
bomshell

Release 1.0.2

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bomshell is used to retrieve weather data from the [Australian Bureau of Meteorology's \(BOM\) public ftpsite](#), and display the result in the shell, where it belongs, as God intended it. Not this silly web clownsuit bullshit the kids are all agog about.

bomshell retrieves the spatial data from the public ftp site and packs it into a local database. Tools are provided to build and maintain the local database. Queries can be made of the database and the spatial database files. As the tool matures the spatial database will be used to determine the product ID's of reports the user is interested in and those specific products downloaded from the BOM's public ftp site.

CHAPTER 1

Installation

```
pip install bomshell
```


CHAPTER 2

Sample Usage

All bomshell command line options are available from the `--help` option

```
$ bomshell
Usage: bomshell [OPTIONS] COMMAND [ARGS]...

Retrieve weather data from the Australian Bureau of Meteorology

Options:
  --version            Show the version and exit.
  -v, --verbose        Level of verbosity of logs
  -c, --cache-path PATH BOM data cache path, Default:
                       /home/thys/.cache/bomshell
  --help              Show this message and exit.

Commands:
  spatial  Spatial database management
```

Sub-commands' options are also available using `--help` on the subcommand.

In order to know what the BOM calls a specific product you need to figure out what the product ID is. This is available from the spatial databases. `bomshell` downloads the current spatial data and packs it into a convenient local database that can be queried for, amongst other things, product ID's.

The local spatial database can be synced, or re-build as necessary.

```
$ bomshell spatial
Usage: bomshell spatial [OPTIONS] COMMAND [ARGS]...

Spatial database management

Options:
  -o, --overwrite / --no-overwrite  Overwrite existing spatial data, default is:
                                       False
  --help                              Show this message and exit.
```

```
Commands:
  build      Build the local spatial database
  csvdump    Dump spatial data to csv
  fetch      Fetch spatial data
  sync       Sync the local spatial data, overwriting...
  tabledump  Dump spatial data to table
```

All spatial data can be printed to nicely formatted tables. Many output formats are available.

```
$ bomshell spatial tabledump --help
Usage: bomshell spatial tabledump [OPTIONS]

  Dump spatial data to table

Options:
  -s, --spatial-type [cyclone_areas|fire_districts|forecast_districts|high_sea_
↪areas|marine_zones|metros|ocean_wind_warning|point_places|radar_coverage|radar_
↪location|rainfall_districts]
                                choose a spatial type
  -f, --table-format [fancy_grid|grid|html|jira|latex|latex_
↪booktabs|mediawiki|moinmoin|orgtbl|pipe|plain|psql|rst|simple|textile|tsv]
                                choose a table type
  --help                        Show this message and exit.
```

CHAPTER 3

Examples

```
$ bomshell spatial tabledump --spatial-type radar_coverage --table-format rst
```

Results in the following table:

South Doodlakine	58	117.953	-31.777	South Doodlakine	SthDood	SthDoodlakine	WA
Weipa	18	141.925	-12.666	Weipa	Weipa	Weipa	QLD
Sydney	71	151.209	-33.7008	Sydney (Terrey Hills)	TerreyHills	TerreyHills	NSW
Adelaide	64	138.469	-34.6169	Adelaide (Buckland Park)	BuckPk	BucklandPk	SA
Alice Springs	25	133.888	-23.796	Alice Springs	AliceSp	AliceSprings	NT
Brisbane	66	153.24	-27.7178	Brisbane (Mt Stapylton)	MtStapl	MtStapylton	QLD
Broome	17	122.235	-17.9483	Broome	Broome	Broome	WA
Cairns	19	145.683	-16.817	Cairns	Cairns	Cairns	QLD
Carnarvon	5	113.669	-24.8878	Carnarvon	Carnvn	Carnarvon	WA
Ceduna	33	133.696	-32.1298	Ceduna	Ceduna	Ceduna	SA
Dampier	15	116.687	-20.65	Dampier	Dampier	Dampier	WA
Darwin	63	130.925	-12.457	Darwin (Berrimah)	Berrima	Darwin	NT
Esperance	32	121.892	-33.8303	Esperance	Esprnce	Esperance	WA
Mt Gambier	14	140.775	-37.7477	Mount Gambier	Gambier	MtGambier	SA
Geraldton	6	114.697	-28.8044	Geraldton	Gerlton	Geraldton	WA
Giles	44	128.3	-25.03	Giles	Giles	Giles	WA
Gladstone	23	151.263	-23.855	Gladstone	Gladstn	Gladstone	QLD
Gove	9	136.823	-12.275	Gove	Gove	Gove	NT
Grafton	28	152.951	-29.622	Grafton	Grafton	Grafton	NSW
Mornington Is	36	139.167	-16.666	Mornington Island (Gulf of Carpentaria)	Glfcarp	GulfCarp	NT
Halls Creek	39	127.663	-18.231	Halls Creek	HallsCk	HallsCreek	WA
Port Hedland	16	118.632	-20.3719	Port Hedland	PtHedland	PtHedland	WA
Hobart Ap	37	147.501	-42.8374	Hobart Airport	HobartAP	HobartAP	TAS
Gympie	8	152.577	-25.9574	Gympie (Mount Kanigan)	Kanign	Gympie	QLD
Kurnell	54	151.226	-34.0148	Sydney (Kurnell)	Kurnell	Kurnell	NSW
Melbourne	2	144.755	-37.8552	Melbourne (Laverton)	Melb	Melbourne	VIC

Table 3.1 – continued from previous page

Learmonth	29	113.999	-22.103	Learmonth	Lrmonth	Learmonth	WA
Newcastle	4	152.025	-32.73	Newcastle	LemnTre	Newcasle	NSW
Wollongong	3	150.875	-34.2625	Wollongong (Appin)	Wollgng	Wollgng	NSW
Longreach	56	144.29	-23.43	Longreach	Longrch	Longreach	QLD
Mackay	22	149.217	-21.117	Mackay	Mackay	Mackay	QLD
Marburg	50	152.539	-27.608	Brisbane (Marburg)	Marburg	Brisbane	QLD
Mildura	30	142.086	-34.235	Mildura	Mildura	Mildura	VIC
Moree	53	149.85	-29.5	Moree	Moree	Moree	NSW
Perth Ap	26	115.976	-31.9273	Perth Airport	PrthAP	PerthAP	WA
Sellicks Hill	46	138.5	-35.33	Adelaide (Sellicks Hill)	Sellick	Adelaide	SA
Katherine	42	132.446	-14.513	Katherine (Tindal)	Tindal	Tindal	NT
Wagga Wagga	55	147.467	-35.167	Wagga Wagga	Wagga	Wagga	NSW
Willis Is	41	149.965	-16.2874	Willis Island	Willis	WillisIs	QLD
Woomera	27	136.803	-31.157	Woomera	Woomera	Woomera	SA
NW Tasmania	52	145.579	-41.181	NW Tasmania (West Takone)	WTakone	NW-Tas	TAS
Wyndham	7	128.119	-15.453	Wyndham	Wyndham	Wyndham	WA
Yarrawonga	49	146.023	-36.0297	Yarrawonga	NE-Vic	Yarrawonga	VIC
Canberra	40	149.512	-35.6614	Canberra (Captains Flat)	CapFlat	CaptFlat	NSW
Norfolk Is	62	167.933	-29.033	Norfolk Island	Norfolk	NorfolkIs	NSW
Bowen	24	148.075	-19.886	Bowen	Bowen	Bowen	QLD
Warrego	67	147.349	-26.44	Warrego	Warrego	Warrego	QLD
Bairnsdale	68	147.576	-37.8876	Bairnsdale	Bnsdale	Bairnsdale	VIC
Darwin Ap	10	130.892	-12.4247	Darwin Airport	Darwin	DarwinAP	NT
Melbourne Ap	51	144.831	-37.6656	Melbourne Airport	MelbnAP	TullaAP	VIC
Emerald	72	148.239	-23.5498	Emerald	Emerald	Emerald	QLD
Perth	70	115.867	-32.3917	Perth (Serpentine)	SerpTin	Serpentine	WA
Namoi	69	150.192	-31.0236	Namoi (Blackjack Mountain)	Namoi	Namoi	NSW
Townsville	73	146.551	-19.4198	Townsville (Hervey Range)	HrvyRng	HrvyRng	QLD
Hobart	76	147.806	-43.1122	Hobart (Mt Koonya)	MtKoonya	MtKoonya	TAS
Albany	31	117.816	-34.9418	Albany	Albany	Albany	WA
Mt Isa	75	139.555	-20.7112	Mount Isa	Mnt_Isa	Mnt_Isa	QLD
Warruwi	77	133.38	-11.6485	Warruwi	Arafura	Arafura	NT
Kalgoorlie	48	121.455	-30.7834	Kalgoorlie	K/grlie	Kalgoorlie	WA
Newdegate	38	119.009	-33.097	Newdegate	Ndegate	Newdegate	WA

The spatial data type needs to be specified when doing queries on the database.

```
$ bomshell spatial tabledump --spatial-type forecast_districts --table-format fancy_
↳grid
| NSW_PW001 | 1 | Northern Rivers | NSW |
↳
-----
| NSW_PW002 | 2 | Mid North Coast | NSW |
↳
-----
| NSW_PW003 | 3 | Hunter | NSW |
↳
-----
| NSW_PW004 | 4 | Northern Tablelands | NSW |
↳
-----
| NSW_PW005 | 5 | Metropolitan | NSW |
↳
```

-----	NSW_PW006 6 Illawarra	NSW	└
↔			
-----	NSW_PW007 7 South Coast	NSW	└
↔			
-----	NSW_PW008 8 Central Tablelands	NSW	└
↔			

CHAPTER 4

Versioning

Current version is 1.0.2