
Algorithm 2 求解地理位置

Input: $G: Fs', Ls', Time$

▷ 输入通过附件数据所求得的方位角，影长和时间

Output: $P: [l \ w \ j]$

▷ 影长，纬度，经度

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1: function ROUGHTRAVERSAL
2:    $L = [0, 10]$ 
3:    $W = [-90, 90]$ 
4:    $J = [-180, 180]$ 
5:   for each  $l$  in  $L$  step = 1 do
6:     for each  $w$  in  $W$  step = 10 do
7:       for each  $j$  in  $J$  step = 10 do
8:         for each  $t$  in  $Time$  do
9:            $Ls(i) = l / \tan(\theta_H)$ 
10:           $Fs(i) = \arccos((\sin(C) - \sin(\theta_H) * \sin(w)) / (\cos(\theta_H) * \cos(w)))$ 
11:        end for
12:         $FsError = \frac{1}{20} * \sum_{i=1}^{20} (Fs(i) - Fs'(i))^2$ 
13:         $LsError = \frac{1}{21} * \sum_{j=1}^{21} (Ls(j) - Ls'(j))^2$ 
14:         $Error = 0.6 * FsError + 0.4 * LsError$  ▷ 误差
15:        if  $Error < \delta$  then
16:           $P = [l \ w \ j]$  ▷ 误差最小的杆长，纬度和经度数组
17:        end if
18:      end for
19:    end for
20:  end for
21:  return  $P$ 
22: end function
```
