

Side-by-Side Decay models

```
globals [rate]

to setup
  clear-all
  crt 500
  ask turtles [
    set color red
    set shape "circle"
    setxy (random world-width)(random world-
height)
  ]
  set rate Decay_rate / 500
  reset-ticks
end

to go
  ask turtles [
    if color = red [check_if_decay] ; if the turtle
is "red" see if it should decay
  ]
  tick
end

to check_if_decay
  ask turtles with [color = red ]
  [if (random-float 100.0 < rate)
    [set color blue]
  ]
end
```

```
globals [
  decays
  last-count
]

to setup
  clear-all
  set-default-shape turtles "circle"
  ask n-of number-nuclei patches [
    sprout 1 [ set color cyan ]
  ]
  set last-count number-nuclei
  set decays 0
  reset-ticks
end

to go
  model
  if all? turtles [color = blue - 3]
  [ stop ]
  set decays 0
  ask turtles with [color = cyan]
  [ if random-float 100.0 < decay-chance
    [ set color yellow
      set decays decays + 1 ] ]
  display
  ask turtles with [color = yellow]
  [ set color blue - 3 ]
  tick
end

to draw-vertical-line [x-val]
  set-plot-pen-color red
  plot-pen-up
  plotxy x-val 0
  plot-pen-down
  plotxy x-val number-nuclei
end

to draw-horizontal-line [y-val]
  set-plot-pen-color green
  plot-pen-up
  plotxy 0 y-val
  plot-pen-down
  plotxy ticks y-val
end

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