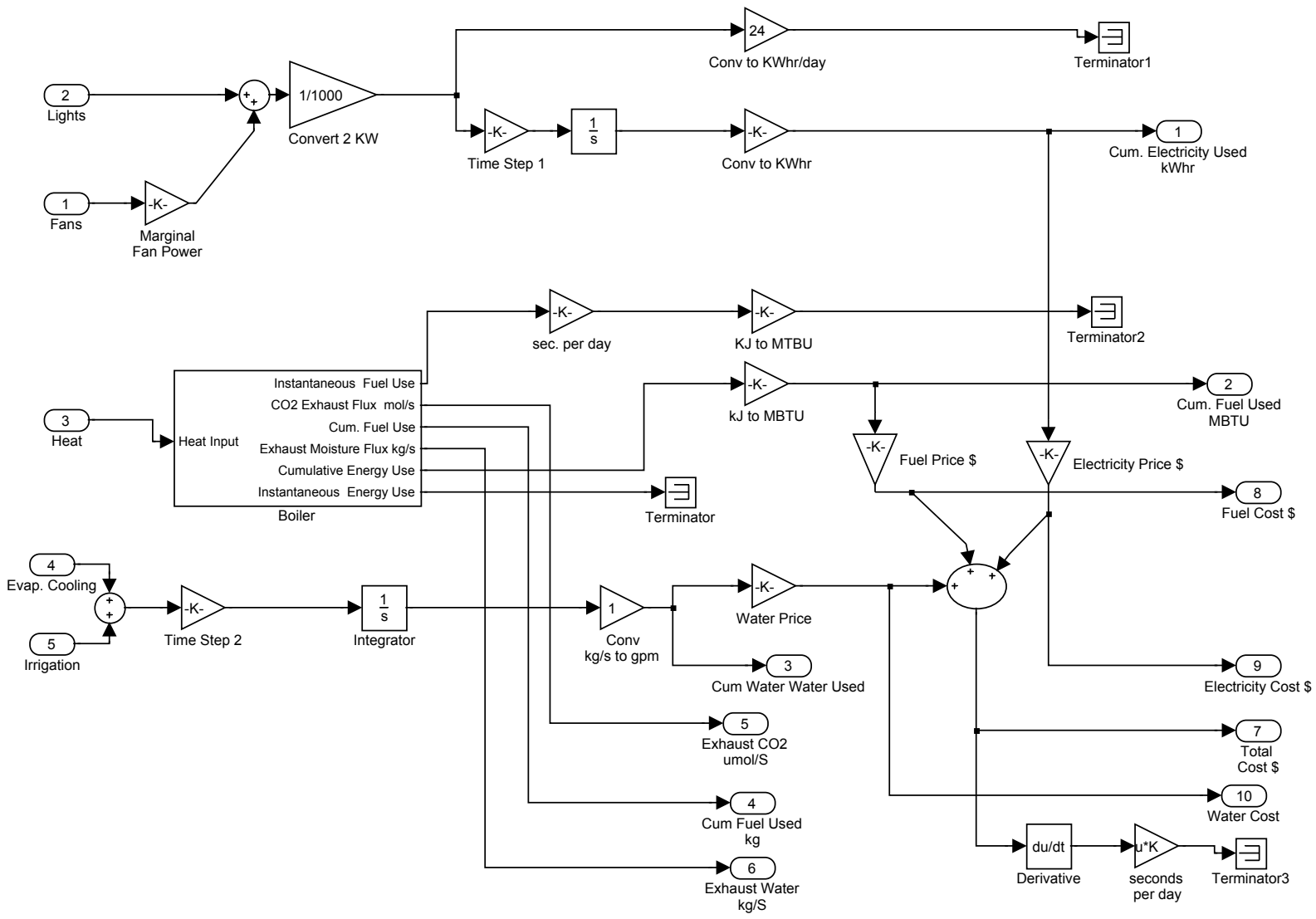
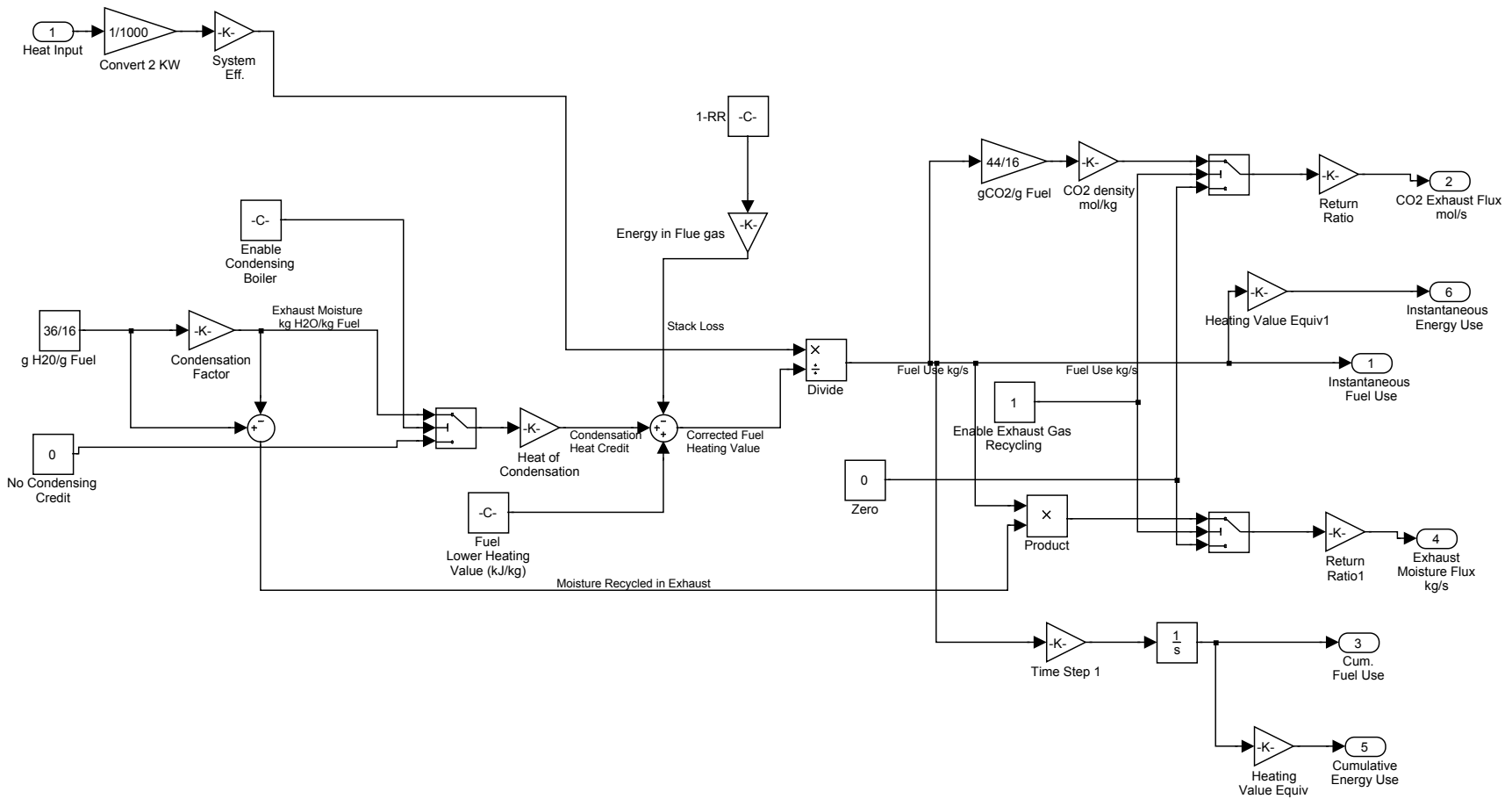


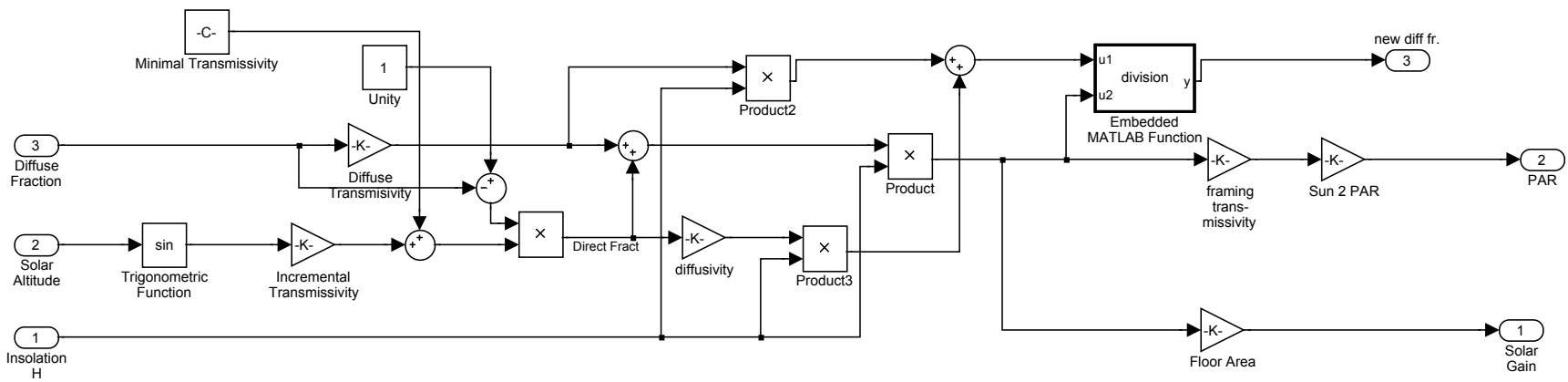
guesssim



guesssim/Energy Use Calculator



guesssim/Energy Use Calculator/Boiler

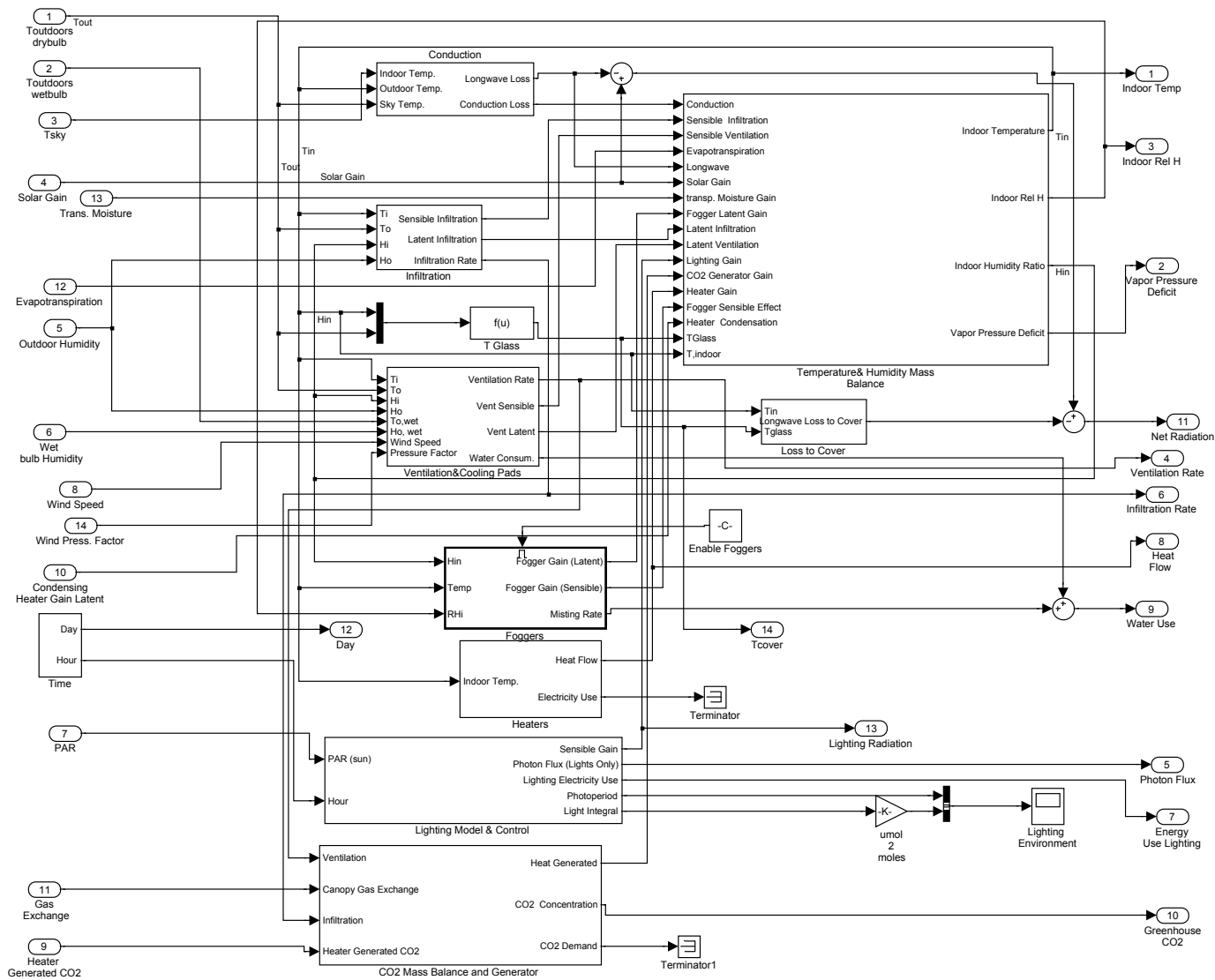


guesssim/Glazing X-missivity

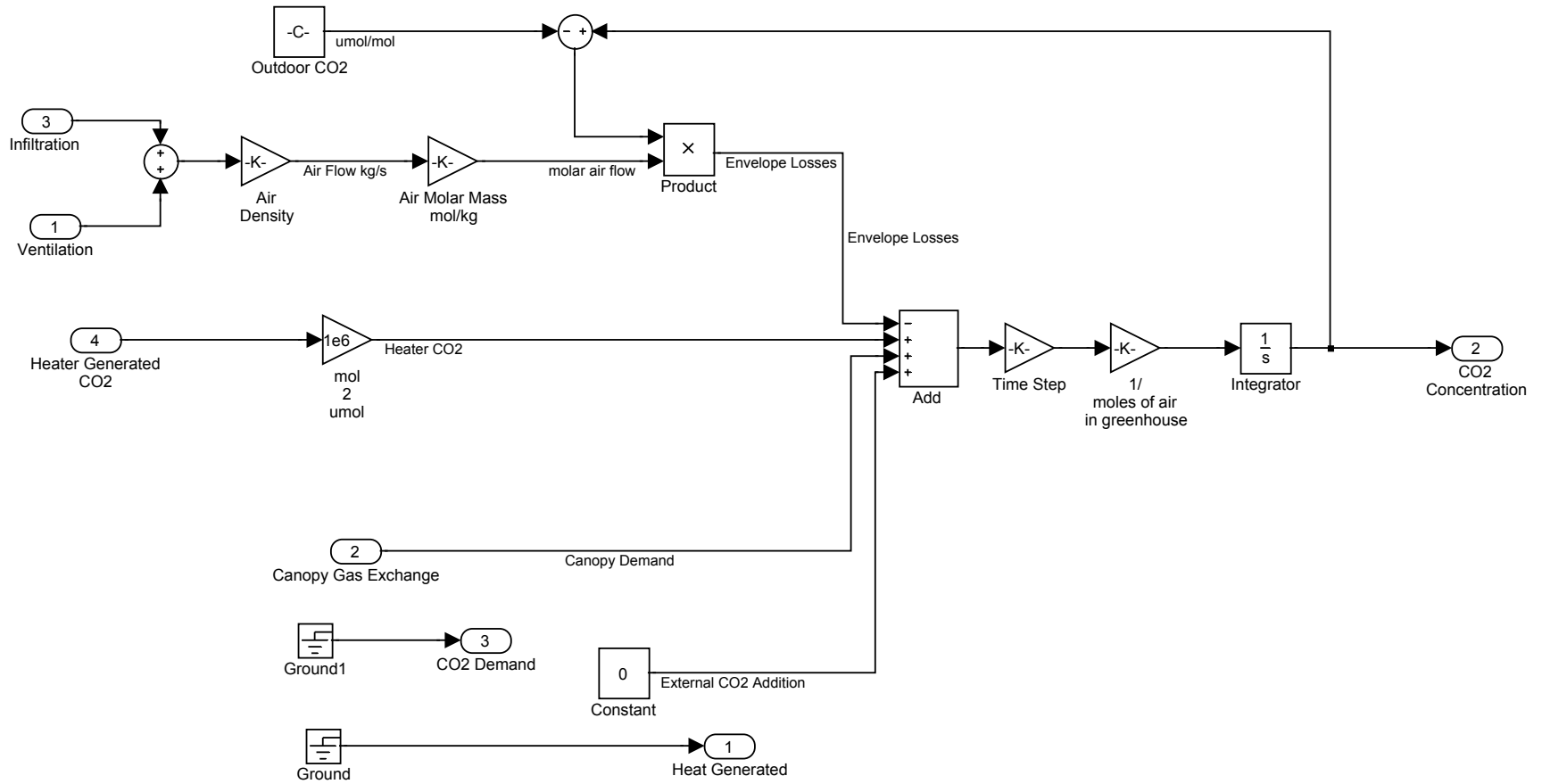
guesssim/Glazing X-missivity/Embedded MATLAB Function.eML\_blk\_kernel

```
1: function y = division(u1, u2)
2: % This block supports an embeddable subset of the MATLAB language
3: % See the help menu for details.
4: if u2 ~= 0
5:     y = u1./u2;
6: else y = 0;
7: end
```

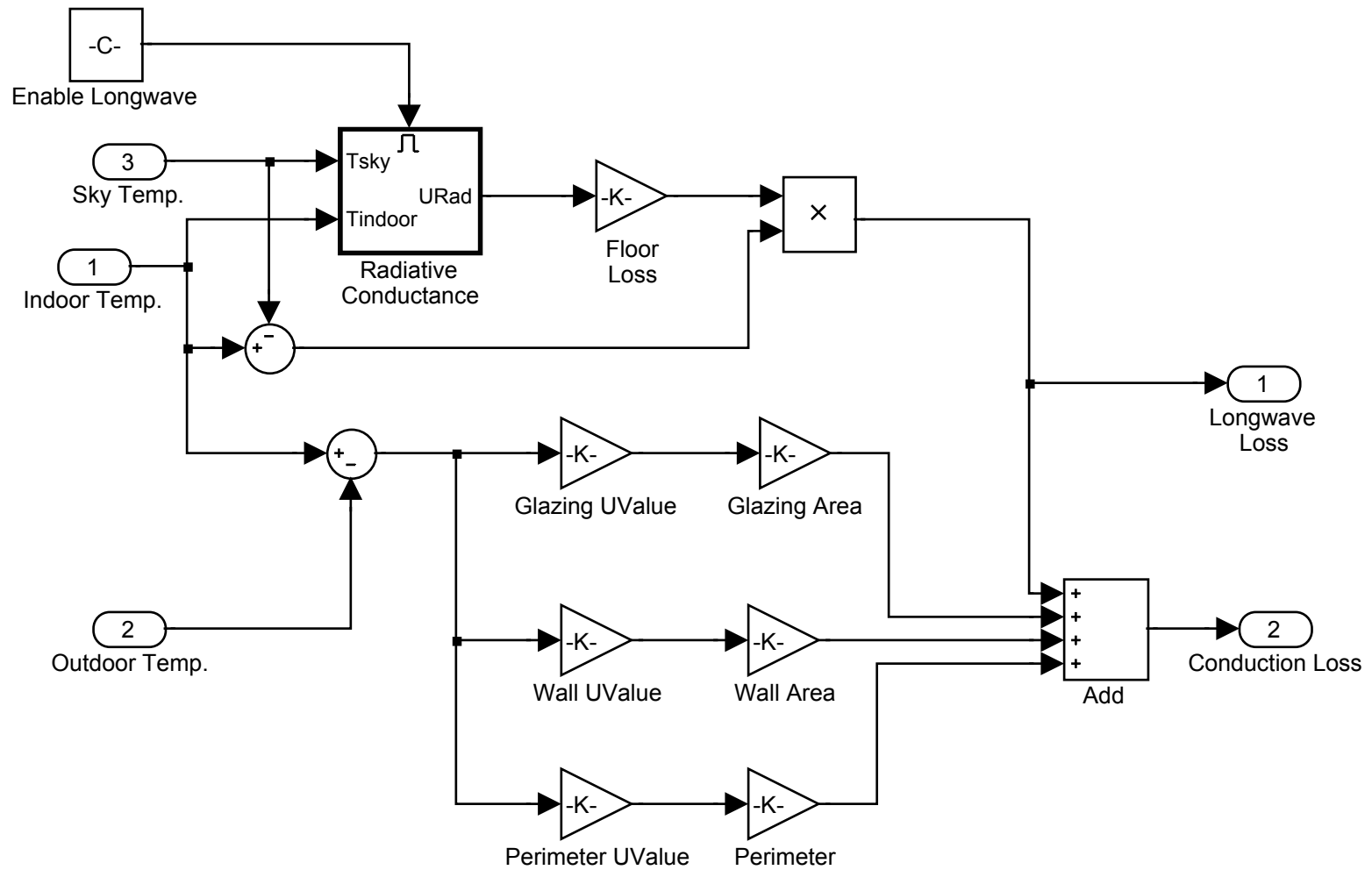
%<fullsystem>



guesssim/Greenhouse Climate Model&Controller

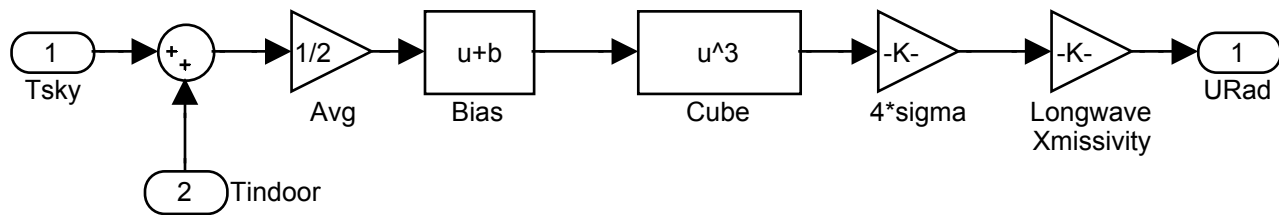


guessim/Greenhouse Climate Model&Controller/CO2 Mass Balance and Generator

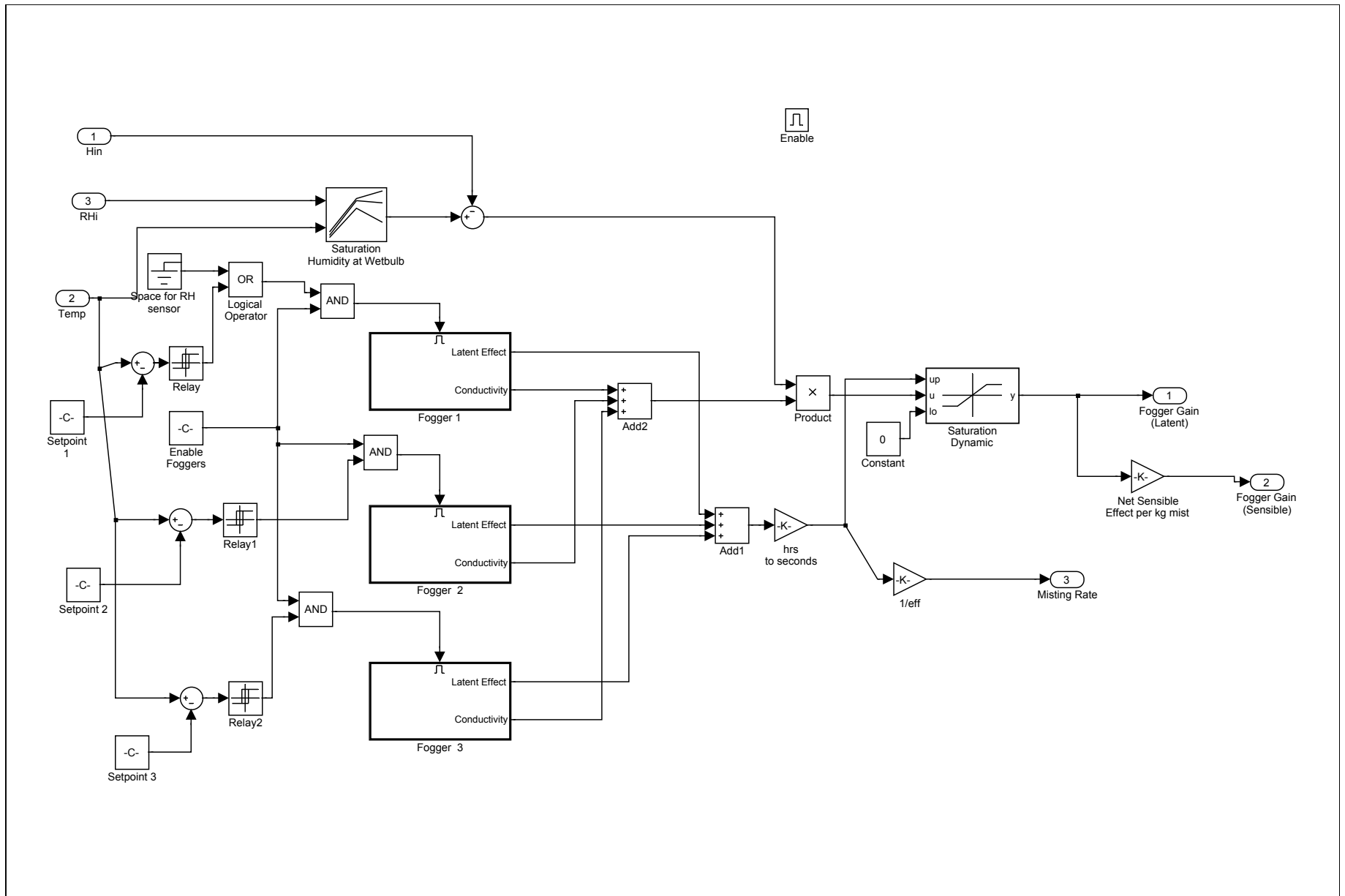


guesssim/Greenhouse Climate Model&Controller/Conduction

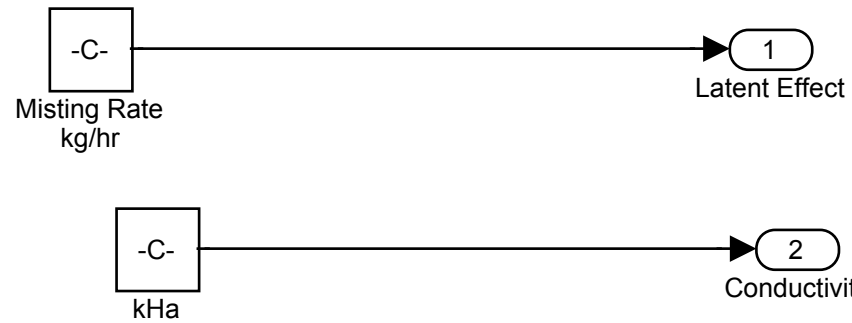




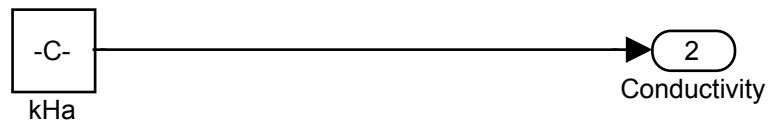
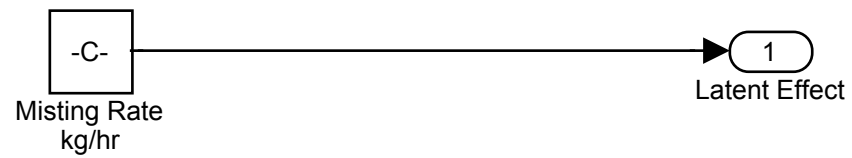
guesssim/Greenhouse Climate Model&Controller/Conduction/Radiative Conductance



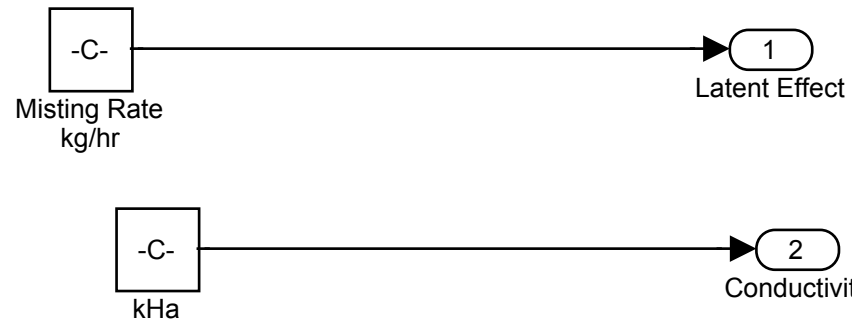
guesssim/Greenhouse Climate Model&Controller/Foggers



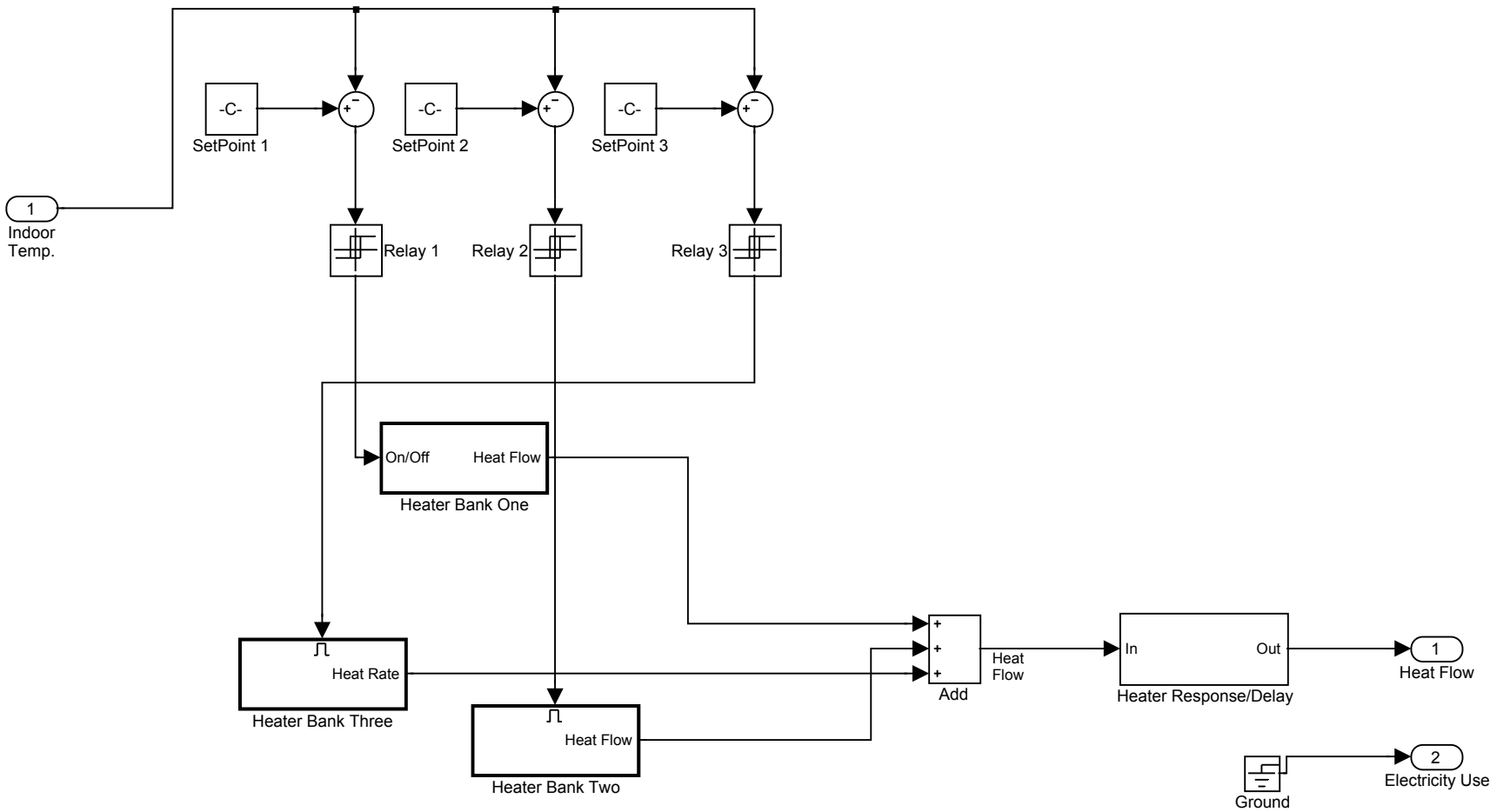
guesssim/Greenhouse Climate Model&Controller/Foggers/Fogger 2



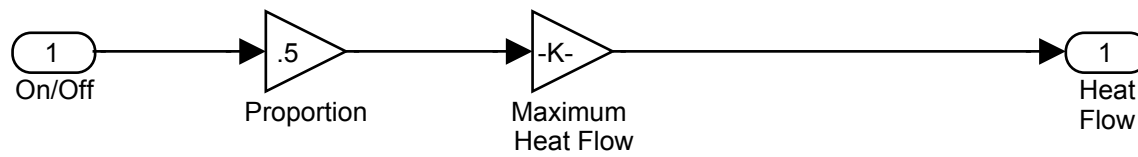
guesssim/Greenhouse Climate Model&Controller/Foggers/Fogger 3



guesssim/Greenhouse Climate Model&Controller/Foggers/Fogger 1



guesssim/Greenhouse Climate Model&Controller/Heaters

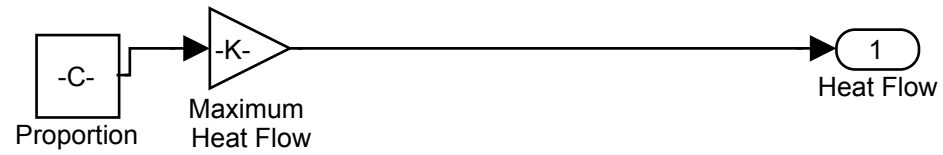


guesssim/Greenhouse Climate Model&Controller/Heaters/Heater Bank One

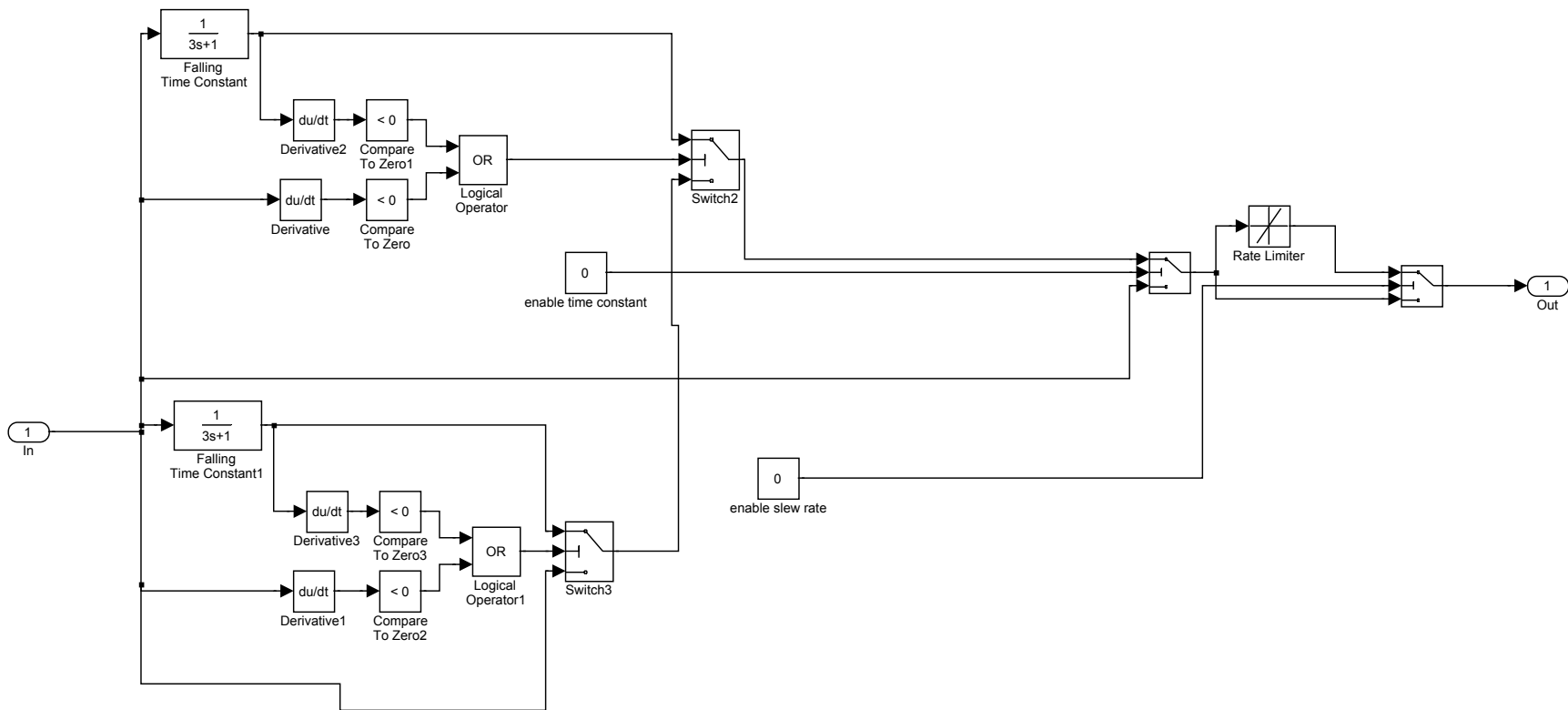


guesssim/Greenhouse Climate Model&Controller/Heaters/Heater Bank Three

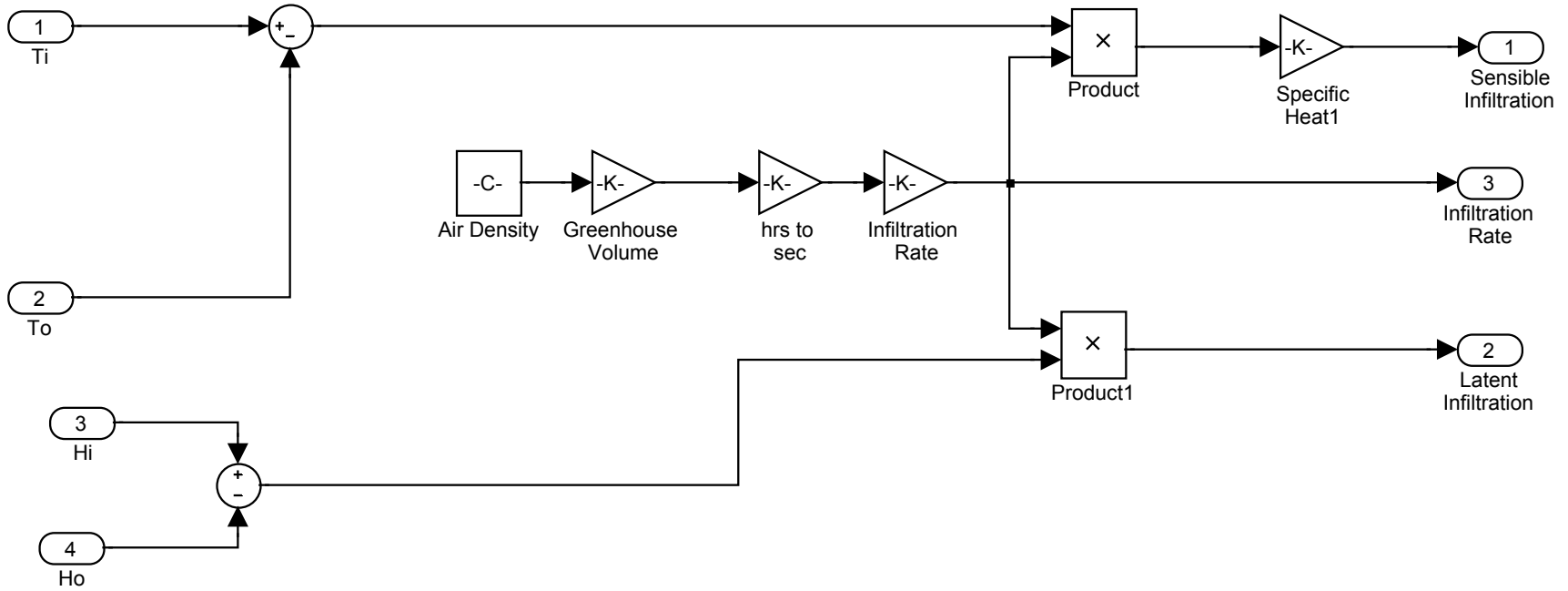




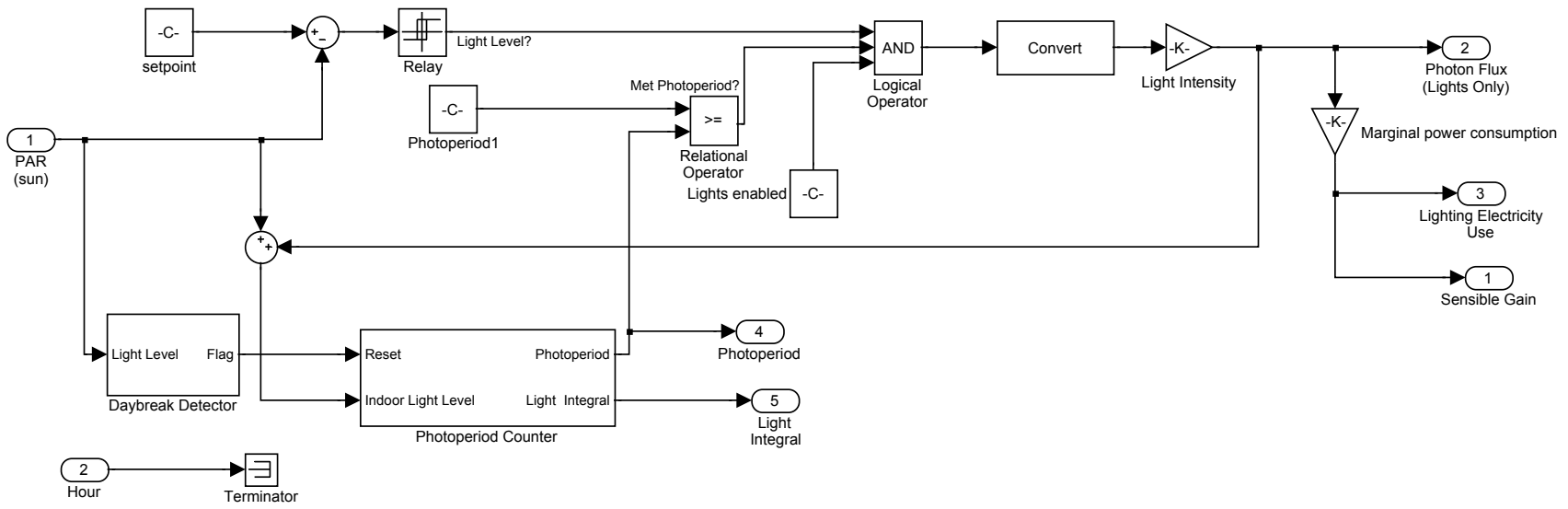
guesssim/Greenhouse Climate Model&Controller/Heaters/Heater Bank Two



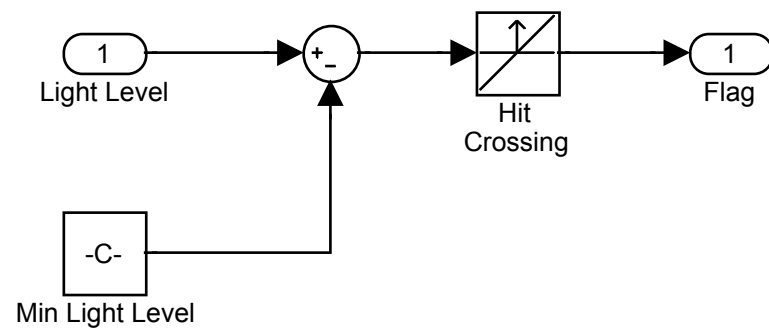
guesssim/Greenhouse Climate Model&Controller/Heaters/Heater Response//Delay



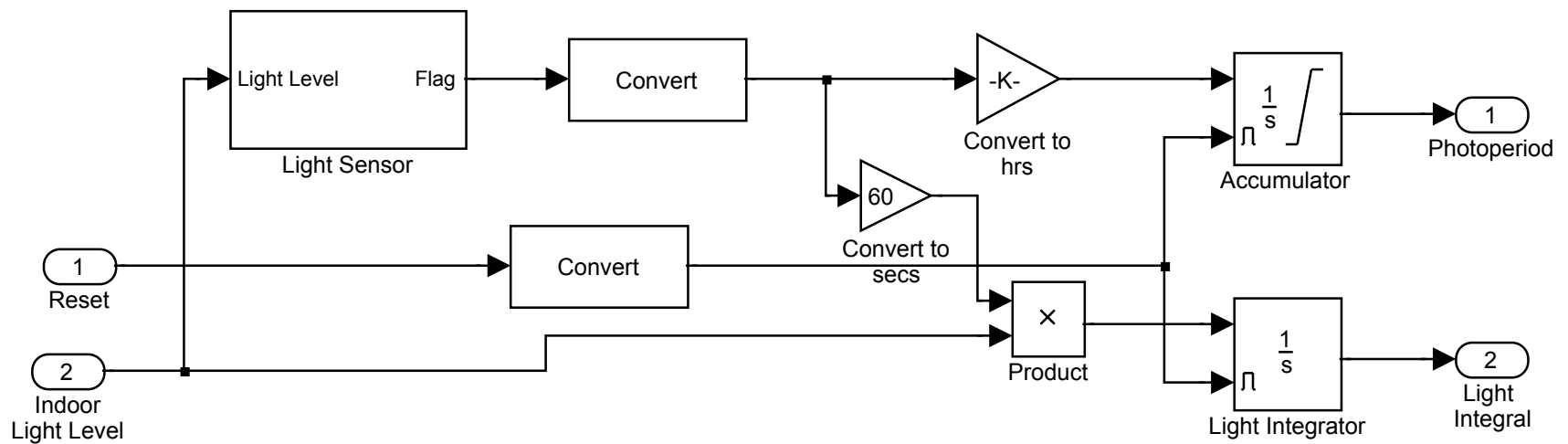
guesssim/Greenhouse Climate Model&Controller/Infiltration



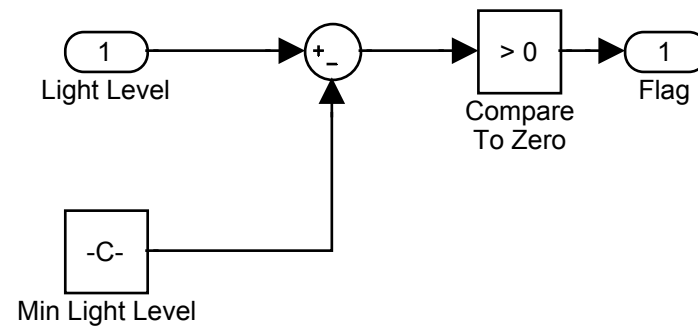
guesssim/Greenhouse Climate Model&Controller/Lighting Model & Control



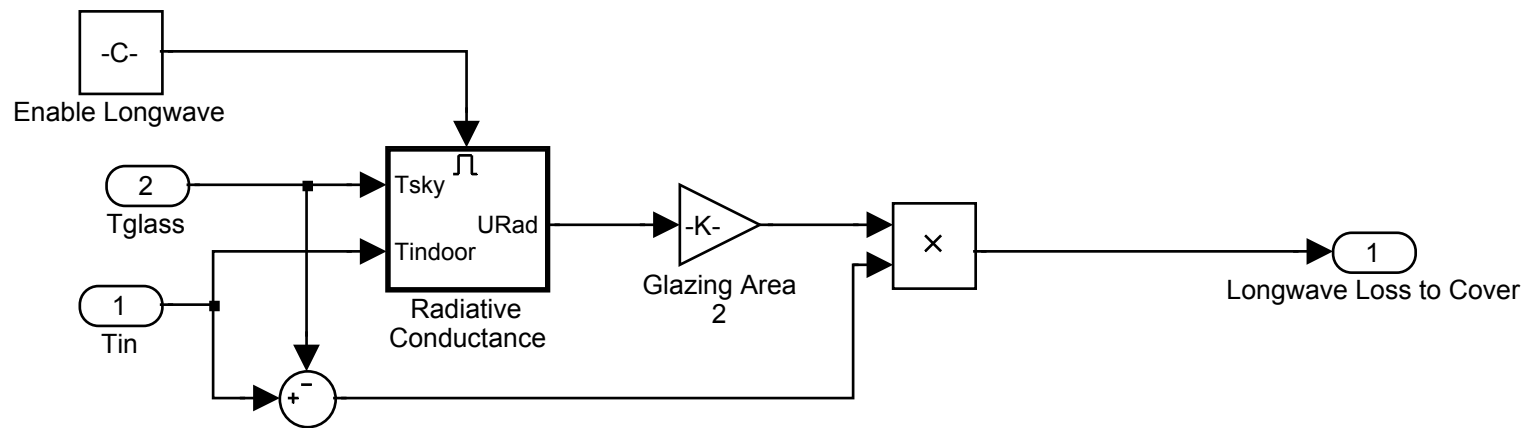
guesssim/Greenhouse Climate Model&Controller/Lighting Model & Control/Daybreak Detector



guessim/Greenhouse Climate Model&Controller/Lighting Model & Control/Photoperiod Counter

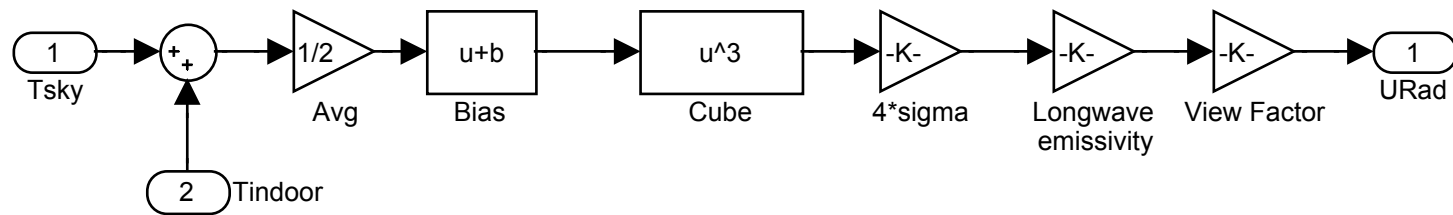


guesssim/Greenhouse Climate Model&Controller/Lighting Model & Control/Photoperiod Counter/Light Sensor

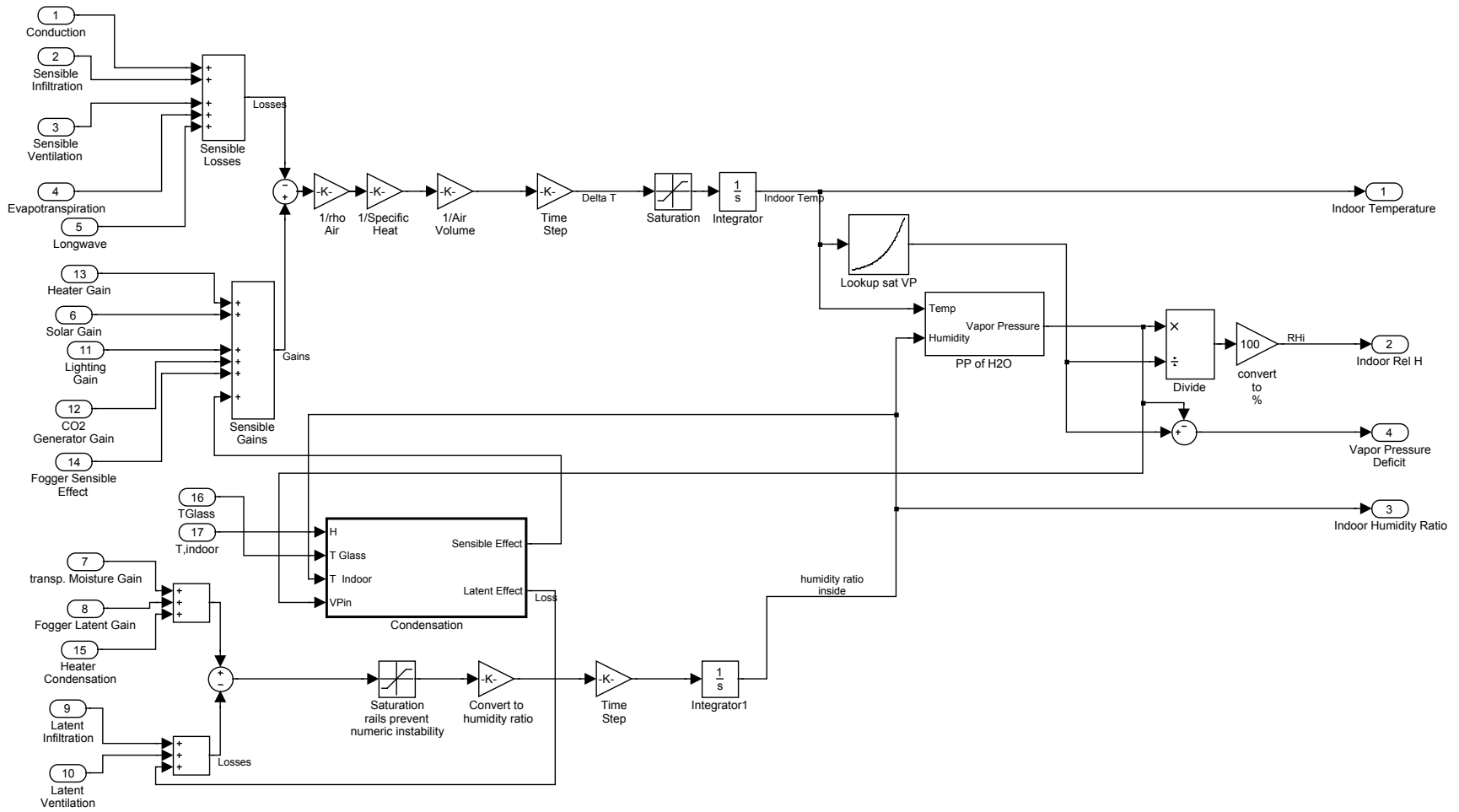


guesssim/Greenhouse Climate Model&Controller/Loss to Cover

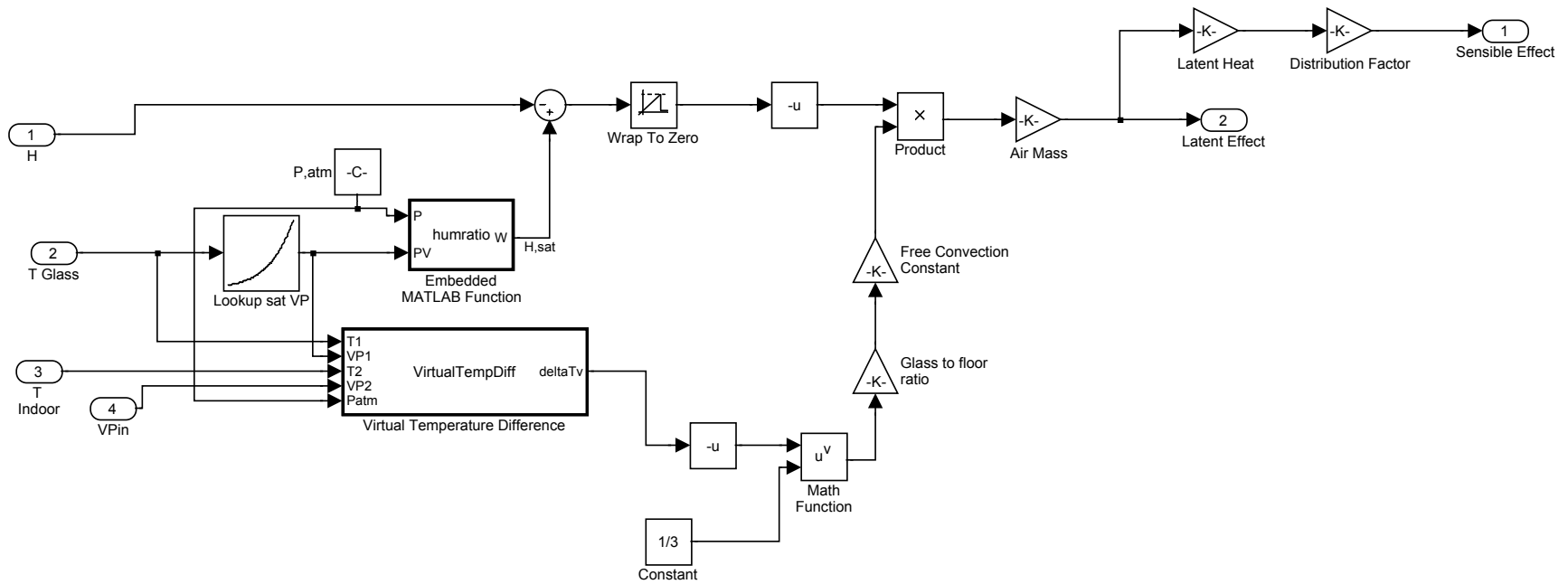




guesssim/Greenhouse Climate Model&Controller/Loss to Cover/Radiative Conductance



guesssim/Greenhouse Climate Model&Controller/Temperature& Humidity Mass Balance



guesssim/Greenhouse Climate Model&Controller/Temperature& Humidity Mass Balance/Condensation

guesssim/Greenhouse Climate Model&Controller/Temperature& Humidity Mass Balance/Condensation/Embedded MATLAB Function.eML\_blk\_kernel

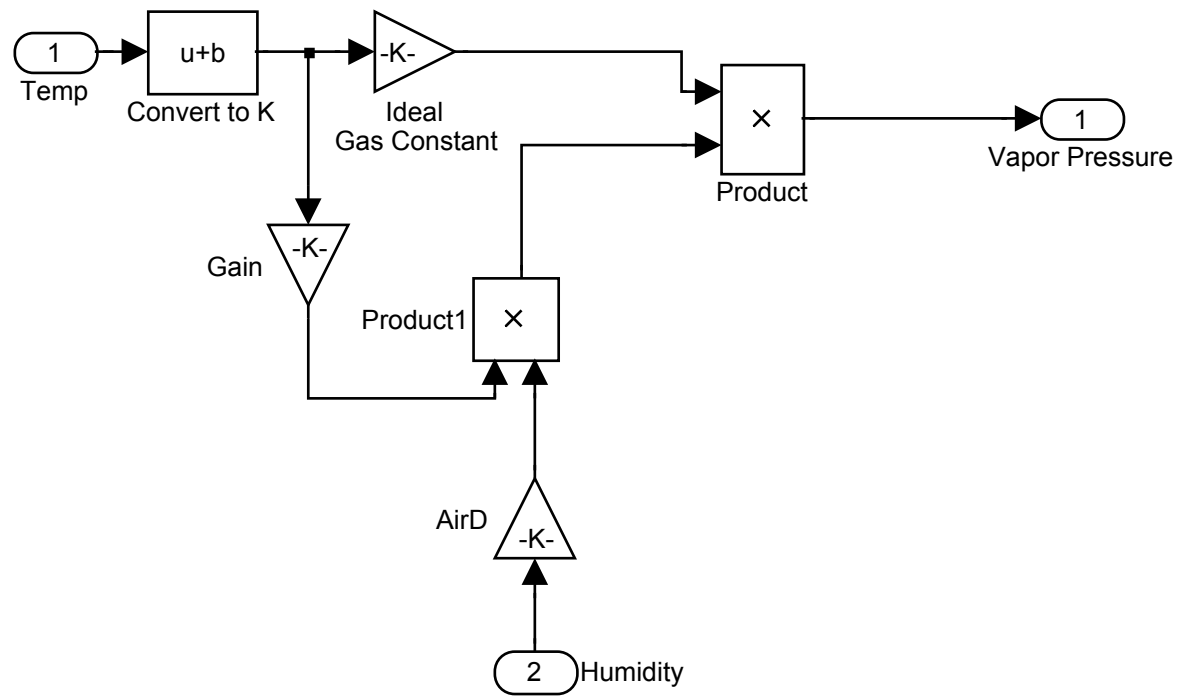
```
1: % HUMRATIO.m
2: % Calculates humidity ratio W (kg vapor/kg air)
3: % PV -- Partial pressure of water vapor
4: % P -- Atmospheric air pressure in kPa (P)
5: %
6: % W = HUMRATIO (P, PV)
7: function W = humratio (P, PV)
8: % if (PV > P) | ((PV < 0) | (P < 0))
9: %   P
10: %   PV
11: %   error ('PSYCH03: FATAL Illegal or negative pressure values')
12: % end
13: W = 0.62198 * PV ./ (P - PV);
14: return
```

%<fullsystem>

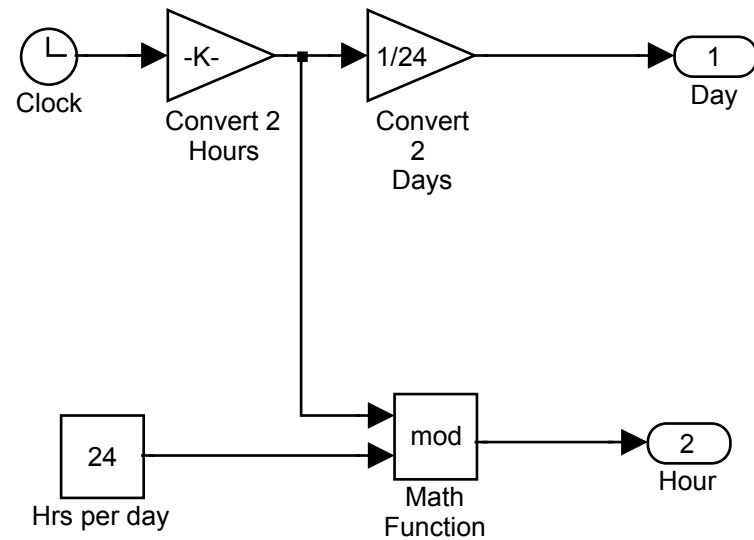
guesssim/Greenhouse Climate Model&Controller/Temperature& Humidity Mass Balance/Condensation/Virtual Temperature Difference.eML\_blk\_kernel

```
1: % Calculates the difference in virtual temperature between T1 & T2
2: % Source: Monteith & Unsworth
3:
4: function deltaTv = VirtualTempDiff(T1, VP1, T2, VP2, Patm)
5: % This block supports an embeddable subset of the MATLAB language
6: % See the help menu for details.
7:
8: deltaTv = T1 - T2 + 0.38 * (VP1*T1 - VP2*T2)/Patm;
```

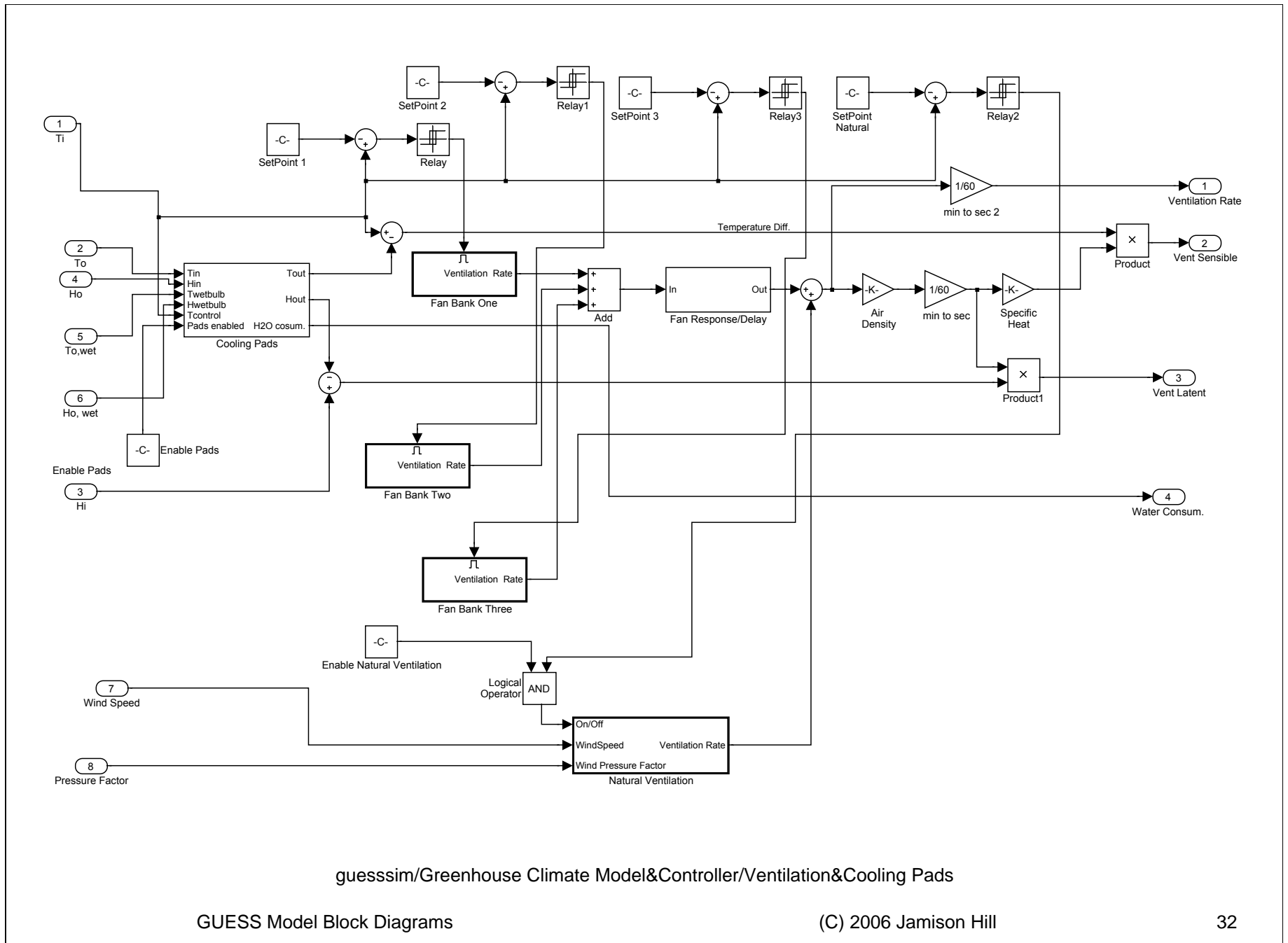
%<fullsystem>



guesssim/Greenhouse Climate Model&Controller/Temperature& Humidity Mass Balance/PP of H2O

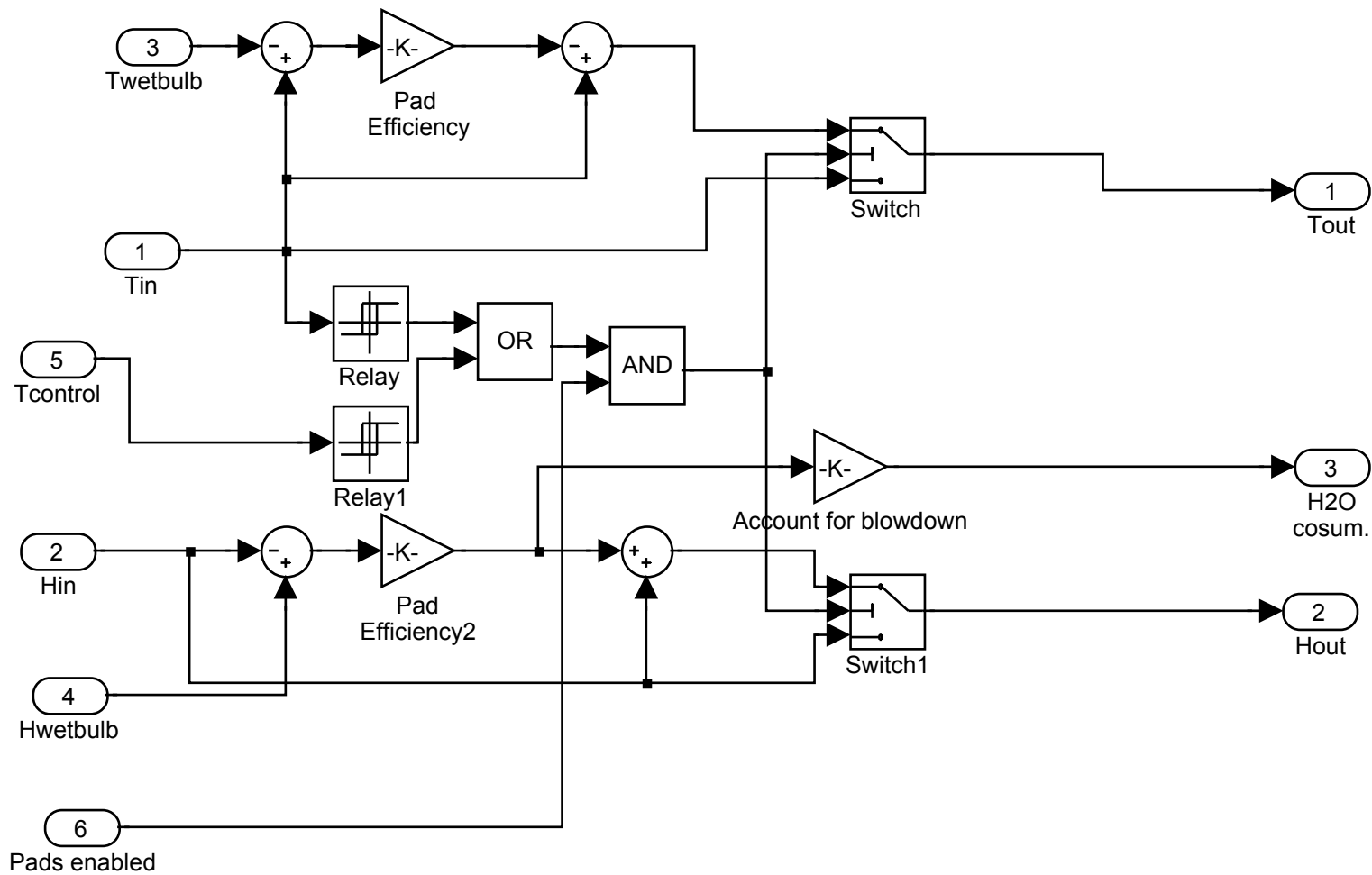


guesssim/Greenhouse Climate Model&Controller/Time

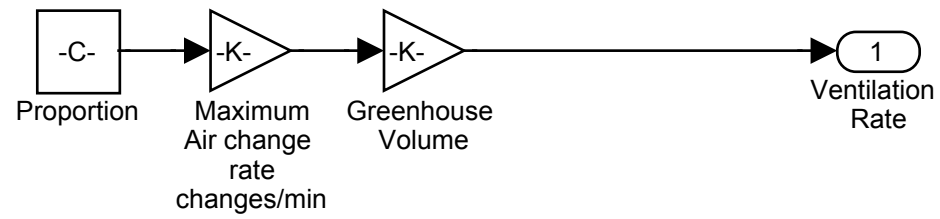


guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads

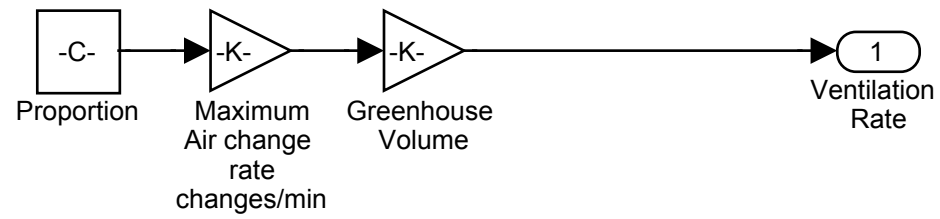




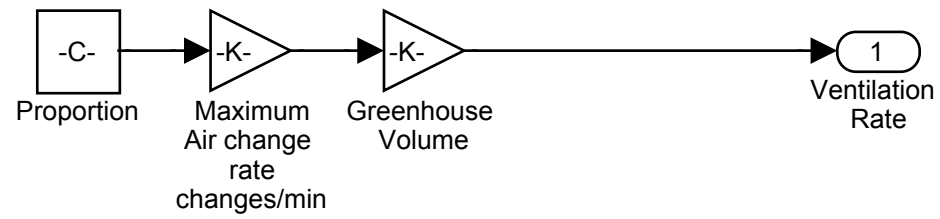
guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads/Cooling Pads



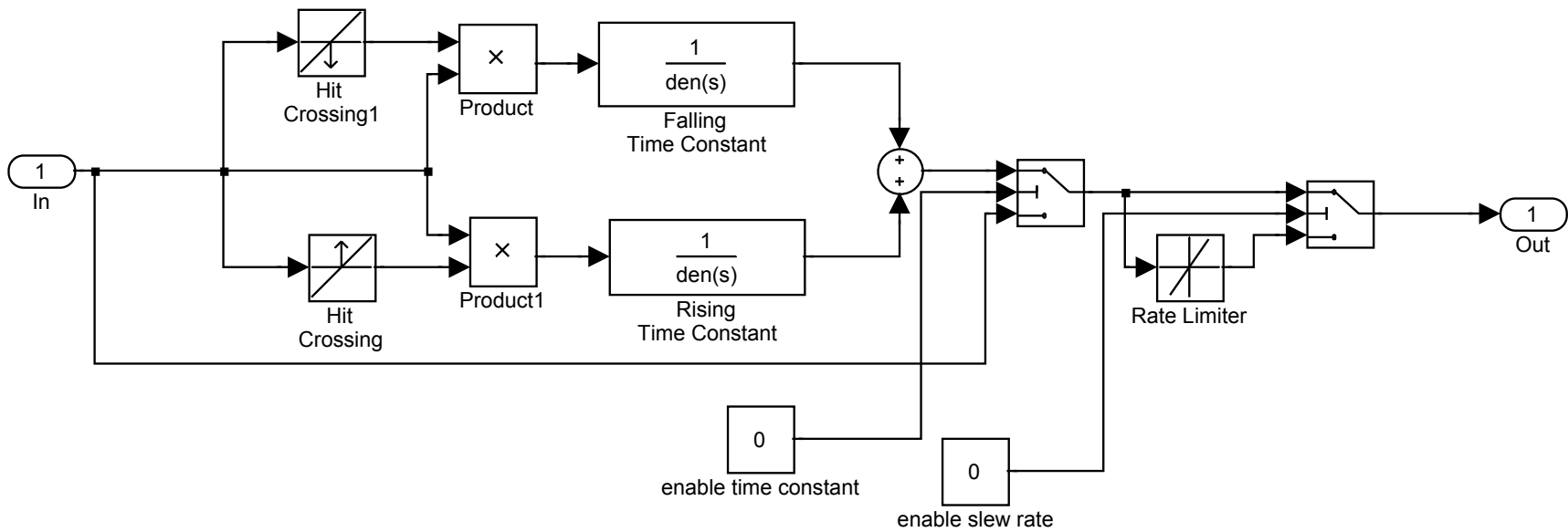
guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads/Fan Bank One



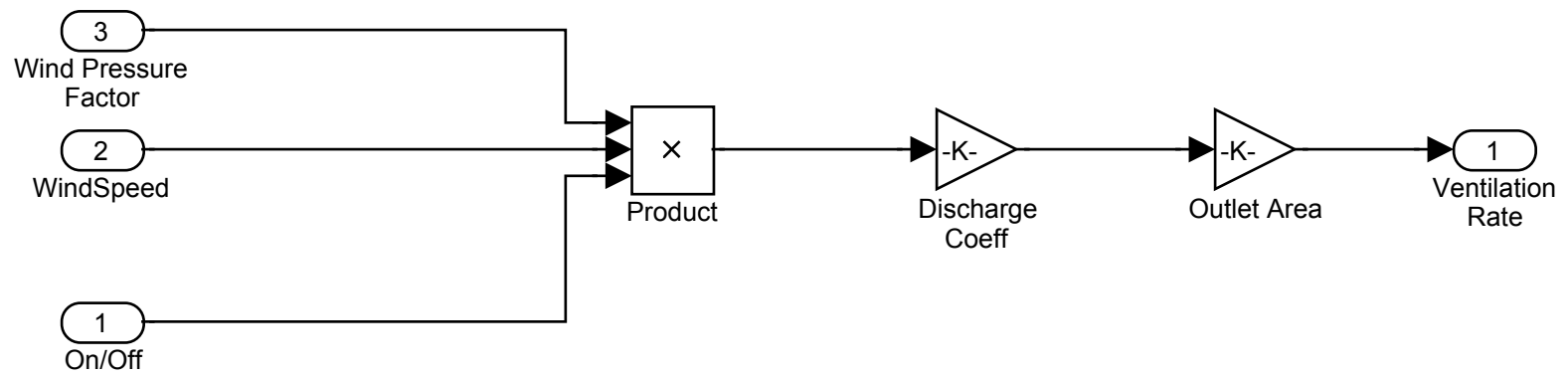
guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads/Fan Bank Three



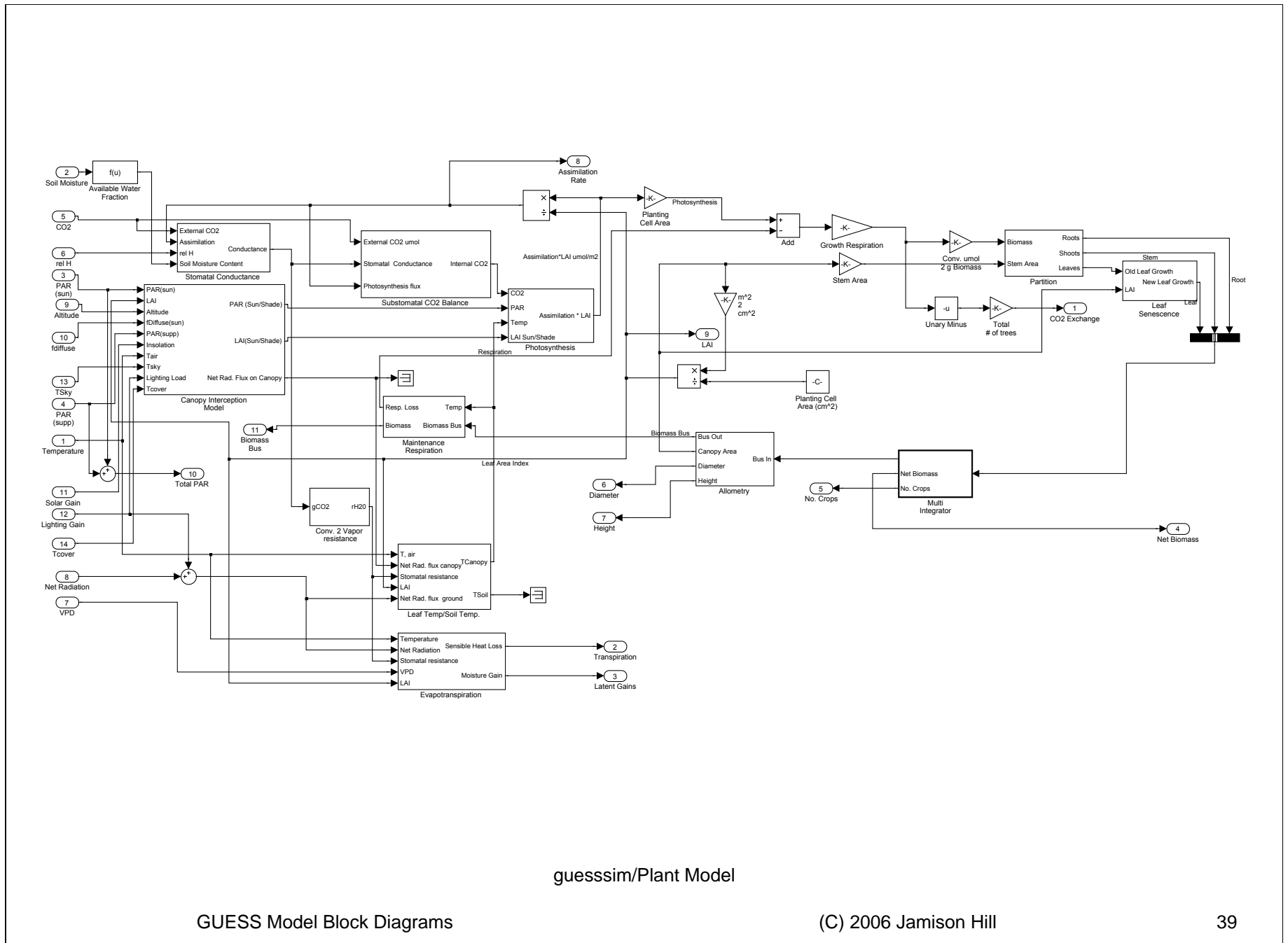
guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads/Fan Bank Two



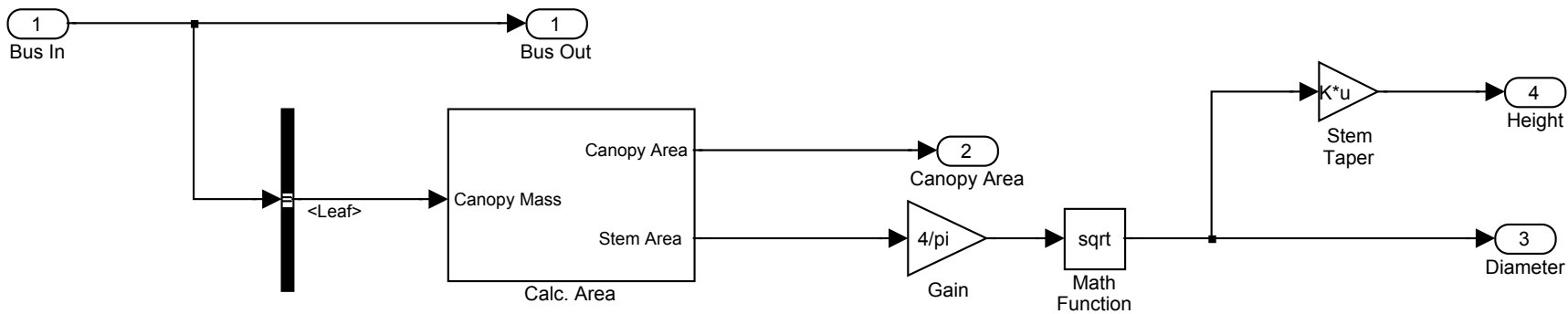
guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads/Fan Response//Delay



guesssim/Greenhouse Climate Model&Controller/Ventilation&Cooling Pads/Natural Ventilation

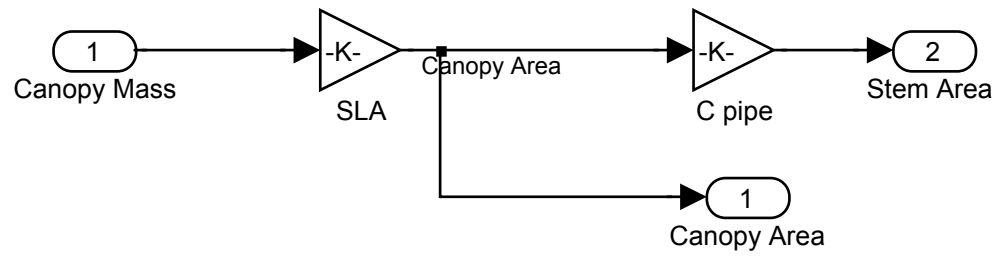


guessim/Plant Model

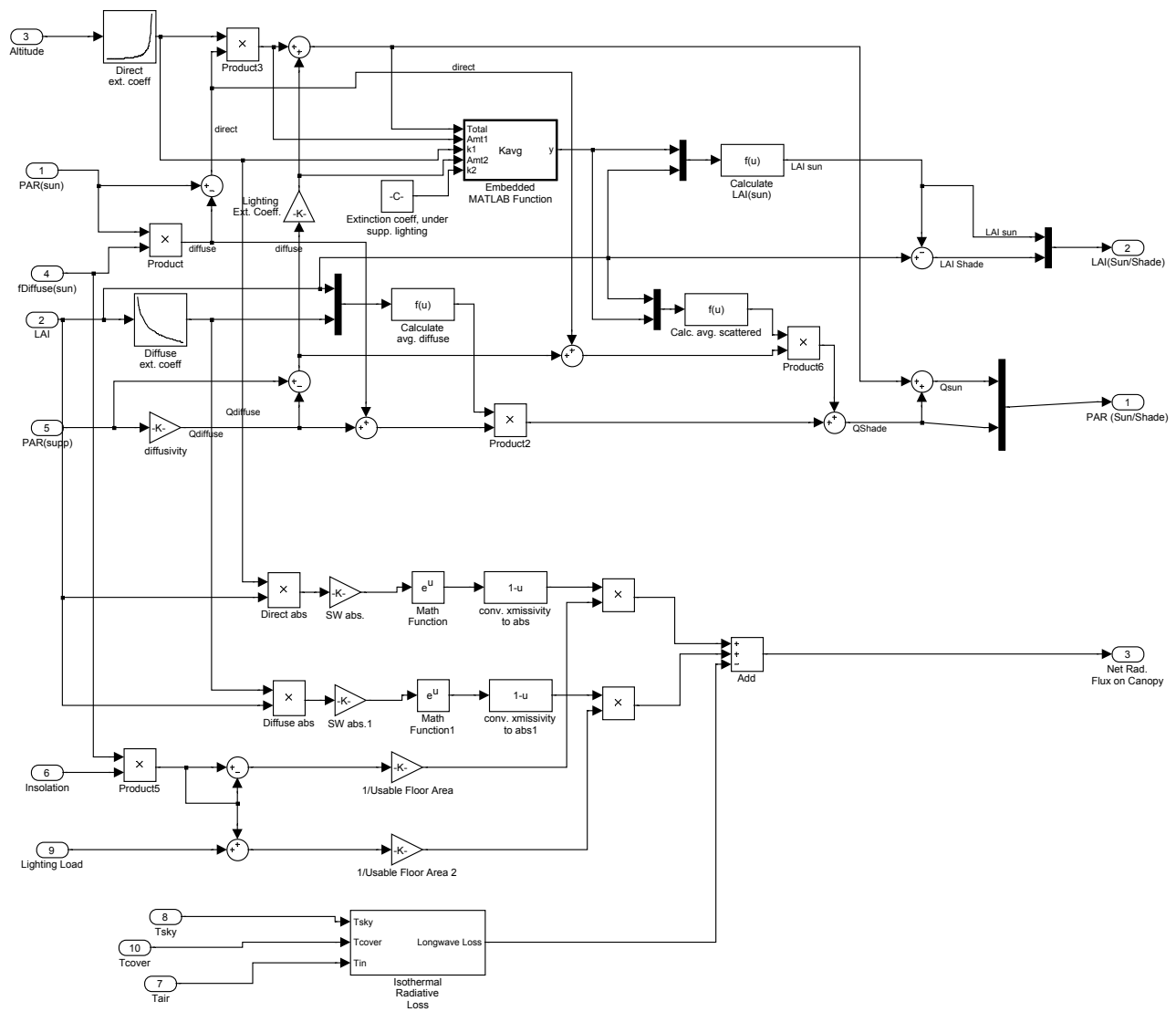


guesssim/Plant Model/Allometry





guesssim/Plant Model/Allometry/Calc. Area

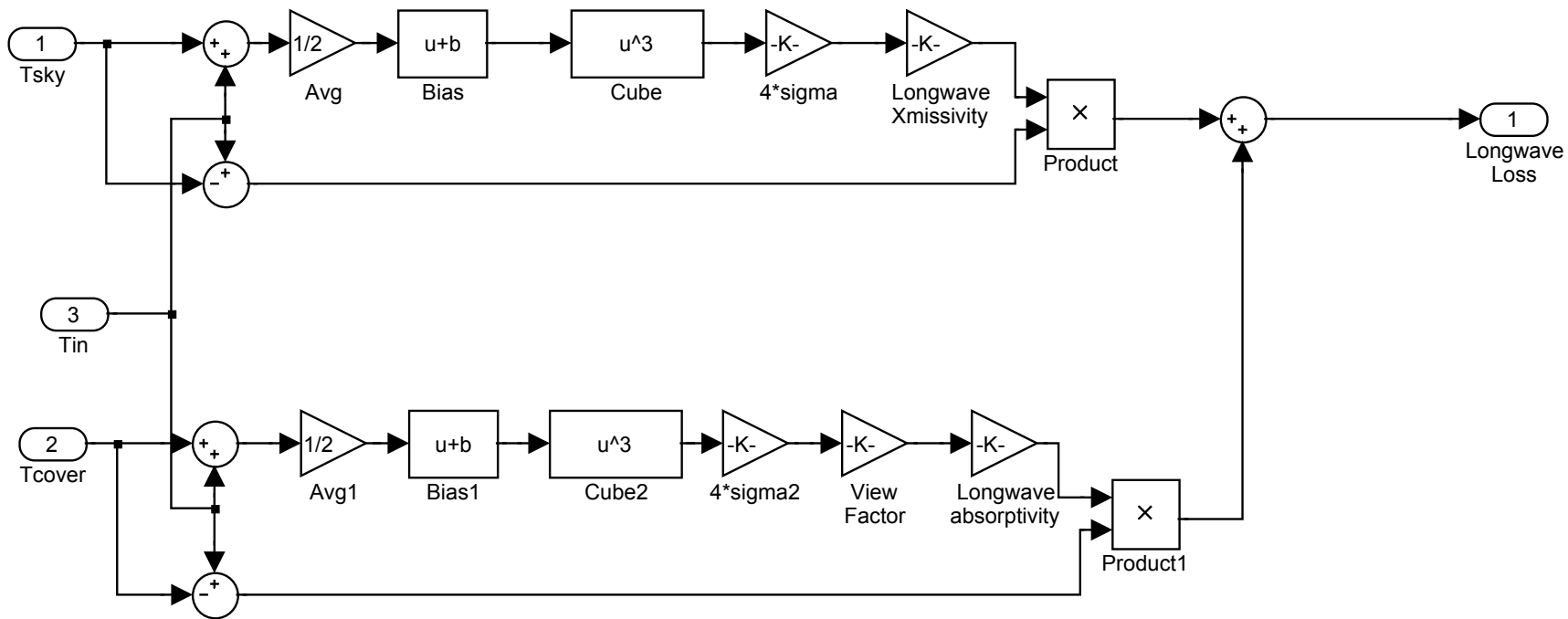


guesssim/Plant Model/Canopy Interception Model

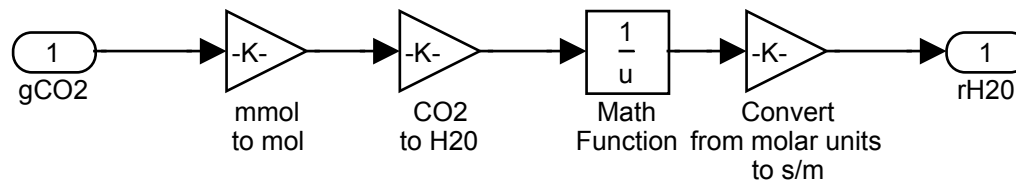
guesssim/Plant Model/Canopy Interception Model/Embedded MATLAB Function.eML\_blk\_kernel

```
1: function y = Kavg(Total,Amt1,k1,Amt2,k2)
2: % This block supports an embeddable subset of the MATLAB language
3: % See the help menu for details.
4: if Amt2 == 0
5:     y = k1;
6: elseif (Amt1 + Amt2) == 0
7:     y = k1;
8: else
9:     y = (k1 *Amt1 + k2*Amt2)/(Amt1 + Amt2);
10: end
```

%<fullsystem>

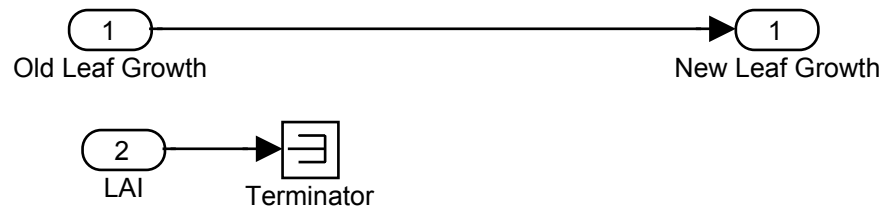


guesssim/Plant Model/Canopy Interception Model/Isothermal Radiative Loss

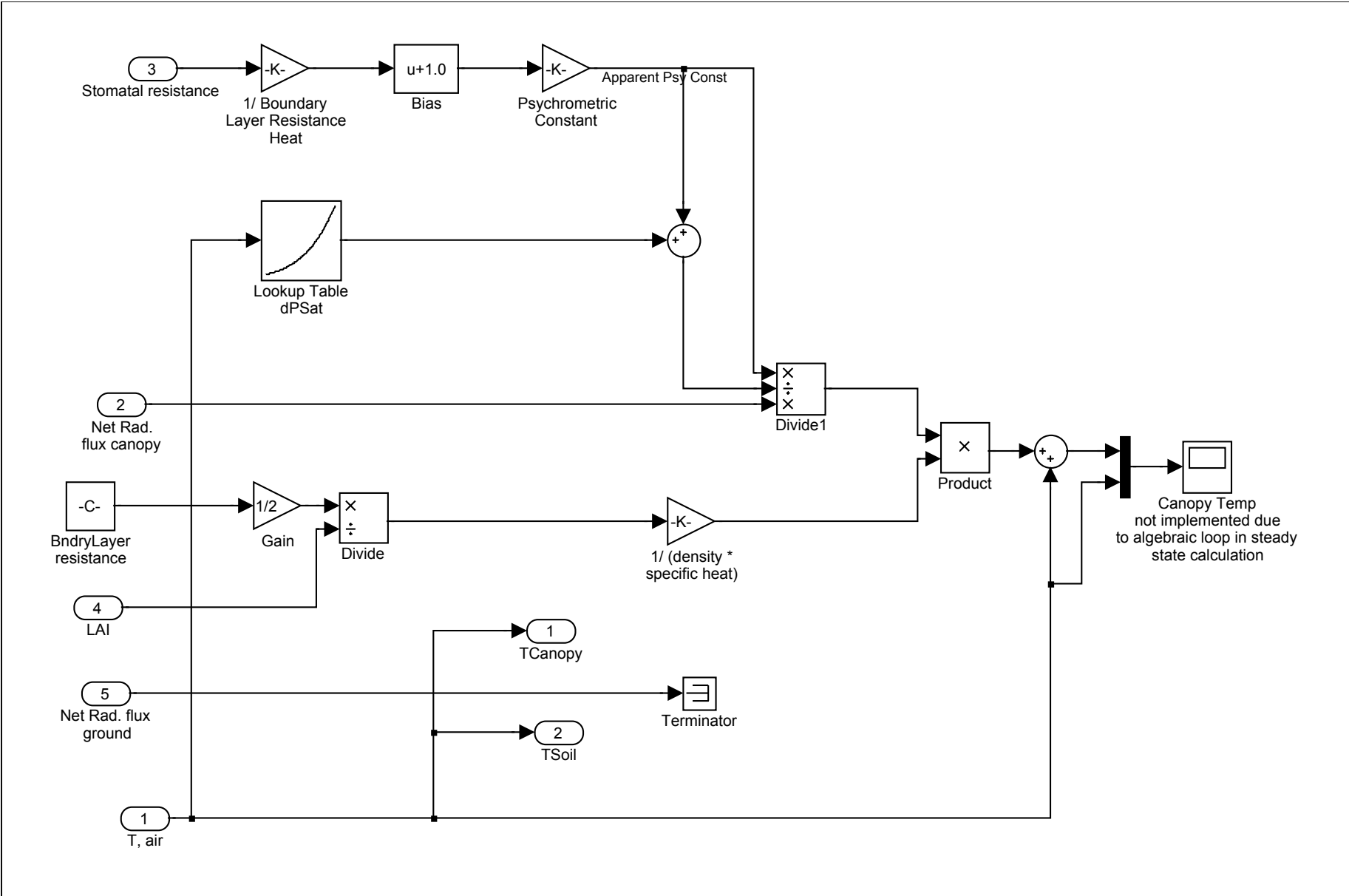


guesssim/Plant Model/Conv. 2 Vapor resistance



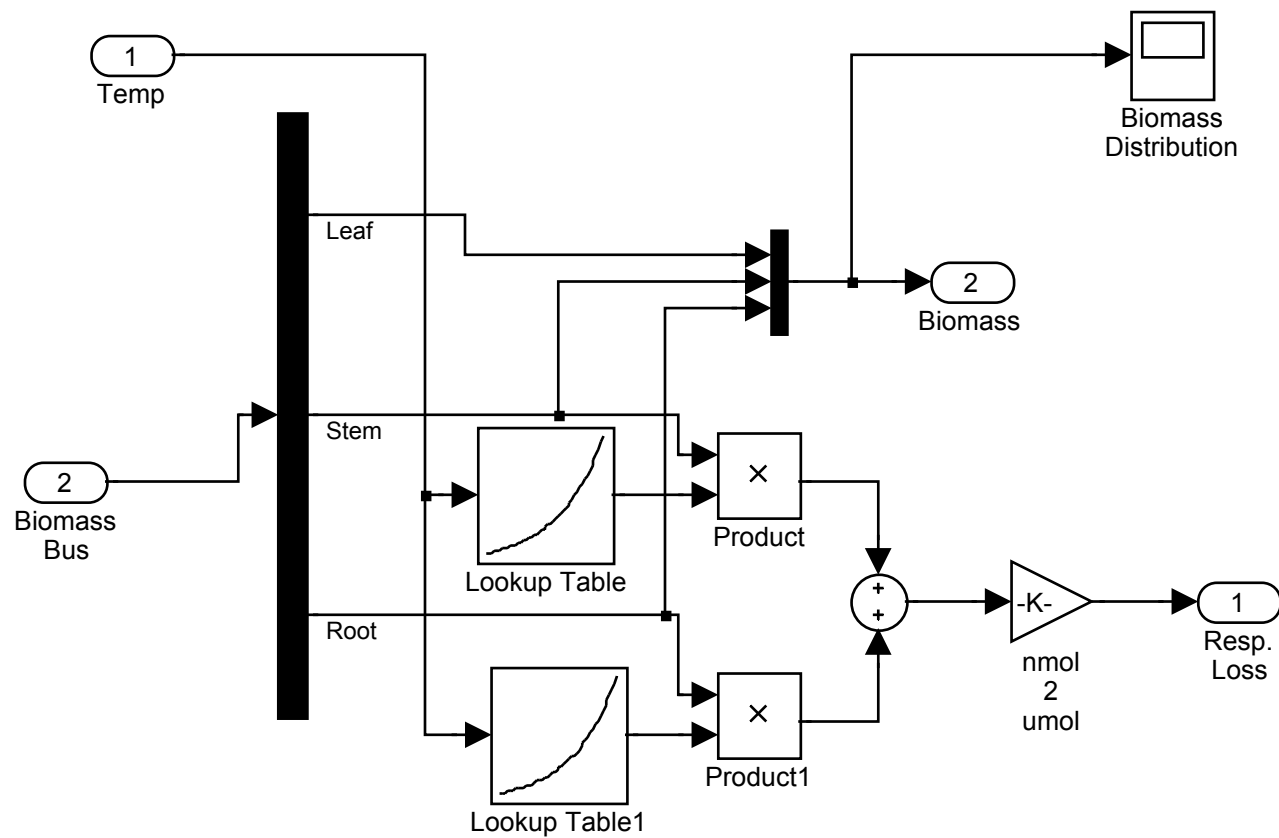


guesssim/Plant Model/Leaf Senescence

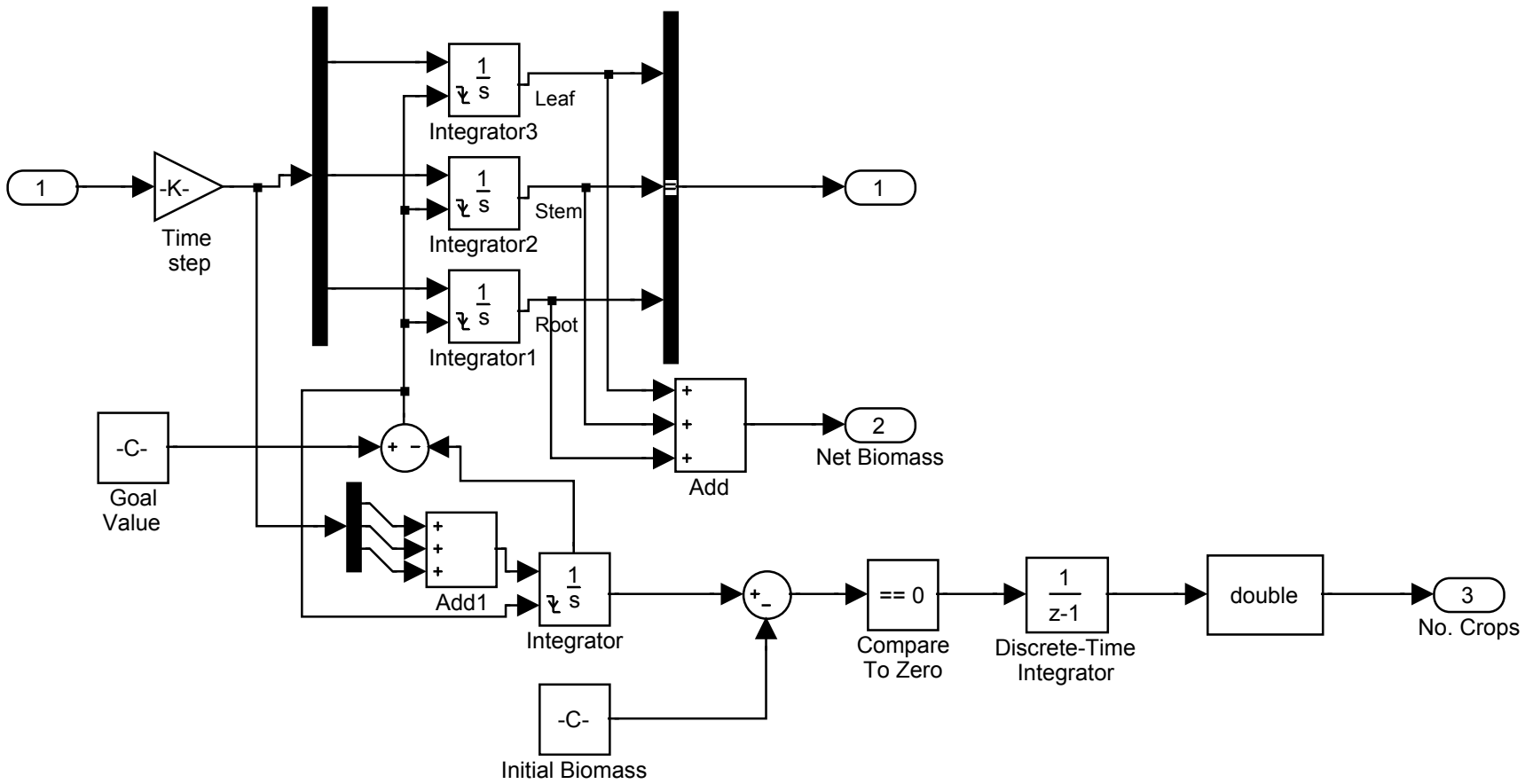


guesssim/Plant Model/Leaf Temp//Soil Temp.

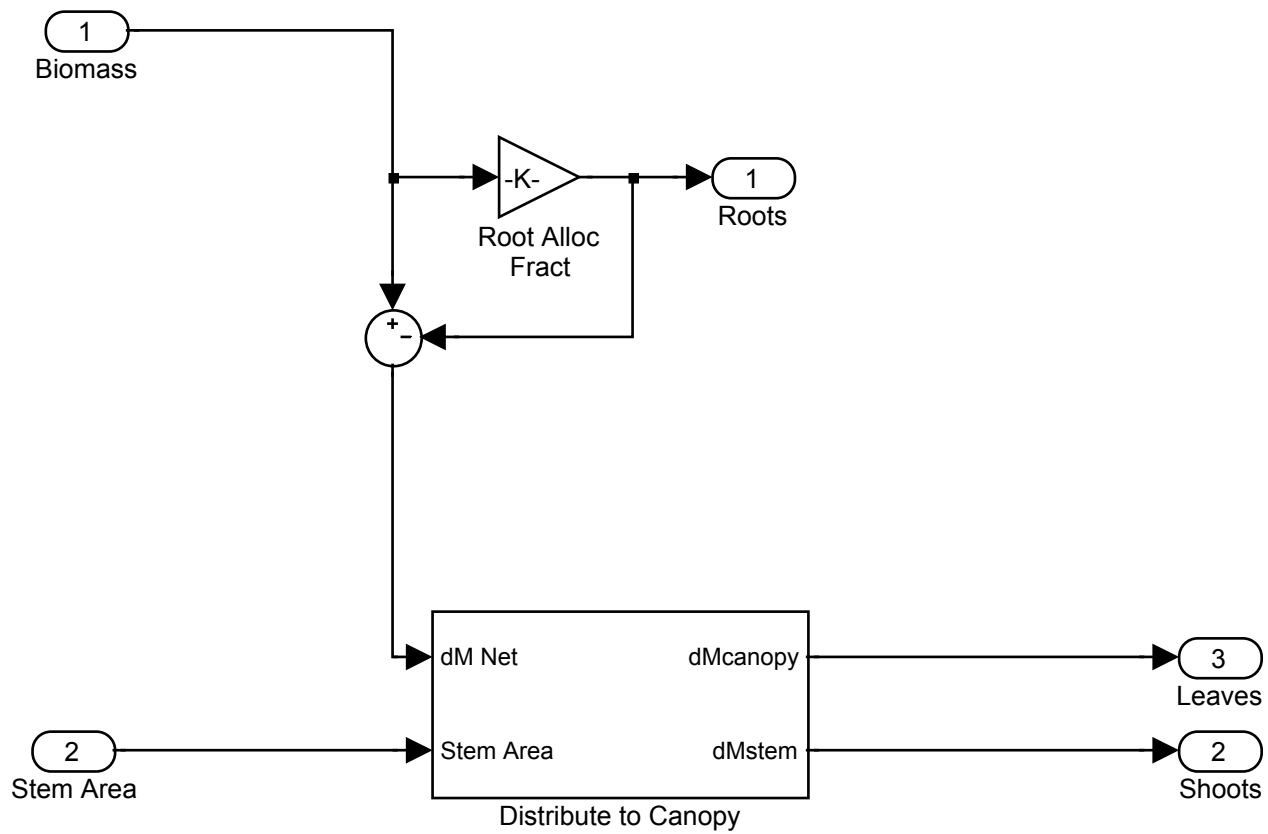




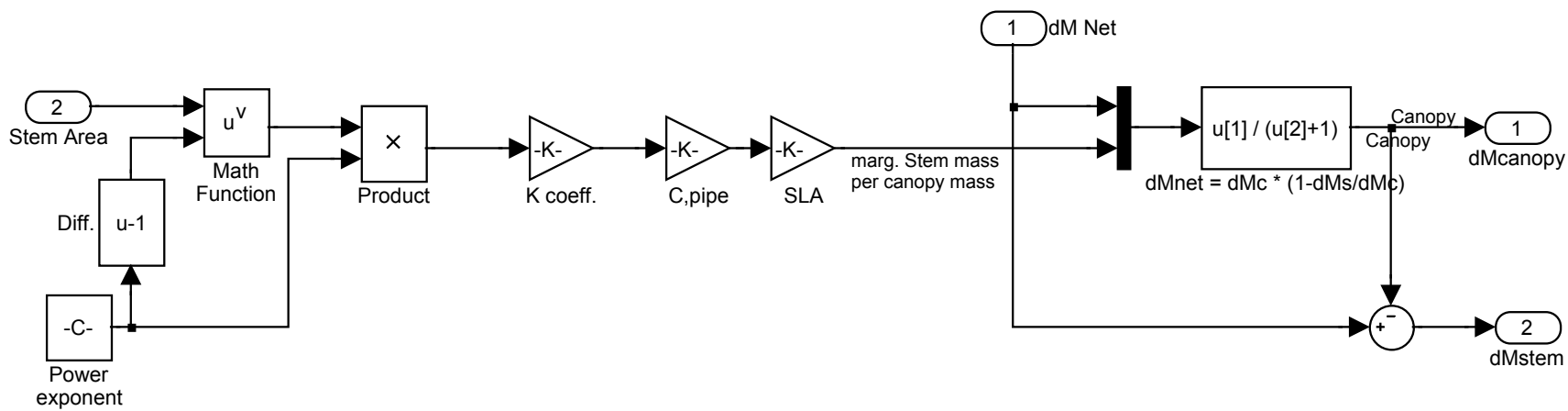
guesssim/Plant Model/Maintenance Respiration



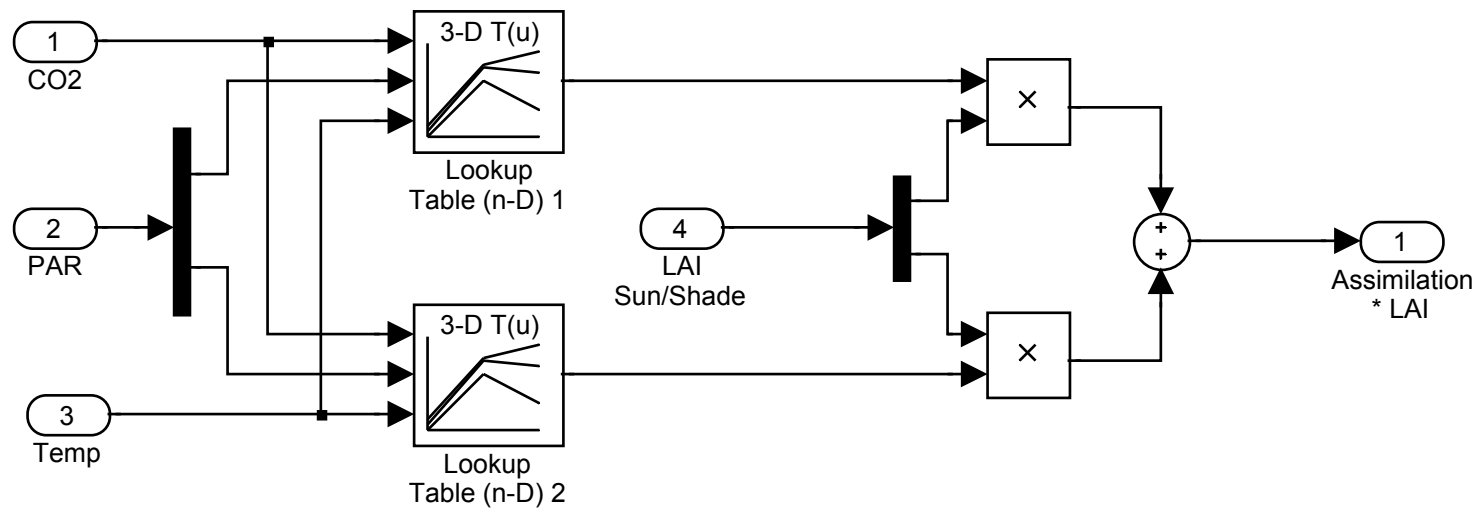
guesssim/Plant Model/Multi Integrator



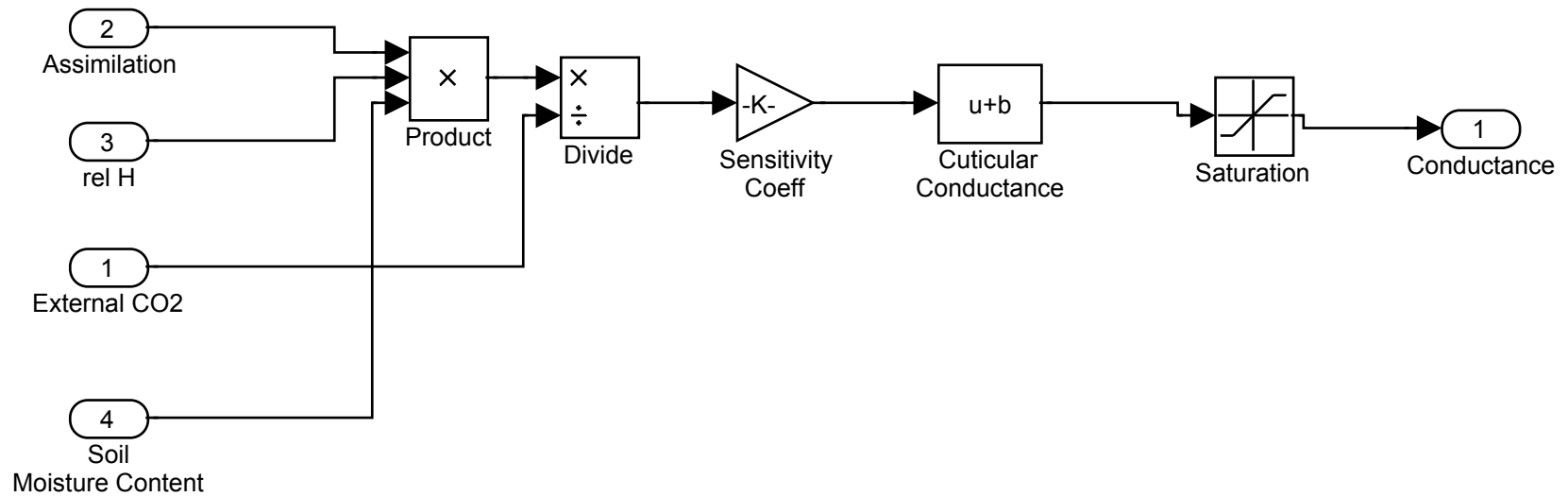
guesssim/Plant Model/Partition



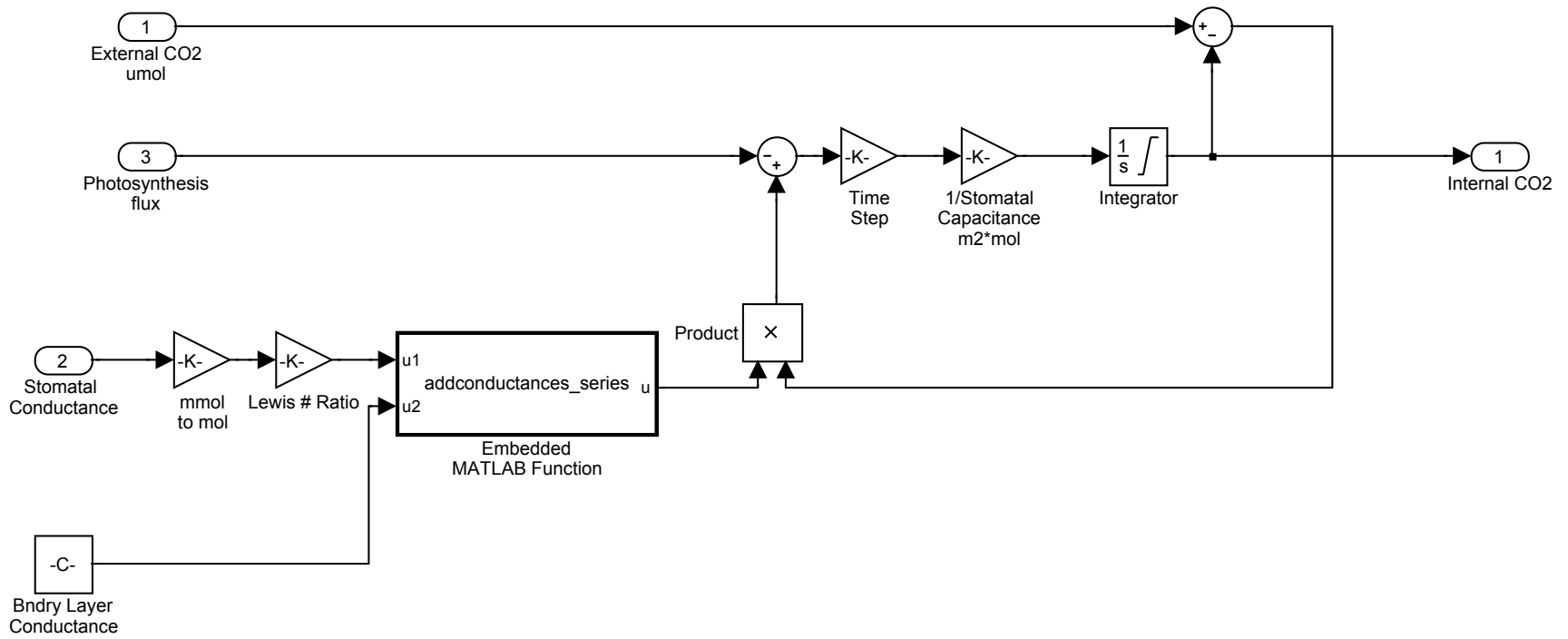
guesssim/Plant Model/Partition/Distribute to Canopy



guesssim/Plant Model/Photosynthesis



guesssim/Plant Model/Stomatal Conductance



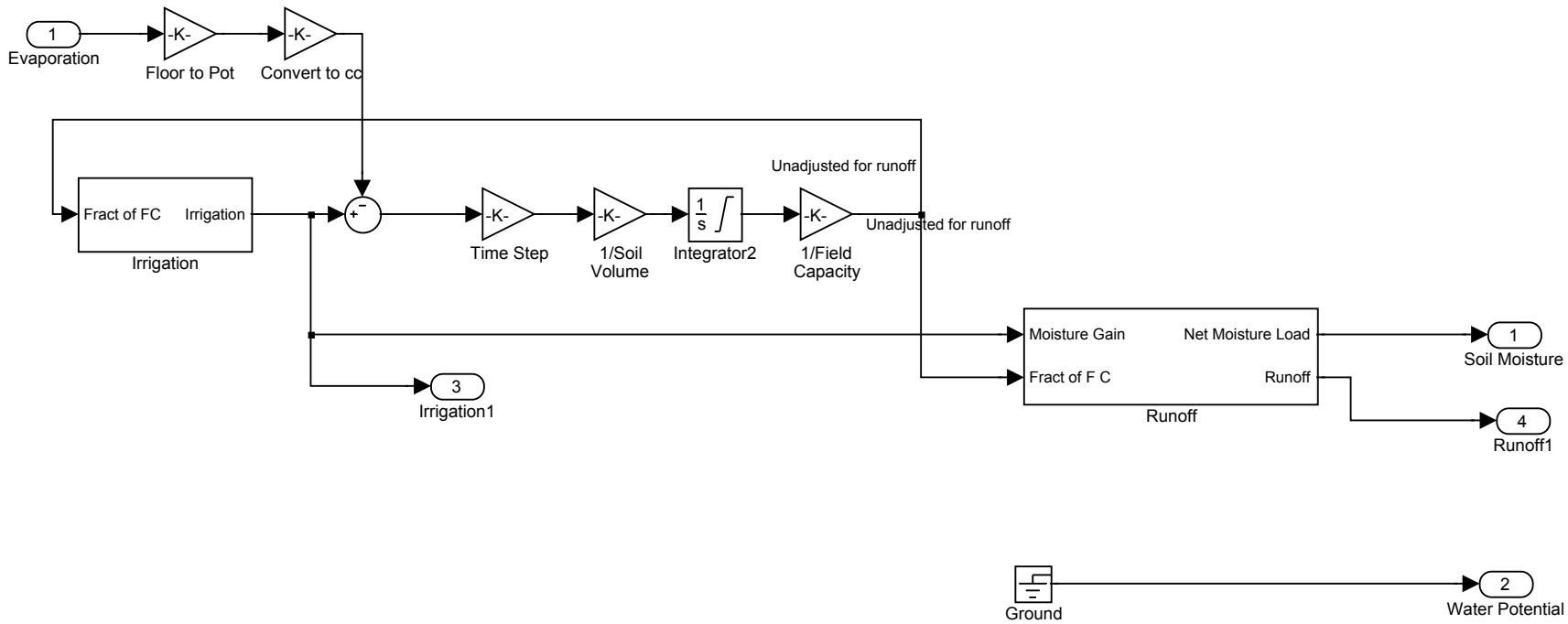
guesssim/Plant Model/Substomatal CO2 Balance

guesssim/Plant Model/Substomatal CO2 Balance/Embedded MATLAB Function.eML\_blk\_kernel

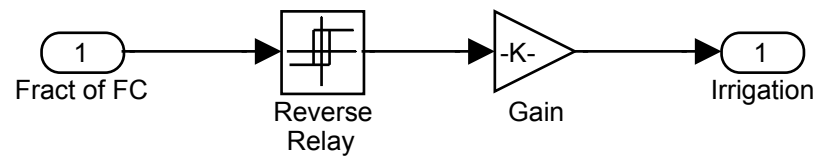
```
1: function u = addconductances_series(u1, u2)
2: % This block supports an embeddable subset of the MATLAB language
3: % See the help menu for details.
4: % This function adds series conductances
5: %  $U = 1/(1/U1 + 1/U2)$ 
6:
7: u = 1/(1/u1+1/u2);
```

%<fullsystem>

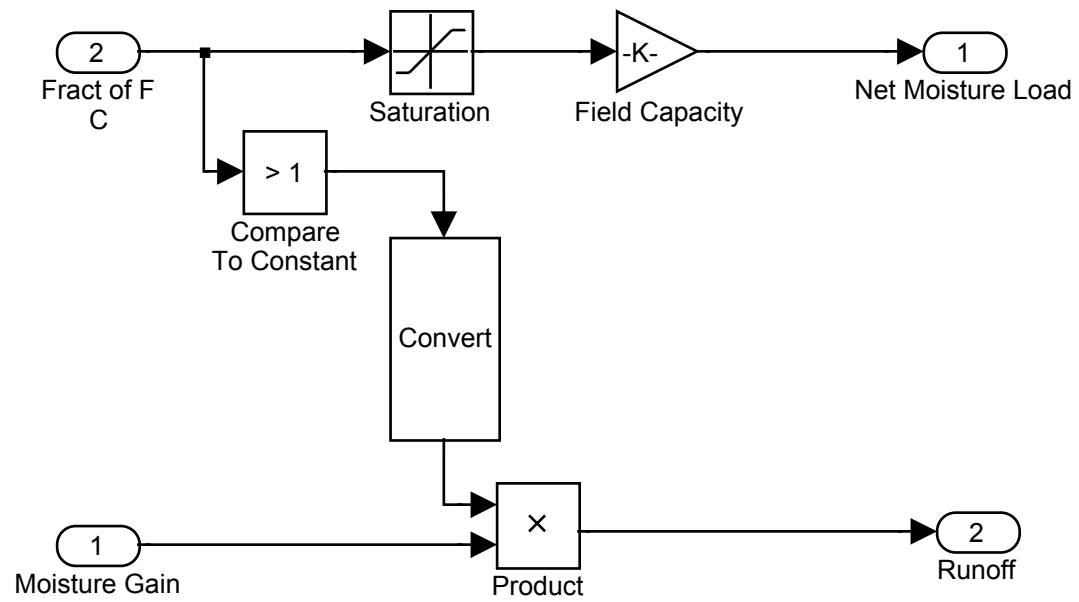




guesssim/Soil Model



guesssim/Soil Model/Irrigation



guesssim/Soil Model/Runoff