

# Direct and Diffuse

Yesterday (19 jun) was an interesting day to look at SPN1 data. The morning was a thick overcast, so there was essentially no direct radiation until 11:30. The afternoon was clear, where diffuse was as low as 13% of global radiation at 17:00.

P.S. Here is some code to make a summary plot:

```
dpar(start="2013 jun 1 00:00",lenday=45)
```

```
ig = dat("Rsw.global")>20
```

```
hist((dat("Rsw.dfs")/dat("Rsw.global"))[ig[,1],1],n=50)
```

```
> box()
```

```
hist((dat("Rsw.dfs")/dat("Rsw.global"))[ig[,2],2],n=50); box(); title("Canopy Top")
```

```
hist((dat("Rsw.dfs")/dat("Rsw.global"))[ig[,1],1],n=50); box(); title("Under Canopy")
```

Canopy top shows a good mix of clear and overcast conditions, though more bimodal (fewer "mixed") conditions than I would have expected.

As expected, most of the under canopy light is diffuse, but amazingly there are a <few> data points with direct close to clear-sky values.