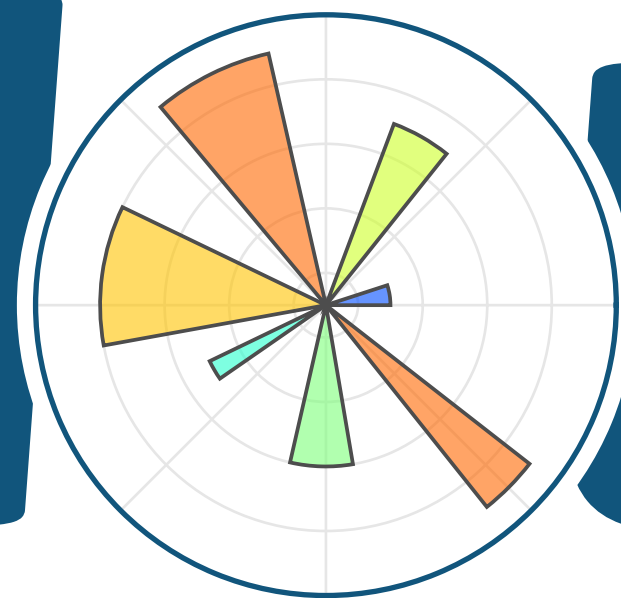
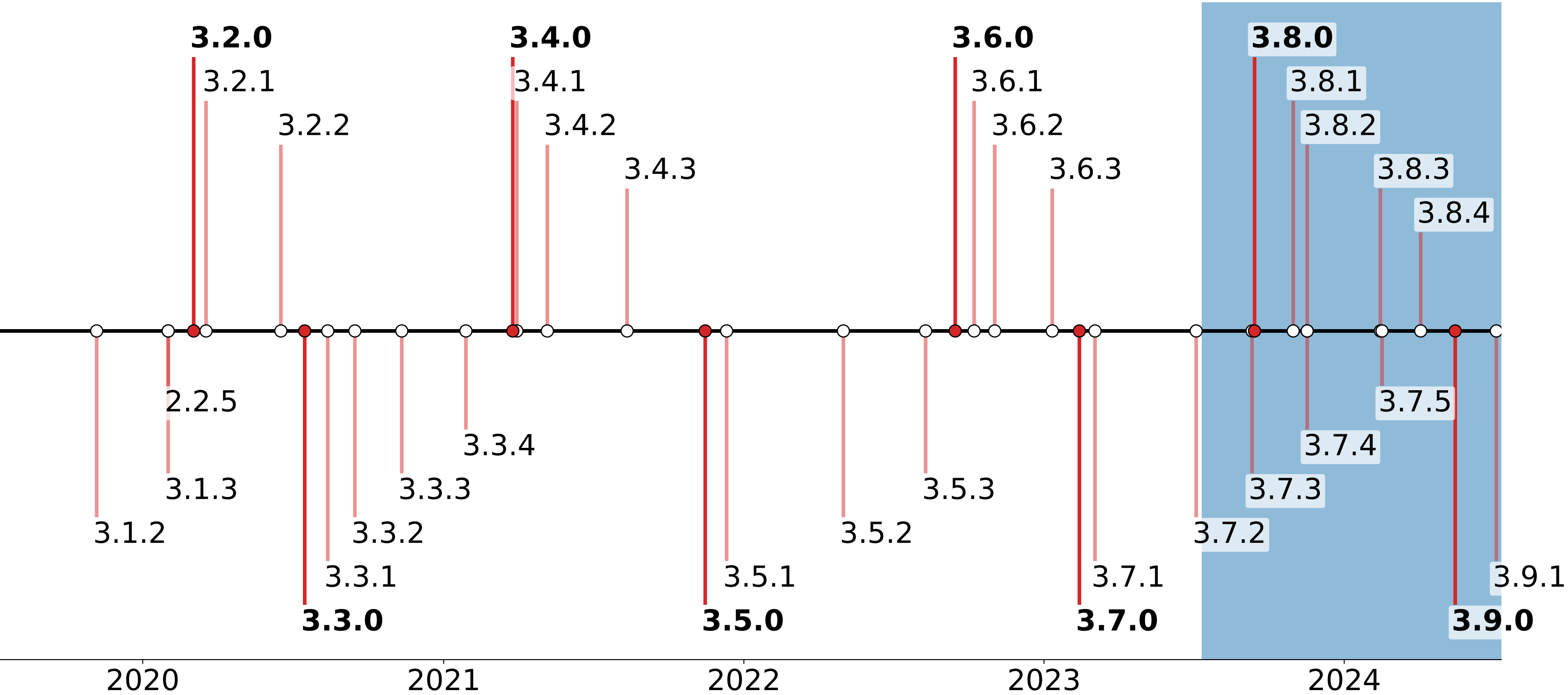
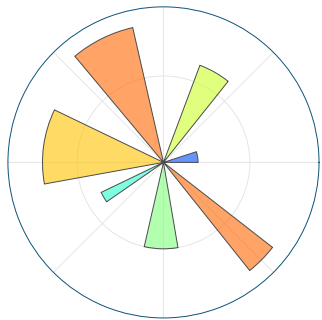


matplotlib

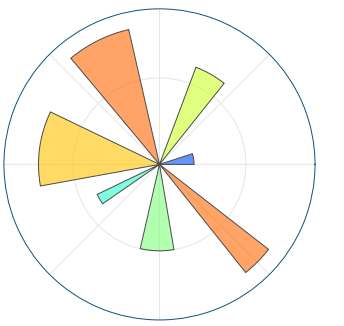


SciPy 2024
@matplotlib

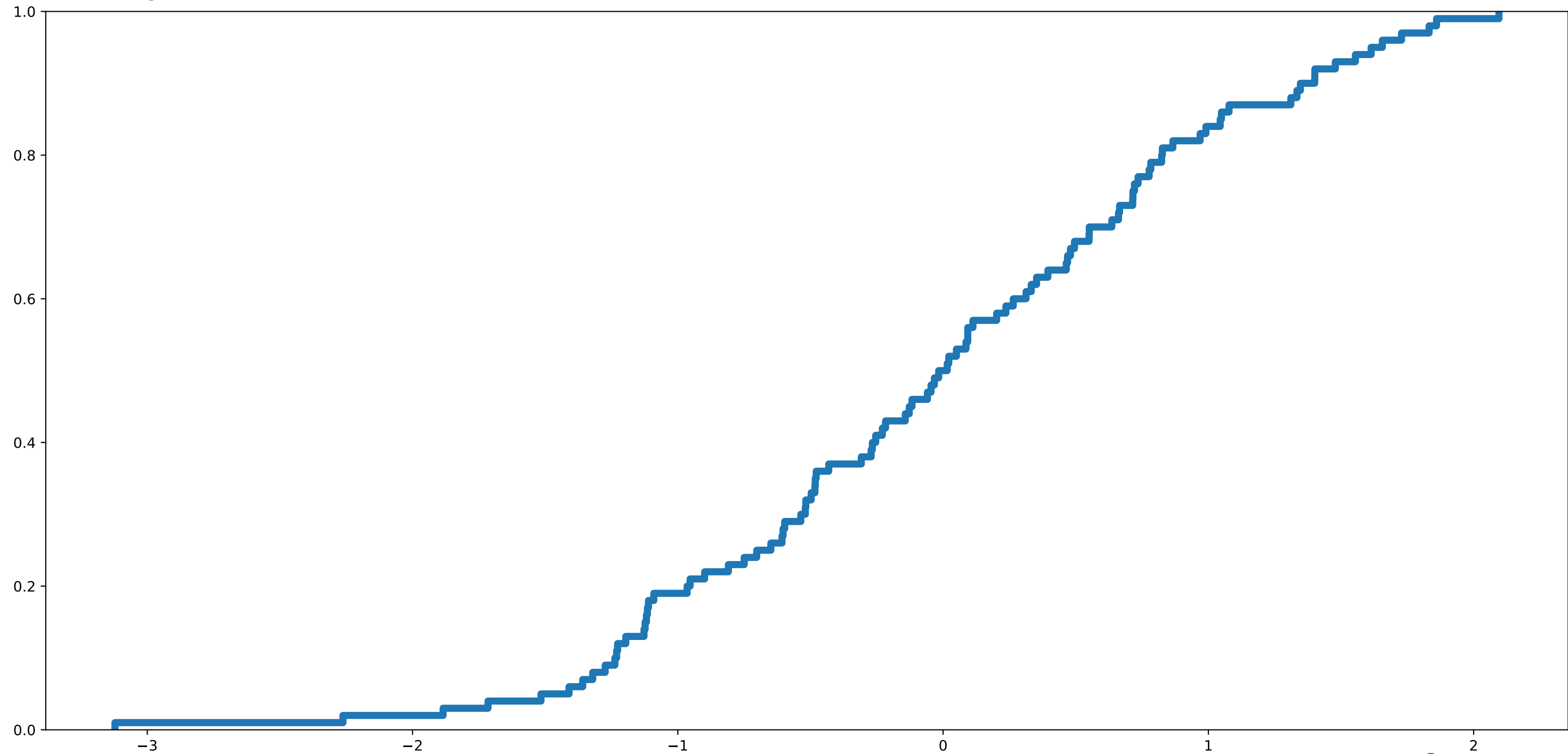
Release History



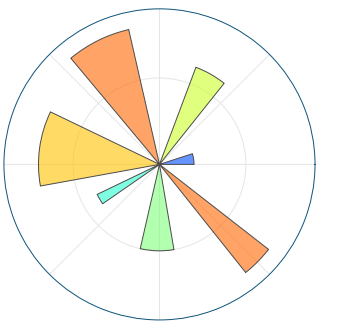
3.8: ECDFs



```
ax.ecdf(np.random.randn(100))
```



PR by @anntzer

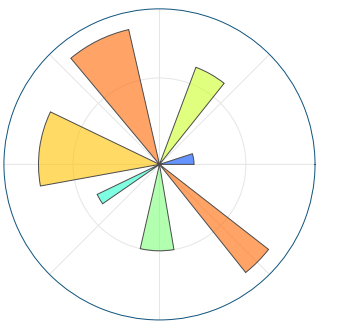


3.8: Mathtext improvements

Improvements lead by GSoC student @devRD (Ratnabali Dutta)

- **\boldsymbol support (PR#25661)**
 $\text{\boldsymbol{a+2+\alpha}} \rightarrow \mathbf{a} + 2 + \boldsymbol{\alpha}$
- **More mathematical operators (PR#26024)**
 $\text{\dagger} \dagger, \text{\QED} \blacksquare, \text{\sinewave} \sim, \text{\isinE} \in, \text{etc.}$
- **More relational operators (PR#25933)**
 $\text{\leqq} \leq, \text{\lessgtr} \lesseqgtr, \text{\backsim} \backsim, \text{\precsim} \precsim, \text{\gtrapprox} \gtrapprox, \text{\lll} \lll, \text{\Vvdash} \Vdash, \text{\triangle} \triangle, \text{etc.}$
- **Support for \text (PR#22173 by @oscargus)**
 $\text{\text{text}} \rightarrow \textit{mathtext}$

3.8: Type hints (provisional)



- **Simple signatures**

```
bar(x: float | ArrayLike, height: float | ArrayLike,  
    width: float | ArrayLike, bottom: float | ArrayLike | None,  
    *, align: Literal["center", "edge"], data = ...,  
    **kwargs) -> BarContainer:
```

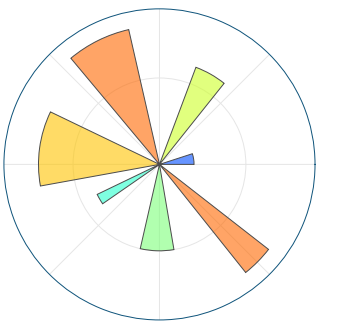
- **Complex (overloaded) signatures**

```
def subplot_mosaic(mosaic: str, *,  
    empty_sentinel: str, subplot_kw: dict[str, Any] | None  
    ) -> dict[str, Axes]: ...
```

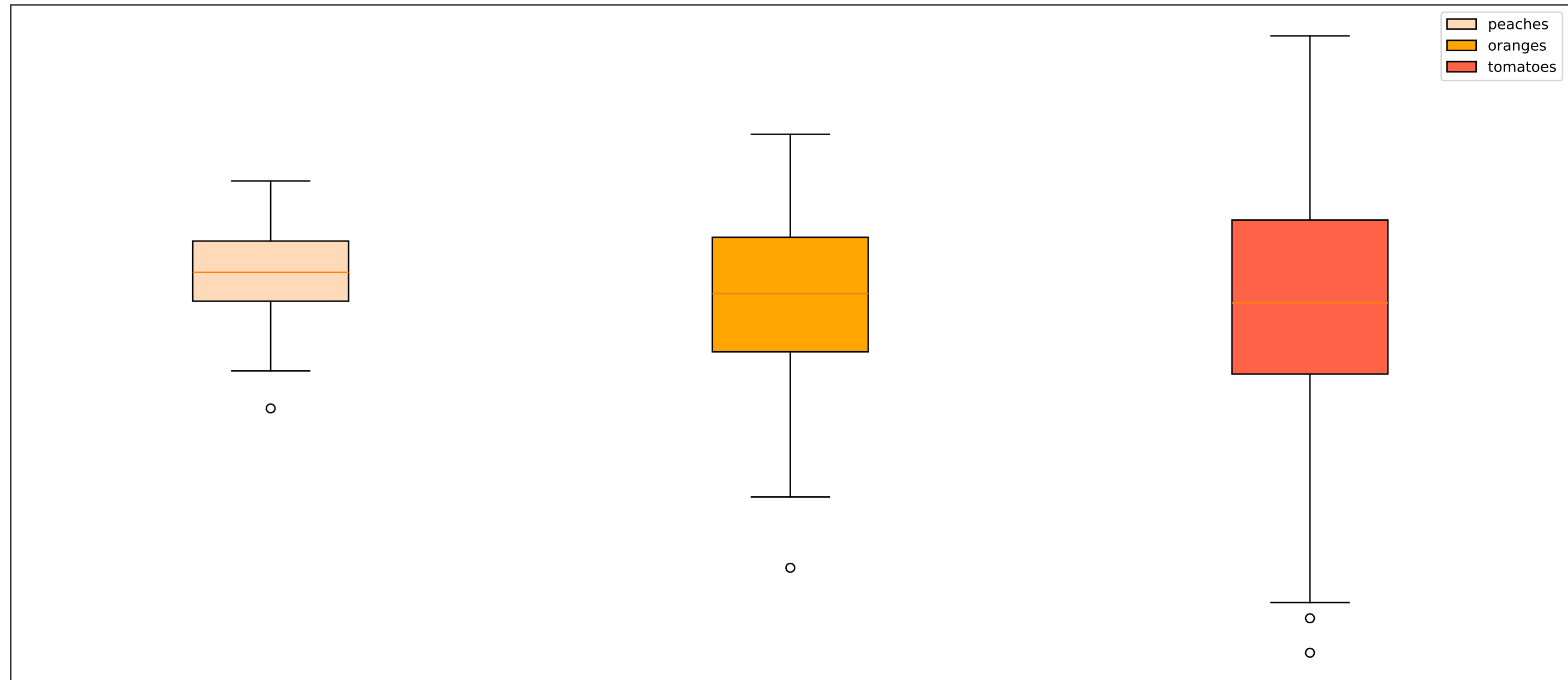
```
def subplot_mosaic(mosaic: list[HashableList[_T]], *,  
    empty_sentinel: _T, subplot_kw: dict[str, Any] | None,  
    ) -> dict[_T, Axes]: ...
```

```
def subplot_mosaic(mosaic: list[HashableList[Hashable]], *,  
    empty_sentinel: Any, subplot_kw: dict[str, Any] | None,  
    ) -> dict[Hashable, Axes]: ...
```

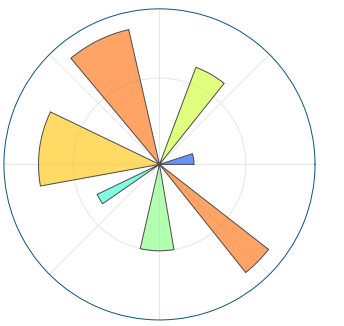
3.9: Legend support for boxplot



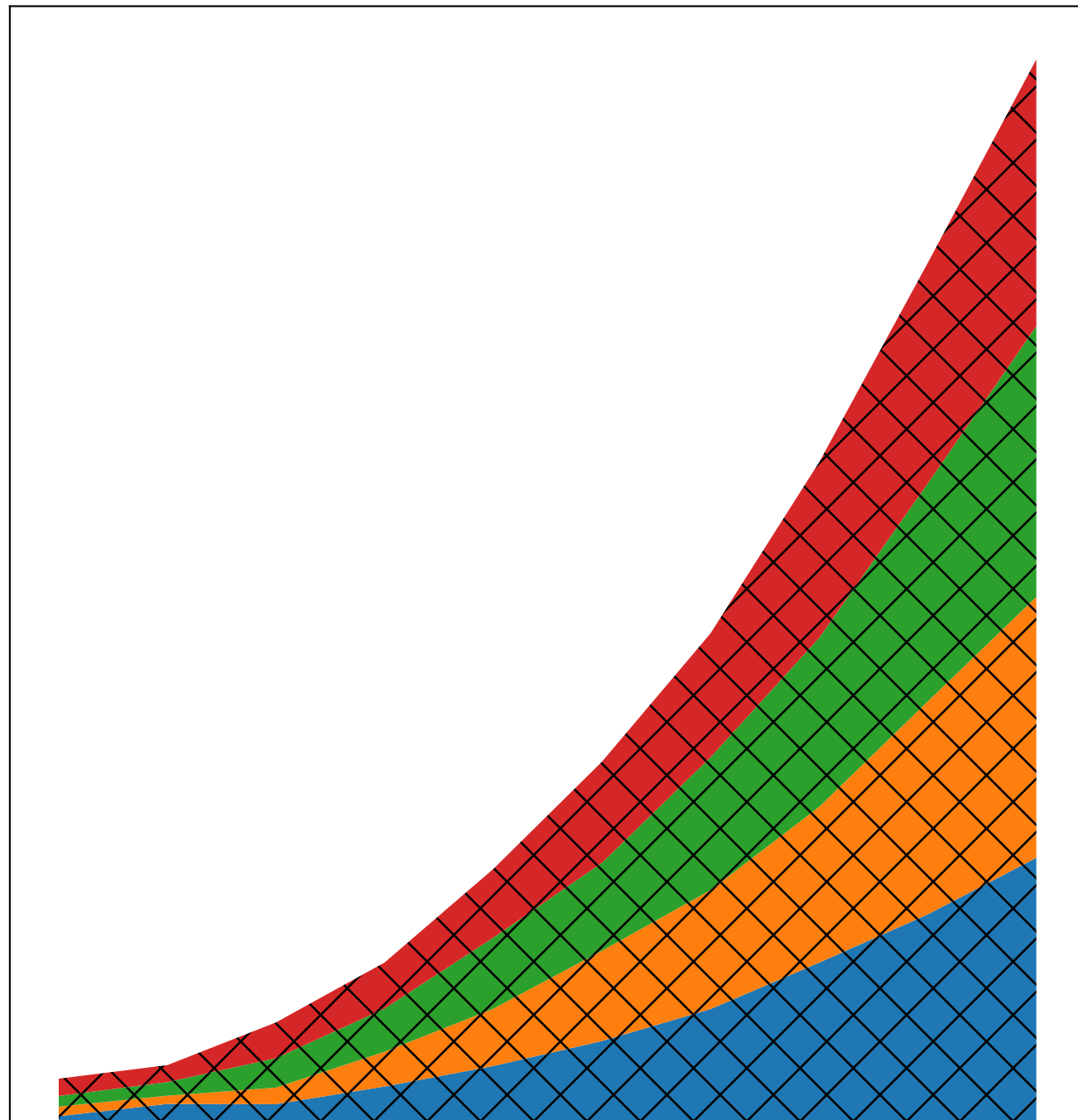
```
ax.boxplot(fruit_weights,  
           label=["peaches", "oranges", "tomatoes"])
```



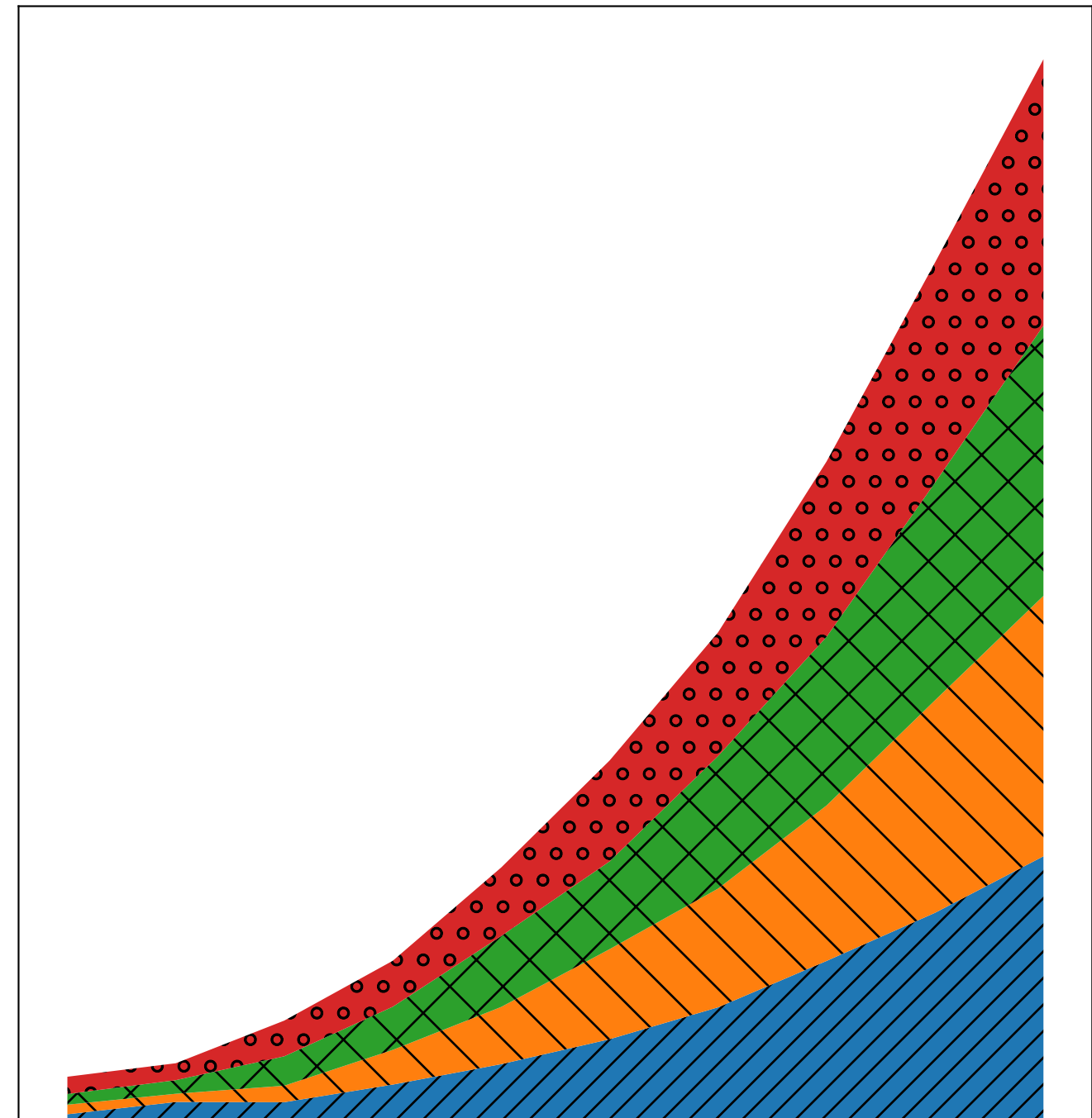
3.9: Individual stackplot hatches



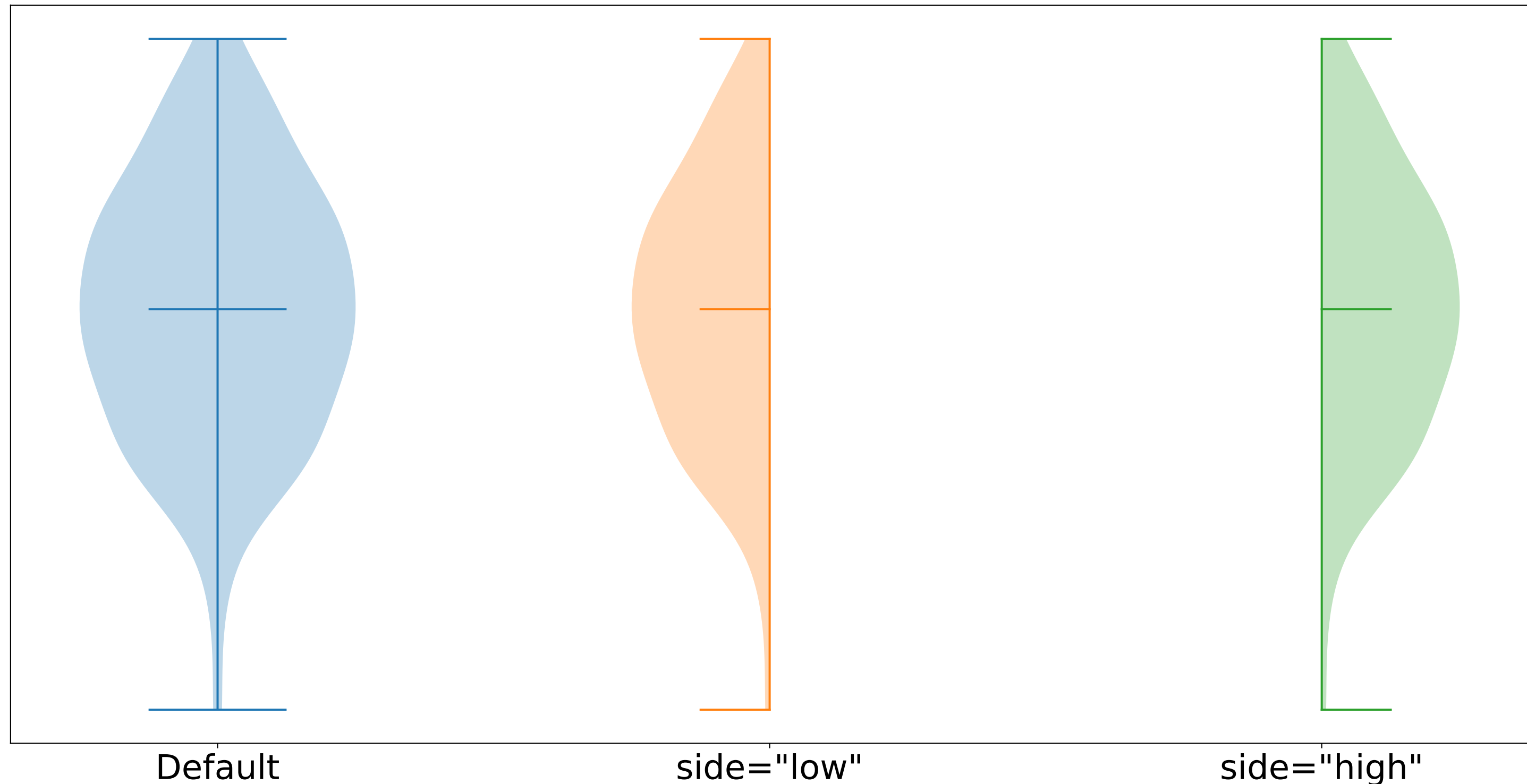
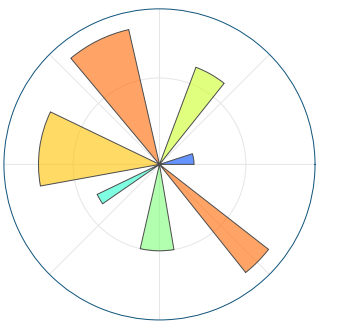
hatch='x'



hatch=['/', '\\', 'x', 'o']

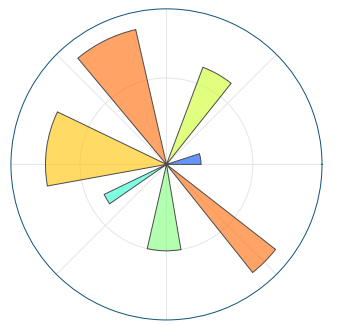
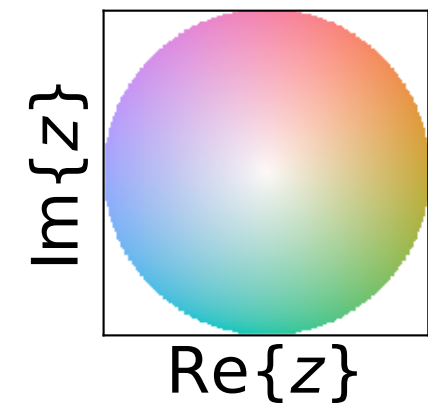
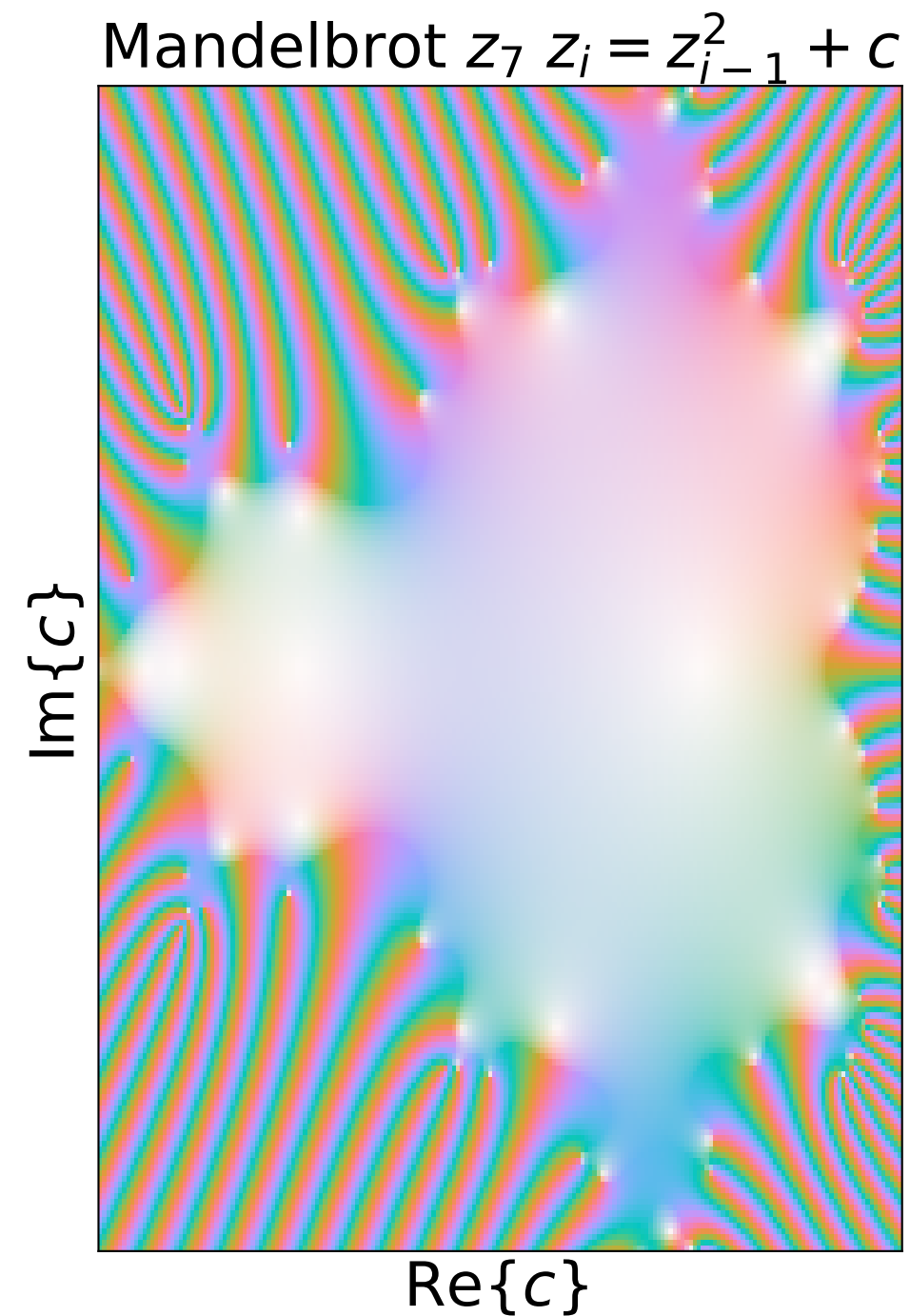
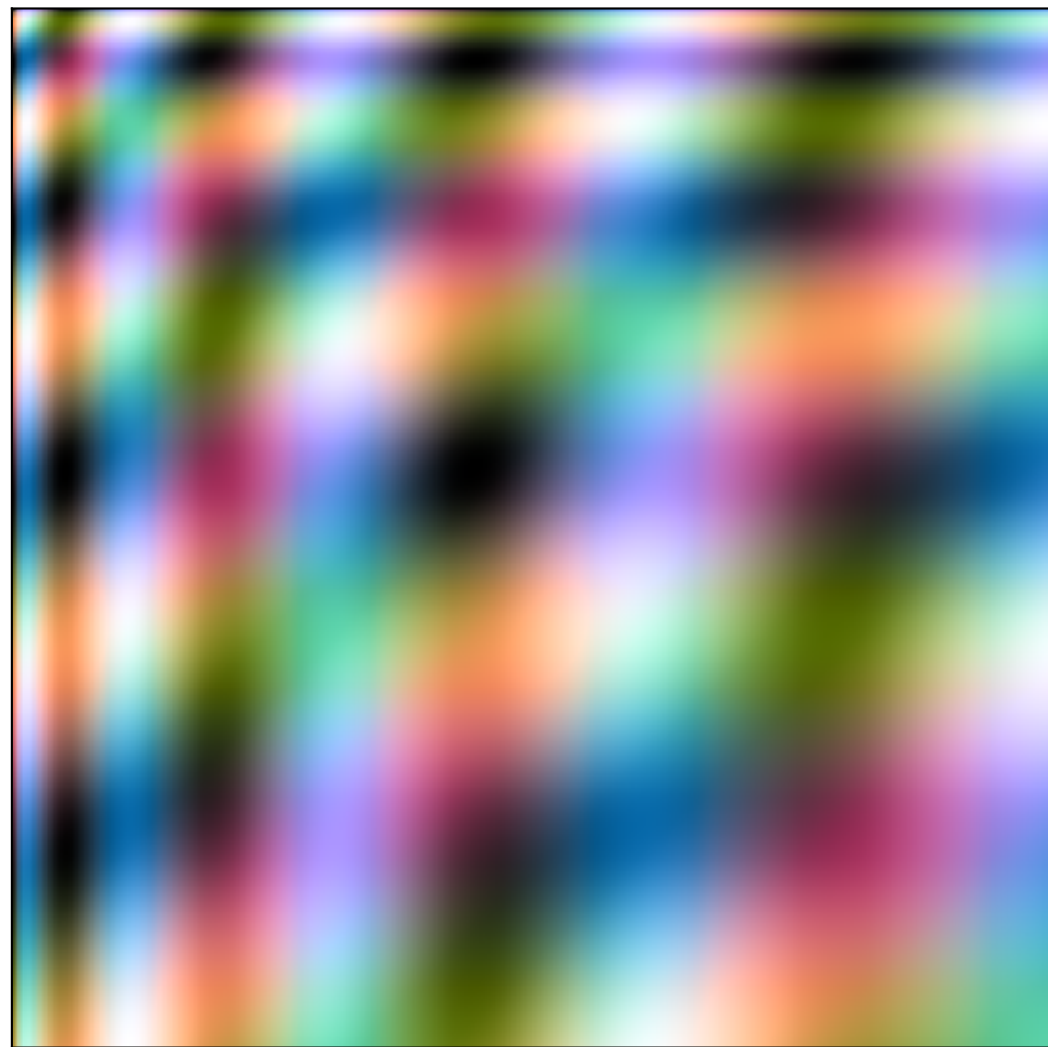


3.9: Violinplot sides

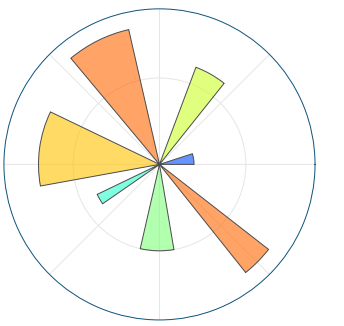


3.10: Upcoming features

- Multivariate colormapping



Sprint topics



- GSoD for example categorization (Eva Sibinga)
- Tagging examples with sphinx-tags (by @melissawm)

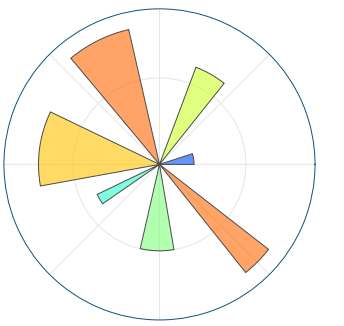
`.. tags:: animation, component: axes`

Come to our Sprint!

- **Your Contribution?**
 - New Contributors Meeting (first Tuesday of month)



Thank You!



This entire presentation was made in Matplotlib:
<https://github.com/QuLogic/scipy2024-mpl-update>

Slides



Release Notes

