Algorithm 1 Find user's serving cell

$threshold = T$
$N_{cell} = 31$
$N_{user} = 39$
$N_{sector} = 5$
$CM = InitCell(N_{cell})$
$UM = InitUser(N_{user})$

for $u \in UM$ **do**
    for $c \in CM$ **do**
        $SNR = getSnr(c, u)$
        if $SNR >= threshold$ **then**
            $R = getRegion(c, u)$
            $R.add(u)$
        end if
    end for
end for

for $epoch = 1 \quad to \quad (N_{cell} * N_{sector})$ **do**
    $(\hat{C}, \hat{R}) = findMaxUser(CM)$
    for $u \in \hat{R}$ **do**
        $u.servingcell = \hat{C}$
        for $c \in CM$ **do**
            if u is under the region R of c && $c \neq \hat{C}$ **then**
                $R.remove(u)$
            end if
        end for
    end for
end for

Algorithm 2 Decrease each cell's power

```
1: threshold =T
2:
3: for c ∈ CM do
4:     flag = True
5:     while c.isNotMinPwer() and flag == True do
6:         c.powerDown(1)
7:         for each user u which is under the service of c do
8:             SNRlater = getSnr(c, u)
9:             if SNRlater<threshold then
10:                c.powerUp(1)
11:                flag = False
12:                break
13:            end if
14:        end for
15:    end while
16: end for
```