```verilog
 1   `timescale 1ns / 1ps
 2   //////////////////////////////////////////////////////////////////////////////////
 3   // Company:
 4   // Engineer:
 5   //
 6   // Create Date:    15:01:18 05/15/2016
 7   // Design Name:
 8   // Module Name:    Meteor
 9   // Project Name:
10   // Target Devices:
11   // Tool versions:
12   // Description:
13   //
14   // Dependencies:
15   //
16   // Revision:
17   // Revision 0.01 - File Created
18   // Additional Comments:
19   //
20   //////////////////////////////////////////////////////////////////////////////////
21   module Meteor(
22       input [7:0] lfsr1,
23       input [15:0] loc1,
24       input [15:0] H,
25       input [15:0] V,
26       input [15:0] loc2,
27       input [15:0] M1_inx,
28       input [15:0] M2_inx,
29       input [15:0] M1_iny,
30       input [15:0] M2_iny,
31       input [7:0] lfsr2,
32       input firstMeteor,
33       input [15:0] flashes,
34       input endGame,
35       output [7:0] meteor1,
36       output [7:0] meteor2,
37       output load1,
38       output load2,
39       output [15:0] M1_outx,
40       output [15:0] M2_outx,
41       output [15:0] M1_outy,
42       output [15:0] M2_outy,
43       output point
44        );
45        wire [15:0] center = 200;
46       // wire meteor_1 =  (H <= (lfsr+32)) & (H >= (lfsr-32)) & (V > 0 +(loc1*2) & V <=
     0+64+(loc1*2));// 200 = center
47       // wire meteor_2 =  (H <= (lfsr+32)) & (H >= (lfsr-32)) & (V > 0 +(loc2 * 2) & V <=
     0+64+(loc2*2));
48         assign M1_outx = 264+lfsr1 - H;
49         assign M2_outx = (lfsr2+80 - H)&~firstMeteor;
50         assign M1_outy = (-40 - V + (loc1*2))&~firstMeteor | ((600 - V)+loc1*2)&firstMeteor
      ;
51         assign M2_outy = (-90 - V  + (loc2*2))&~firstMeteor;
52
53          //the formula:
54           wire meteor_1 = (M1_inx  + M1_iny < 64) ;
55           wire meteor_12 = (M1_inx +10 + M1_iny + 10) <64;
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56          wire meteor_13 = (M1_inx + 20 + M1_iny + 20) < 64;
57          wire meteor_2 = (M2_inx  + M2_iny < 64);
58          wire meteor_22 = (M2_inx + 10 + M2_iny + 10) < 64;
59          wire meteor_23 = (M2_inx + 20 + M2_iny + 20) < 64;
60      // wire [15:0] maskx = tempx >> 15;
61      // wire [15:0] finalx = (maskx ^ tempx) - maskx;
62
63          //wire [15:0] tempy = center - V;
64          //wire [15:0] masky = tempy >> 15;
65          //wire [15:0] y = (masky ^ tempy) - masky;
66
67       // wire meteor_1 = y + finalx < 64;
68
69      //assign meteor[2] = meteor_0;
70      //assign meteor[3] = meteor_0;
71      //assign meteor[4] = meteor_0;
72
73  //bellow meteor is green
74      assign meteor1[7] = meteor_1&~endGame;
75      assign meteor1[6] = meteor_12&~endGame;
76      assign meteor1[5] = meteor_13&~endGame;
77      assign meteor1[4] = meteor_12&endGame&flashes[4];
78      assign meteor1[3] = meteor_1&endGame&flashes[3];
79      assign meteor1[2] = meteor_13&endGame&flashes[4] |  meteor_1&endGame&flashes[3];
80      assign meteor1[1] = meteor_12&endGame&~flashes[4];
81      // bellow meteor is red
82      assign meteor2[2] = meteor_23;
83      assign meteor2[3] = meteor_22;
84       assign meteor2[4] = meteor_2;
85       assign meteor2[7] = meteor_23;
86
87       assign load1 = (loc2 == 200);// was at 200
88       assign load2 =  (loc1 == 150); // was 150
89      assign point = (loc1 >= 280) | (loc2 >= 320); //was 280 and 320
90  endmodule
91
```