



Allunga Exposure Laboratory

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2010 Summary

WEATHER SUMMARY - Monthly Data

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)		
	Max	Min	9am	9pm	9am	9pm					Horiz	19°N	Horiz
January	30.9	24.6	23.5	23.3	76.9	79.1	534.0	199.5	0.0	216.2	579.5	544.6	29.1
February	31.1	24.8	23.6	24.3	78.4	82.8	308.0	173.6	0.0	221.8	549.3	540.5	27.4
March	30.9	23.8	21.6	22.3	72.4	80.0	195.0	184.2	0.0	238.6	614.1	624.9	32.1
April	29.5	22.6	20.6	21.3	71.5	80.4	57.3	147.5	0.0	203.3	530.6	562.6	28.7
May	28.4	18.6	15.7	17.6	60.5	76.3	8.0	175.4	0.0	253.8	533.4	585.3	27.3
June	26.4	15.7	13.6	15.9	61.8	77.0	8.0	153.8	0.0	251.5	525.1	583.8	26.3
July	26.2	16.6	16.4	16.9	74.8	80.4	22.9	148.8	294.2	229.4	475.5	547.1	23.7
August	26.2	15.0	13.7	15.3	61.7	73.6	39.8	193.0	296.4	285.3	616.5	679.8	29.3
September	27.7	19.9	17.4	17.7	67.6	75.7	55.2	226.1	188.2	270.8	607.6	636.1	30.3
October	28.9	21.0	18.3	19.0	63.8	75.8	32.0	248.0	235.0	286.9	692.4	693.5	34.6
November	31.2	23.3	19.3	20.4	60.3	73.1	33.0	299.2	210.2	321.7	740.4	715.1	37.9
December	30.9	23.6	20.7	20.7	65.4	72.3	250.6	303.6	225.3	323.7	694.0	657.0	37.8
Average	29.0	20.8	18.7	19.6	68	77		204.4	241.6	258.6	596.5	614.2	30.36
Total							1543.8	2452.7	1449.3	3103.0	7158.4	7370.3	364.28

For Langleys divide MJ/m² by 0.0418

UV-R = UV-A + UV-B (290-385 nm)

Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

171228 176297 **Total Langleys**
14269 14691 **Average Langleys per month**



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January

2010

DAILY WEATHER RECORD

	Temperature (°C)				Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	Dew Point 9am	Dew Point 9pm	9am	9pm					Horiz	19°N	Horiz	
1	30	24	28	23	95	76	3.0	3.0	0.0	3.7	16.9	16.1	0.79	Cloud, Shower
2	30	24	24	24	96	87	7.0	7.0	0.0	4.9	17.9	17.3	0.67	Cloud, Shower
3	30	24	24	23	79	76	2.5	3.2	0.0	5.7	16.4	16.0	0.89	Fine, Cloud, Shower
4	31	25	24	22	74	71	2.0	6.0	0.0	10.5	23.7	20.9	1.11	Fine, Lt Cloud, Shower
5	31	25	24	23	90	75	6.0	8.4	0.0	8.2	23.1	20.7	1.09	Fine, Lt Cloud, Shower
6	31	25	24	23	69	77	0.0	8.4	0.0	10.7	24.5	21.5	1.19	Fine
7	32	25	22	23	70	73	0.0	7.6	0.0	10.3	23.8	21.5	1.16	Fine
8	30	23	23	24	77	96	6.0	9.0	0.0	6.1	19.6	18.4	0.95	Fine, Lt Cloud, Shower
9	29	24	22	22	76	80	33.0	5.6	0.0	5.7	11.1	11.0	0.68	Cloud, Rain, Fine
10	31	24	29	21	98	70	2.0	5.0	0.0	7.2	19.1	18.5	0.97	Fine, Cloud
11	31	22	19	21	56	67	1.0	8.0	0.0	10.6	24.4	22.3	1.25	Fine
12	31	23	21	20	65	63	0.0	8.8	0.0	10.2	24.0	22.7	1.28	Fine
13	31	24	22	23	68	78	0.0	9.8	0.0	10.9	25.3	23.9	1.26	Fine
14	31	24	22	22	67	73	0.0	9.1	0.0	12.1	26.2	24.5	1.25	Fine
15	33	25	22	24	64	75	0.0	9.0	0.0	11.6	25.0	23.8	1.22	Fine
16	33	25	22	24	63	81	0.0	10.2	0.0	9.6	23.4	20.9	1.12	Fine
17	33	25	23	23	74	76	0.0	7.6	0.0	9.8	24.4	23.4	1.26	Fine
18	34	26	24	26	68	82	0.0	8.0	0.0	8.1	20.8	19.9	1.05	Fine, Lt Cloud
19	33	27	25	25	72	78	0.0	7.2	0.0	9.1	25.1	24.2	1.22	Fine
20	34	28	24	23	68	72	0.0	8.6	0.0	6.3	18.7	18.2	0.98	Fine, Cloud
21	32	26	22	23	59	71	0.0	9.2	0.0	10.1	23.6	22.7	1.19	Fine
22	33	26	21	23	63	72	0.0	11.0	0.0	10.9	24.5	22.0	1.13	Fine
23	32	26	22	21	63	59	1.0	6.8	0.0	5.9	20.4	19.6	1.01	Fine, Cloud
24	29	25	24	25	81	94	4.5	8.2	0.0	3.9	11.1	10.8	0.61	Cloud, Shower
25	29	25	26	25	97	87	20.0	0.0	0.0	2.3	6.5	6.3	0.55	Rain
26	29	25	25	25	91	95	55.0	6.8	0.0	2.1	10.2	9.8	0.46	Rain, Cloud
27	26	24	25	24	85	96	60.0	1.0	0.0	1.3	9.4	8.6	0.52	Rain, Cloud
28	27	24	24	24	93	93	85.0	0.0	0.0	0.4	6.7	6.6	0.41	Rain overcast
29	29	24	24	22	96	91	60.0	3.8	0.0	0.0	5.5	5.5	0.38	Rain Overcast
30	32	23	24	25	84	87	94.0	3.2	0.0	0.0	5.7	5.7	0.34	Rain, Overcast
31	31	24	25	25	82	80	92.0	0.0	0.0	8.0	22.5	21.3	1.09	Fine, Rain
Average	31	25	24	23	77	79		6.4	0.0	7.0	18.7	17.6	0.9	
Total							534.0	199.5	0.0	216.2	579.5	544.6	29.1	

For Langleys divide MJ/m² by 0.0418
 Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

UV-R = UV-A + UV-B (290-385 nm)

13862
447
13027 **Total Langleys**
420 **Average Langleys**



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February

DAILY WEATHER RECORD

2010

	Temperature (°C)				Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	Dew 9am	Point 9pm	9am	9pm					Horiz	19°N	Horiz	
1	32	24	21	24	66	79	0.0	6.2	0.0	9.2	22.6	22.0	1.08	Fine, Lt Cloud
2	33	25	21	25	60	83	0.0	6.8	0.0	12.1	23.3	22.4	1.14	Fine, Lt Cloud
3	33	24	20	24	58	78	0.0	6.6	0.0	12.2	24.5	23.8	1.26	Fine, Lt Cloud
4	33	26	26	26	77	84	0.0	7.6	0.0	11.3	23.5	22.8	1.25	Fine, Lt Cloud
5	32	26	24	26	69	85	7.0	7.8	0.0	10.7	25.3	24.5	1.28	Fine, Lt Cloud
6	33	27	24	25	71	79	1.0	8.0	0.0	11.4	25.4	24.5	1.30	Fine, O/N Shower
7	32	24	24	24	78	77	3.5	8.0	0.0	8.8	22.0	21.2	1.10	Fine, Lt Cloud
8	32	26	23	24	68	75	1.5	7.2	0.0	9.6	21.7	21.3	1.09	Fine, Lt Cloud
9	31	26	24	24	75	78	0.0	8.0	0.0	8.5	20.6	20.3	1.03	Fine, Lt Cloud
10	32	24	23	23	85	80	0.0	6.6	0.0	9.4	23.2	22.6	1.21	Fine, Lt Cloud
11	31	24	24	24	73	96	5.0	7.4	0.0	9.5	17.8	18.9	0.89	Fine, Lt Cloud, Shower
12	30	23	23	23	92	99	40.0	8.0	0.0	3.6	18.0	17.9	0.93	Cloud, Rain
13	30	24	23	24	71	81	1.0	2.6	0.0	10.6	23.2	22.5	1.28	Fine, Lt Cloud, Shower
14	31	24	24	25	84	87	11.0	7.4	0.0	8.6	21.6	21.3	1.16	Fine, Lt Cloud
15	30	26	25	26	94	87	1.0	4.4	0.0	6.3	19.2	19.1	0.92	Fine, Cloud, Shower
16	30	26	26	24	85	69	10.0	3.4	0.0	2.5	11.3	11.3	0.55	Rain cloudy
17	31	25	25	25	90	82	43.0	2.6	0.0	4.3	8.3	8.3	0.64	Cloud, Rain
18	28	24	25	24	96	92	4.0	6.4	0.0	2.1	14.1	14.1	0.21	Cloud, Shower
19	29	23	22	23	89	81	84.0	0.0	0.0	1.1	6.1	6.1	0.59	Rain, Cloud
20	31	24	24	23	76	77	3.0	5.8	0.0	9.5	18.8	18.7	0.95	Fine, Lt Cloud
21	31	25	24	23	74	74	6.0	6.8	0.0	7.0	20.5	20.3	0.20	Fine, Cloud
22	31	24	24	24	74	73	0.0	7.6	0.0	11.1	25.2	24.5	1.31	Fine, Lt Cloud
23	31	25	24	24	83	81	0.0	8.0	0.0	12.2	24.5	24.3	1.28	Fine
24	32	25	23	25	69	82	0.0	7.4	0.0	10.5	23.8	23.7	1.25	Fine
25	32	25	25	24	75	81	0.0	7.0	0.0	10.6	24.7	24.6	1.23	Fine
26	31	27	23	24	81	89	14.0	8.6	0.0	7.7	19.1	18.5	0.89	Fine, Cloud, Rain
27	29	24	24	24	90	96	30.0	7.4	0.0	0.2	8.3	8.3	0.66	Cloud, Rain
28	30	23	24	26	91	93	43.0	0.0	0.0	1.2	12.7	12.7	0.70	Cloud, Rain

**Average
Total**

31	25	24	24	78	83		6.2	0.0	7.9	19.6	19.3	1.0	
						308.0	173.6	0.0	221.8	549.3	540.5	27.38	

For Langley's divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)
Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

13139 12929 **Total Langley's**
438 431 **Average Langley's**



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March
2010

DAILY WEATHER RECORD

	Temperature (°C)				Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	Dew 9am	Point 9pm	9am	9pm					Horiz	19°N	Horiz UV-R	
1	30	26	25	26	85	85	1.5	2.8	0.0	4.5	15.0	14.9	0.81	Cloud, O/N Shower
2	32	26	26	26	83	85	22.0	4.6	0.0	4.3	17.9	17.9	0.90	Fine, Cloud, Shower
3	33	26	24	28	69	98	0.0	4.0	0.0	10.7	19.5	19.4	1.01	Fine
4	32	25	24	24	72	76	10.0	7.4	0.0	10.9	23.9	23.8	1.13	Fine
5	34	27	21	22	60	70	0.0	7.6	0.0	11.5	23.9	24.0	1.25	Fine
6	35	27	20	24	55	79	0.0	7.2	0.0	12.0	25.9	26.2	1.34	Fine
7	34	24	24	23	67	74	0.0	6.6	0.0	11.5	26.6	27.1	1.46	Fine
8	33	24	24	25	68	78	0.0	7.0	0.0	11.1	24.4	24.9	1.29	Fine
9	32	26	22	24	67	91	0.0	8.0	0.0	8.2	23.7	23.8	1.26	Fine, Lt Cloud
10	30	24	24	23	93	79	5.0	4.4	0.0	1.0	14.9	14.9	0.84	Cloud, Shower
11	32	25	25	22	80	85	2.0	3.2	0.0	8.7	18.2	18.5	0.93	Fine, Cloud, Shower
12	31	23	20	20	62	82	8.0	7.4	0.0	6.9	12.3	12.5	0.70	Fine, Cloud, Shower
13	28	23	20	20	70	70	6.0	7.2	0.0	6.1	17.2	17.3	0.84	Fine, Cloud, Shower
14	31	22	18	19	61	65	0.5	5.4	0.0	5.2	22.3	22.6	1.20	Fine, Cloud
15	31	23	19	22	81	90	2.0	6.8	0.0	8.5	21.4	21.8	1.18	Fine, Lt Cloud
16	30	22	19	20	58	72	0.0	6.2	0.0	8.0	18.3	18.5	0.93	Fine, Lt Cloud
17	31	22	18	20	62	73	0.0	6.0	0.0	8.4	23.4	24.0	1.21	Fine, Lt Cloud
18	30	22	19	19	80	67	0.0	7.6	0.0	9.1	24.1	24.4	1.22	Fine, Lt Cloud
19	32	22	18	18	68	64	0.0	8.0	0.0	9.7	24.7	25.1	1.27	Fine, Lt Cloud
20	30	23	18	21	65	80	0.0	9.6	0.0	8.2	21.0	21.1	1.06	Fine, Lt Cloud
21	30	24	22	25	85	86	0.0	6.4	0.0	7.2	22.4	22.4	1.12	Fine, Lt Cloud
22	30	24	26	24	87	98	3.0	3.4	0.0	2.1	13.3	14.5	0.83	Cloud, Shower
23	30	21	22	23	83	88	127.0	0.0	0.0	3.7	16.6	16.8	0.85	Cloud, Rain
24	30	22	20	21	67	83	1.0	4.6	0.0	7.6	16.9	17.4	0.91	Fine, Cloud, Shower
25	30	22	21	21	71	74	0.0	5.4	0.0	7.7	15.7	16.2	0.79	Fine cloudy
26	30	24	21	20	65	74	0.0	7.6	0.0	8.2	18.4	19.1	0.95	fine showers
27	30	24	21	21	73	78	0.0	7.2	0.0	5.7	15.2	15.5	0.80	Cloud, Fine
28	29	22	21	23	71	83	0.0	5.0	0.0	5.1	16.5	16.9	0.87	Fine, Cloudy
29	30	25	23	23	78	86	0.0	5.0	0.0	8.3	19.3	19.9	0.96	Fine, Cloud, O/N Sho
30	30	24	23	23	75	85	6.0	6.4	0.0	9.0	20.7	21.5	1.08	Fine, Lt Cloud
31	28	23	22	22	84	81	1.0	6.2	0.0	9.5	20.5	22.0	1.12	Fine, Lt Cloud
Average	30.9	23.8	21.6	22.3	72	80		5.9	0.0	7.7	19.8	20.2	1.04	
Total							195.0	184.2	0.0	238.6	614.1	624.9	32.11	

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)
Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

14689 14947 **Total Langleys**
474 482 **Average Langleys**



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April

2010

DAILY WEATHER RECORD

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain	Evap	Wet Time	Sun Shine	Global Radiation (MJ/m ²)			Remarks
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	Horiz	
1	28	23	22	18	79	72	6.0	4.0	0.0	0.5	12.5	12.5	0.70	Cloud, Rain
2	30	22	19	23	65	83	0.8	2.2	0.0	4.6	11.4	11.5	0.64	Cloud, Rain
3	29	25	23	22	74	88	0.0	5.6	0.0	2.3	14.2	14.4	0.77	Lt Cloud
4	29	23	22	21	78	77	1.5	4.8	0.0	1.1	11.4	11.5	0.63	Cloud
5	30	23	22	22	75	79	0.0	6.2	0.0	9.1	21.4	22.9	1.12	Cloud
6	27	24	23	20	82	84	0.0	4.5	0.0	2.2	7.9	8.0	0.60	Cloud, Rain
7	29	22	21	22	73	83	13.0	2.6	0.0	10.4	22.1	24.0	1.20	Fine, Lt Cloud
8	30	22	20	22	68	81	0.0	5.6	0.0	11.0	21.3	23.0	1.13	Fine, Lt Cloud
9	30	22	22	22	74	87	0.0	5.8	0.0	10.9	21.8	23.6	1.09	Fine, Lt Cloud
10	30	20	22	22	80	84	0.0	5.4	0.0	10.8	22.8	24.6	1.24	Fine
11	29	21	22	22	77	84	0.0	4.8	0.0	10.4	23.3	25.1	1.28	Fine
12	30	22	23	22	78	85	0.0	5.8	0.0	10.6	22.9	24.7	1.20	Fine
13	31	23	22	24	73	94	0.0	4.6	0.0	5.3	18.1	18.8	0.98	Fine, Cloud
14	29	21	17	22	60	82	0.0	5.6	0.0	11.1	23.2	24.8	1.15	Fine, Lt Cloud
15	30	21	20	20	66	73	0.0	5.6	0.0	8.7	16.6	17.7	0.89	Fine, Lt Cloud
16	30	22	19	19	63	69	0.0	7.2	0.0	10.2	20.8	22.3	1.13	Fine, Lt Cloud
17	30	21	19	20	67	72	0.0	7.4	0.0	10.1	21.9	23.1	1.16	Fine, Lt Cloud
18	29	22	20	20	64	72	0.0	6.2	0.0	3.9	13.1	13.5	0.74	Cloud, O/N shower
19	26	22	20	19	86	79	1.0	6.8	0.0	6.1	18.4	19.6	0.95	Fine
20	31	21	19	21	65	78	2.0	3.0	0.0	8.0	19.5	20.8	1.04	Fine, Cloud, Rain
21	39	22	20	21	67	81	9.0	5.2	0.0	3.4	19.6	20.2	1.08	Fine, Cloud
22	30	22	20	22	67	78	0.0	3.0	0.0	3.2	13.9	14.3	0.75	Fine, Cloud
23	24	30	20	22	69	80	0.0	4.6	0.0	4.1	10.3	10.6	0.63	Cloud
24	27	24	22	23	88	89	1.0	5.4	0.0	0.4	12.4	12.5	0.69	Cloud
25	30	23	22	23	73	86	22.0	1.4	0.0	5.5	16.7	17.6	0.86	Fine, Cloud, Rain
26	31	23	20	22	65	79	1.0	4.6	0.0	10.1	21.4	23.3	1.17	Fine
27	30	22	21	22	70	80	0.0	6.6	0.0	8.8	17.5	18.8	0.85	Fine, Cloud
28	27	23	21	21	77	86	0.0	5.8	0.0	5.2	17.1	18.0	0.96	Cloud
29	30	22	17	20	59	77	0.0	1.8	0.0	7.8	16.7	18.4	0.86	Fine, Cloud
30	31	24	19	20	64	71	0.0	5.4	0.0	7.5	20.4	22.5	1.18	Fine, Cloud
Average	29.5	22.6	20.6	21.3	72	80		4.9	0.0	6.8	17.7	18.8	0.96	
Total							57.3	147.5	0.0	203.3	530.6	562.6	28.67	

For Langleys divide MJ/m² by 0.0418

UV-R = UV-A + UV-B (290-385 nm)

Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

12691 13457 **Total Langleys**

423 449 **Average Langleys**



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May

2010

DAILY WEATHER RECORD

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	9am	9pm	9am	9pm					UV-R			
											Horiz	19°N	Horiz	
1	30	21	19	19	62	71	0.0	6.8	0.0	10.4	22.0	24.1	1.18	Fine
2	30	20	18	19	60	75	0.0	7.2	0.0	9.2	20.3	22.2	1.03	Fine, Lt Cloud
3	30	22	18	21	61	78	0.0	6.0	0.0	8.0	20.5	22.4	1.01	Fine, Cloud
4	30	23	20	22	66	85	0.0	6.8	0.0	8.9	11.6	13.2	0.66	Fine, Cloud
5	30	21	21	20	74	87	0.0	8.0	0.0	7.7	22.6	24.6	1.17	Fine, Cloud
6	32	18	19	19	63	78	0.0	5.4	0.0	10.6	22.1	24.3	1.22	Fine
7	30	18	15	14	54	64	0.0	7.0	0.0	10.9	21.5	23.9	1.15	Fine
8	29	16	13	17	51	73	0.0	7.2	0.0	8.8	16.9	18.4	0.90	Fine, Lt Cloud
9	27	16	12	17	47	69	0.0	6.4	0.0	4.4	11.7	12.3	0.61	Fine, Cloud
10	29	18	16	19	60	77	0.0	5.6	0.0	8.8	16.9	18.6	0.81	Fine
11	29	19	18	19	62	76	0.0	6.4	0.0	5.1	13.3	14.2	0.57	Fine
12	28	20	17	20	65	82	0.0	3.0	0.0	4.2	14.1	14.6	0.71	Fine, Cloud
13	29	19	16	19	61	83	1.0	2.8	0.0	9.6	20.9	22.5	1.12	Fine, Lt Cloud
14	28	18	15	15	56	68	0.0	7.2	0.0	10.2	21.6	23.2	1.19	Fine
15	28	17	14	16	54	72	0.0	7.6	0.0	9.5	18.3	21.0	1.05	Fine
16	28	18	19	18	72	72	0.0	6.0	0.0	7.7	14.4	15.6	0.77	Fine, Cloud
17	24	26	14	17	66	77	0.0	6.0	0.0	0.2	9.8	9.8	0.33	Fine, Overcast
18	27	19	16	15	69	71	0.0	2.0	0.0	10.8	25.7	28.4	1.32	Fine lt cloud
19	27	15	12	13	51	66	0.0	5.0	0.0	10.6	18.3	21.1	1.09	Fine
20	27	14	12	16	50	70	0.0	7.4	0.0	7.0	15.3	16.8	0.71	Fine
21	26	18	16	18	66	85	0.0	5.2	0.0	3.2	8.1	8.5	0.37	Cloud
22	28	16	15	20	56	84	0.0	3.2	0.0	10.8	21.6	23.4	1.12	Fine
23	28	20	18	19	67	83	0.0	5.0	0.0	9.5	15.1	16.8	0.72	Fine, Lt Cloud
24	29	18	19	18	77	78	0.0	5.4	0.0	7.6	12.3	13.6	0.59	Fine, Cloud
25	29	20	20	21	70	82	0.0	5.4	0.0	8.5	14.9	16.8	0.75	Fine, Cloud
26	28	24	21	17	78	79	0.0	4.6	0.0	5.0	10.2	10.9	0.39	Fine, Cloud
27	27	17	10	16	43	82	7.0	5.8	0.0	10.5	21.9	24.8	1.13	Fine
28	27	14	15	16	65	65	0.0	4.8	0.0	9.1	18.0	19.5	0.90	Fine, Lt Cloud
29	29	21	19	20	67	89	0.0	5.0	0.0	5.5	11.6	12.8	0.46	Fine, Cloud
30	28	17	8	14	41	72	0.0	4.4	0.0	10.7	21.2	23.4	1.20	Fine
31	27	14	3	12	43	73	0.0	6.8	0.0	10.8	20.7	23.6	1.04	Fine, Lt Cloud
Average	28.4	18.6	15.7	17.6	61	76		5.7	0.0	8.2	17.2	18.9	0.88	
Total							8.0	175.4	0.0	253.8	533.4	585.3	27.27	

For Langleys divide MJ/m² by 0.0418

UV-R = UV-A + UV-B (290-385 nm)

Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

12759

412

14000 **Total Langleys**

452 **Average Langleys**



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June
2010

DAILY WEATHER RECORD

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain	Evap	Wet Time	Sun Shine	Global Radiation (MJ/m ²)			Remarks
	Max	Min	9am	9pm	9am	9pm	mm	mm	Hours	Hours	Horiz	19°N	UV-R Horiz	
1	25	10	8	10	45	61	0.0	5.4	0.0	10.7	20.5	23.5	1.10	Fine
2	27	12	13	18	47	76	0.0	6.4	0.0	9.8	19.1	21.4	1.05	Fine, Lt Cloud
3	27	21	20	21	86	82	1.0	5.2	0.0	3.7	8.4	8.9	0.41	Cloud
4	26	20	18	18	78	87	7.0	4.8	0.0	7.4	15.4	17.0	0.83	Fine, Lt Cloud, Shower
5	26	17	5	13	36	76	0.0	5.0	0.0	10.8	20.3	23.2	1.01	Fine
6	26	13	8	13	45	76	0.0	5.4	0.0	10.6	21.0	23.7	1.04	Fine
7	25	12	13	13	63	72	0.0	4.6	0.0	10.3	19.9	22.6	0.94	Fine
8	25	13	10	15	51	82	0.0	6.2	0.0	10.7	20.2	22.8	0.98	Fine
9	27	13	15	19	66	91	0.0	3.4	0.0	10.7	21.2	23.7	1.05	Fine
10	28	15	16	18	59	86	0.0	3.6	0.0	10.6	19.7	22.5	0.96	Fine
11	26	16	16	14	70	64	0.0	5.2	0.0	5.8	8.9	9.7	0.40	Fine, Cloud
12	26	13	5	12	36	65	0.0	3.6	0.0	10.6	19.7	21.8	0.97	Fine
13	24	13	5	13	39	78	0.0	6.2	0.0	10.5	20.1	22.2	1.03	Fine
14	26	13	11	15	52	63	0.0	5.8	0.0	8.3	18.9	21.3	0.92	Fine, Lt Cloud
15	28	18	14	16	66	86	0.0	3.4	0.0	5.9	12.5	13.6	0.66	Fine, Cloud
16	28	20	15	17	60	77	0.0	6.0	0.0	8.1	14.9	16.9	0.75	Fine, Lt Cloud
17	27	16	15	18	61	88	0.0	6.6	0.0	9.5	19.4	21.3	0.91	Fine, Lt Cloud
18	26	15	17	18	77	89	0.0	4.6	0.0	10.2	20.8	23.2	1.07	Fine
19	27	15	18	13	82	59	0.0	2.4	0.0	6.6	14.1	15.6	0.77	Fine, Cloud
20	25	18	9	12	52	69	0.0	5.0	0.0	9.4	20.2	22.9	1.05	Fine
21	27	11	6	14	39	64	0.0	5.2	0.0	7.4	17.1	19.0	0.89	Fine, Lt Cloud
22	26	17	14	15	59	60	0.0	5.6	0.0	3.5	11.3	11.9	0.46	Fine, Cloud
23	28	20	16	15	61	66	0.0	8.6	0.0	6.9	18.3	20.1	0.96	Fine, Cloud
24	26	16	14	16	63	78	0.0	7.6	0.0	9.0	20.3	22.8	1.08	Fine, Lt Cloud
25	26	18	18	18	79	77	0.0	5.2	0.0	3.1	10.1	10.6	0.42	Fine, Cloud
26	27	18	16	18	68	77	0.0	5.2	0.0	4.3	13.0	13.8	0.63	Fine, Cloud
27	26	15	17	18	73	92	0.0	5.4	0.0	10.0	20.5	22.9	0.99	Fine
28	26	15	19	18	84	89	0.0	4.0	0.0	10.2	20.1	22.5	1.02	Fine
29	27	16	18	20	81	91	0.0	4.0	0.0	8.9	19.9	21.4	0.96	Fine, Lt Cloud
30	28	17	18	19	77	88	0.0	4.2	0.0	8.0	19.3	21.0	0.95	Fine, Lt Cloud
Average	26.4	15.7	13.6	15.9	62	77		5.1	0.0	8.4	17.5	19.5	0.88	
Total							8.0	153.8	0.0	251.5	525.1	583.8	26.26	

For Langleys divide MJ/m² by 0.0418
Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

UV-R = UV-A + UV-B (290-385 nm)

12560
405

13964 **Total Langleys**
450 **Average Langleys**



Allunga Exposure Laboratory

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July

DAILY WEATHER RECORD

2010

	Temperature (°C)				Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	Dew Point		9am	9pm					UV-R			
			9am	9pm							Horiz	19°N	Horiz	
1	26	18	16	17	81	76	3.5	7.2	12.2	7.1	11.4	12.9	0.53	O/N Shower. Fine
2	26	14	14	16	66	78	0.0	5.6	5.6	10.5	18.6	22.3	0.85	Fine
3	26	15	14	17	66	83	0.0	4.8	10.6	10.6	15.8	19.0	0.81	Fine
4	26	14	16	16	73	76	0.0	5.4	12.4	10.4	16.7	20.0	0.74	Fine
5	26	16	16	15	70	66	0.0	4.8	8.7	5.5	12.4	13.7	0.64	Fine
6	27	15	15	18	72	85	0.0	7.4	10.1	10.1	16.9	20.1	0.83	Fine
7	27	19	18	18	81	77	0.5	4.4	6.8	5.6	15.6	18.4	0.80	Fine, Cloud
8	26	20	18	18	72	77	0.0	4.4	9.9	0.7	6.0	6.1	0.34	Cloud
9	24	20	18	18	78	88	0.5	4.4	8.8	0.0	3.9	4.0	0.21	Cloud
10	26	19	18	19	77	90	2.1	0.4	11.2	1.2	8.9	9.3	0.40	Cloud
11	28	20	16	18	75	91	5.2	2.8	12.7	8.8	17.0	19.8	0.83	Fine
12	25	17	13	16	65	86	0.0	5.2	12.2	10.9	19.3	23.1	1.02	Fine
13	25	12	14	15	73	80	0.0	4.8	13.1	10.0	19.0	22.4	0.91	Fog, Fine
14	25	14	15	15	75	83	0.0	4.2	12.8	10.8	18.4	22.0	0.91	Fine
15	25	13	16	16	75	83	0.0	4.6	12.1	10.6	18.9	22.5	0.97	Fine
16	26	13	17	17	83	87	0.0	4.8	11.7	10.4	18.3	21.6	0.83	Fine
17	27	13	18	19	83	82	0.0	3.2	12.2	10.0	17.8	21.0	0.81	Fine
18	26	18	15	18	66	79	0.0	7.0	4.7	7.7	18.2	20.7	0.84	Fine
19	26	18	13	15	61	66	0.0	5.6	0.0	2.3	10.3	10.8	0.63	Fine, Cloud
20	28	20	17	18	71	78	0.0	6.6	4.6	4.8	12.1	13.2	0.52	Fine, Lt Cloud
21	25	20	16	15	72	71	0.0	5.6	0.0	3.5	15.4	17.2	0.75	Fine, Lt Cloud
22	22	18	17	14	89	72	3.5	4.6	9.8	0.1	4.5	4.6	0.24	Cloud
23	27	17	18	17	80	80	7.0	0.4	11.7	5.8	15.2	16.4	0.72	Shower, Fine
24	27	19	17	17	68	81	0.6	6.0	4.8	6.9	17.2	19.2	0.89	Fine
25	27	19	16	20	70	87	0.0	5.8	6.6	10.8	15.7	18.5	0.86	Fine
26	27	17	19	20	84	90	0.0	5.6	10.2	7.5	16.0	18.0	0.77	Mist, Fine
27	27	18	20	19	80	85	0.0	2.8	12.7	8.9	19.5	22.3	1.04	Fine
28	28	18	19	19	82	87	0.0	4.4	10.0	8.8	16.3	18.6	0.88	Fine
29	30	15	18	18	89	86	0.0	4.2	13.8	10.1	20.2	23.4	1.06	Fine
30	26	13	17	15	80	80	0.0	6.8	10.7	8.6	19.2	21.8	0.92	Fine, Lt Cloud
31	26	12	13	11	61	63	0.0	5.0	11.5	10.4	20.8	24.2	1.10	Fine
Average	26.2	16.6	16.4	16.9	75	80		4.8	9.5	7.4	15.3	17.6	0.76	
Total							22.9	148.8	294.2	229.4	475.5	547.1	23.65	

For Langleys divide MJ/m² by 0.0418

UV-R = UV-A + UV-B (290-385 nm)

Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

11374

13087 **Total Langleys**

367

422 **Average Langleys**



Allunga Exposure Laboratory

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August

DAILY WEATHER RECORD

2010

	Temperature (°C)				Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	Dew Point		9am	9pm					UV-R			
			9am	9pm							Horiz	19°N	Horiz	
1	26	9	13	13	62	74	0.0	7.2	9.9	10.8	21.2	24.3	1.02	Fine
2	26	11	16	16	73	78	0.0	3.6	8.8	10.4	20.1	22.8	0.91	Fine
3	27	14	9	16	46	74	0.0	5.0	11.6	9.5	20.5	23.0	0.95	Fine
4	27	18	5	16	36	78	17.8	5.2	10.6	6.4	14.3	15.4	0.75	O/N Shower, Fine
5	24	12	6	9	41	61	0.0	6.6	8.2	11.1	21.7	24.8	1.04	Fine
6	24	8	7	7	48	62	0.0	5.2	4.6	11.0	22.0	25.0	1.08	Fine
7	24	9	7	12	45	66	0.0	7.8	11.1	11.1	21.8	24.8	1.02	Fine
8	25	12	12	15	64	79	0.0	4.2	12.0	11.1	20.8	23.6	0.95	Fine
9	26	11	16	17	71	85	0.0	4.8	12.7	10.6	19.8	22.3	0.90	Fine
10	26	12	18	15	82	73	0.0	4.4	15.0	9.9	21.5	24.0	1.04	Fine
11	26	13	16	17	70	77	0.0	6.2	13.4	10.5	20.6	23.0	0.96	Fine
12	26	19	16	14	71	67	0.0	4.0	14.0	10.8	19.7	22.1	0.95	Fine
13	26	13	12	15	56	67	0.0	8.4	13.7	10.6	21.0	23.5	1.00	Fine
14	27	12	6	15	35	69	0.0	7.2	12.4	11.0	21.9	24.3	1.04	Fine
15	26	14	13	18	56	76	0.0	5.8	9.2	3.5	18.1	18.8	0.77	Mist, Lt Cloud
16	26	15	17	16	73	75	0.0	6.6	9.8	10.7	22.0	24.5	1.04	Fine
17	27	13	17	15	76	67	0.0	4.8	11.1	10.8	21.2	23.5	0.98	Fine
18	26	17	14	14	58	68	0.0	7.4	6.7	11.0	22.2	24.7	1.10	Fine
19	27	13	11	13	51	62	0.0	8.0	0.0	9.5	19.4	21.2	0.90	Fine
20	28	20	12	15	50	69	0.0	9.4	0.0	7.9	20.9	22.5	0.98	Fine
21	27	17	15	13	61	61	0.0	7.8	0.0	8.5	20.3	22.0	0.91	Fine
22	26	16	13	16	58	76	0.0	9.6	2.7	10.8	23.0	25.4	1.12	Fine
23	27	19	13	16	57	74	0.0	6.8	10.0	8.9	15.6	16.9	0.81	Fine, Cloud
24	26	19	16	16	67	78	0.0	7.8	10.9	7.4	19.7	22.3	0.97	Fine, Cloud
25	27	19	16	17	63	77	0.0	6.8	0.5	6.6	14.4	15.2	0.75	Fine, Cloud
26	26	13	16	16	67	74	0.0	5.4	12.2	9.2	22.5	24.3	1.05	Fine
27	27	18	15	17	62	78	0.0	5.4	8.7	9.9	22.2	24.0	0.98	Fine
28	26	16	18	18	67	88	0.1	6.8	11.4	7.0	14.9	15.8	0.82	Fine, Cloud
29	27	20	20	19	87	85	15.5	4.6	17.0	7.1	16.7	17.7	0.85	Fine, Shower
30	27	21	20	20	79	86	0.0	5.6	15.0	5.3	15.9	16.5	0.73	Lt Cloud
31	27	21	20	19	82	79	6.4	4.6	13.2	6.4	20.6	21.6	0.95	O/N Shower, Fine
Average	26.2	15.0	13.7	15.3	62	74		6.2	9.6	9.2	19.9	21.9	0.95	
Total							39.8	193.0	296.4	285.3	616.5	679.8	29.32	

For Langleys divide MJ/m² by 0.0418

UV-R = UV-A + UV-B (290-385 nm)

Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

14747

16261 **Total Langleys**

476

525 **Average Langleys**



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September

DAILY WEATHER RECORD

2010

	Temperature (°C)				Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	Dew Point		9am	9pm					UV-R			
			9am	9pm							Horiz	19°N	Horiz	
1	27	22	20	20	81	79	0.0	4.8	7.8	4.5	15.8	16.6	0.85	Fine, Cloud
2	30	22	20	20	76	86	12.0	5.0	9.5	9.8	17.0	18.3	1.07	O/N Rain, Fine
3	28	20	19	19	77	82	0.5	7.2	14.5	6.1	15.6	16.2	0.67	Fine, Cloud
4	26	19	14	18	57	77	0.0	6.2	6.9	7.3	21.0	22.1	1.03	Fine
5	27	20	16	18	63	77	0.0	8.6	0.2	8.9	21.7	23.0	1.07	Fine
6	27	20	17	17	67	73	0.0	7.0	8.6	10.5	20.9	22.4	1.10	Fine
7	26	21	18	19	72	80	0.0	7.8	8.3	7.7	19.5	21.0	1.02	Fine, Lt Cloud
8	27	21	17	16	69	71	0.0	6.2	2.0	7.9	14.8	15.6	0.67	Fine
9	26	18	16	16	64	71	0.0	7.6	9.0	10.6	20.1	21.4	1.10	Fine
10	27	16	16	17	58	75	0.0	6.2	9.4	10.3	21.9	23.2	1.04	Fine
11	27	21	16	18	61	76	0.0	8.0	0.2	10.2	21.5	22.8	1.01	Fine
12	27	21	18	15	77	64	3.5	9.0	5.8	9.5	21.2	22.3	1.06	Fine
13	27	20	17	17	73	72	0.0	8.0	0.0	10.0	17.3	18.3	1.11	Fine
14	28	20	19	17	85	93	3.7	6.2	9.7	4.7	17.9	18.3	0.95	Fine, Shower
15	27	15	18	18	80	85	32.0	6.8	13.5	11.0	24.7	26.1	1.18	O/N Rain, Fine
16	28	21	20	19	69	80	0.0	6.0	4.6	10.6	24.6	25.9	1.12	Fine
17	28	22	19	20	69	83	0.0	7.6	10.0	10.8	23.7	24.9	1.10	Fine
18	28	21	21	20	72	88	0.0	6.6	4.5	9.2	22.7	23.7	1.11	Fine
19	31	20	21	20	73	88	0.0	5.0	5.7	11.1	26.0	27.3	1.20	Fine
20	29	20	18	19	64	80	0.0	8.0	10.9	11.7	23.9	25.1	1.21	Fine
21	28	20	18	18	63	80	0.0	5.6	12.5	10.2	24.6	25.7	1.21	Fine
22	28	17	19	18	69	70	0.0	6.2	13.0	9.7	20.3	21.1	1.13	Fine
23	28	22	18	19	68	73	0.0	8.6	6.0	9.7	20.2	20.9	1.02	Fine
24	27	21	16	17	70	69	0.5	9.2	4.5	2.5	9.2	9.2	0.42	Lt Cloud
25	28	22	14	16	50	65	0.0	6.8	0.0	8.5	17.6	18.1	0.84	Fine
26	28	18	15	12	53	53	0.0	10.2	0.0	9.9	21.2	21.8	0.89	Fine
27	28	18	15	16	62	65	0.0	10.4	0.0	10.0	16.6	17.1	0.92	Fine
28	28	21	14	16	52	63	0.0	10.6	0.0	9.3	21.0	21.5	0.92	Fine
29	28	19	16	17	70	67	2.5	10.8	10.4	8.8	19.8	20.3	1.12	Fine, O/N Shower
30	28	20	18	19	64	87	0.5	9.9	0.7	9.8	25.3	25.9	1.16	Fine
Average	27.7	19.9	17.4	17.7	68	76		7.5	6.3	9.0	20.3	21.2	1.01	
Total							55.2	226.1	188.2	270.8	607.6	636.1	30.30	

For Langleys divide MJ/m² by 0.0418
Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

UV-R = UV-A + UV-B (290-385 nm)

14534 15216 **Total Langleys**
469 491 **Average Langleys**



Allunga Exposure Laboratory

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October

DAILY WEATHER RECORD

2010

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	9am	9pm	9am	9pm					Horiz	19°N	Horiz	
1	28	19	17	17	64	69	0.0	10.0	7.4	11.2	23.8	24.4	1.15	Fine
2	28	21	17	16	67	69	0.0	8.6	6.3	9.1	22.4	22.9	1.09	fine
3	26	20	19	17	71	69	1.5	8.8	7.4	3.6	14.8	14.9	0.83	Fine, Cloud
4	29	19	16	17	56	73	2.0	7.0	9.0	8.2	22.4	22.7	0.98	O/N Shower, Fine
5	32	21	7	14	33	72	2.0	7.8	6.1	11.0	27.4	27.9	1.34	Fine
6	27	14	15	15	56	68	0.0	10.4	9.3	11.1	22.8	23.2	1.25	Fine
7	27	20	15	16	54	70	0.0	8.4	2.2	11.1	27.0	27.4	1.30	Fine
8	28	18	15	15	54	63	0.0	7.6	5.9	11.1	26.4	26.8	1.30	Fine
9	27	18	15	16	53	75	0.0	8.2	4.0	11.0	26.9	27.2	1.30	Fine
10	29	17	18	19	63	84	0.0	6.2	10.1	11.0	26.8	27.1	1.31	Fine
11	30	19	20	21	68	86	0.0	8.0	12.3	11.0	26.3	26.5	1.26	Fine
12	28	21	19	19	63	74	0.0	7.4	12.4	11.0	23.0	23.1	1.25	Fine
13	29	22	18	19	60	75	0.0	10.0	0.0	10.7	22.8	22.9	1.26	Fine
14	28	24	20	21	68	97	0.0	8.0	9.3	5.4	13.9	14.0	0.77	Fine, Lt Cloud
15	28	21	20	19	75	76	0.0	8.2	13.7	5.7	17.1	17.1	0.85	Fine, Lt Cloud
16	29	22	18	20	61	76	3.0	7.0	1.0	10.6	24.7	24.8	1.28	Fine
17	29	19	19	20	64	78	0.0	8.0	6.8	10.4	25.2	25.2	1.17	Fine
18	31	21	19	21	64	84	0.0	7.4	6.2	11.0	26.3	26.3	1.32	Fine
19	30	22	19	21	61	80	0.0	6.2	12.6	9.8	24.3	24.2	1.21	Fine
20	30	23	20	20	63	76	0.0	7.6	11.9	10.3	23.9	23.8	1.19	Fine
21	27	21	21	21	92	81	4.5	9.6	2.2	2.3	8.3	8.3	0.46	Cloud, Shower
22	27	23	21	20	80	78	3.5	4.6	7.6	1.4	9.4	9.3	0.35	Cloud Shower
23	29	22	19	18	65	68	14.0	5.8	11.3	11.4	26.0	25.8	1.29	O/N Rain, Fine
24	28	22	19	19	65	71	0.0	9.0	8.6	11.7	26.3	26.0	1.31	Fine
25	30	22	18	19	54	74	0.0	8.4	8.1	11.5	26.4	26.0	1.31	Fine
26	31	19	20	21	72	78	0.0	7.2	8.8	8.6	23.4	23.1	1.16	Fine
27	30	23	21	20	71	72	1.0	8.0	13.2	7.6	19.4	19.2	0.96	Fine, Lt Cloud
28	30	24	20	21	64	73	0.5	7.6	7.1	9.7	21.6	21.2	1.07	Fine
29	30	25	21	22	68	80	0.0	9.2	4.1	10.7	18.5	18.1	0.96	Fine
30	30	25	22	22	70	79	0.0	8.2	4.3	8.2	18.9	18.6	0.98	Fine
31	31	25	20	22	58	81	0.0	9.6	5.8	9.5	26.0	25.5	1.31	Fine
Average	29	21	18.3	19.0	64	76		8.0	7.6	9.3	22.3	22.4	1.12	
Total							32.0	248.0	235.0	286.9	692.4	693.5	34.57	
For Langleys divide MJ/m ² by 0.0418											16562	16589 Total Langleys		
Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency											534	535 Average Langleys		



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November

DAILY WEATHER RECORD

2010

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	9am	9pm	9am	9pm					UV-R			
							Horiz	19°N	Horiz					
1	29	24	19	21	62	78	0.0	10.8	10.2	9.2	21.7	21.3	0.92	Fine, Lt Cloud
2	31	25	21	23	66	85	0.0	7.4	11.0	10.0	23.1	22.6	1.09	Fine
3	31	22	22	23	73	85	0.0	10.0	10.6	10.8	25.3	24.7	1.18	Fine
4	32	24	21	23	62	84	0.0	7.8	7.1	11.8	26.0	25.3	1.27	Fine
5	35	20	9	20	27	76	0.0	8.4	11.8	11.6	27.6	26.9	1.36	Fine
6	34	17	7	18	22	66	0.0	12.0	10.9	12.2	28.4	27.6	1.31	Fine
7	34	17	14	22	41	83	0.0	12.0	11.0	12.1	27.3	26.4	1.23	Fine
8	34	21	23	23	70	89	0.0	8.0	10.6	11.1	27.1	26.3	1.35	Fine
9	32	23	21	22	63	77	0.0	8.8	10.3	11.3	26.3	25.5	1.29	Fine
10	30	24	19	18	55	64	0.0	9.6	5.0	11.6	25.2	24.3	1.11	Fine
11	30	23	18	19	53	67	0.0	9.2	4.3	12.2	25.9	25.0	1.29	Fine
12	31	23	18	18	54	63	0.0	10.6	5.7	12.1	24.0	23.2	1.25	Fine
13	30	23	15	17	46	62	0.0	11.8	6.0	12.3	27.4	26.4	1.33	Fine
14	30	22	18	20	56	71	0.0	10.2	3.3	11.1	25.5	24.6	1.38	Fine
15	32	25	18	19	58	69	0.0	10.8	6.5	12.1	26.9	25.9	1.38	Fine
16	31	22	20	20	63	70	0.0	8.6	4.1	12.1	25.9	24.9	1.40	Fine
17	30	26	20	19	59	74	0.0	11.6	2.6	11.4	22.7	21.8	1.38	Fine
18	31	24	20	20	61	72	0.0	10.2	0.0	11.7	24.5	23.5	1.38	Fine
19	31	24	20	19	59	65	0.0	11.0	5.0	12.2	25.5	24.4	1.38	Fine
20	30	24	20	20	62	70	0.0	9.8	6.4	11.2	26.8	25.7	1.40	Fine
21	31	23	21	21	65	73	0.0	10.0	3.0	10.8	25.5	24.5	1.40	Fine
22	31	25	21	22	62	76	0.0	11.0	4.2	7.1	23.1	22.4	1.30	Fine, Lt Cloud
23	32	26	22	22	66	73	0.0	7.8	7.4	10.5	22.2	21.3	1.30	Fine
24	32	26	24	22	85	74	0.0	7.6	3.3	11.6	25.0	23.9	1.38	Fine
25	32	25	21	20	62	69	2.5	14.6	8.6	11.4	26.1	24.9	1.40	Fine, Shower
26	31	23	18	18	54	62	0.0	10.6	0.0	12.3	26.3	25.0	1.40	Fine
27	31	25	21	21	63	73	0.0	12.0	10.0	11.9	25.6	24.3	1.40	Fine, O/N Shower
28	29	24	23	21	92	75	21.5	10.6	11.4	2.4	16.6	16.4	0.75	Shower, Fine
29	29	23	22	21	78	72	9.0	6.0	10.6	4.2	16.4	16.1	0.80	Shower, Fine
30	31	25	22	21	71	75	0.0	10.4	9.3	9.4	20.5	20.0	1.05	Fine, Lt Cloud
Average	31	23	19.3	20.4	60	73		10.0	7.0	10.7	24.7	23.8	1.26	
Total							33.0	299.2	210.2	321.7	740.4	715.1	37.86	

For Langleys divide MJ/m² by 0.0418 UV-R = UV-A + UV-B (290-385 nm)
Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

17710 17105 **Total Langleys**
571 552 **Average Langleys**



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December

DAILY WEATHER RECORD

2010

	Temperature (°C)		Dew Point		Relative Humidity (%)		Rain mm	Evap mm	Wet Time Hours	Sun Shine Hours	Global Radiation (MJ/m ²)			Remarks
	Max	Min	9am	9pm	9am	9pm					UV-R			
											Horiz	19°N	Horiz	
1	31	24	19	20	58	68	7.5	7.2	10.3	7.4	19.3	18.6	0.96	Fine
2	31	23	18	20	55	68	0.0	8.0	9.7	10.9	18.9	17.9	1.19	Fine
3	31	24	19	21	60	68	0.0	11.2	9.4	12.1	22.5	21.3	1.24	Fine
4	30	22	18	19	56	75	4.0	12.0	9.3	9.8	20.4	19.5	1.16	Fine
5	28	22	19	20	75	92	23.5	10.8	11.6	4.2	16.5	16.2	0.76	Fine, Shower
6	26	21	21	19	88	83	63.0	5.6	24.0	0.0	9.2	9.2	0.53	Storm, Rain
7	30	21	22	20	78	75	33.5	2.6	21.1	10.8	21.7	20.6	1.31	O/N Rain, Fine
8	30	23	21	21	69	75	0.0	9.4	4.3	11.5	23.1	21.9	1.28	Fine
9	31	22	20	21	63	75	0.0	8.6	7.2	11.3	25.3	23.9	1.43	Fine
10	31	24	20	20	61	72	0.0	8.8	8.8	12.5	26.5	24.9	1.47	Fine
11	31	24	21	20	61	68	0.0	10.4	0.0	11.9	24.7	23.3	1.37	Fine
12	31	26	21	21	63	70	0.0	10.0	1.3	11.9	17.5	16.5	1.15	Fine
13	31	25	20	21	58	69	0.0	11.8	4.0	11.9	24.2	22.8	1.24	Fine
14	32	25	19	20	56	67	0.0	11.8	0.0	12.1	25.5	24.0	1.47	Fine
15	31	24	18	20	53	66	0.0	10.8	1.6	12.1	27.2	25.5	1.49	Fine
16	31	23	17	18	51	64	0.0	11.2	1.3	12.2	24.9	23.4	1.35	Fine
17	31	22	19	20	61	68	0.0	12.0	0.0	12.5	26.8	25.1	1.46	Fine
18	31	22	18	19	52	65	0.0	8.0	5.0	11.9	20.7	19.5	1.34	Fine
19	31	22	20	17	62	56	0.0	11.6	0.0	11.0	22.7	21.5	1.32	Fine
20	31	24	17	18	49	63	0.0	11.4	0.3	11.6	18.7	17.6	1.03	Fine
21	30	23	21	22	70	89	8.0	13.0	7.8	7.6	17.2	16.5	0.89	Fine, Shower
22	31	23	22	20	70	70	15.5	6.8	7.6	10.2	26.0	24.7	1.18	Fine, Shower
23	32	25	22	21	67	74	5.6	8.0	5.4	12.4	26.5	24.9	1.41	Fine, Shower
24	32	25	24	24	72	80	0.0	9.6	4.2	10.1	23.0	21.8	1.12	Fine
25	33	27	26	25	79	83	0.0	8.8	0.8	9.6	21.8	20.7	1.05	Fine
26	31	25	25	26	96	87	21.5	10.4	13.1	7.7	17.5	16.5	0.88	Fine, Cloud, Rain
27	32	22	26	25	80	80	57.0	14.8	15.8	7.0	22.1	21.3	1.05	Fine, Storm, Rain
28	32	26	25	23	76	75	11.5	8.0	15.1	12.3	21.7	20.4	1.26	O/N Rain, Fine
29	33	26	23	21	66	67	0.0	9.8	8.5	12.2	27.2	25.6	1.48	Fine
30	31	24	22	19	63	63	0.0	9.6	10.2	12.7	27.4	25.7	1.50	Fine
31	32	24	20	20	58	67	0.0	11.6	7.6	12.3	27.3	25.7	1.44	Fine
Average	30.9	23.6	20.7	20.7	65	72		9.8	7.3	10.4	22.4	21.2	1.22	
Total							250.6	303.6	225.3	323.7	694.0	657.0	37.81	

For Langleys divide MJ/m² by 0.0418

UV-R = UV-A + UV-B (290-385 nm)

Townsville UV data recorded by Australian Radiation Protection and Nuclear Safety Agency

16600
535

15715 **Total Langleys**
507 **Average Langleys**