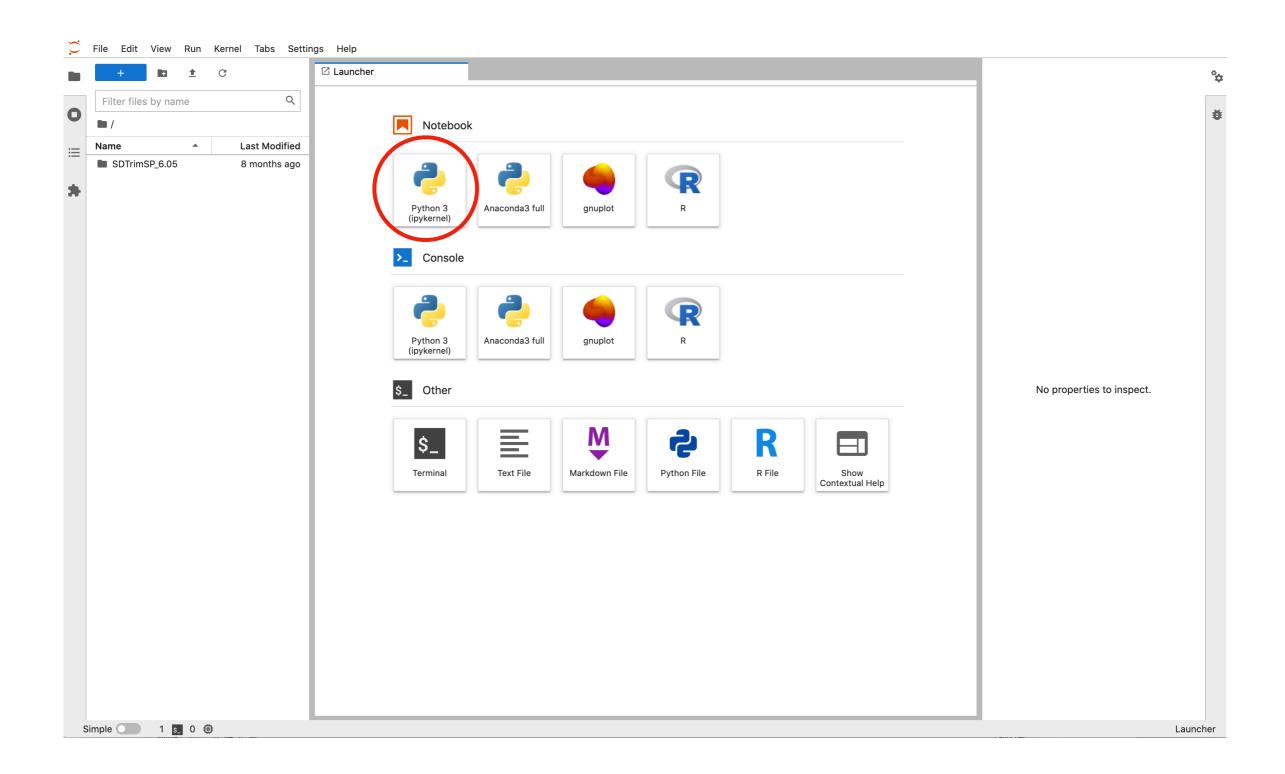
Joint ICTP-IAEA School on Data for Modelling Atomic and Molecular Processes in Plasmas

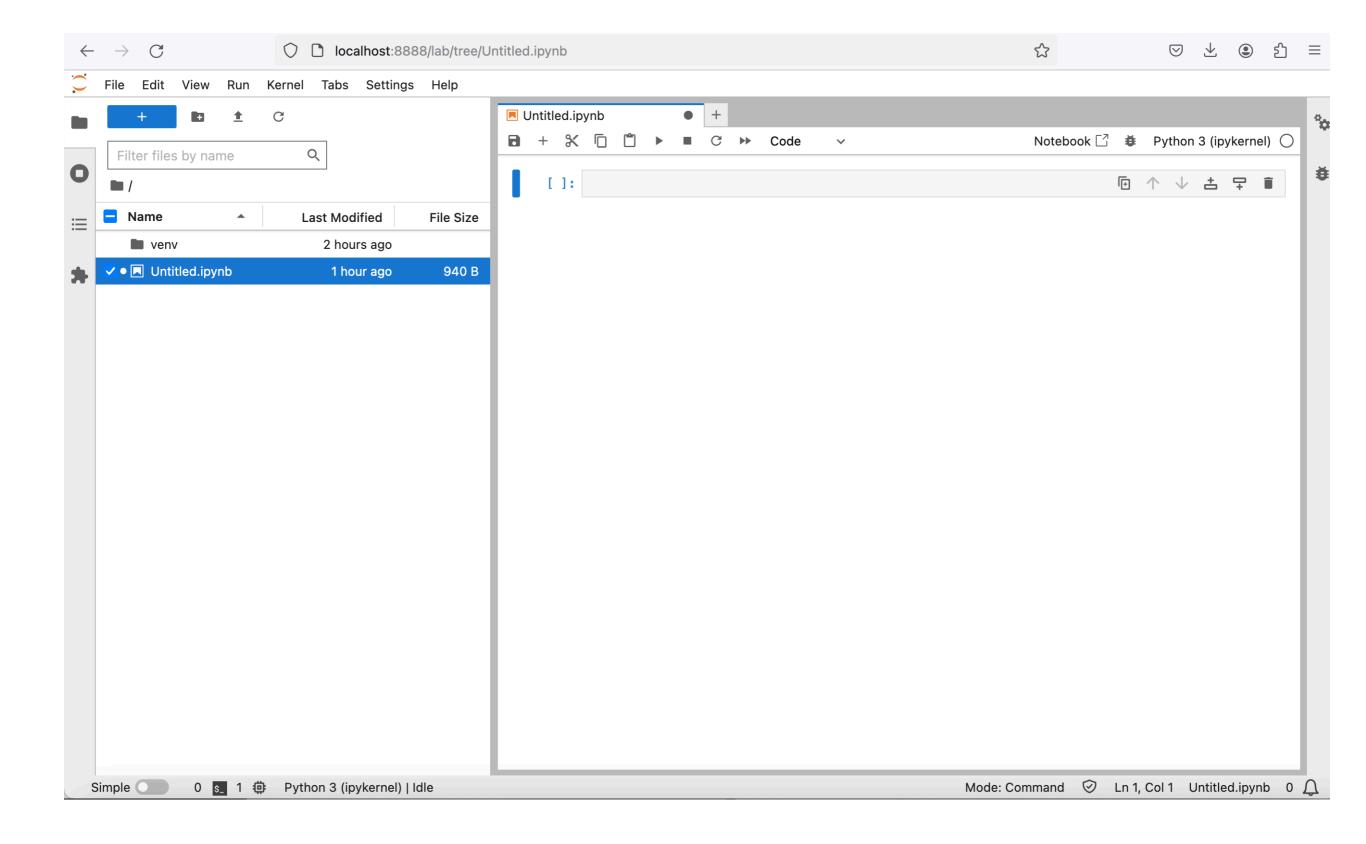
Introduction to Jupyter Markdown

Christian Hill International Atomic Energy Agency

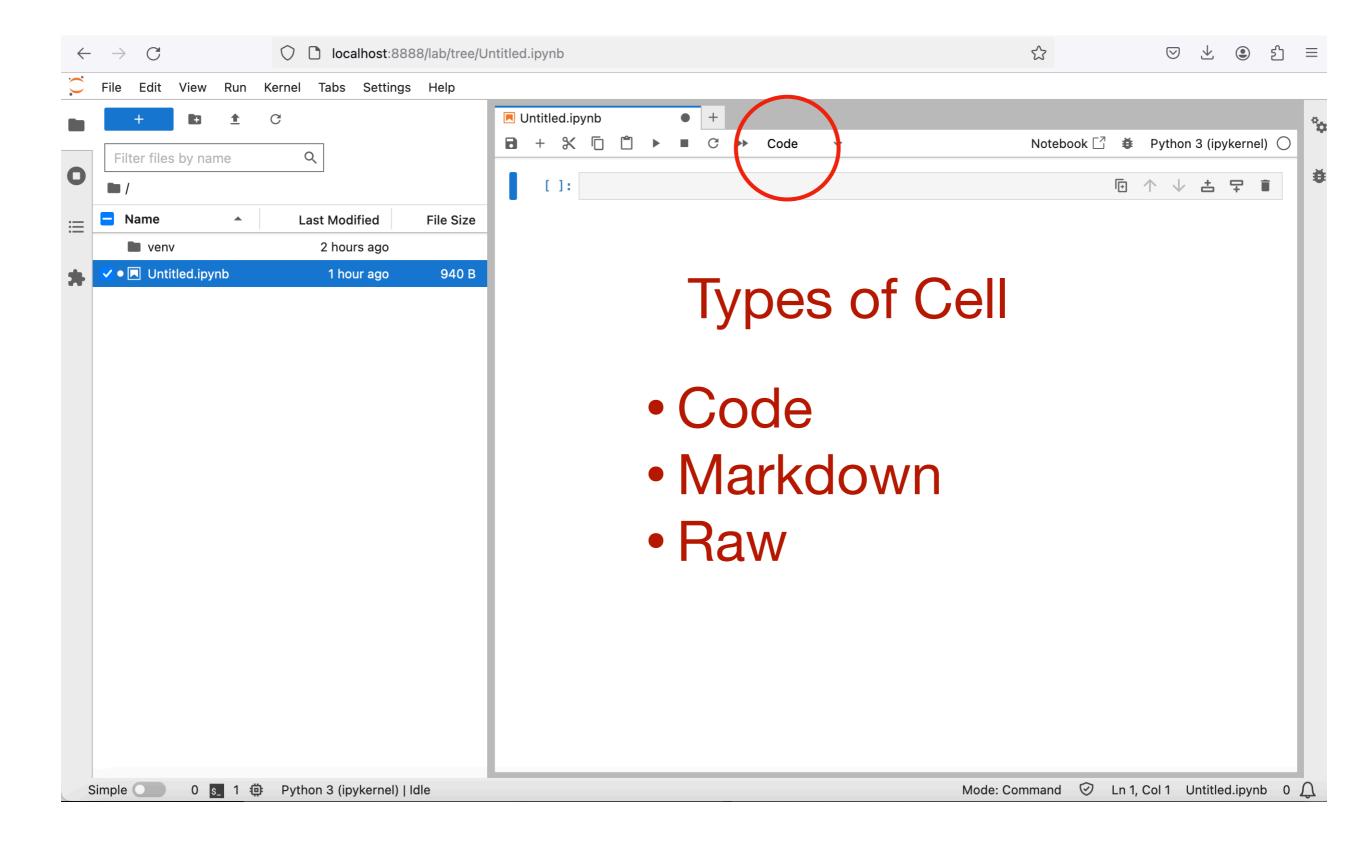
Jupyter Notebook



Jupyter Notebook



Jupyter Notebook



Jupyter Notebook: Markdown (1) Sections

In [x]:

```
# Section 1
## Section 1.1
This is the first paragraph of the section called
"Section 1.1" it consists of a few lines of text
and ends with a blank line.
This is the second paragraph of the section.
It is defined by four lines.
These will be merged into a single block of text because
they are not separated by blank lines.
## Section 1.2
And so on...
```

Section 1

Section 1.1

This is the first paragraph of the section called "Section 1.1" it consists of a few lines of text and ends with a blank line.

This is the second paragraph of the section. It is defined by four lines. These will be merged into a single block of text because they are not separated by blank lines.

Section 1.2

And so on...

Jupyter Notebook: Markdown (2) Text Styles

In [x]:

This is a paragraph of text with a variety of font styles, including *italic*, **bold** and _underlined_. If you want to surround some text with literal asterisks, you have to *escape them*.

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Jupyter Notebook: Markdown (3) Bullet Lists

An unordered list: In [x]: * Solids - Iron - Titanium * Liquids - Bromine _Note_: Bromine is a reddish-brown liquid, with a melting point of -7.2 °C and a boiling point of 58.8 °C. Its vapour is noticeable even at room temperature. - Mercury _Note_: Mercury is the only only metallic element that is liquid at standard temperature and pressure. * Gases - Hydrogen - Oxygen

- Chlorine

An unordered list:

- Solids
 - Iron
 - Titanium
- Liquids
 - Bromine

Note: Bromine is a reddish-brown liquid, with a melting point of -7.2 °C and a boiling point of 58.8 °C. Its vapour is noticeable even at room temperature.

Mercury
 Note: Mercury is the only only metallic element that is liquid

at standard temperature and pressure.

Gases

- Hydrogen
- Oxygen
- Chlorine

Jupyter Notebook: Markdown (4) Enumerated Lists

In [x]:

Instructions

- 1. Draw a thin line in pencil 1.5 cm from the bottom of the TLC plate.
- 2. Apply sample spots in equal distances across the line.
- 3. Pour the solvent into the TLC chamber to a depth of 1 cm.
- 4. Place the plate inside the champer with the pencil line just above the solvent surface.
- Allow sufficient time for the development of the TLC spots.

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- Place the plate inside the champer with the pencil line just above the solvent surface.
- Allow sufficient time for the development of the TLC spots.

Jupyter Notebook: Markdown (5) Links

In [x]:

This is a link to the [Project Jupyter Website] (https://jupyter.org/).

This is a link to the Project Jupyter Website.

In [x]:

Some resources for free chemical data include [Wikipedia][wikipedia], [ChemSpider][chemspider] and the [Dortmund Data Bank][ddb].

[wikipedia]: [https://wikipedia.org]
[chemspider]: [https://chemspider.com]

[ddb]: [http://www.ddbst.com/free-data.html]

Some resources for free chemical data include Wikipedia, ChemSpider and the <u>Dortmund Data Bank</u>.

My website is https://scipython.com.

Jupyter Notebook: Markdown (6) Local Links

```
In [x]: Here is [my local file, data.txt](files/data.txt)

Here is my local file, data.txt.
```

Jupyter Notebook: Markdown (7) Tables

```
| Alloy | Melting point | Composition |
|----- | ------ | ------- |
| Field's metal | 62 °C | Bi (32.5%) / Sn (16.5%) / In (51%) |
| Roses's metal | 98 °C | Bi (50%) / Pb (25%) / Sn (25%) |
| Wood's metal | 70 °C | Bi (50%) / Pb (26.7%) / Sn (13.3%) / Cd (10%) |
| Cerrosafe | 74 °C | Bi (42.5%) / Pb (37.7%) / Sn (11.3%) / Cd (8.5%) |
```

| Alloy | Melting point | Composition |
|---------------|---------------|---|
| Field's metal | 62 °C | Bi (32.5%) / Sn (16.5%) / In (51%) |
| Roses's metal | 98 °C | Bi (50%) / Pb (25%) / Sn (25%) |
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Jupyter Notebook: Markdown (8) Images

![The nu2 fundamental bending band of carbon dioxide](CO2-spec.png)

Figure 1. The \$\nu_2\$ fundamental bending band of carbon dioxide

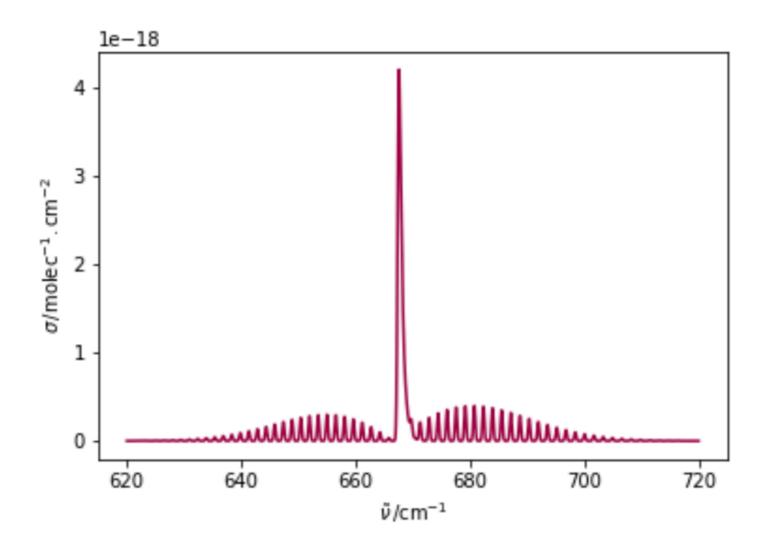


Figure 1. The u_2 fundamental bending band of carbon dioxide