
Subject: Re: computing wet-bulb temperature
Posted by [wmconnolley](#) on Mon, 19 Dec 2005 09:15:16 GMT
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Tom Over <tmover@hotmail.com> wrote:

> Does anybody have an IDL routine to compute wet-bulb temperature?

No, but this computes the vapour pressure and might help...

```
function vp,t1,degc=degc
```

```
@comm_error
```

```
; Return vapour pressure (hPa) of water given temperature
```

```
; Constants
```

```
ts=373.16
```

```
ews=1013.246
```

```
; In K (default) or oC?
```

```
if (keyword_set(degc)) then t=t1+273.15 else t=t1
```

```
; Check
```

```
if (min(t) lt 100) then message,'dew temp < 100'
```

```
; Calculate
```

```
p= 10.0 ^ ( -7.90298 * ( ts / t - 1.0 ) $  
    + 5.02808 * alog10 ( ts / t ) $  
    - 1.3816e-7 * ( 10 ^ ( 11.344 * ( 1-ts/t ) ) -1 ) $  
    + 8.1328e-3 * ( 10 ^ ( -3.4915 * ( ts/t-1 ) ) -1 ) $  
    + alog10 ( ews ) )
```

```
return,p
```

```
end
```

```
-W.
```

```
--
```

William M Connolley | wmc@bas.ac.uk | <http://www.antarctica.ac.uk/met/wmc/>
Climate Modeller, British Antarctic Survey | Disclaimer: I speak for myself
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