Persistence of snow in forests and clearings
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Snow in forests and openings

Falling snow is intercepted by trees, so less snow reaches the ground

Snow on the ground is shaded by trees, so melt is slower

So ... does snow lie longer on the forest floor or in openings?
Canopy and sub-canopy fluxes

**Energy balance**

- SWdown
- LWdown
- SWup
- LWup
- QaCan
- H
- LE

**Water balance**

- Tcan
- Snowf
- Rainf
- Evap
- SubCan
- Ecan

- SnowfSrf
- RainfSrf
- SubSrf
- Esrf

- DelCanSWE
- SmCan
- DelCanWat

- SWnetCan
- LWnetCan
- QfCan
- DelCanHeat
- Hcan
- LEcan

- SWnetSrf
- LWnetSrf
- QfSrf
- DelSnowHeat
- G

- Infil

from the SnowMIP2 instructions

in JULES
Snow in forests and openings

Alptal, Switzerland

BERMS, Canada
JULES (Loobos configuration)

Alptal, Switzerland

BERMS, Canada
JULES ("recommended" configuration)

Alptal, Switzerland

BERMS, Canada
JULES (recommended configuration)

Alptal, Switzerland

BERMS, Canada
Switch on the new snowpack model:

```plaintext
&JULES_MODEL_LEVELS
  nsmax = 3
```

Switch on the canopy snow model:

```plaintext
&JULES_SWITCHES
  can_model = 4
  l_snow_albedo = T
  l_snowdep_surf = T
```

For short vegetation:

```plaintext
l_point_data = T
```

For forest (interim fix):

```plaintext
l_point_data = F
```

Driving data, evaluation data and namelists to be provided as a JULES example.
Two-source sparse canopy model

Alptal, Switzerland

BERMS, Canada