# Accuracy of the collection places

The standard value for 1° of latitude is set to 111.325 km.
The length of 1° longitude increases from 0 m at the poles (90° latitude) to 111.319 km at the equator (0° latitude).

Because I would like to keep one error value for both coordinates I chose the conservative value of 111 km for each degree.

Therefore, the uncertainty of the collection place can be given by the following values:

1° = 111 km
1’ = 1.85 km
1” = 30 m

| Accuracy | Coordinates | Explanation | Example | Error | |
|---|---|---|---|---|---|
| 1 | **36° 09' 16.6?" N** | Exact (GPS or Google Earth coordinates) | 36° 09' 16.50" N | ± 0.1” | **< 5 m** |
| 2 | **36° 09' 16.??" N** | Decimal places of seconds are guessed. | 36° 09' 16.50" N | ± 1” | **< 30 m** |
| 3 | **36° 09' 1?" N** | Last digit of seconds is guessed. | 36° 09' 16" N | ± 10” | **< 300 m** |
| 4 | **36° 09' ??" N** | Both digits of seconds are guessed. | 36° 09' 16" N | ± 60” | **< 1.85 km** |
| 5 | **36° 0?' N** | Last digit of minutes is guessed. | 36° 09' N | ±10’ | **< 18.5 km** |
| 6 | **36° ??' N** | Both digits of minutes are guessed. | 36° 09' N | ± 60’ | **< 111 km** |
| 7 | **3?° N** | Last digit of degree is guessed. | 36° N | ± 10° | **< 1110 km** |
| 8 | **??° N** | Both digits of degree are guessed. | 36° N | | **> 1110 km** |

swapping list: **orange** number + accuracy

swapped samples: **purple** number + accuracy
given samples: **blue** number + accuracy

own samples: **green** number (1,2) + N
**yellow** number (3,4) + N
**red** number (5,6) + N