.25<br>-14.25<br>-14.75     |
| i=313 |            |          |      |         |        |  |                              |                                    |                                |
| i=314 | 1639410135 | 15:42:15 | -107 | -112.25 | -5.25  |  |                              |                                    |                                |
| i=315 |            |          |      |         |        |  |                              |                                    |                                |
| i=316 | 1639410495 | 15:48:15 | -109 | -116.25 | -7.25  |  |                              |                                    |                                |
| i=317 |            |          |      |         |        |  |                              |                                    |                                |
| i=318 | 1639410855 | 15:54:15 | -109 | -115.5  | -6.5   |  | -105                         | -118.75                            | -13.75                         |
| i=319 |            |          |      |         |        |  |                              |                                    |                                |
| i=320 | 1639411215 | 16:0:15  | -109 | -116.25 | -7.25  |  |                              |                                    |                                |
| i=321 |            |          |      |         |        |  |                              |                                    |                                |
| i=322 | 1639411575 | 16:6:15  | -107 | -111.75 | -4.75  |  |                              |                                    |                                |
| i=323 | 1639411755 | 16:9:15  | -109 | -116.25 | -7.25  |  |                              |                                    |                                |
| i=324 | 1639411935 | 16:12:15 | -109 | -115.5  | -6.5   |  |                              |                                    |                                |
| i=325 | 1639412115 | 16:15:15 | -109 | -115.5  | -6.5   |  |                              |                                    |                                |
| i=326 | 1639412295 | 16:18:15 | -111 | -121    | -10    |  |                              |                                    |                                |
| i=327 | 1639412475 | 16:21:15 | -112 | -121.5  | -9.5   |  | -107                         | -123                               | -16                            |
| i=328 | 1639412655 | 16:24:15 | -111 | -118.5  | -7.5   |  |                              |                                    |                                |
| i=329 | 1639412835 | 16:27:15 | -108 | -112.5  | -4.5   |  |                              |                                    |                                |
| i=330 | 1639413015 | 16:30:15 | -105 | -108.25 | -3.25  |  | -104<br>-105                 | -117<br>-123.75                    | -13<br>-18.75                  |
| i=331 | 1639413195 | 16:33:15 | -104 | -106.5  | -2.5   |  | -105                         | -118.25                            | -13.25                         |
| i=332 | 1639413375 | 16:36:15 | -104 | -106.75 | -2.75  |  | -105<br>-105                 | -118<br>-118.75                    | -13<br>-13.75                  |
| i=333 | 1639413555 | 16:39:15 | -102 | -104.25 | -2.25  |  | -104<br>-104<br>-104         | -116.5<br>-116.75<br>-116.5        | -12.5<br>-12.75<br>-12.5       |
| i=334 | 1639413735 | 16:42:15 | -102 | -103.25 | -1.25  |  | -104<br>-104<br>-104         | -116.5<br>-116.25<br>-116.75       | -12.5<br>-12.25<br>-12.75      |
| i=335 | 1639413915 | 16:45:15 | -105 | -122.25 | -17.25 |  | -105<br>-104<br>-104         | -118<br>-117<br>-115.75            | -13<br>-13<br>-11.75           |
| i=336 | 1639414095 | 16:48:15 | -101 | -101.25 | -0.25  |  | -105<br>-105                 | -118.25<br>-117.75                 | -13.25<br>-12.75               |
| i=337 | 1639414275 | 16:51:15 | -100 | -100    | 1      |  | -104                         | -117                               | -13                            |

|       |            |          |      |         |       |                      |                               |                            |
|-------|------------|----------|------|---------|-------|----------------------|-------------------------------|----------------------------|
| i=338 | 1639414455 | 16:54:15 | -102 | -102    | 0     | -105                 | -119.25                       | -14.25                     |
| i=339 | 1639414635 | 16:57:15 | -102 | -102    | 0     | -105<br>-104         | -119<br>-117.5                | -14<br>-13.5               |
| i=340 | 1639414815 | 17:0:15  | -100 | -100    | 0.25  | -103                 | -115.25                       | -12.25                     |
| i=341 | 1639414995 | 17:3:15  | -100 | -100    | 0.75  | -103<br>-104         | -115.5<br>-116.5              | -12.5<br>-12.5             |
| i=342 | 1639415175 | 17:6:15  | -99  | -99     | 1     |                      |                               |                            |
| i=343 | 1639415355 | 17:9:15  | -98  | -98     | 2.5   |                      |                               |                            |
| i=344 | 1639415535 | 17:12:15 | -98  | -98     | 2     | -101<br>-101<br>-102 | -111<br>-111<br>-112.25       | -10<br>-10<br>-10.25       |
| i=345 | 1639415715 | 17:15:15 | -98  | -98     | 2     | -102                 | -112.25                       | -10.25                     |
| i=346 | 1639415895 | 17:18:15 | -99  | -99     | 0.75  | -103<br>-103         | -114.5<br>-114.5              | -11.5<br>-11.5             |
| i=347 | 1639416075 | 17:21:15 | -99  | -99     | 0.25  | -104<br>-104         | -116.25<br>-116               | -12.25<br>-12              |
| i=348 | 1639416255 | 17:24:15 | -101 | -101.25 | -0.25 | -103                 | -114.25                       | -11.25                     |
| i=349 | 1639416435 | 17:27:15 | -100 | -100    | 0.5   |                      |                               |                            |
| i=350 | 1639416614 | 17:30:14 | -101 | -101.25 | -0.25 | -105<br>-104<br>-103 | -117.75<br>-116.25<br>-114.75 | -12.75<br>-12.25<br>-11.75 |
| i=351 | 1639416795 | 17:33:15 | -102 | -103.5  | -1.5  | -105                 | -118                          | -13                        |
| i=352 | 1639416975 | 17:36:15 | -102 | -103.25 | -1.25 |                      |                               |                            |
| i=353 | 1639417153 | 17:39:13 | -103 | -104.75 | -1.75 |                      |                               |                            |
| i=354 | 1639417333 | 17:42:13 | -102 | -103.25 | -1.25 |                      |                               |                            |
| i=355 | 1639417513 | 17:45:13 | -102 | -103.5  | -1.5  |                      |                               |                            |
| i=356 | 1639417693 | 17:48:13 | -103 | -105.25 | -2.25 |                      |                               |                            |
| i=357 | 1639417873 | 17:51:13 | -104 | -106.25 | -2.25 |                      |                               |                            |
| i=358 | 1639418053 | 17:54:13 | -105 | -108.5  | -3.5  | -104                 | -116                          | -12                        |
| i=359 | 1639418233 | 17:57:13 | -107 | -111.75 | -4.75 |                      |                               |                            |
| i=360 | 1639418413 | 18:0:13  | -108 | -115.75 | -7.75 | -105<br>-105         | -118.25<br>-118.25            | -13.25<br>-13.25           |
| i=361 | 1639418593 | 18:3:13  | -108 | -114.5  | -6.5  | -105<br>-105         | -118.5<br>-118.5              | -13.5<br>-13.5             |
| i=362 | 1639418773 | 18:6:13  | -109 | -116    | -7    | -106<br>-106         | -120.25<br>-120.25            | -14.25<br>-14.25           |
| i=363 | 1639418953 | 18:9:13  | -110 | -118    | -8    | -107                 | -122.25                       | -15.25                     |
| i=364 | 1639419133 | 18:12:13 | -110 | -118.25 | -8.25 |                      |                               |                            |
| i=365 | 1639419312 | 18:15:12 | -110 | -118    | -8    |                      |                               |                            |
| i=366 | 1639419493 | 18:18:13 | -108 | -129.5  | -21.5 |                      |                               |                            |
| i=367 |            |          |      |         |       |                      |                               |                            |
| i=368 | 1639419853 | 18:24:13 | -107 | -112.5  | -5.5  |                      |                               |                            |
| i=369 | 1639420033 | 18:27:13 | -108 | -114.5  | -6.5  |                      |                               |                            |
| i=370 | 1639420213 | 18:30:13 | -111 | -120    | -9    |                      |                               |                            |
| i=371 |            |          |      |         |       |                      |                               |                            |
| i=372 | 1639420573 | 18:36:13 | -108 | -114    | -6    | -105                 | -118.25                       | -13.25                     |

|       |            |          |      |         |        |  |                      |                            |                         |
|-------|------------|----------|------|---------|--------|--|----------------------|----------------------------|-------------------------|
|       |            |          |      |         |        |  | -106                 | -120.5                     | -14.5                   |
| i=373 | 1639420753 | 18:39:13 | -110 | -118    | -8     |  |                      |                            |                         |
| i=374 | 1639420933 | 18:42:13 | -108 | -114.5  | -6.5   |  |                      |                            |                         |
| i=375 | 1639421112 | 18:45:12 | -111 | -120.25 | -9.25  |  | -105                 | -118.75                    | -13.75                  |
| i=376 | 1639421293 | 18:48:13 | -111 | -121    | -10    |  | -106<br>-106         | -120<br>-120               | -14<br>-14              |
| i=377 | 1639421473 | 18:51:13 | -112 | -121.5  | -9.5   |  | -106                 | -120.5                     | -14.5                   |
| i=378 | 1639421653 | 18:54:13 | -111 | -123.5  | -12.5  |  | -105<br>-105<br>-106 | -119<br>-119<br>-121.5     | -14<br>-14<br>-15.5     |
| i=379 | 1639421996 | 18:59:56 |      |         |        |  | -106<br>-105         | -120.25<br>-119.5          | -14.25<br>-14.5         |
| i=380 | 1639422013 | 19:0:13  | -112 | -121.75 | -9.75  |  | -106<br>-107         | -120.75<br>-122            | -14.75<br>-15           |
| i=381 | 1639422359 | 19:5:59  |      |         |        |  | -106<br>-106<br>-107 | -119.75<br>-120<br>-122    | -13.75<br>-14<br>-15    |
| i=382 | 1639422372 | 19:6:12  | -115 | -128.5  | -13.5  |  | -107<br>-107         | -122.75<br>-122.25         | -15.75<br>-15.25        |
| i=383 | 1639422553 | 19:9:13  | -114 | -125.5  | -11.5  |  | -107                 | -122.25                    | -15.25                  |
| i=384 | 1639422733 | 19:12:13 | -112 | -123    | -11    |  | -106<br>-107         | -120.75<br>-121.5          | -14.75<br>-14.5         |
| i=385 | 1639422912 | 19:15:12 | -115 | -130.25 | -15.25 |  |                      |                            |                         |
| i=386 |            |          |      |         |        |  |                      |                            |                         |
| i=387 | 1639423273 | 19:21:13 | -115 | -127.75 | -12.75 |  | -106                 | -120.5                     | -14.5                   |
| i=388 | 1639423571 | 19:26:11 |      |         |        |  | -106<br>-106         | -120<br>-120               | -14<br>-14              |
| i=389 | 1639423633 | 19:27:13 | -115 | -128.75 | -13.75 |  | -107                 | -122.5                     | -15.5                   |
| i=390 | 1639423813 | 19:30:13 | -114 | -125.75 | -11.75 |  |                      |                            |                         |
| i=391 | 1639423992 | 19:33:12 | -114 | -125.75 | -11.75 |  |                      |                            |                         |
| i=392 | 1639424172 | 19:36:12 | -110 | -118    | -8     |  | -106                 | -120                       | -14                     |
| i=393 | 1639424361 | 19:39:21 | -110 | -117.75 | -7.75  |  | -106                 | -120.5                     | -14.5                   |
| i=394 | 1639424532 | 19:42:12 | -111 | -118.5  | -7.5   |  | -107                 | -122                       | -15                     |
| i=395 | 1639424736 | 19:45:36 | -110 | -118.25 | -8.25  |  | -107<br>-107         | -122.5<br>-122             | -15.5<br>-15            |
| i=396 | 1639424917 | 19:48:37 | -110 | -117    | -7     |  | -107                 | -122.75                    | -15.75                  |
| i=397 | 1639425239 | 19:53:59 |      |         |        |  | -107<br>-107<br>-106 | -122.75<br>-122<br>-121.25 | -15.75<br>-15<br>-15.25 |
| i=398 | 1639425254 | 19:54:14 | -109 | -116.25 | -7.25  |  | -106                 | -120.75                    | -14.75                  |
| i=399 | 1639425435 | 19:57:15 | -110 | -118.25 | -8.25  |  | -106<br>-105         | -120.75<br>-119            | -14.75<br>-14           |
| i=400 | 1639425613 | 20:0:13  | -113 | -123.25 | -10.25 |  |                      |                            |                         |
| i=401 | 1639425888 | 20:4:48  |      |         |        |  | -107                 | -122.25                    | -15.25                  |
| i=402 | 1639425972 | 20:6:12  | -112 | -121.5  | -9.5   |  | -108                 | -124.25                    | -16.25                  |
| i=403 | 1639426152 | 20:9:12  | -114 | -125.25 | -11.25 |  | -108<br>-107         | -125.5<br>-122.75          | -17.5<br>-15.75         |

|       |            |          |      |         |        |  |      |         |        |
|-------|------------|----------|------|---------|--------|--|------|---------|--------|
|       |            |          |      |         |        |  | -108 | -124.75 | -16.75 |
|       |            |          |      |         |        |  | -109 | -125.75 | -16.75 |
| i=404 | 1639426333 | 20:12:13 | -114 | -125    | -11    |  | -108 | -123.75 | -15.75 |
|       |            |          |      |         |        |  | -108 | -123.75 | -15.75 |
|       |            |          |      |         |        |  | -107 | -123    | -16    |
| i=405 | 1639426512 | 20:15:12 | -113 | -123.5  | -10.5  |  | -109 | -126    | -17    |
|       |            |          |      |         |        |  | -108 | -124.75 | -16.75 |
|       |            |          |      |         |        |  | -109 | -126.5  | -17.5  |
| i=406 | 1639426692 | 20:18:12 | -114 | -126    | -12    |  | -109 | -126.25 | -17.25 |
|       |            |          |      |         |        |  | -109 | -126.25 | -17.25 |
|       |            |          |      |         |        |  | -109 | -126.75 | -17.75 |
| i=407 | 1639426872 | 20:21:12 | -115 | -127.75 | -12.75 |  | -109 | -126.75 | -17.75 |
|       |            |          |      |         |        |  | -110 | -128.25 | -18.25 |
| i=408 | 1639427052 | 20:24:12 | -117 | -131.75 | -14.75 |  |      |         |        |
| i=409 | 1639427397 | 20:29:57 |      |         |        |  | -110 | -129.5  | -19.5  |
|       |            |          |      |         |        |  | -111 | -130.25 | -19.25 |
| i=410 | 1639427412 | 20:30:12 | -118 | -133.5  | -15.5  |  |      |         |        |
| i=411 | 1639427592 | 20:33:12 | -116 | -130    | -14    |  | -112 | -132    | -20    |
| i=412 | 1639427936 | 20:38:56 |      |         |        |  | -111 | -130.25 | -19.25 |
| i=413 | 1639427953 | 20:39:13 | -115 | -129.25 | -14.25 |  |      |         |        |
| i=414 | 1639428132 | 20:42:12 | -112 | -122.25 | -10.25 |  |      |         |        |
| i=415 | 1639428313 | 20:45:13 | -112 | -122.25 | -10.25 |  |      |         |        |
| i=416 | 1639428493 | 20:48:13 | -110 | -118    | -8     |  |      |         |        |
| i=417 | 1639428672 | 20:51:12 | -108 | -114    | -6     |  |      |         |        |
| i=418 | 1639428852 | 20:54:12 | -109 | -116    | -7     |  | -110 | -128.5  | -18.5  |
| i=419 | 1639429032 | 20:57:12 | -109 | -115.75 | -6.75  |  | -110 | -127.75 | -17.75 |
|       |            |          |      |         |        |  | -109 | -126.5  | -17.5  |
|       |            |          |      |         |        |  | -110 | -128.5  | -18.5  |
| i=420 | 1639429213 | 21:0:13  | -109 | -115.5  | -6.5   |  | -112 | -131    | -19    |
|       |            |          |      |         |        |  | -111 | -130.5  | -19.5  |
| i=421 | 1639429392 | 21:3:12  | -111 | -118.75 | -7.75  |  | -111 | -130    | -19    |
| i=422 | 1639429572 | 21:6:12  | -110 | -117.25 | -7.25  |  |      |         |        |
| i=423 | 1639429752 | 21:9:12  | -110 | -118.75 | -8.75  |  |      |         |        |
| i=424 | 1639429932 | 21:12:12 | -109 | -116.25 | -7.25  |  | -113 | -133.75 | -20.75 |
| i=425 | 1639430112 | 21:15:12 | -112 | -120    | -8     |  | -111 | -130.75 | -19.75 |
|       |            |          |      |         |        |  | -112 | -132    | -20    |
| i=426 | 1639430292 | 21:18:12 | -110 | -118.25 | -8.25  |  | -112 | -132.75 | -20.75 |
|       |            |          |      |         |        |  | -112 | -132.25 | -20.25 |
|       |            |          |      |         |        |  | -112 | -133    | -21    |
| i=427 | 1639430472 | 21:21:12 | -111 | -119.25 | -8.25  |  | -112 | -133.5  | -21.5  |
|       |            |          |      |         |        |  | -111 | -130.5  | -19.5  |
| i=428 | 1639430652 | 21:24:12 | -110 | -118    | -8     |  |      |         |        |
| i=429 | 1639430832 | 21:27:12 | -110 | -116.75 | -6.75  |  | -112 | -133    | -21    |
|       |            |          |      |         |        |  | -112 | -132.75 | -20.75 |
| i=430 | 1639431012 | 21:30:12 | -110 | -117.75 | -7.75  |  | -112 | -132    | -20    |
|       |            |          |      |         |        |  | -112 | -132.75 | -20.75 |
| i=431 | 1639431193 | 21:33:13 | -109 | -116    | -7     |  | -113 | -123    | -10    |
| i=432 | 1639431377 | 21:36:17 | -110 | -117.5  | -7.5   |  | -111 | -131    | -20    |

|       |            |          |      |         |        |  |              |                    |                  |
|-------|------------|----------|------|---------|--------|--|--------------|--------------------|------------------|
|       |            |          |      |         |        |  | -112         | -132               | -20              |
| i=433 | 1639431554 | 21:39:14 | -109 | -115.25 | -6.25  |  |              |                    |                  |
| i=434 | 1639431735 | 21:42:15 | -111 | -118.5  | -7.5   |  |              |                    |                  |
| i=435 | 1639431915 | 21:45:15 | -110 | -117.5  | -7.5   |  | -112         | -134.5             | -22.5            |
| i=436 | 1639432095 | 21:48:15 | -109 | -116.25 | -7.25  |  |              |                    |                  |
| i=437 | 1639432274 | 21:51:14 | -109 | -116    | -7     |  | -111         | -130.75            | -19.75           |
| i=438 | 1639432454 | 21:54:14 | -111 | -118.5  | -7.5   |  | -112         | -132.25            | -20.25           |
| i=439 | 1639432634 | 21:57:14 | -110 | -117.25 | -7.25  |  | -111         | -130.25            | -19.25           |
| i=440 | 1639432814 | 22:0:14  | -110 | -117.5  | -7.5   |  |              |                    |                  |
| i=441 | 1639432994 | 22:3:14  | -110 | -118    | -8     |  | -111<br>-111 | -130.5<br>-131     | -19.5<br>-20     |
| i=442 | 1639433172 | 22:6:12  | -111 | -119    | -8     |  | -112         | -131.75            | -19.75           |
| i=443 | 1639433352 | 22:9:12  | -112 | -122    | -10    |  | -113         | -134.25            | -21.25           |
| i=444 | 1639433532 | 22:12:12 | -114 | -128    | -14    |  | -112         | -132.75            | -20.75           |
| i=445 | 1639433712 | 22:15:12 | -113 | -124.5  | -11.5  |  |              |                    |                  |
| i=446 | 1639433892 | 22:18:12 | -114 | -127    | -13    |  | -112<br>-112 | -132.75<br>-133    | -20.75<br>-21    |
| i=447 | 1639434072 | 22:21:12 | -113 | -124.25 | -11.25 |  |              |                    |                  |
| i=448 | 1639434252 | 22:24:12 | -113 | -125    | -12    |  |              |                    |                  |
| i=449 | 1639434432 | 22:27:12 | -111 | -120.75 | -9.75  |  |              |                    |                  |
| i=450 | 1639434612 | 22:30:12 | -110 | -119.25 | -9.25  |  |              |                    |                  |
| i=451 | 1639434792 | 22:33:12 | -109 | -115.75 | -6.75  |  |              |                    |                  |
| i=452 | 1639434972 | 22:36:12 | -109 | -115.5  | -6.5   |  | -112         | -131.5             | -19.5            |
| i=453 | 1639435152 | 22:39:12 | -109 | -115.5  | -6.5   |  | -111<br>-111 | -130.5<br>-130.75  | -19.5<br>-19.75  |
| i=454 | 1639435332 | 22:42:12 | -109 | -116    | -7     |  |              |                    |                  |
| i=455 | 1639435512 | 22:45:12 | -109 | -115    | -6     |  | -111<br>-112 | -130.5<br>-132.25  | -19.5<br>-20.25  |
| i=456 | 1639435692 | 22:48:12 | -110 | -117.5  | -7.5   |  | -111<br>-112 | -131.25<br>-132.75 | -20.25<br>-20.75 |
| i=457 | 1639435872 | 22:51:12 | -111 | -120    | -9     |  |              |                    |                  |
| i=458 | 1639436052 | 22:54:12 | -111 | -119.25 | -8.25  |  |              |                    |                  |
| i=459 | 1639436232 | 22:57:12 | -110 | -117    | -7     |  |              |                    |                  |
| i=460 | 1639436412 | 23:0:12  | -111 | -118.75 | -7.75  |  |              |                    |                  |
| i=461 | 1639436592 | 23:3:12  | -110 | -117.25 | -7.25  |  | -111<br>-111 | -130.5<br>-130.5   | -19.5<br>-19.5   |
| i=462 | 1639436772 | 23:6:12  | -108 | -114.75 | -6.75  |  |              |                    |                  |
| i=463 | 1639436952 | 23:9:12  | -109 | -115.5  | -6.5   |  | -109         | -126.75            | -17.75           |
| i=464 | 1639437256 | 23:14:16 |      |         |        |  | -109<br>-109 | -126.5<br>-126.5   | -17.5<br>-17.5   |
| i=465 | 1639437312 | 23:15:12 | -108 | -114    | -6     |  | -111<br>-110 | -130<br>-128.5     | -19<br>-18.5     |
| i=466 | 1639437492 | 23:18:12 | -109 | -115.25 | -6.25  |  | -110<br>-110 | -129.25<br>-129.25 | -19.25<br>-19.25 |
| i=467 | 1639437672 | 23:21:12 | -109 | -116.25 | -7.25  |  |              |                    |                  |
| i=468 | 1639437852 | 23:24:12 | -111 | -119.25 | -8.25  |  | -111         | -130.5             | -19.5            |

|       |            |          |  |      |         |       |              |                 |               |
|-------|------------|----------|--|------|---------|-------|--------------|-----------------|---------------|
|       |            |          |  |      |         |       | -111         | -130.75         | -19.75        |
| i=469 | 1639438032 | 23:27:12 |  | -111 | -118.75 | -7.75 | -110<br>-110 | -128.75<br>-129 | -18.75<br>-19 |
| i=470 | 1639438212 | 23:30:12 |  | -111 | -119    | -8    |              |                 |               |
| i=471 | 1639438392 | 23:33:12 |  | -109 | -115.25 | -6.25 |              |                 |               |
| i=472 | 1639438572 | 23:36:12 |  | -109 | -115.5  | -6.5  |              |                 |               |
| i=473 | 1639438752 | 23:39:12 |  | -110 | -118    | -8    | -112         | -131.75         | -19.75        |
| i=474 | 1639438932 | 23:42:12 |  | -110 | -118.25 | -8.25 |              |                 |               |
| i=475 | 1639439112 | 23:45:12 |  | -109 | -115.5  | -6.5  | -112         | -132.75         | -20.75        |
| i=476 | 1639439292 | 23:48:12 |  | -111 | -119.5  | -8.5  | -111         | -131            | -20           |
| i=477 | 1639439472 | 23:51:12 |  | -110 | -116.75 | -6.75 | -110         | -128            | -18           |
| i=478 | 1639439664 | 23:54:24 |  | -108 | -113.75 | -5.75 | -110         | -129            | -19           |
| i=479 | 1639439832 | 23:57:12 |  | -107 | -112    | -5    |              |                 |               |