@prism project

Christophe BAL

9 Nov 2025 – Version 1.2.1

The `@prism` project[1] provides small size color palettes that can be used to create expressive color maps for graphics in different contexts.

Last changes

1.2.1
2025-11-09

Fix.

- Equal palettes: the floating point equality uses now a correct tolerance.

Break.

- Palettes: the extra `Greys` has been removed (it is equal to `Grays`).

New.

- Similar palettes: two PDF files show similar palettes in standard and black modes (semi-automated process used).

Update.

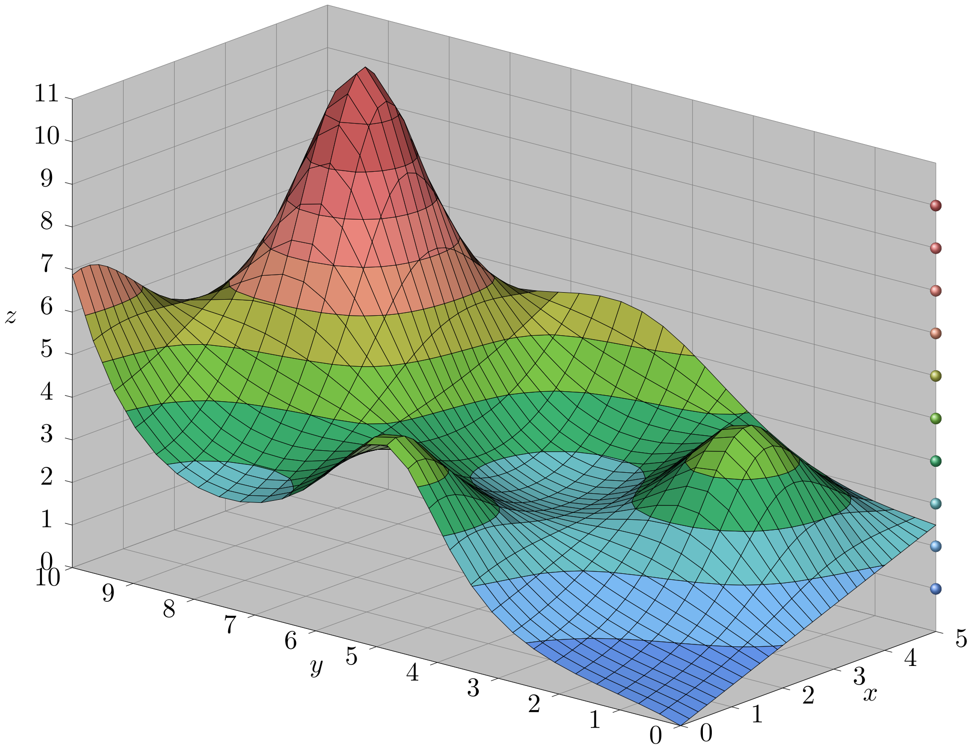
- `luadraw` product: the associative array `palNames` has been added for compatibility reasons with the `luadraw` package.
- `BlindFish` palette: the last color variation has been made smoother (`luadraw` process used).

[1] The name comes from "***@ · esthetic P · roducts** for **R · epresenting I · nformative S · cientific M · aps***". This name is a double play on words: [1] a prism splits light into an informative spectrum, symbolizing how data are decomposed into meaningful color, and [2] "@" read as "at" indicates where the light meets the prism to be broken down into an informative spectrum.

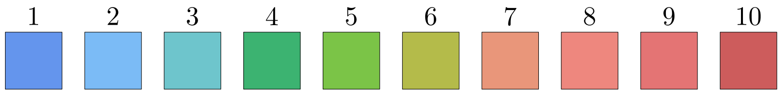
Contents

I. Motivations

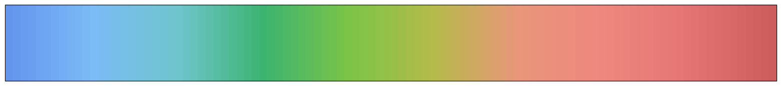
Originally, this project was born out of a desire to enhance `luadraw` with a set of color palettes to easily produce something like the following 3D plot.



Technically, a finite list of colors is provided to `luadraw` which then uses linear interpolation to calculate the intermediate colors. In the previous case, the finite color palette used is defined as follows.

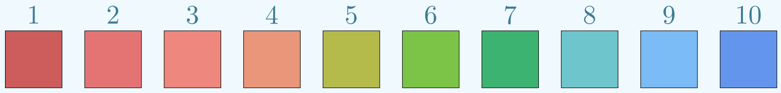


Using this palette, `luadraw` is able to produce the following spectrum, allowing us to create the graph above.

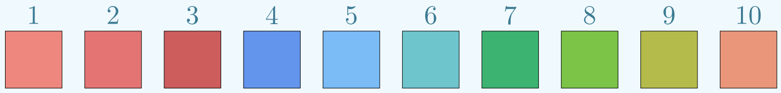


Note.

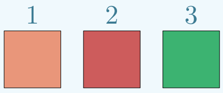
Using the `luadraw` implementation of `@prism`, see the section V-2, we can create the palettes below made from the previous one named `'GeoRainbow'`. Each instruction used is given below each palette.



`getPal('GeoRainbow', {reverse = true})`

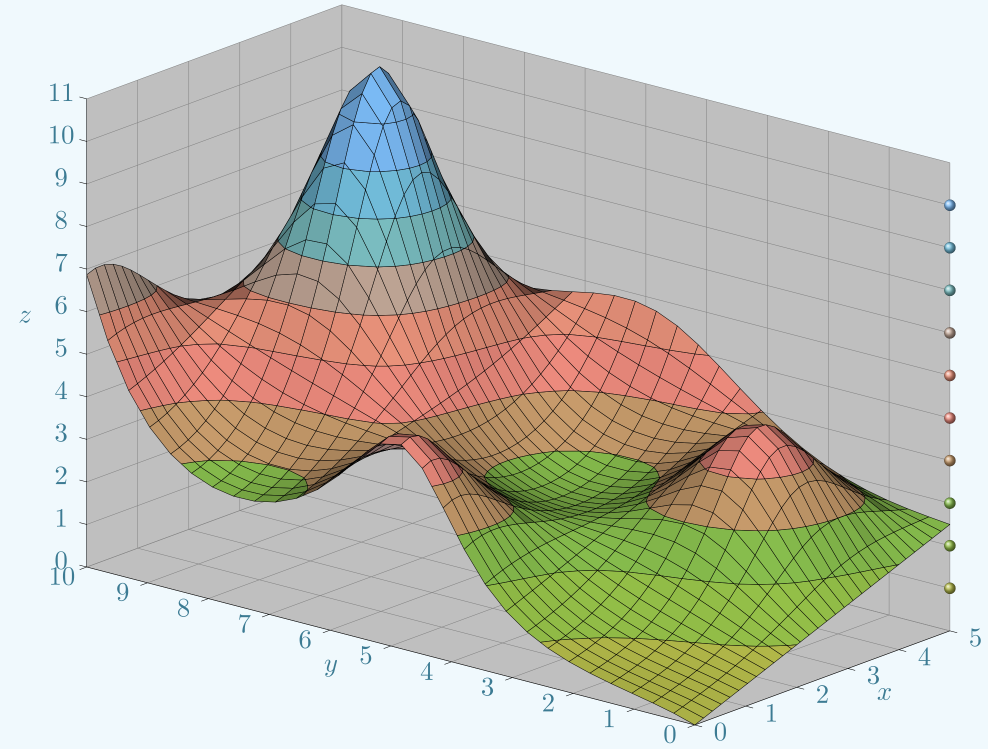


`getPal('GeoRainbow', {shift = 3})`



`getPal('GeoRainbow', {extract = {7, 10, 4}})`

This features provide remarkable creative flexibility: with the same surface as before, but using the setting `getPal('GeoRainbow', {extract = {2, 3, 7, 8, 5, 6}, reverse = true})` instead of `getPal('GeoRainbow')`, we instantly change the visual tone, shifting from a seaside feel to a snow-covered world.



II. Where do the color palettes come from?

`@prism` includes some original creations, but most color palettes are derived from the projects listed below by segmenting their color maps into 10-value palettes.

- `Asymptote` is used, but currently offers nothing beyond `Matplotlib` (despite different implementations).
- `CartoColor` palettes are extracted from `Palettable` project.
- `cmocean` palettes are extracted from `Palettable` project.
- `Colorbrewer` provides professional color palettes for mapping and data visualization.
- `Light and Bartlein` palettes are extracted from `Palettable` project.
- `Matplotlib` compiles color maps from diverse projects, serving as the foundation for the initial palette list.
- `MyCarta` palettes are extracted from `Palettable` project.
- `Plotly` palettes are extracted from `Palettable` project.
- `Scientific Coulour Maps` provides palettes designed for colorblind accessibility.
- `Tableau` palettes are extracted from `Palettable` project.
- `Wes Anderson Palettes` palettes are extracted from `Palettable` project.

We retain only palettes that comply with the following rules.

- **No repetition.** Unlike `Matplotlib`,[2] `@prism` use a one-to-one map from names to palettes.
- **No reversed versions.** Unlike `Matplotlib`,[3] `@prism` never includes reversed palettes as fixed data.

> **Note.**
>
> *Adding new palettes to `@prism` is straightforward (no coding skills required). See section VI-2 to get started.*

[2] Some `Matplotlib` palettes are duplicated, likely for historical reasons.

[3] Most `Matplotlib` color maps have a reversed version named with the `_r` suffix, possibly for performance reasons.

III. Reuse from...

Here are the key points to remember when using palettes similar to those offered by projects listed in the section II.

1. `@prism` uses standardized `CamelCase` notation. Therefore, palette names such as `berlin` and `gist_heat` become `Berlin` and `GistHeat` respectively.

2. `Matplotlib` palettes with a name ending with `_r` (reversed color order) are not included in `@prism`.

3. The following presents palettes from projects other than `Matplotlib` that have been kept but renamed: $\boxed{\Rightarrow}$ indicates a name modification, with the `@prism` name displayed on the right.

CartoColors	`Prism`	$\Rightarrow$	`PrismCC`
Plotly	`Rainbow`	$\Rightarrow$	`RainbowPly`
Tableau	`Gray`	$\Rightarrow$	`GrayTab`

4. The following palettes are excluded because they duplicate `@prism` palettes either directly or in reversed order, except that exact duplicates (same name and colors) are omitted when they don't come from `Matplotlib`, and we use $\boxed{=}$ for equality, $\boxed{\rightleftharpoons}$ for reversal, and the rightmost palettes are the ones retained in `@prism`.

Cubehelix	`Classic`	$=$	`Cubehelix`
Matplotlib	`GistGray`	$\rightleftharpoons$	`Binary`
	`GistGrey`	$\rightleftharpoons$	`Binary`
	`GistYarg`	$=$	`Binary`
	`GistYerg`	$=$	`Binary`
	`Gray`	$\rightleftharpoons$	`Binary`
	`Grey`	$\rightleftharpoons$	`Binary`
	`Greys`	$=$	`Grays`
Plotly	`D3`	$=$	`Tab10`
cmocean	`Balance`	$=$	`Vik`
	`Gray`	$=$	`Binary`

Caution.

Most `@prism` implementations add the `pal` prefix to standardized `CamelCase` names. See the section V.

Note.

Most `@prism` implementations provide methods to easily obtain reversed palettes, sub-palettes, and color-shifted palettes. See the section V.

IV. How to choose a palette?

Two methods are available to find the ideal palette.

1. The documents `showcase-en-std.pdf` (light theme) and `showcase-en-dark.pdf` (dark theme) present use cases for each palette.

2. Appendix 1 page 10 presents all palettes organized by theme with a visualization of their color spectrum.

Note.

Appendix 2 page 26 groups visually similar palettes together.

V. Supported implementations

The implementations are inside the folder `products`.

1. JSON, the versatile default format

By default, a file `palettes.json` is provided to allow unsupported coding languages to also integrate `@prism` palettes. Here are the first line of this file.

```
{
  "Accent": [
    [0.498039, 0.788235, 0.498039],
    [0.690196, 0.705881, 0.757298],
    [0.882352, 0.721568, 0.661437],
    [0.99477, 0.835294, 0.550326],
    [0.913289, 0.935947, 0.610021],
    [0.306317, 0.487581, 0.680174],
    [0.700653, 0.146404, 0.562091],
    [0.855772, 0.162962, 0.316775],
    [0.671459, 0.366448, 0.159041],
    [0.4, 0.4, 0.4]
  ],
  ...
}
```

2. luadraw palettes

a. Description

You can use `@prism` palettes with `luadraw` which is a package that greatly facilitates the creation of high-quality 2D and 3D plots via LuaLaTeX and `TikZ`.

Note.

Initially, the `@prism` project was created to provide ready-to-use palettes for `luadraw`.

b. Use a luadraw palette

The `Lua` palette names all use the prefix `pal` followed by the name available in the file `palettes.json`. You can access a palette by three ways.

- `palGistHeat` is a `Lua` variable.
- `getPal('GistHeat')` and `getPal('palGistHeat')` are equal to `palGistHeat`.
- `palNames['palGistHeat']` is equal to `palGistHeat`.

Note.

The `Lua` palette variables are arrays of arrays of three floats. Here is the definition of `palGistHeat`.

```
palGistHeat = {
    {0.0, 0.0, 0.0},
    {0.105882, 0.0, 0.0},
    {0.211764, 0.0, 0.0},
    {0.317647, 0.0, 0.0},
    {0.429411, 0.0, 0.0},
    {0.535294, 0.0, 0.0},
    {0.641176, 0.0, 0.0},
    {0.752941, 0.003921, 0.0},
    {0.858823, 0.145098, 0.0},
    {0.964705, 0.286274, 0.0},
    {1.0, 0.42745, 0.0},
    {1.0, 0.57647, 0.152941},
    {1.0, 0.717647, 0.435294},
    {1.0, 0.858823, 0.717647},
    {1.0, 1.0, 1.0}
}
```

The `getPal` function has some options. To explain how this works, let's consider the following use case.

```
mypal = getPal(
    'GistHeat',
    {
        extract = {2, 5, 8, 9},
        shift   = 1,
        reverse = true
    }
)
```

To simplify the explanations, we will refer to the colors in the standard palette `'GistHeat'` as `coul_1`, `coul_2`, etc. The options are then **processed in the following order**.

1. `{coul_2, coul_5, coul_8, coul_9}` is the result of the extraction.
2. `{coul_9, coul_2, coul_5, coul_8}` comes from the shifting applied to the extracted palette (colors move to the right if `shift` is positive).
3. `{coul_8, coul_5, coul_2, coul_9}` is the reversed version of the shifted palette.

> **Note.**
>
> *The reversed version of any palette can be obtained using `getPal(palname, {reverse = true})`.*

VI. Contribute via Git

> **Caution.**
>
> *Never use the `main` branch, which is for freezing the latest stable versions of all the projects in the mono repository `https://github.com/projetmbc/for-writing`.*

1. Complete the translations

> **Important.**
>
> *Although we're going to explain how to translate the documentation, it doesn't seem relevant to do so, as English should suffice these days.*

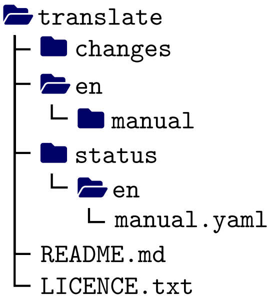


Figure 1: Simplified view of the translation folder

The translations are roughly organized as in figure 1 where just the important folders for the translations have been "*opened*".[4] **A little further down, the section VI-1-e explains how to add new translations.**

a. The en folder

This folder, managed by the author of `@prism`, contains files easy to translate even if you're not a coder.

[4] This was the organization on October 26, 2025.

b. The changes folder

This folder is a communication tool where important changes are indicated without dwelling on minor modifications specific to one or more translations.

c. The status folder

This folder is used to keep track of translations from the project's point of view. Everything is done via well-commented YAML files, readable by a non-coder.

d. The README.md and LICENCE.txt files

The `LICENCE.txt` file is aptly named, while the `README.md` file takes up in English the important points of what is said in this section about new translations.

e. New translations

> **Note.**
>
> *The folder* `manual` *is reserved for documentation. It contains* TEX *files that can be compiled directly for real-time validation of translations.*

> **Warning.**
>
> *Only start from the* `en` *folder, as it's the responsibility of the* `@prism` *author.*

Let's say you want to add support for Italian.[5] To do this, you must use `Git` as follows.

1. Via `https://github.com/projetmbc/for-writing/tree/aprism/@prism`, recover the entire project folder. Do not use the `main` branch, which is used to freeze the latest stable versions of all the projects in the mono repository `https://github.com/projetmbc/for-writing`.

2. In the `@prism/contrib/translate` folder, create an `it` copy of the `en` folder, where `it` is the short name of the language documented in the page "*IIETF language tag*" from `Wikipedia`.

3. Once the translation is complete in the `it` folder, share it via `https://github.com/projetmbc/for-writing/tree/aprism/@prism` using a classic `git push`.

2. Improving the source code

Participation as a coder is made via the repository `https://github.com/projetmbc/for-writing/tree/aprism/@prism` corresponding to the `@prism` development branch. Here is what you can do, details can be found in the file `https://github.com/projetmbc/for-writing/blob/aprism/@prism/contrib/products/README.md`.

1. Create new palettes within an existing implementation. No coding skills required.

2. Propose a new implementation in your favorite programming language.

3. Combine both approaches.

VII. History

1.2.1
2025-11-09

Fix.

- Equal palettes: the floating point equality uses now a correct tolerance.

Break.

- Palettes: the extra `Greys` has been removed (it is equal to `Grays`).

New.

- Similar palettes: two PDF files show similar palettes in standard and black modes (semi-automated process used).

[5] As mentioned above, there is no real need for the `doc` folder.

Update.

- `luadraw` product: the associative array `palNames` has been added for compatibility reasons with the `luadraw` package.
- `BlindFish` palette: the last color variation has been made smoother (`luadraw` process used).

1.2.0
2025-10-29

Break.

- Palettes: all final palettes now consist of 10 colors.
- `luadraw` products: the `getPal` dictionary array has been converted into a function accepting string palette names (with or without `pal` prefix). See below.

New.

- Palettes.
  - Added `Lemon` and `ShiftRainbow` palettes (`luadraw` creation process used).
  - Added 37 palettes from the `Scientific Coulour Maps` project.
- `luadraw` product: accessing a palette and creating new ones can be made using the `getPal` function which has an optional argument `options` (dict-like array) with the following keys and their values.
  - `extract`: a list of non-zero integers used to extract specific colors from the palette (the order is preserved).
  - `reverse`: a boolean value indicating whether to reverse the palette color order (`false` by default).
  - `shift`: an integer value for applying a circular color shift to the palette.
- Documentations
  - Added English PDF manual.
  - Showcase: two PDF files demonstrate the use of each palette (white and dark modes).

1.1.0
2025-10-14

Break.

- Duplicate palettes and those that are reverse of others are ignored (strict equalities only).

New.

- New palettes added: `BurningGrass`, `GeoRainbow` and `PastelRainbow` (`luadraw` creation process used).
- The `luadraw` palette product has a new dictionary like variable `getPal` to access a palette using its name (as a string variable).

Update.

- Palette contributions: in the mandatory `extend.py` file, the `build_code` function must work with the dictionary of all the palettes, and manage a credit to the `@prism` project.

1.0.0
2025-10-11

First public version of the project.

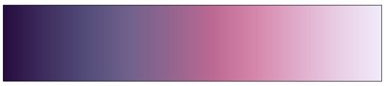
Appendix 1 – The 258 palettes at a glance

The palette names used in this appendix are standard, but most `@prism` implementations add the `pal` prefix.

Important.

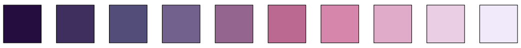
Categories were generated semi-automatically using a program, followed by manual selection to obtain relevant choices. If you identify any errors, please contact the author of `@prism`.

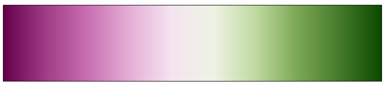
Colorblind-friendly palettes – 40 palettes



`Acton`

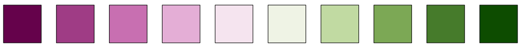
Scientific Colour Maps

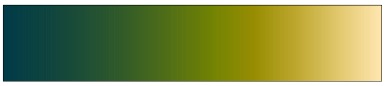




`Bam`

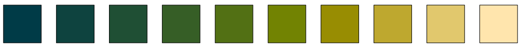
Scientific Colour Maps

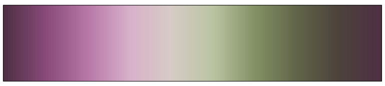




`Bamako`

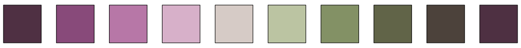
Scientific Colour Maps

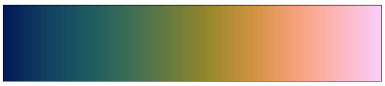




`BamO`

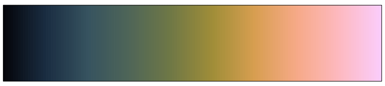
Scientific Colour Maps





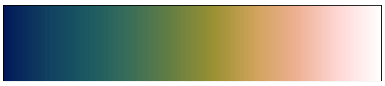
`Batlow`

Scientific Colour Maps



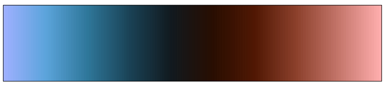
`BatlowK`

Scientific Colour Maps



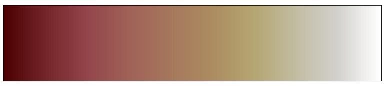
`BatlowW`

Scientific Colour Maps



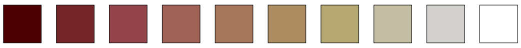
`Berlin`

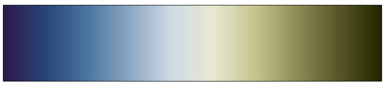
Scientific Colour Maps



`Bilbao`

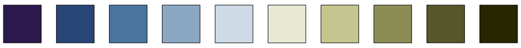
Scientific Colour Maps

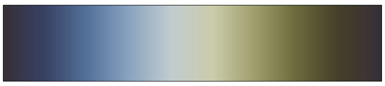




`Broc`

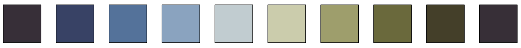
Scientific Colour Maps

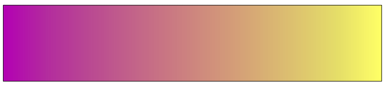




`BrocO`

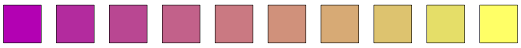
Scientific Colour Maps

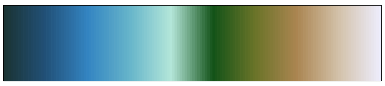




`Buda`

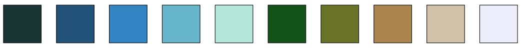
Scientific Colour Maps

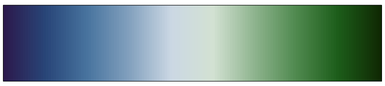




`Bukavu`

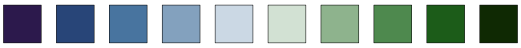
Scientific Colour Maps

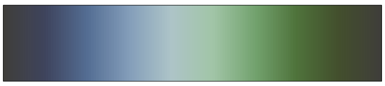




`Cork`

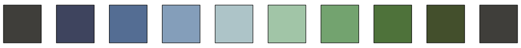
Scientific Colour Maps

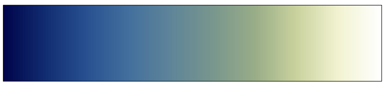




`CorkO`

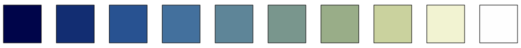
Scientific Colour Maps

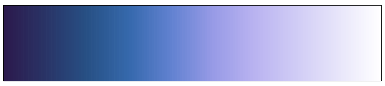




`Davos`

Scientific Colour Maps





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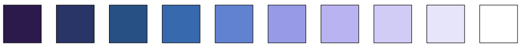
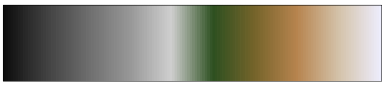
Scientific Colour Maps





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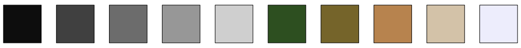

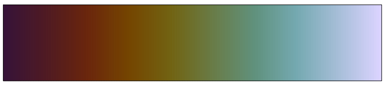

Glasgow

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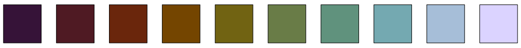
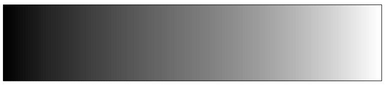
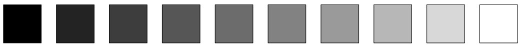
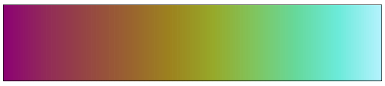




GrayC

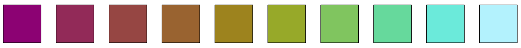
Scientific Colour Maps

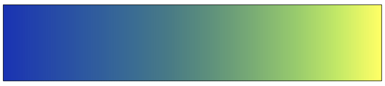




Hawaii

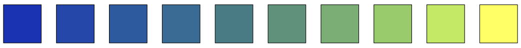
Scientific Colour Maps

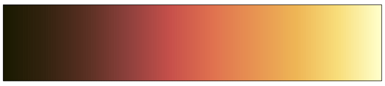




Imola

Scientific Colour Maps





Lajolla

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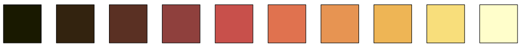

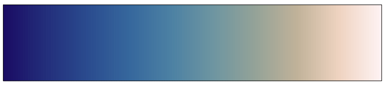

Lapaz

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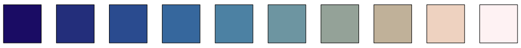
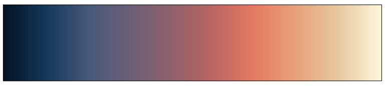
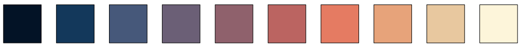
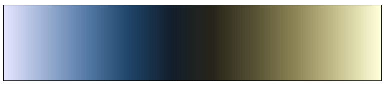




Lipari

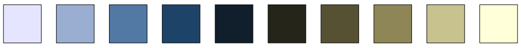
Scientific Colour Maps

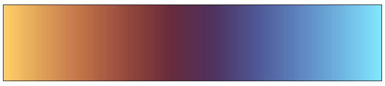




Lisbon

Scientific Colour Maps





Managua

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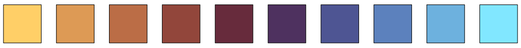

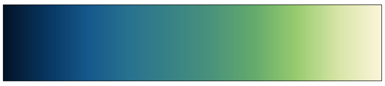

Navia

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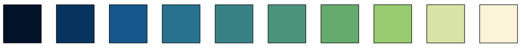

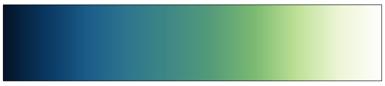

NaviaW

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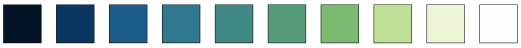

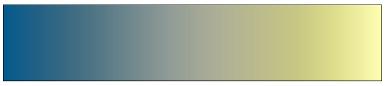

Nuuk

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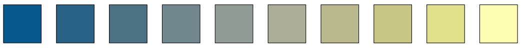

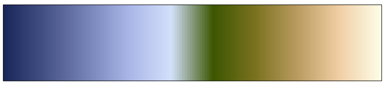

Oleron

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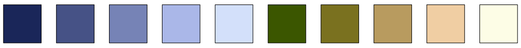

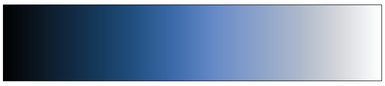

Oslo

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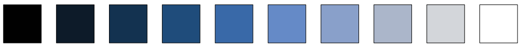

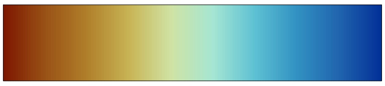

Roma

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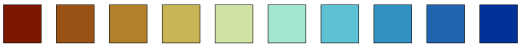

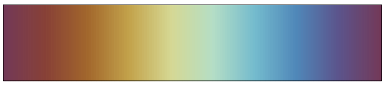

RomaO

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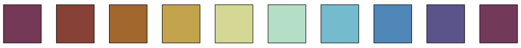

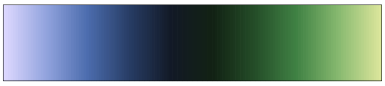

Tofino

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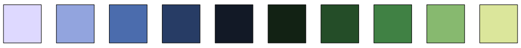

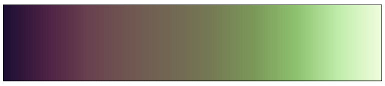

Tokyo

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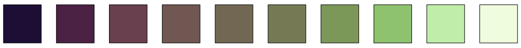

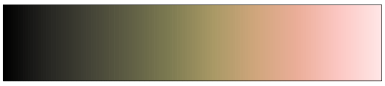

Turku

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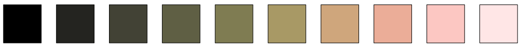
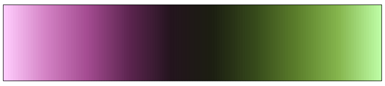
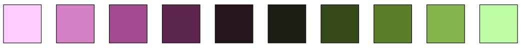
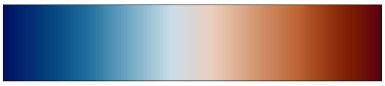




Vanimo

Scientific Colour Maps





Vik

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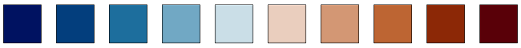

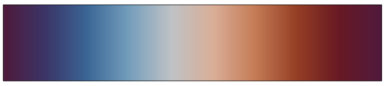

VikO

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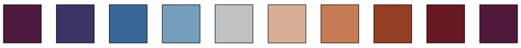
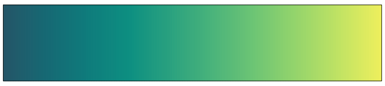
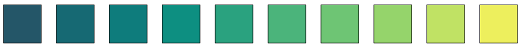
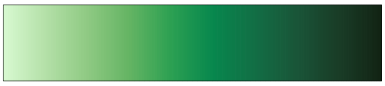


Two-color palettes – 52 palettes

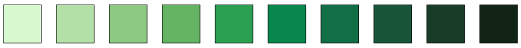


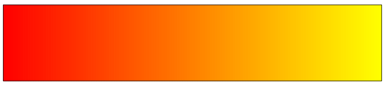
AgGrnYl
CartoColors



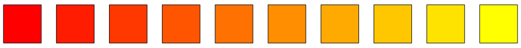


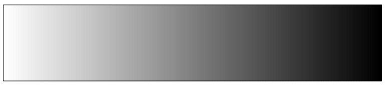
Algae
cmocean



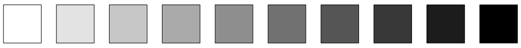


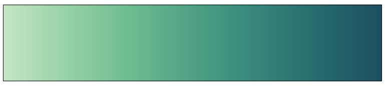
Autumn
Matplotlib



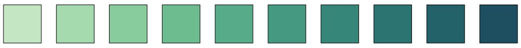


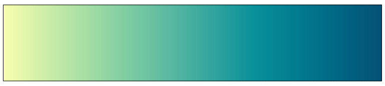
Binary
Matplotlib



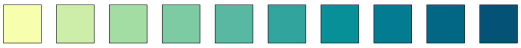


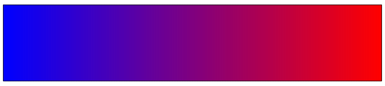
BluGrn
CartoColors



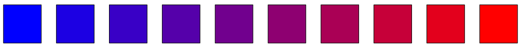


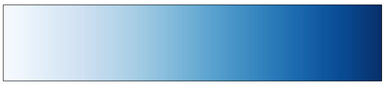
BluYl
CartoColors



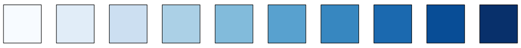


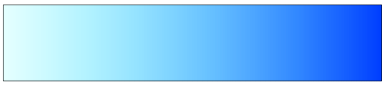
Bluered
Plotly



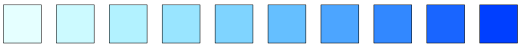


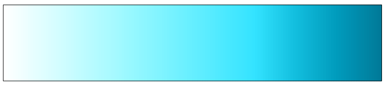
Blues
Colorbrewer



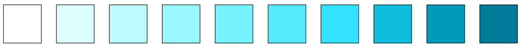


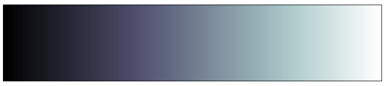
Blues10
Light Bartlein



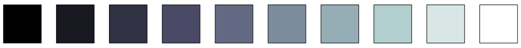


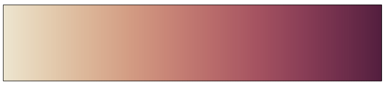
Blues7
Light Bartlein



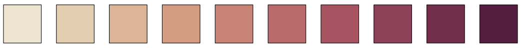


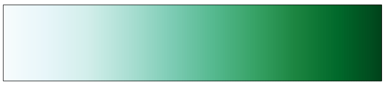
Bone
Matplotlib



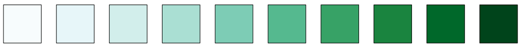


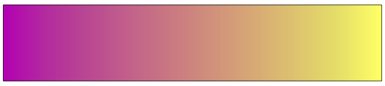
BrwnYl
CartoColors



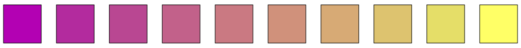


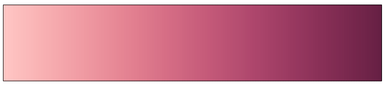
BuGn
Colorbrewer



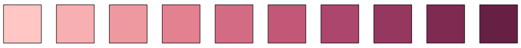


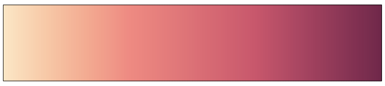
Buda
Scientific Colour Maps



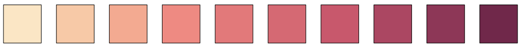


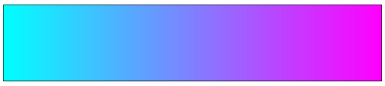
Burg
CartoColors



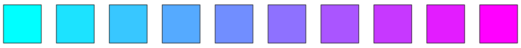


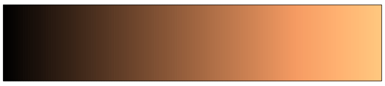
BurgYl
CartoColors



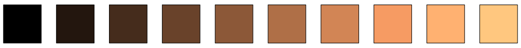


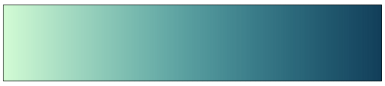
Cool
Matplotlib



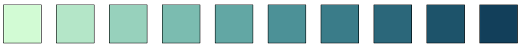


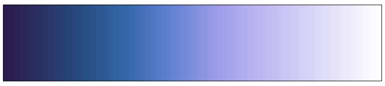
Copper
Matplotlib



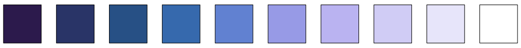


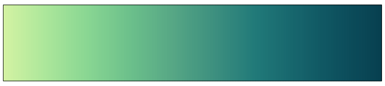
DarkMint
CartoColors



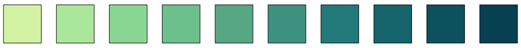


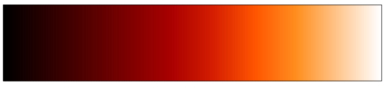
Devon
Scientific Colour Maps



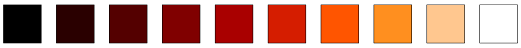


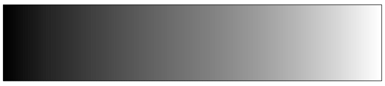
Emrld
CartoColors





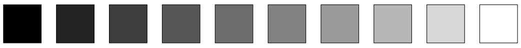
GistHeat
Matplotlib

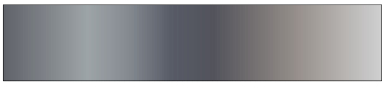




GrayC

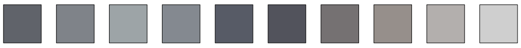
Scientific Colour Maps

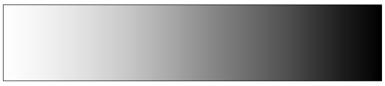




GrayTab

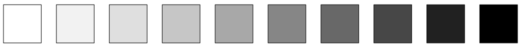
Tableau

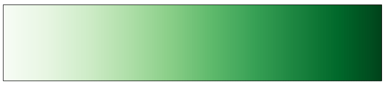




Grays

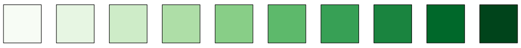
Matplotlib

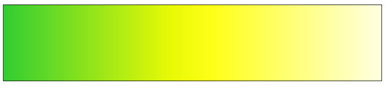




Greens

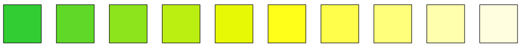
Colorbrewer

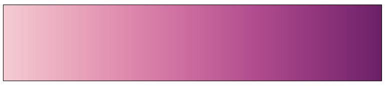




Lemon

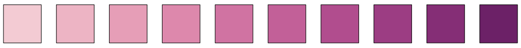
@prism

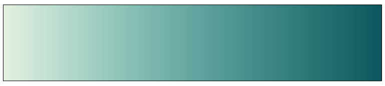




Magenta

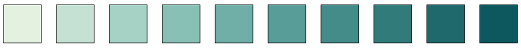
CartoColors

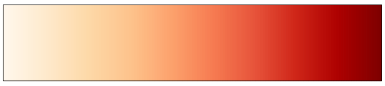




Mint

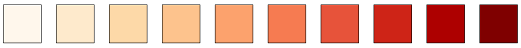
CartoColors

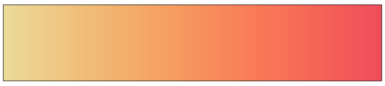




OrRd

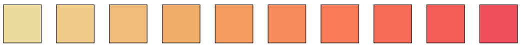
Colorbrewer

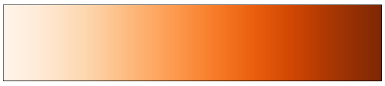




OrYel

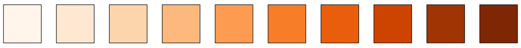
CartoColors

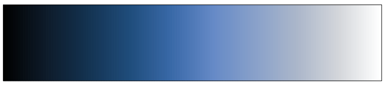




Oranges

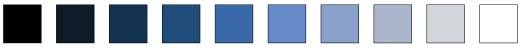
Colorbrewer

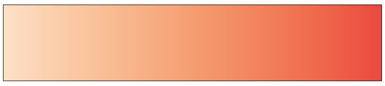




Oslo

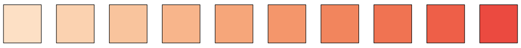
Scientific Colour Maps

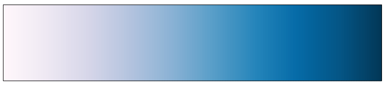




Peach

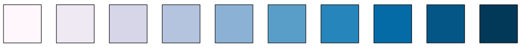
CartoColors

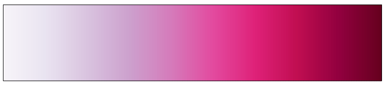




PuBu

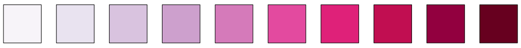
Colorbrewer

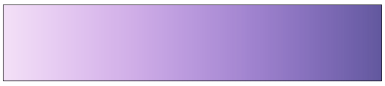




PuRd

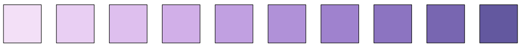
Colorbrewer

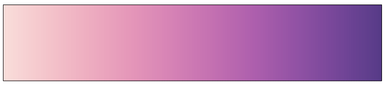




Purp

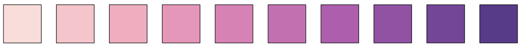
CartoColors

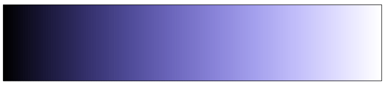




PurpOr

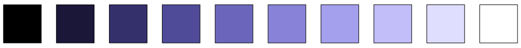
CartoColors

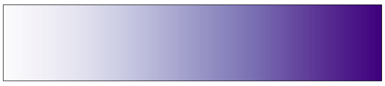




Purple

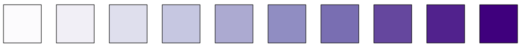
Cubehelix

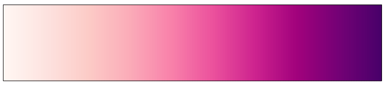




Purples

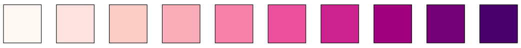
Colorbrewer

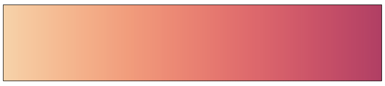




RdPu

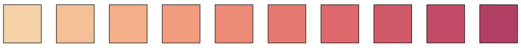
Colorbrewer

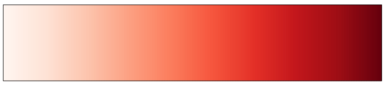




RedOr

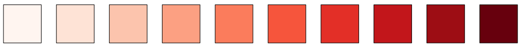
CartoColors

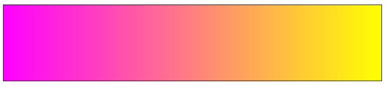




Reds

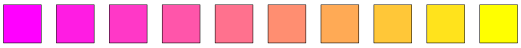
Colorbrewer

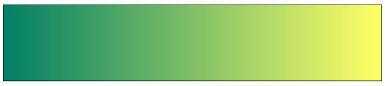




Spring

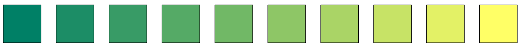
Matplotlib

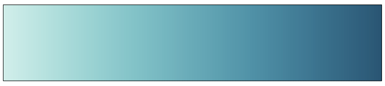




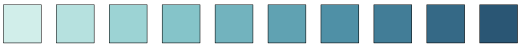
Summer

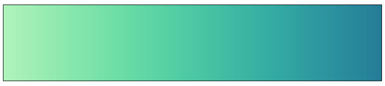
Matplotlib



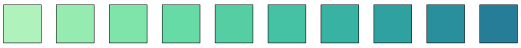


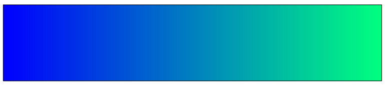
Teal
CartoColors



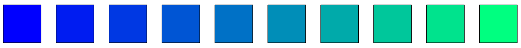


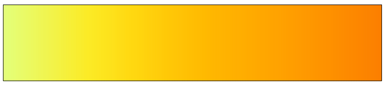
TealGrn
CartoColors



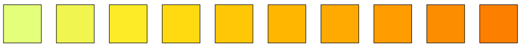


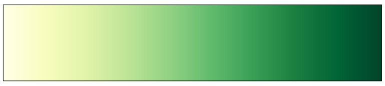
Winter
Matplotlib



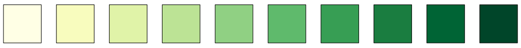


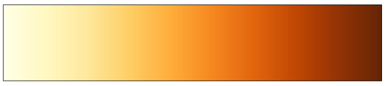
Wistia
Matplotlib



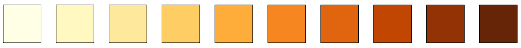


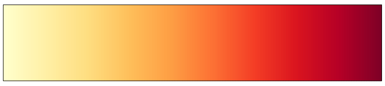
YlGn
Colorbrewer



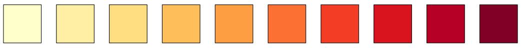


YlOrBr
Colorbrewer

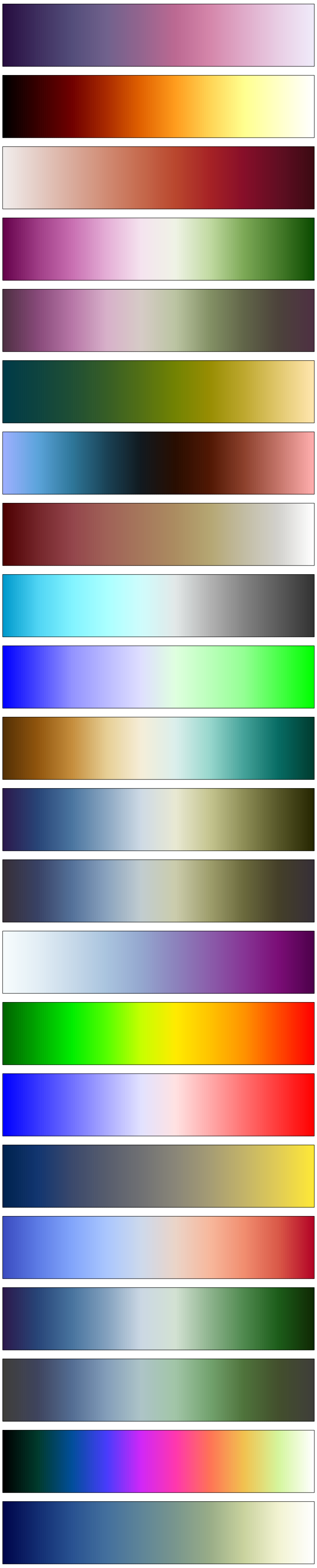




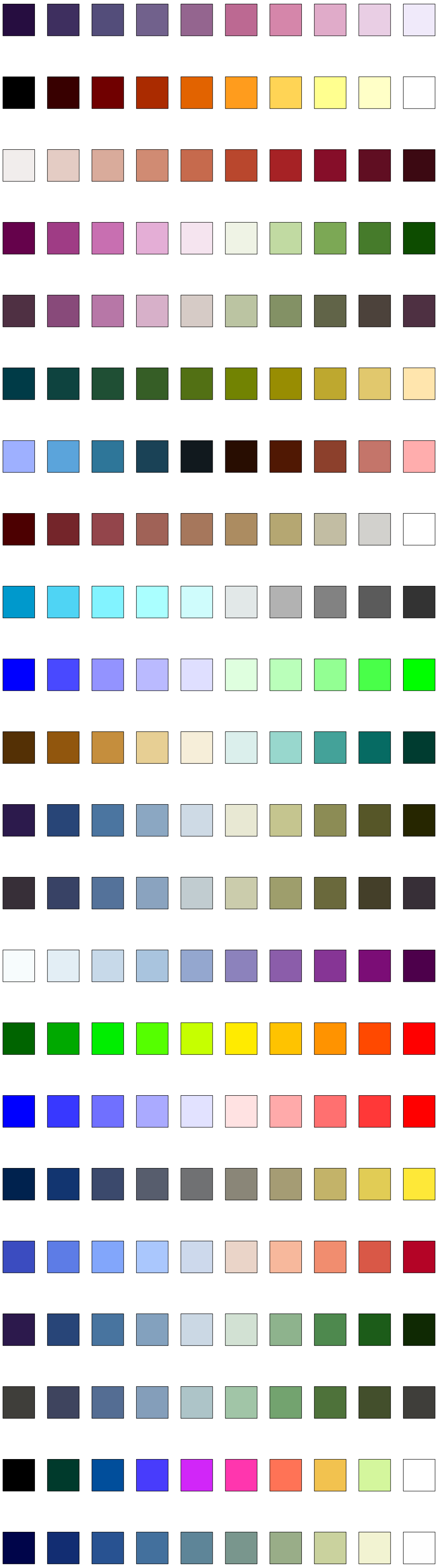
YlOrRd
Colorbrewer

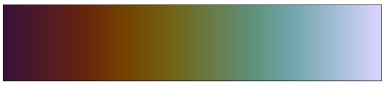


Three-color palettes – 54 palettes



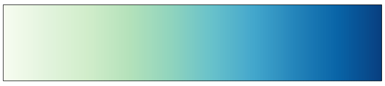
Acton	Scientific Colour Maps
Afmhot	Matplotlib
Amp	cmocean
Bam	Scientific Colour Maps
Bam0	Scientific Colour Maps
Bamako	Scientific Colour Maps
Berlin	Scientific Colour Maps
Bilbao	Scientific Colour Maps
BlueGray	Light Bartlein
BlueGreen	Light Bartlein
BrBG	Colorbrewer
Broc	Scientific Colour Maps
Broc0	Scientific Colour Maps
BuPu	Colorbrewer
BurningGrass	@prism
Bwr	Matplotlib
Cividis	Matplotlib
Coolwarm	Matplotlib
Cork	Scientific Colour Maps
Cork0	Scientific Colour Maps
Cubehelix3	Cubehelix
Davos	Scientific Colour Maps





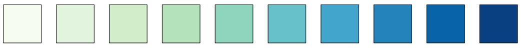
Glasgow

Scientific Colour Maps



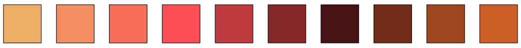
GnBu

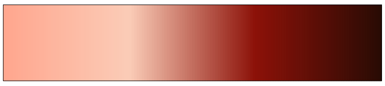
Colorbrewer



GrandBudapest1

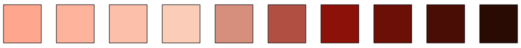
Wes Anderson

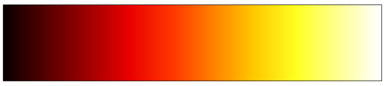




GrandBudapest2

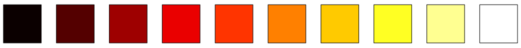
Wes Anderson

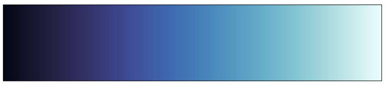




Hot

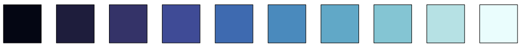
Plotly

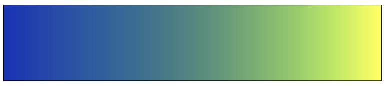




Ice

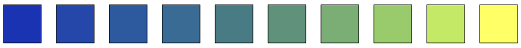
cmocean

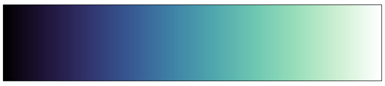




Imola

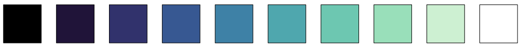
Scientific Colour Maps

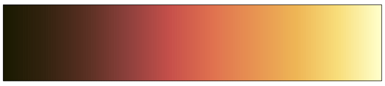




JimSpecial

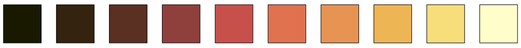
Cubehelix

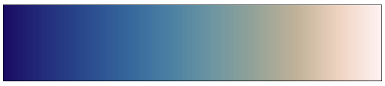




Lajolla

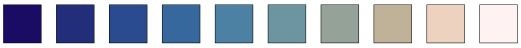
Scientific Colour Maps





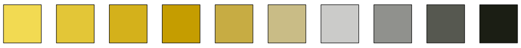
Lapaz

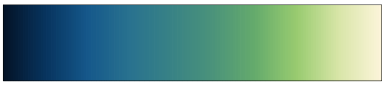
Scientific Colour Maps



Moonrise3

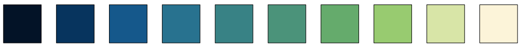
Wes Anderson

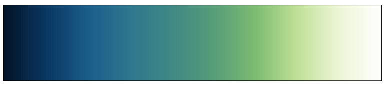




Navia

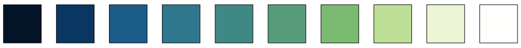
Scientific Colour Maps





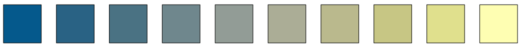
NaviaW

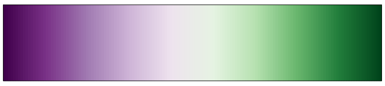
Scientific Colour Maps



Nuuk

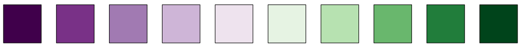
Scientific Colour Maps

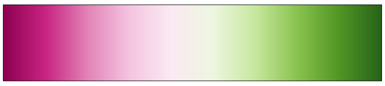




PRGn

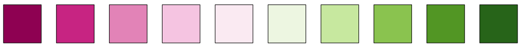
Colorbrewer

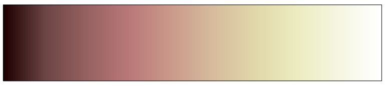




PiYG

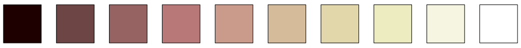
Colorbrewer

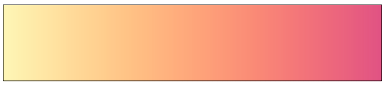




Pink

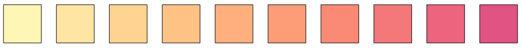
Matplotlib





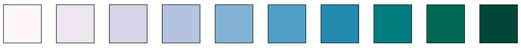
PinkYl

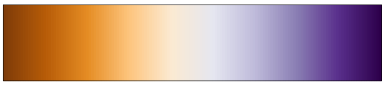
CartoColors



PuBuGn

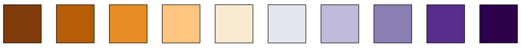
Colorbrewer

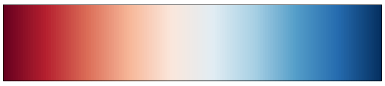




PuOr

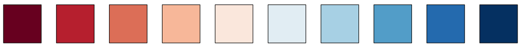
Colorbrewer

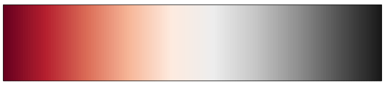




RdBu

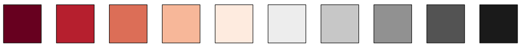
Colorbrewer

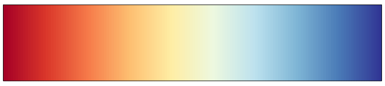




RdGy

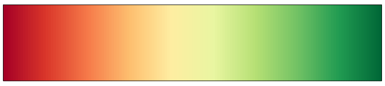
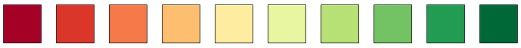
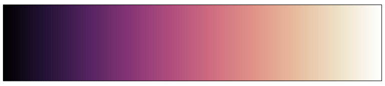
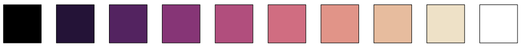
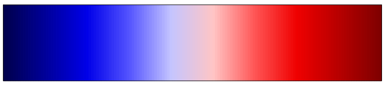
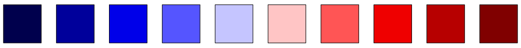
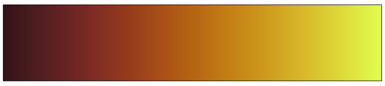
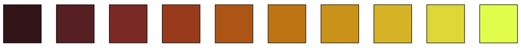
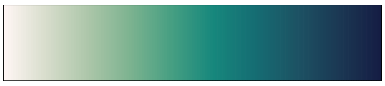
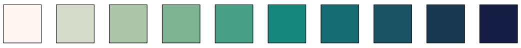
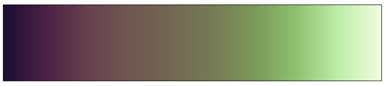
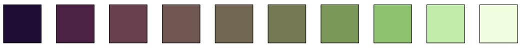
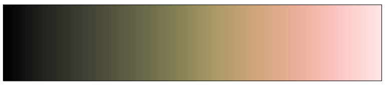
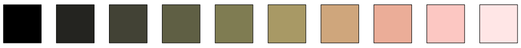
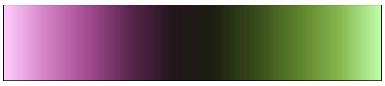
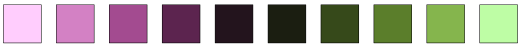
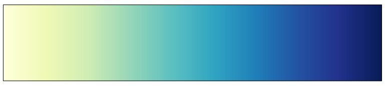
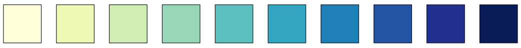
Colorbrewer



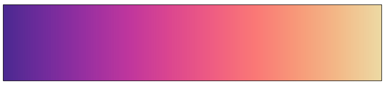


RdYlBu

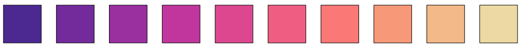
Colorbrewer

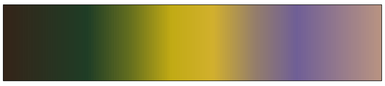
	**RdYlGn** Colorbrewer	
	**Red** Cubehelix	
	**Seismic** Matplotlib	
	**Solar** cmocean	
	**Tempo** cmocean	
	**Tokyo** Scientific Colour Maps	
	**Turku** Scientific Colour Maps	
	**Vanimo** Scientific Colour Maps	
	**YlGnBu** Colorbrewer	

Rainbow-style palettes – 118 palettes

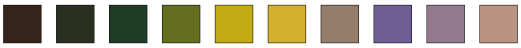


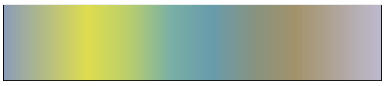
AgSunset
CartoColors



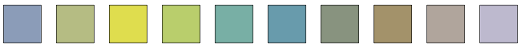


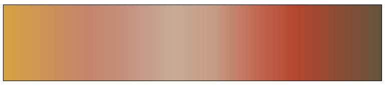
Aquatic1
Wes Anderson



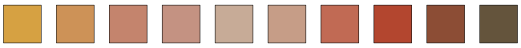


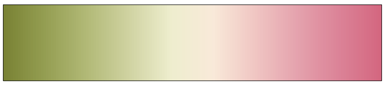
Aquatic2
Wes Anderson



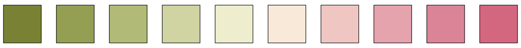


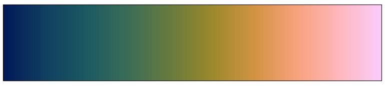
Aquatic3
Wes Anderson



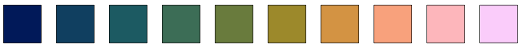


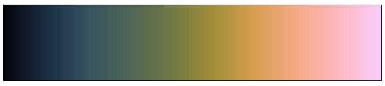
ArmyRose
CartoColors



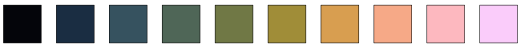


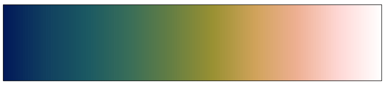
Batlow
Scientific Colour Maps



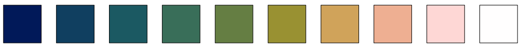


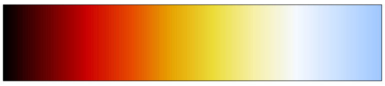
BatlowK
Scientific Colour Maps



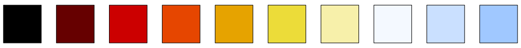


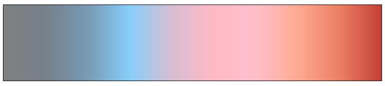
BatlowW
Scientific Colour Maps



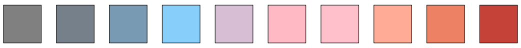


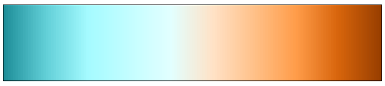
Blackbody
Plotly



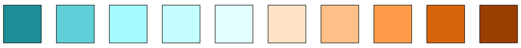


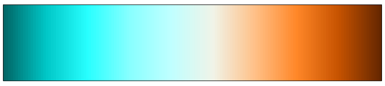
BlindFish
@prism



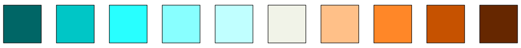


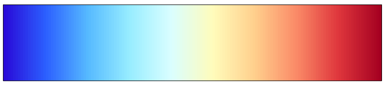
BlueDarkOrange12
Light Bartlein



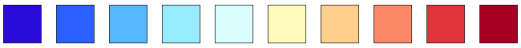


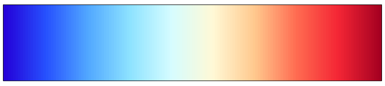
BlueDarkOrange18
Light Bartlein



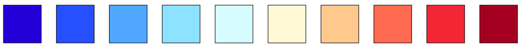


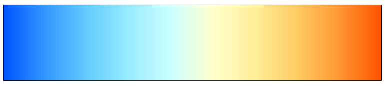
BlueDarkRed12
Light Bartlein



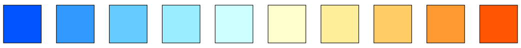


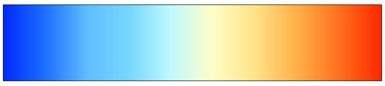
BlueDarkRed18
Light Bartlein



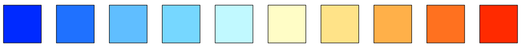


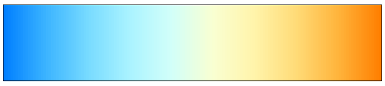
BlueOrange10
Light Bartlein



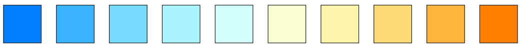


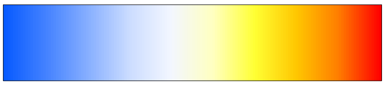
BlueOrange12
Light Bartlein



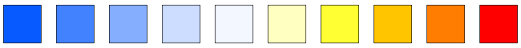


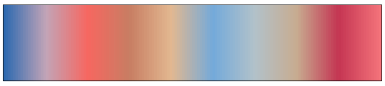
BlueOrange8
Light Bartlein



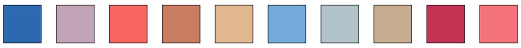


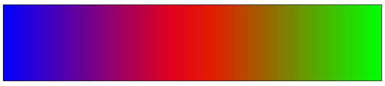
BlueOrangeRed
Light Bartlein



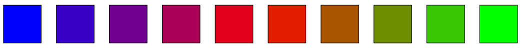


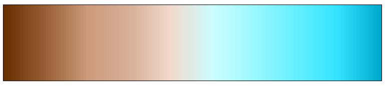
BlueRed
Tableau



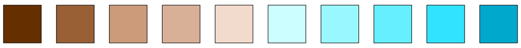


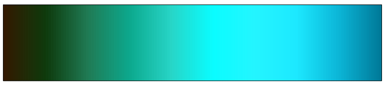
Brg
Matplotlib



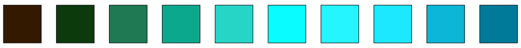


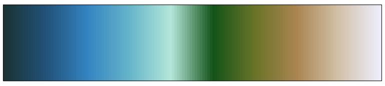
BrownBlue10
Light Bartlein



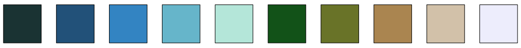


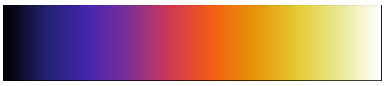
BrownBlue12
Light Bartlein



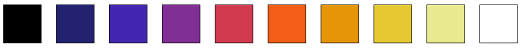


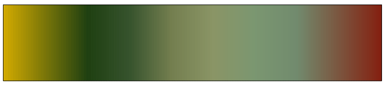
Bukavu
Scientific Colour Maps



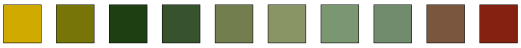


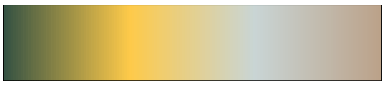
CMRmap
Matplotlib



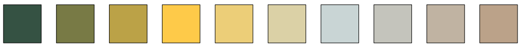


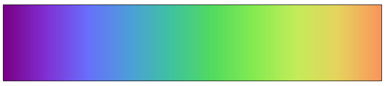
Cavalcanti
Wes Anderson



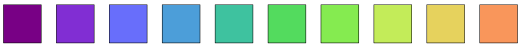


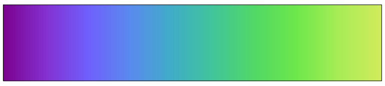
Chevalier
Wes Anderson



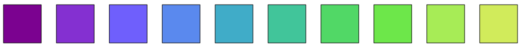


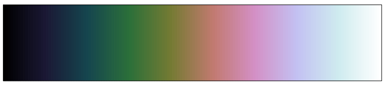
Cube1
MyCarta



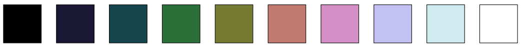


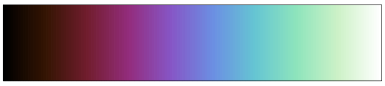
CubeYF
MyCarta



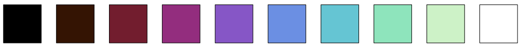


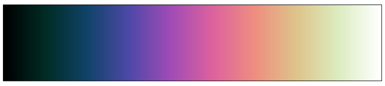
Cubehelix
Matplotlib



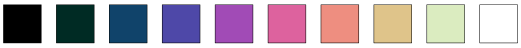


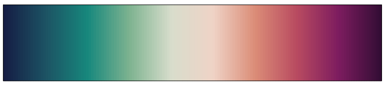
Cubehelix1
Cubehelix



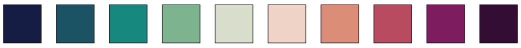


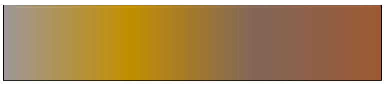
Cubehelix2
Cubehelix



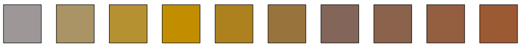


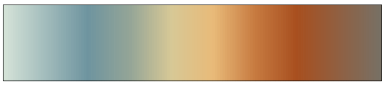
Curl
cmocean



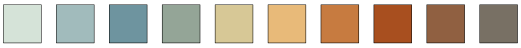


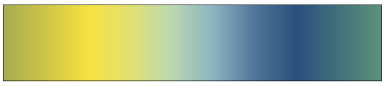
Darjeeling1
Wes Anderson



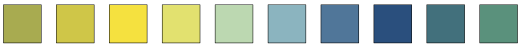


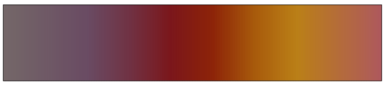
Darjeeling2
Wes Anderson



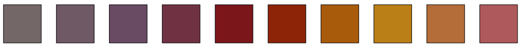


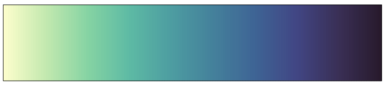
Darjeeling3
Wes Anderson



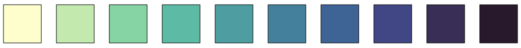


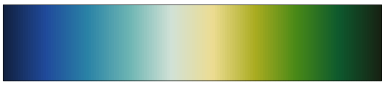
Darjeeling4
Wes Anderson



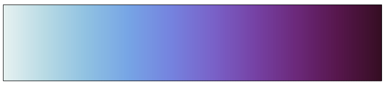


Deep
cmocean

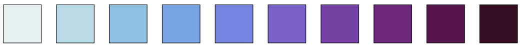


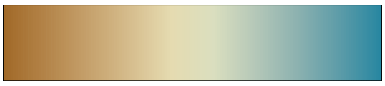


Delta
cmocean

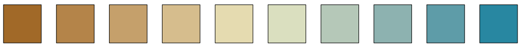


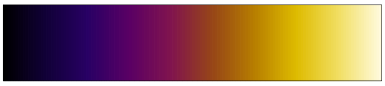
Dense
cmocean



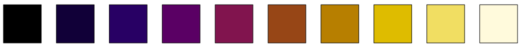


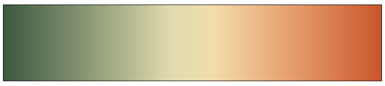
Earth
CartoColors



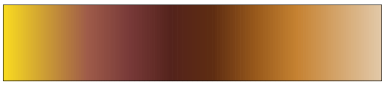


Electric
Plotly

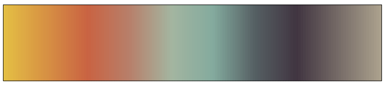




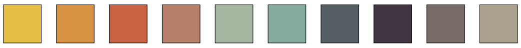
Fall
CartoColors

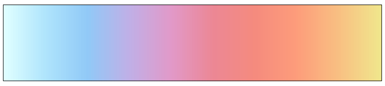


FantasticFox1
Wes Anderson

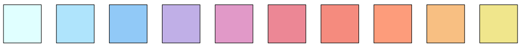


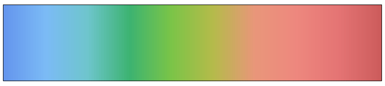
FantasticFox2
Wes Anderson





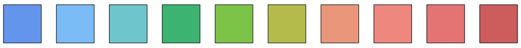
GasFlame
@prism

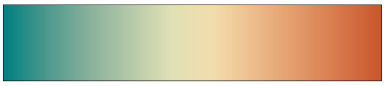




GeoRainbow

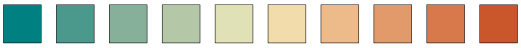
@prism

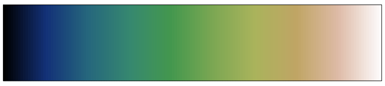




Geyser

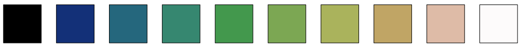
CartoColors

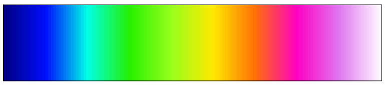




GistEarth

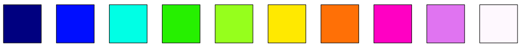
Matplotlib

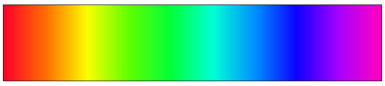




GistNcar

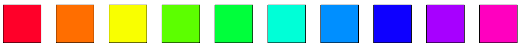
Matplotlib

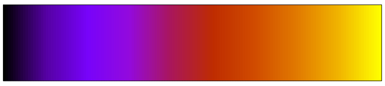




GistRainbow

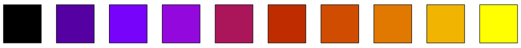
Matplotlib

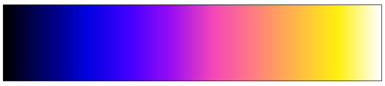




Gnuplot

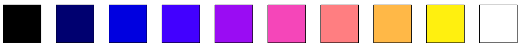
Matplotlib

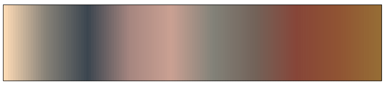




Gnuplot2

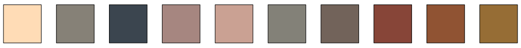
Matplotlib

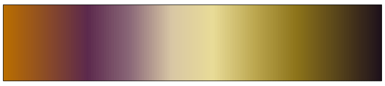




GrandBudapest3

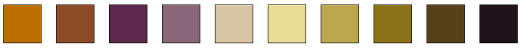
Wes Anderson

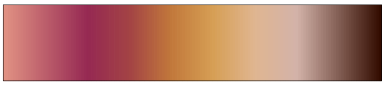




GrandBudapest4

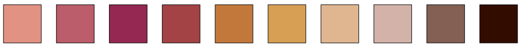
Wes Anderson

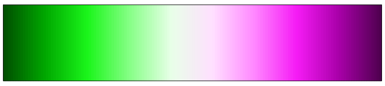




GrandBudapest5

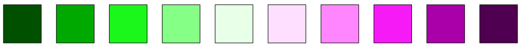
Wes Anderson

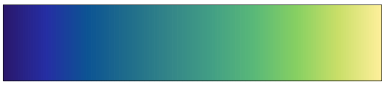




GreenMagenta

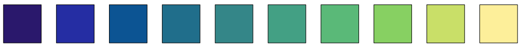
Light Bartlein

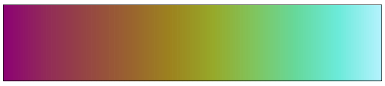




Haline

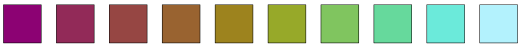
cmocean

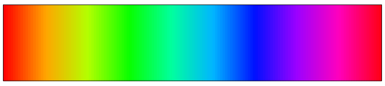




Hawaii

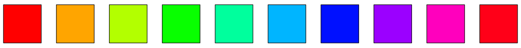
Scientific Colour Maps

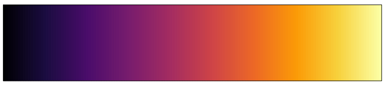




Hsv

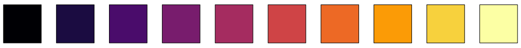
Matplotlib

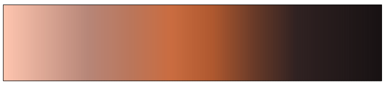




Inferno

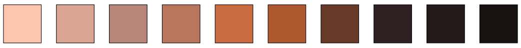
Matplotlib

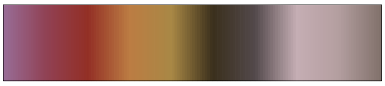




IsleOfDogs1

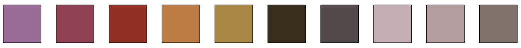
Wes Anderson

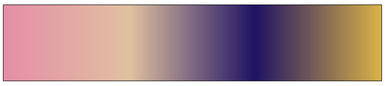




IsleOfDogs2

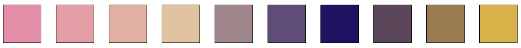
Wes Anderson

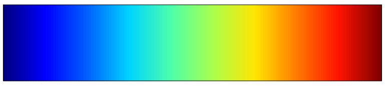




IsleOfDogs3

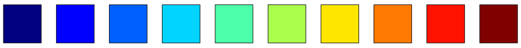
Wes Anderson

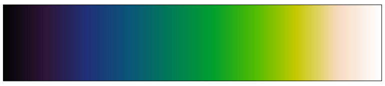




Jet

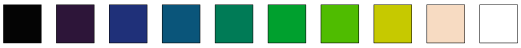
Plotly

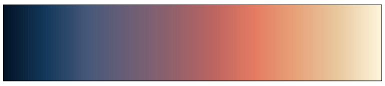




LinearL

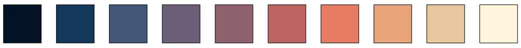
MyCarta

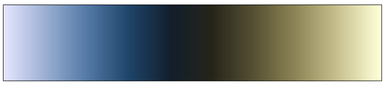




Lipari

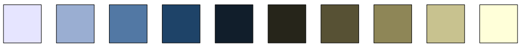
Scientific Colour Maps

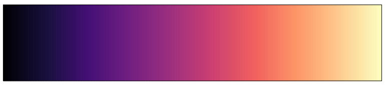




Lisbon

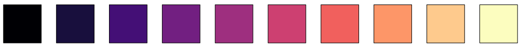
Scientific Colour Maps

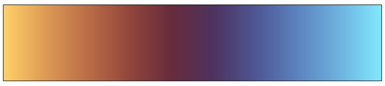




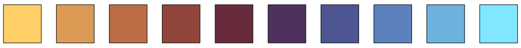
Magma

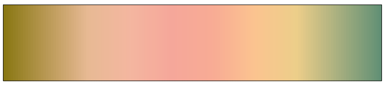
Matplotlib



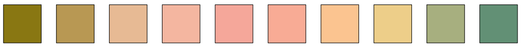


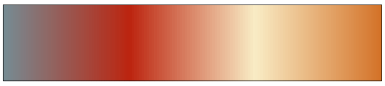
Managua
Scientific Colour Maps



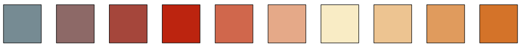


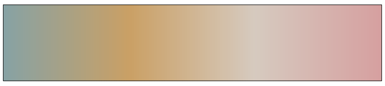
Margot1
Wes Anderson



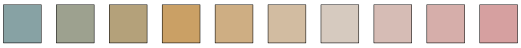


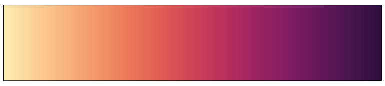
Margot2
Wes Anderson



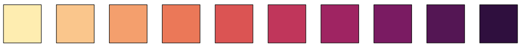


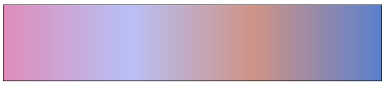
Margot3
Wes Anderson



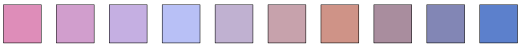


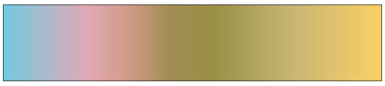
Matter
cmocean



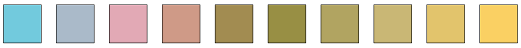


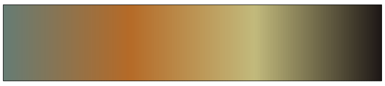
Mendl
Wes Anderson



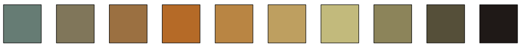


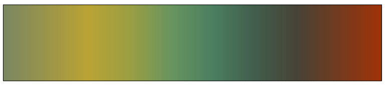
Moonrise1
Wes Anderson



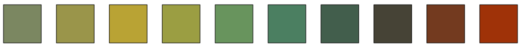


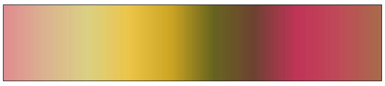
Moonrise2
Wes Anderson



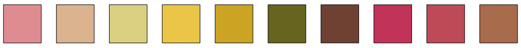


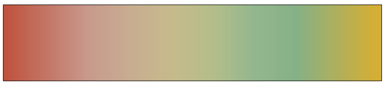
Moonrise4
Wes Anderson



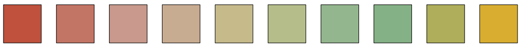


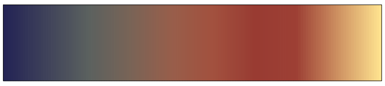
Moonrise5
Wes Anderson





Moonrise6
Wes Anderson





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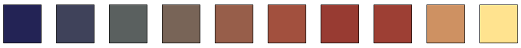
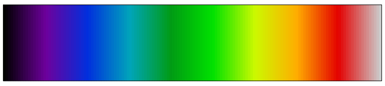
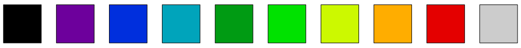
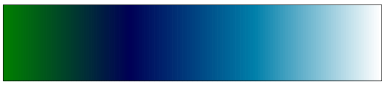
Wes Anderson



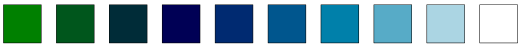


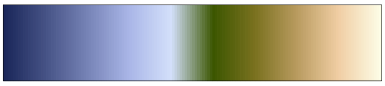
NipySpectral
Matplotlib



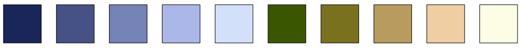


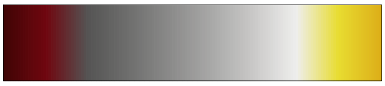
Ocean
Matplotlib



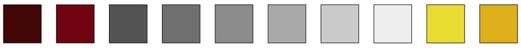


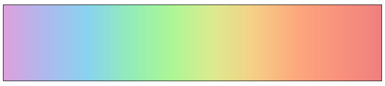
Oleron
Scientific Colour Maps



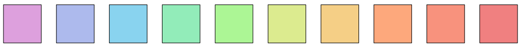


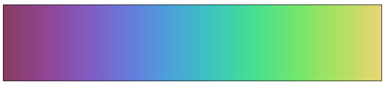
Oxy
cmocean



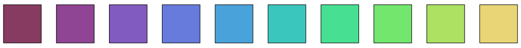


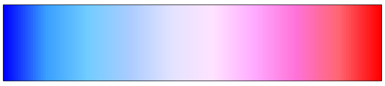
PastelRainbow
@prism



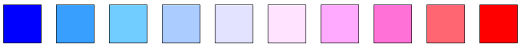


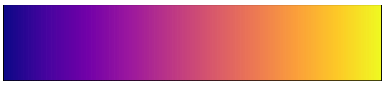
PerceptualRainbow
Cubehelix



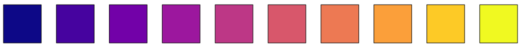


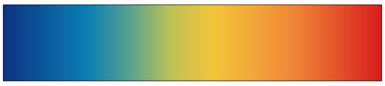
Picnic
Plotly



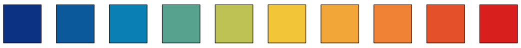


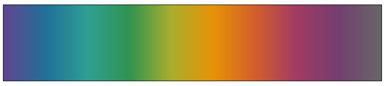
Plasma
Matplotlib



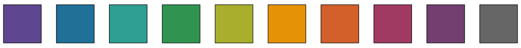


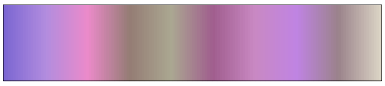
Portland
Plotly



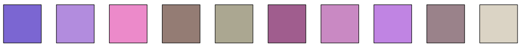


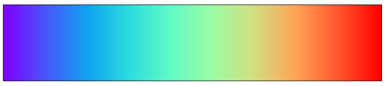
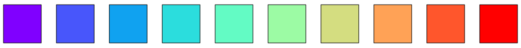
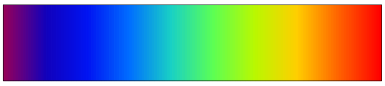
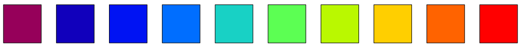
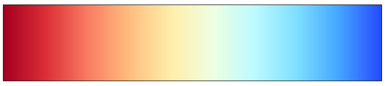
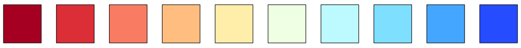
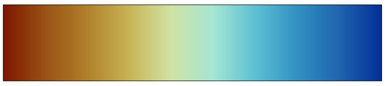
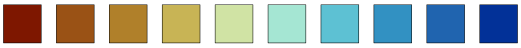
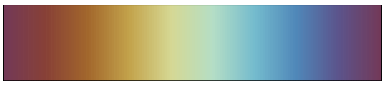
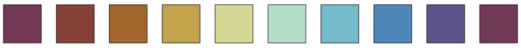
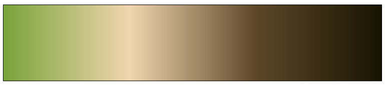
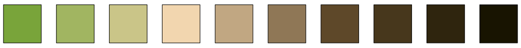
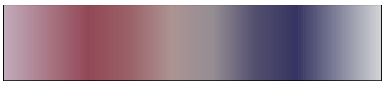
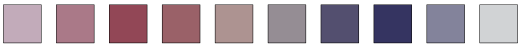
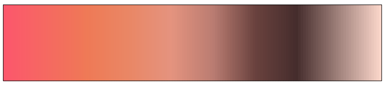
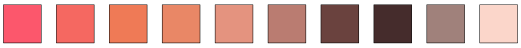
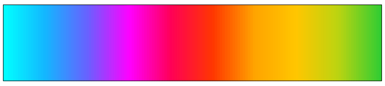
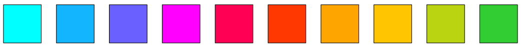
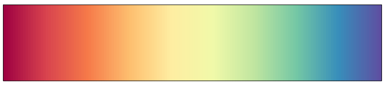
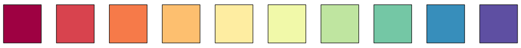
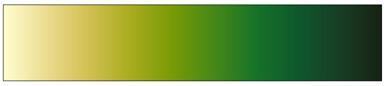
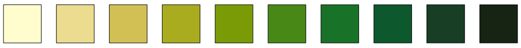
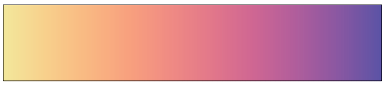
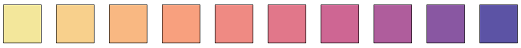
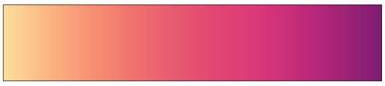
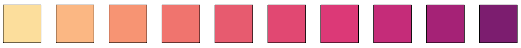
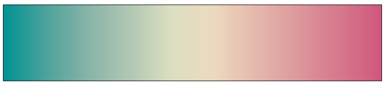
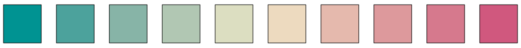
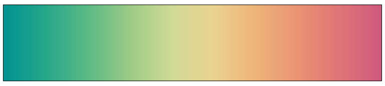
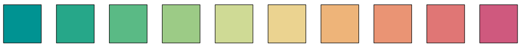
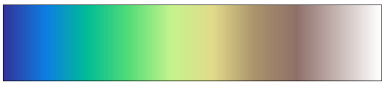
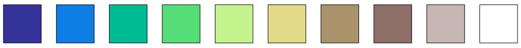
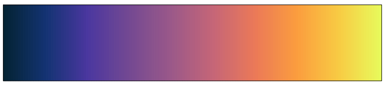
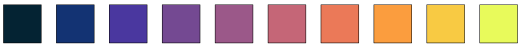
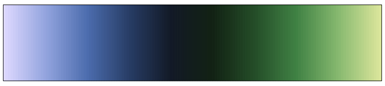
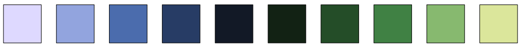
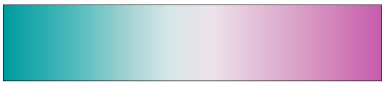
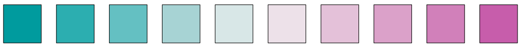
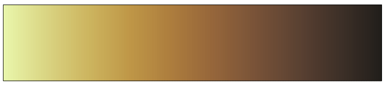
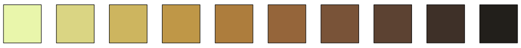
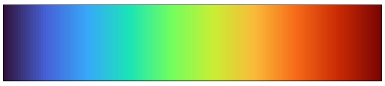
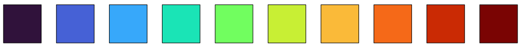
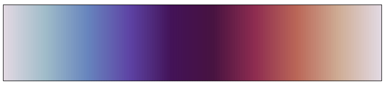
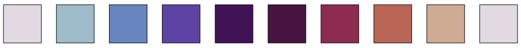
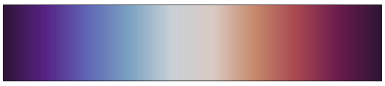
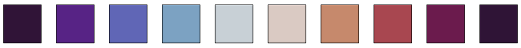
PrismCC
CartoColors

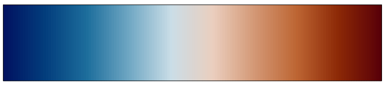




PurpleGray
Tableau

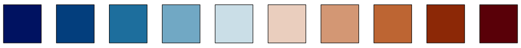


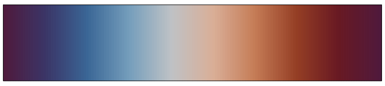
	Rainbow Matplotlib	
	RainbowPly Plotly	
	RedYellowBlue Light Bartlein	
	Roma Scientific Colour Maps	
	Roma0 Scientific Colour Maps	
	Royal1 Wes Anderson	
	Royal2 Wes Anderson	
	Royal3 Wes Anderson	
	ShiftRainbow @prism	
	Spectral Colorbrewer	
	Speed cmocean	
	Sunset CartoColors	
	SunsetDark CartoColors	
	TealRose CartoColors	
	Temps CartoColors	
	Terrain Matplotlib	
	Thermal cmocean	
	Tofino Scientific Colour Maps	
	Tropic CartoColors	
	Turbid cmocean	
	Turbo Matplotlib	
	Twilight Matplotlib	
	TwilightShifted Matplotlib	



Vik

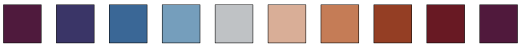
Scientific Colour Maps

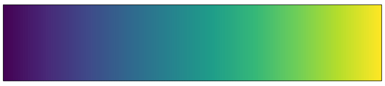




VikO

Scientific Colour Maps





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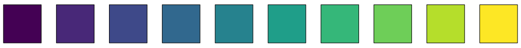
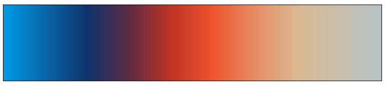
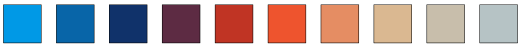
Matplotlib



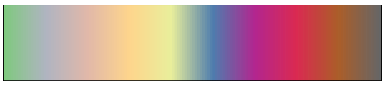


Zissou

Wes Anderson



High-contrast palettes – 34 palettes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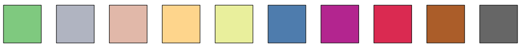

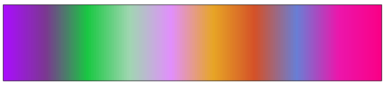
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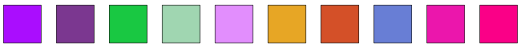

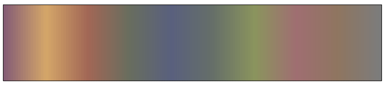
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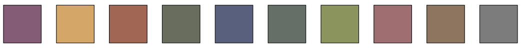

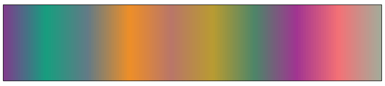
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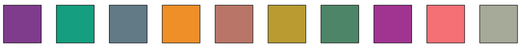

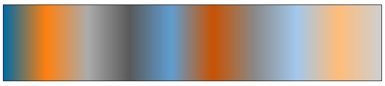
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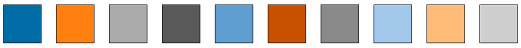

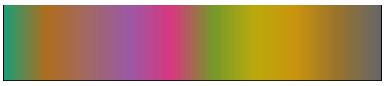
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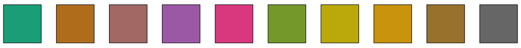

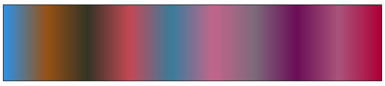
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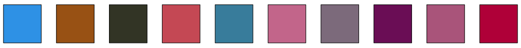

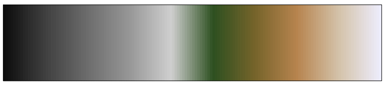
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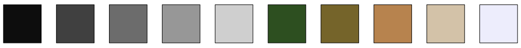

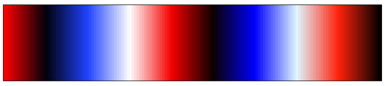
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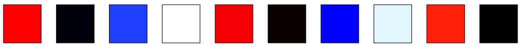

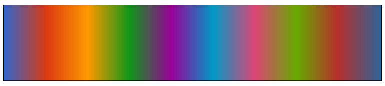
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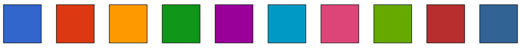

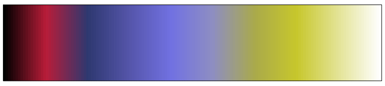
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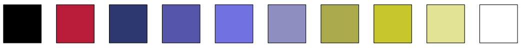

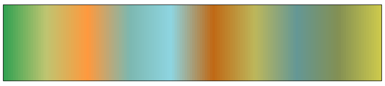
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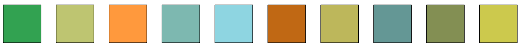

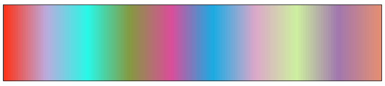
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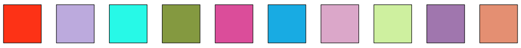

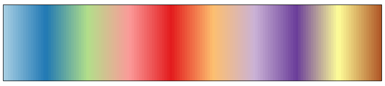
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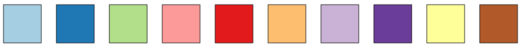

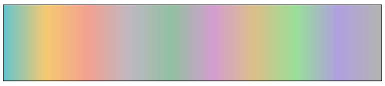
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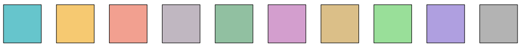

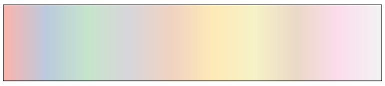
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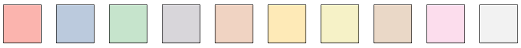

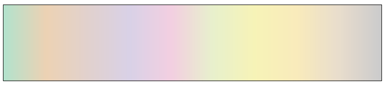
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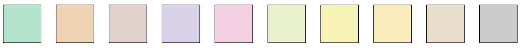

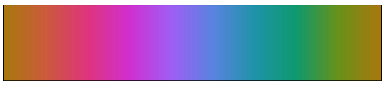
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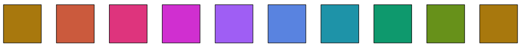

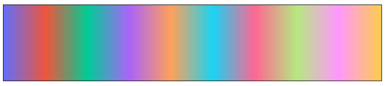
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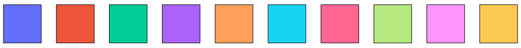

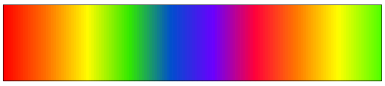
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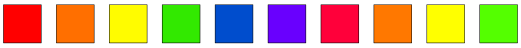

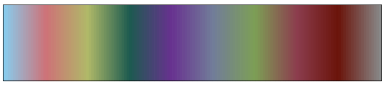
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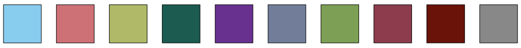

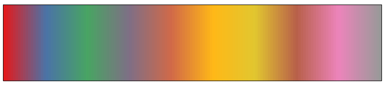
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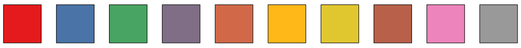

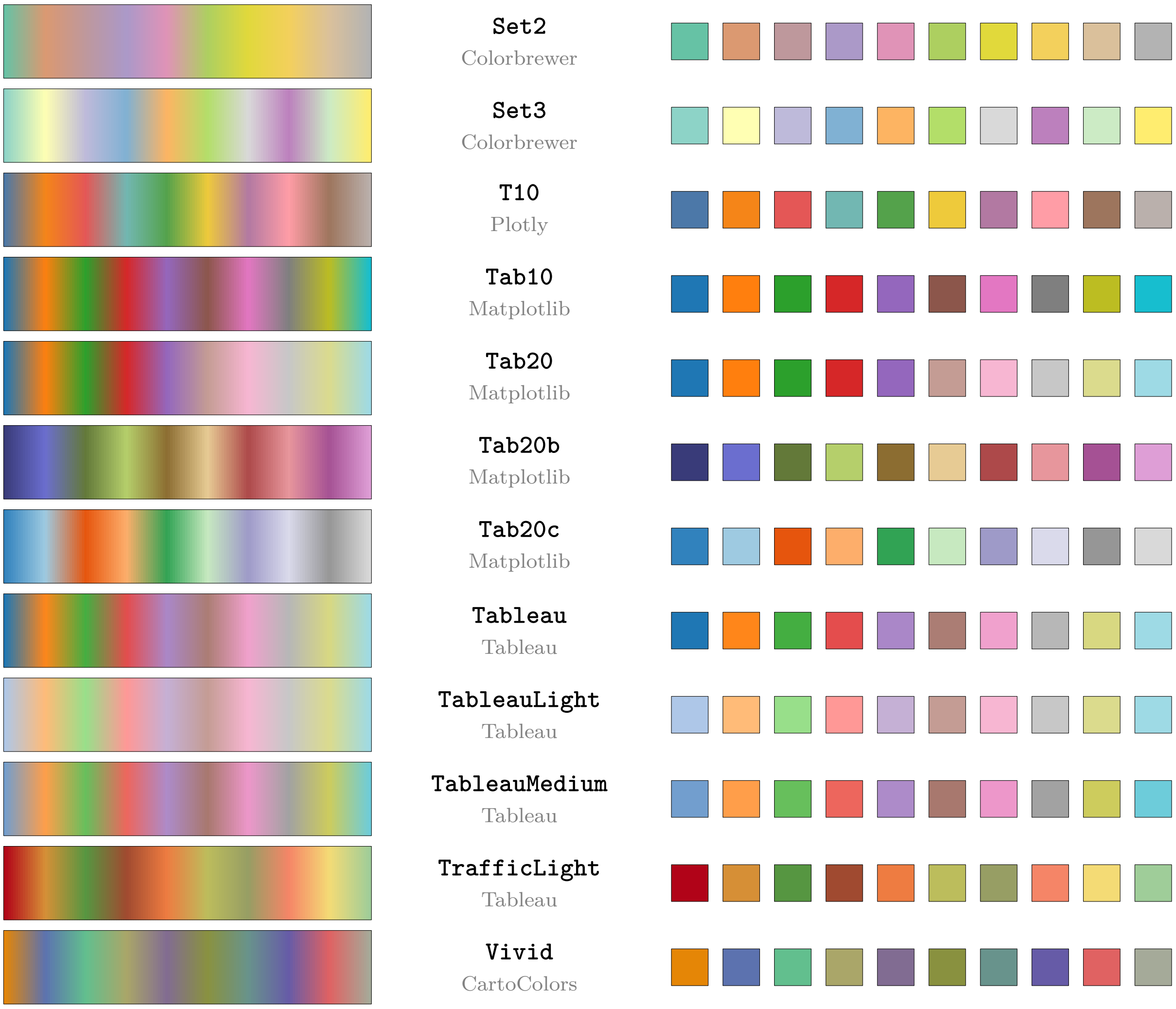
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Matplotlib
Tableau
Tableau
TableauLight
Tableau
TableauMedium
Tableau
TrafficLight
Tableau
Vivid
CartoColors

Appendix 2 – Similar palettes

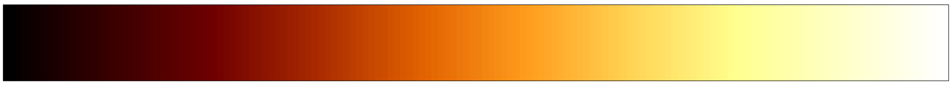
This appendix contains visually similar color palettes. While the differences between some are minimal, we have retained them to respect individual preferences.

Important.

Clusters were generated semi-automatically using a program that suggests similar palettes, followed by manual curation to retain only relevant groupings.[a] *This approach may occasionally miss some similarities. If you identify any omissions, please contact the author of* `@prism`.

[a] The palettes are analyzed in both light and dark modes.

Cluster #1



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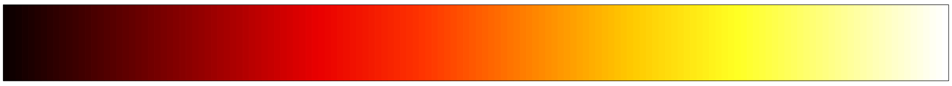
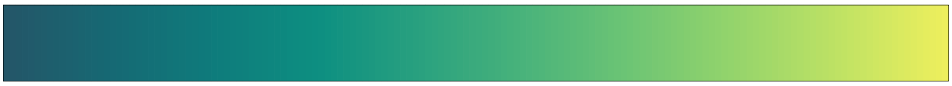
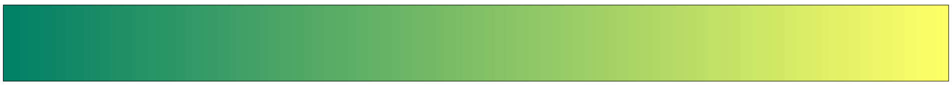


`Hot`

Cluster #2

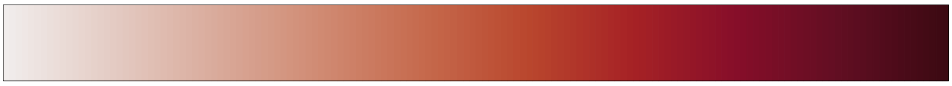


`AgGrnYl`

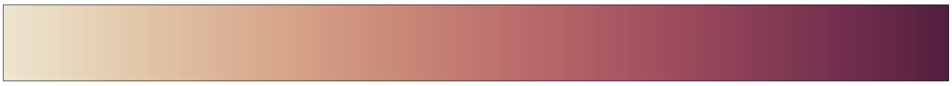


`Summer`

Cluster #3

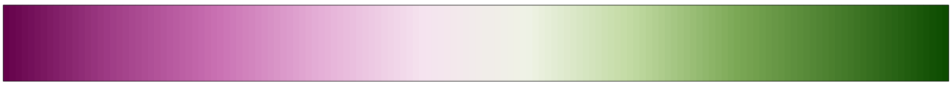


`Amp`

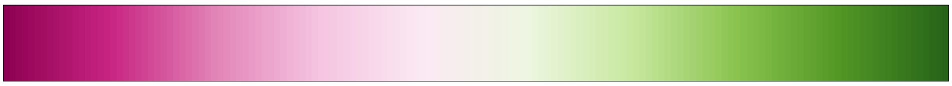


`BrwnYl`

Cluster #4



`Bam`



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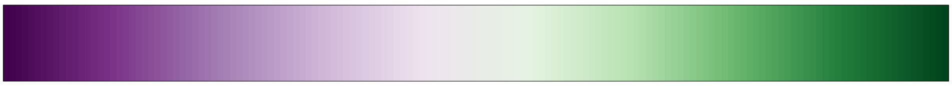
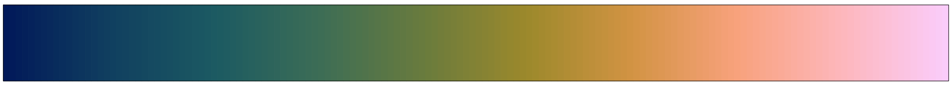
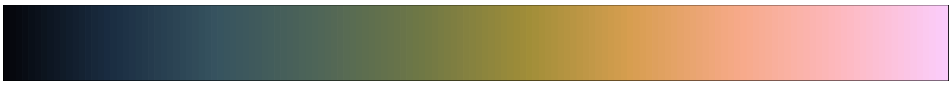


`PRGn`

Cluster #5

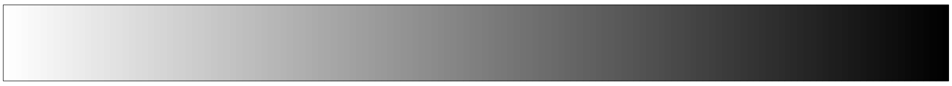


`Batlow`



`BatlowK`

Cluster #6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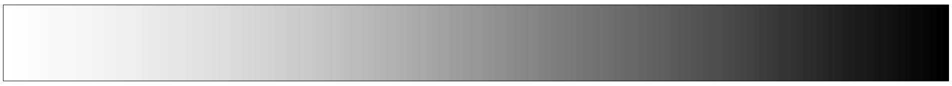
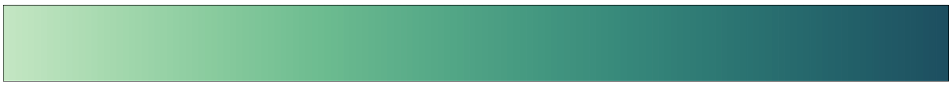
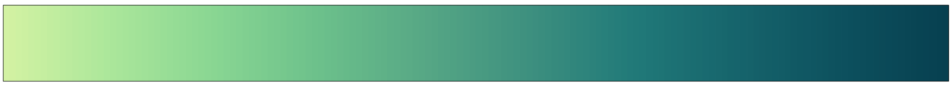
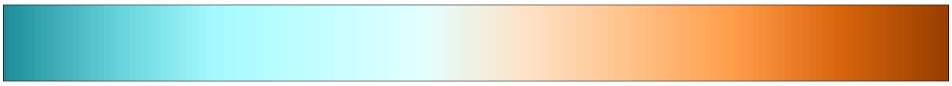

Grays

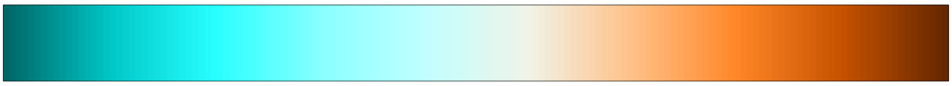
Cluster #7


BluGrn

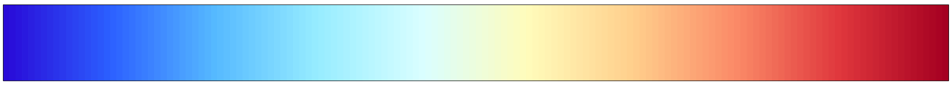

Emrld

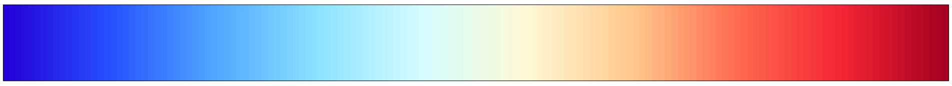
Cluster #8


BlueDarkOrange12

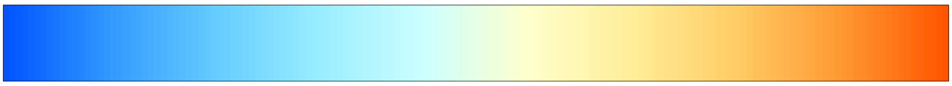

BlueDarkOrange18

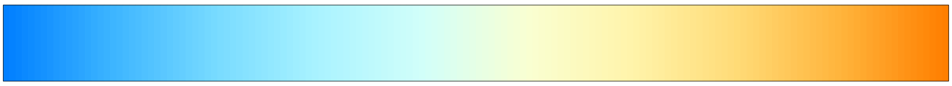
Cluster #9


BlueDarkRed12

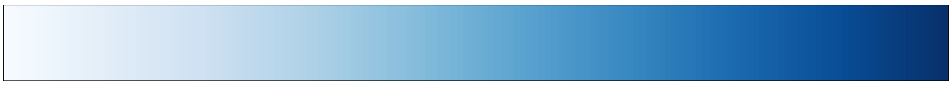

BlueDarkRed18

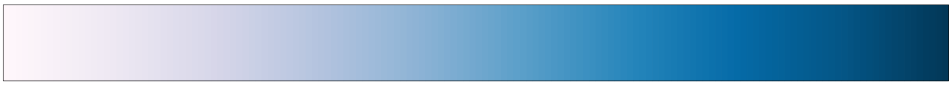
Cluster #10


BlueOrange10

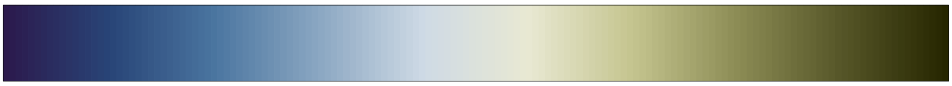

BlueOrange8

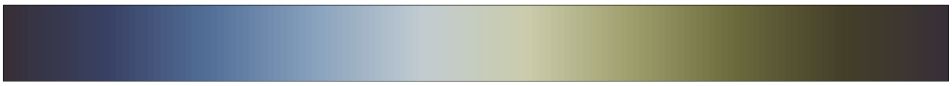
Cluster #11


Blues

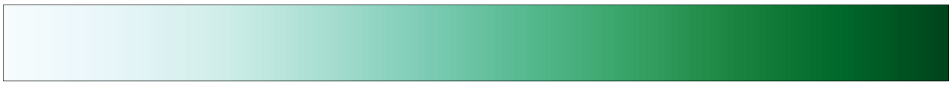

PuBu

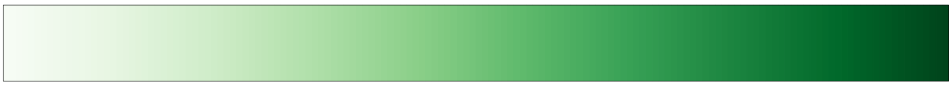
Cluster #12


Broc

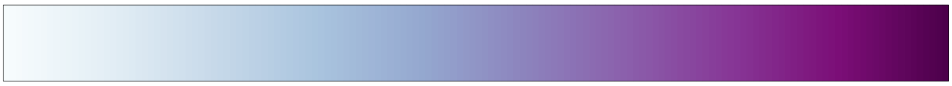

BrocO

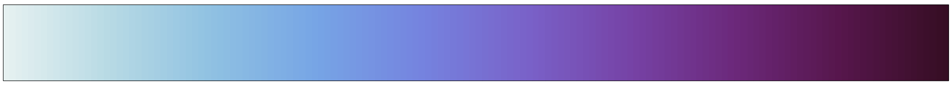
Cluster #13


BuGn

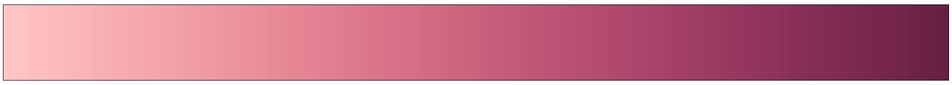

Greens

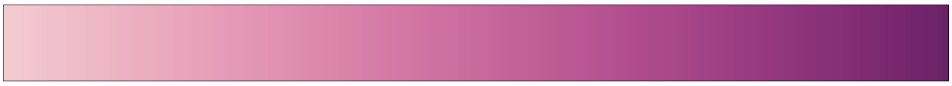
Cluster #14

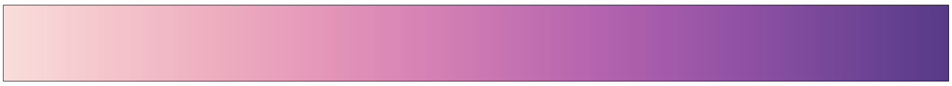

BuPu


Dense

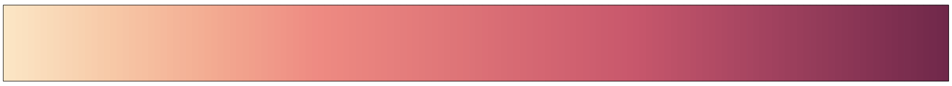
Cluster #15

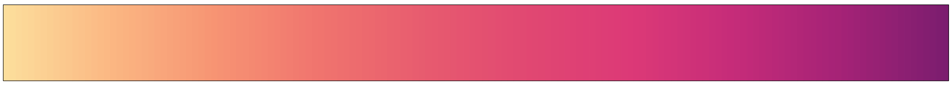

Burg


Magenta

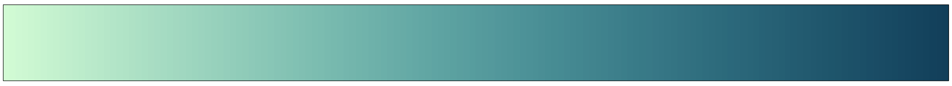

PurpOr

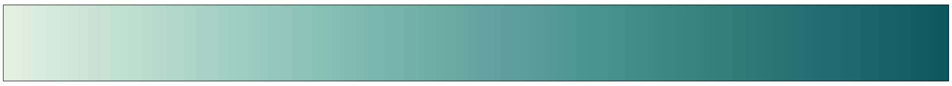
Cluster #16

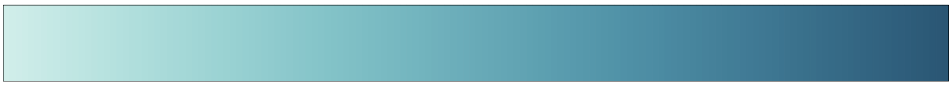

BurgYl


SunsetDark

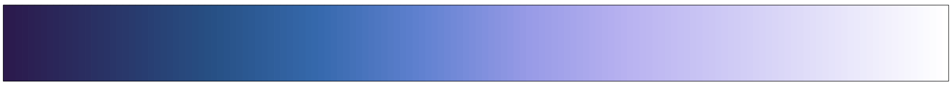
Cluster #17

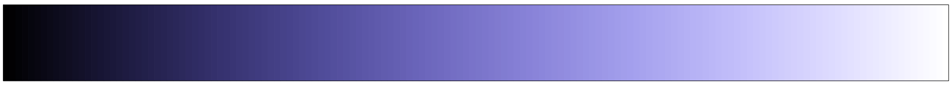

DarkMint


Mint

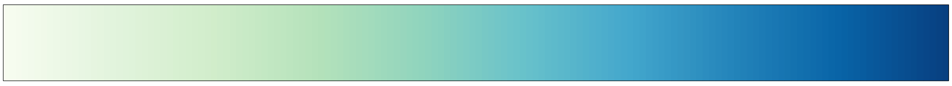

Teal

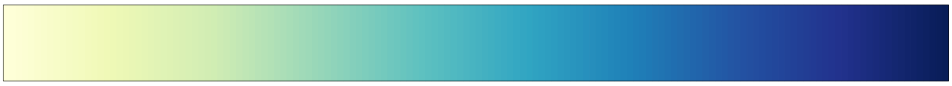
Cluster #18


Devon

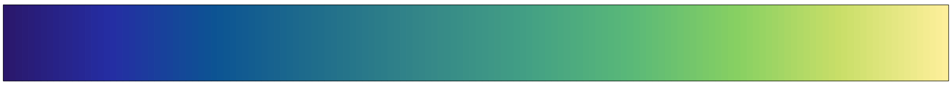

Purple

Cluster #19

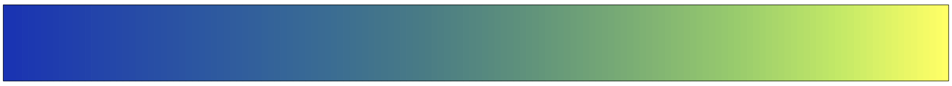

GnBu


YlGnBu

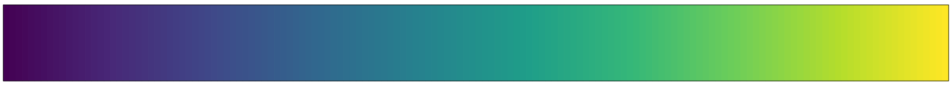
Cluster #20



Haline

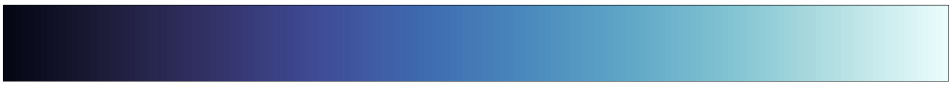


Imola

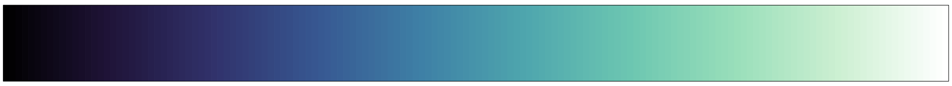


Viridis

Cluster #21

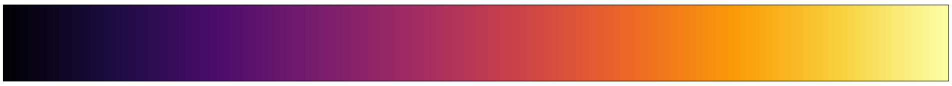


Ice

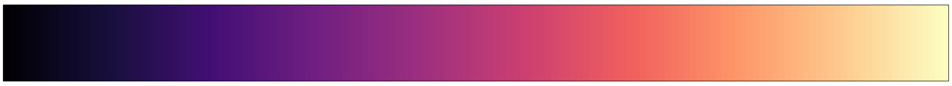


JimSpecial

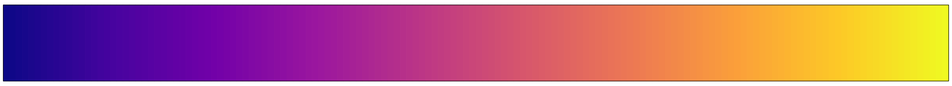
Cluster #22



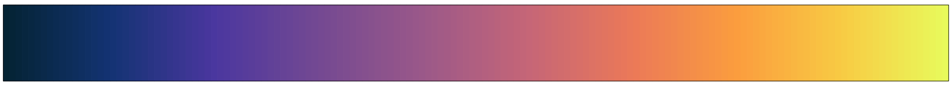
Inferno



Magma

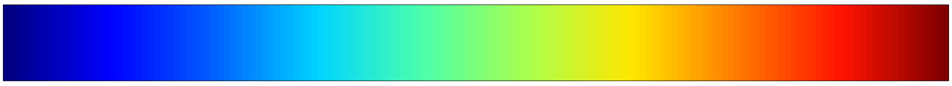


Plasma

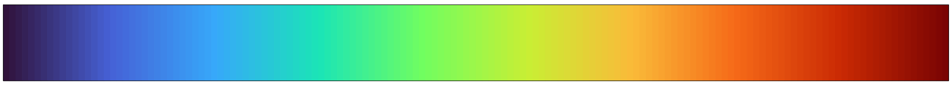


Thermal

Cluster #23

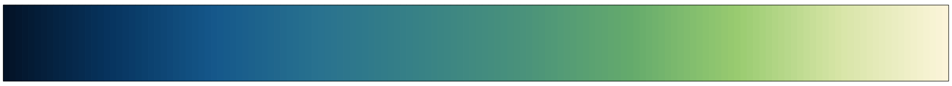


Jet

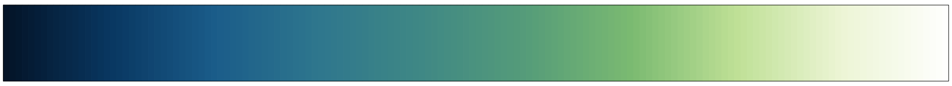


Turbo

Cluster #24

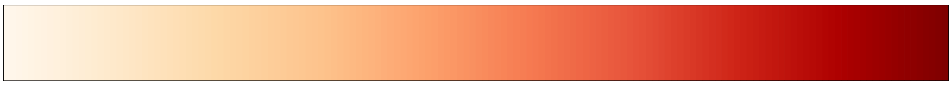


Navia

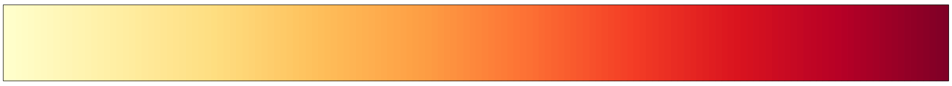


NaviaW

Cluster #25

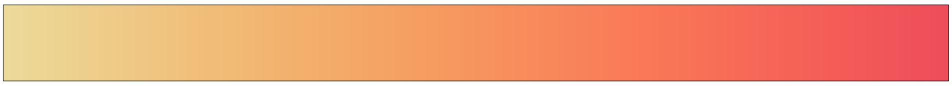


OrRd

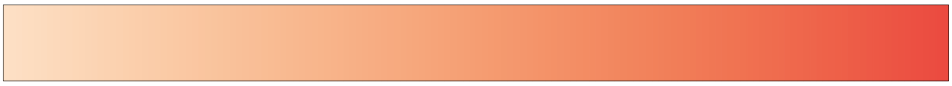


YlOrRd

Cluster #26

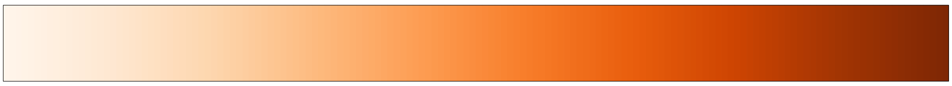


OrYel

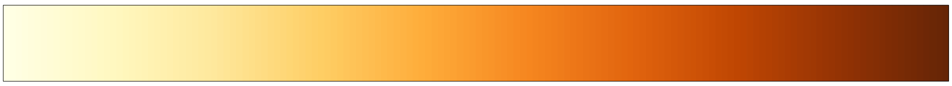


Peach

Cluster #27

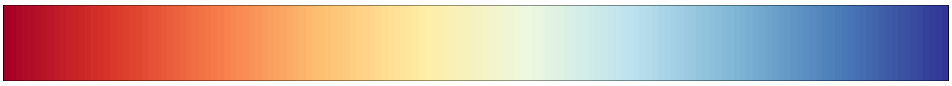


Oranges

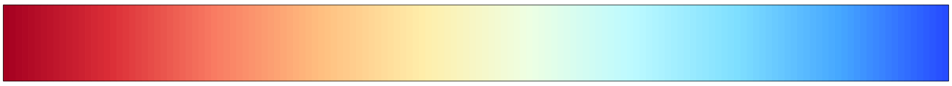


YlOrBr

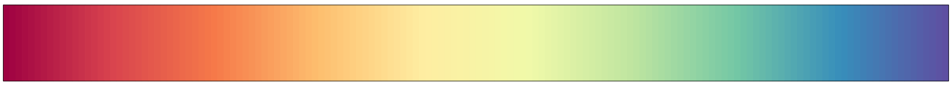
Cluster #28



RdYlBu

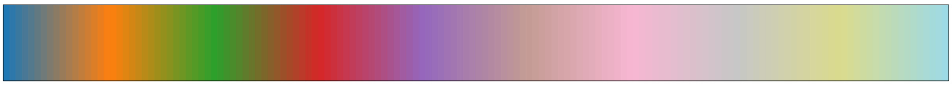


RedYellowBlue

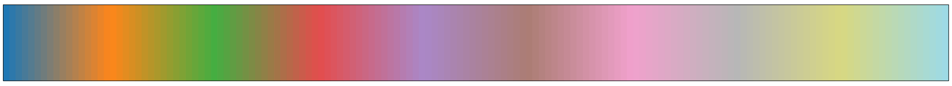


Spectral

Cluster #29

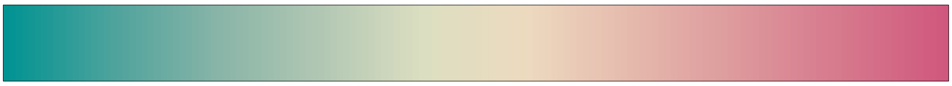


Tab20

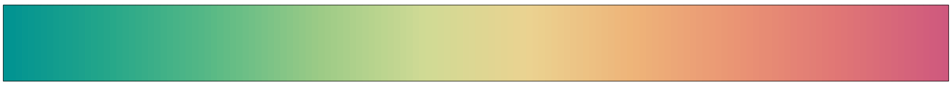


Tableau

Cluster #30

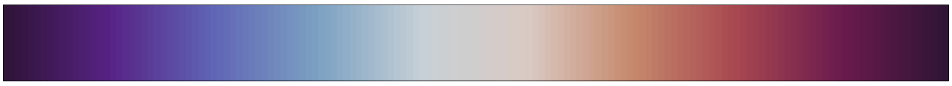


TealRose

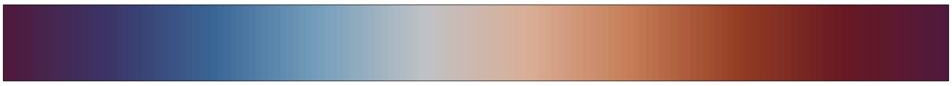


Temps

Cluster #31



TwilightShifted



Vik0