Flux-Y-Beamer Demo

副标题：演示文件 v0.1

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Table of Content

Flux-Y is a modern style beamer presentation modified based on Flux-beamer. It is provided as a work in progress version and may suffer from inconsistencies. Sources and complementary information are available at

https://github.com/YanQH-Gausoul/Flux-Y-Beamer

Five Flux-beamer color palettes.

`\usetheme[style=asphalt]{flux}`

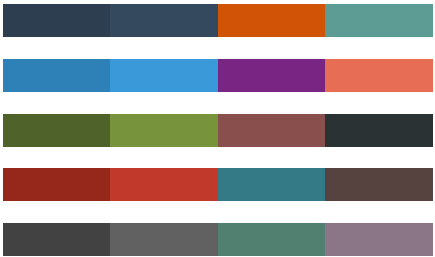
Asphalt

Blue

Green

Red

Gray



Five Flux-Y-beamer color palettes.
One for THU purple theme color.
Four for selected Pantone colors.
`\usetheme[style=asphalt]{flux}`

Default English typographies

- Regular
- Alert
- Example
- *Italic*
- **Bold**

默认中文字体，可在导言区分别设置，需字体库支持

- 常规
- 醒目
- 例子
- 斜体
- **粗体**

Citation style [*Babington, 1993*] [*Eston, 1993*]

Items

- Cats
- Dogs
- Birds

Enumerations

1. First
2. Second
3. Last

Descriptions

Apples	Yes
Oranges	No
Grappes	No

表 1: Largest cities in the world (source: Wikipedia)

City	Population
Mexico City	20,116,842
Shanghai	19,210,000
Peking	15,796,450
Istanbul	14,160,467

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Mexico City	20,116,842
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Flux theme comes with four pre-defined block style collections.
Native style (default) available as `\setblockstyle{native}`

Default

Block content.

Alert

Block content.

Example

Block content.

Flux theme comes with four pre-defined block style collections.
NoBackground style available as `\setblockstyle{nobackground}`

Default

Block content.

Alert

Block content.

Example

Block content.

Flux theme comes with four pre-defined block style collections.
Metropolis style available as `\setblockstyle{metropolis}`

Default

Block content.

Alert

Block content.

Example

Block content.

Flux theme comes with four pre-defined block style collections.
emph style available as `\setblockstyle{emph}`

Default

Block content.

Alert

Block content.

Example

Block content.

Flux-Y offer pre-defined text box, which simply display a sentence using Flux-beamer block styles without title.

Default text content.

Alert text content.

Example text content.

Default text content.

Alert text content.

Example text content.

This is a plain frame.
Use it to display full page images.

目录

$$\partial_t \ln\langle T\rangle = -\sqrt{2\varepsilon_0}\partial_x\underline{\langle\tilde{V}_x\tilde{T}\rangle_y} + \chi_{\text{neo}}\partial_x^2 \ln\langle T\rangle$$

$$\downarrow$$

$$\langle\tilde{V}_x\tilde{T}\rangle_k$$

$$\downarrow$$

$$\sim R\left(\omega - k_y\Omega_Z - b_k\bar{\Omega}_D\right)\langle\tilde{V}_x^2\rangle_k\left[\partial_x\overline{\Delta}\phi_Z(..) - \partial_x\ln\langle T\rangle(..)\right]$$

$$\downarrow$$

$$(\chi_4^{\text{non-res}} + \chi_4^{\text{res}})\partial_x\overline{\Delta}\phi_Z - (\chi_3^{\text{non-res}} + \chi_3^{\text{res}})\partial_x\ln\langle T\rangle$$

$$\chi \text{ model}\downarrow$$

Equation (2)

$$\partial_t\left[\overline{\Delta}\phi_Z\right] = -\partial_x\underline{\langle\tilde{V}_x\overline{\Delta}\tilde{\phi}\rangle_y} + \nu_c\partial_x^2\overline{\Delta}\phi_Z$$

$$\underline{\langle\tilde{V}_x\overline{\Delta}\tilde{\phi}\rangle_k = -\langle\tilde{V}_x\delta q\rangle_k + \langle\tilde{V}_x\tilde{T}\rangle_k}$$

$$\downarrow$$

$$R\left(\omega - k_y\Omega_Z\right)R\left(\omega - k_y\Omega_Z - k_y b_k\bar{\Omega}_D\right)\langle\tilde{V}_x^2\rangle_k\partial_x\ln\langle T\rangle(..)$$
$$-R\left(\omega - k_y\Omega_Z - k_y b_k\bar{\Omega}_D\right)\langle\tilde{V}_x^2\rangle_k\partial_x\overline{\Delta}\phi_Z(..)$$

$$\downarrow$$

$$\chi_1^{\text{non-res}}\frac{\partial_x\ln\langle T\rangle}{\sqrt{2\varepsilon_0}} - (\chi_2^{\text{non-res}} + \chi_2^{\text{res}})\partial_x\overline{\Delta}\phi_Z$$

$$\chi \text{ model}\downarrow$$

Equation (1)

$$\tilde{T}_{\mathbf{k}} = R(\ldots)\left[\partial_x\overline{\Delta}\phi_Z(\ldots) - \partial_x\ln\langle T\rangle(\ldots)\right]\tilde{V}_x(k)$$

$$\delta q_k = R(\omega - k_y\Omega_Z)\left[\tilde{T}_k(\ldots) - \partial_x\langle q\rangle(\ldots)\right]\tilde{V}_x(k)$$

- 温度 and 涡度 梯度同时出现[2]

$$C_i\overline{\Delta}\tilde{\phi} = \tau\tilde{T} - \delta q$$

$$\chi_3 = \Re\sum_k[\tilde{V}_x(k)]^2\frac{i}{\omega - k_y\left(\Omega_Z + b_k\bar{\Omega}_D\right)}$$

- $\omega = \omega_R + i\gamma \Rightarrow$ 分离共振和非共振贡献
- 共振输运只出现在涡量通量中

[2] Connections to Ref. [*Adams, 1993*]

$$\frac{\partial}{\partial t}\left(\overline{\Delta}\phi_Z\right) = -\frac{\partial}{\partial x}\left(\frac{1}{C_i}\vartheta\chi^{\mathrm{n}}\frac{\partial}{\partial x}\frac{\ln\langle T\rangle}{\sqrt{2\varepsilon_0}}\right) + \frac{\partial}{\partial x}\left[\vartheta\chi\frac{\partial}{\partial x}(\overline{\Delta}\phi_Z)\right] + \nu\frac{\partial^2}{\partial x^2}\overline{\Delta}\phi_Z \tag{1}$$

$$\frac{\partial}{\partial t}\ln\langle T\rangle = -\frac{\partial}{\partial x}\left[C_i\sqrt{2\varepsilon_0}(1-\vartheta)\chi\frac{\partial}{\partial x}\left(\overline{\Delta}\phi_Z\right)\right] + \frac{\partial}{\partial x}\left[\chi\frac{\partial}{\partial x}\ln\langle T\rangle\right] + \chi_{\mathrm{neo}}\frac{\partial^2\ln\langle T\rangle}{\partial x^2} \tag{2}$$

边界条件

$$\left.\frac{\partial}{\partial x}\overline{\Delta}\phi_Z\right|_{\mathrm{B}} = 0 \tag{3}$$

$$\left.\frac{\partial}{\partial x}\ln\langle T\rangle\right|_{\mathrm{B}} \equiv \kappa_T^{\mathrm{B}} = \mathrm{Const.} \tag{4}$$

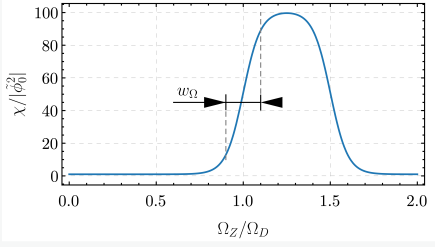
$$\left.\frac{\partial}{\partial x}\langle\tilde{U}^2\rangle\right|_{\mathrm{B}} = 0, \quad \text{or} \quad \left.\frac{\partial}{\partial x}\langle\tilde{\phi}^2\rangle\right|_{\mathrm{B}} = 0 \tag{5}$$

And: $\Omega_Z = \partial_x\phi_Z$, set B.C. for Ω_Z as:

$$\left.\Omega_Z\right|_{\mathrm{B}} = 0 \tag{6}$$

Flux-driven System

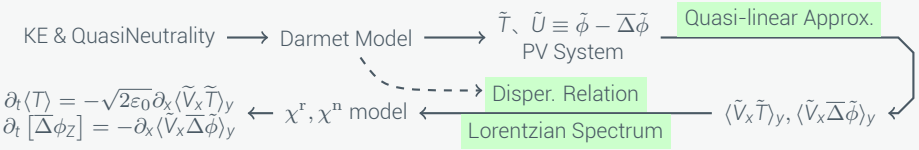
分段输运系数模型 $\chi \equiv (\chi^{\mathrm{n}} + \chi^{\mathrm{r}})|\tilde{\phi}_0|^2$



Eq. (1), (2), (??) + 边界条件 (3-6) + 输运系数模型 $\Longrightarrow$ 演化系统

中文、英文、公式混排演示

演化系统



剖面模式（pattern）

1. 共振: “Wave + Particle + Flow”
2. 涡度通量中仅温度梯度的非共振贡献
3. 流结构 Ω_Z 调制剖面状态:
   - 非共振态：陡峭的温度剖面
   - 共振态：(hypothesized) Near-marginal 温度剖面
4. 边界热通量阈值条件 $\Delta\kappa_T^{\mathrm{crit}}$
5. 台阶宽度决定于：$\delta_b, \chi^{\mathrm{r}}/\chi^{\mathrm{n}}, \kappa_T^{\mathrm{B}}$

可能的应用

- ZF 的无碰撞饱和
- 模型推广到快离子和湍流相互作用
- 范式?

[*Yan & Diamond, 2022*]

Thank You!

Thank You!

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Inspired by **Metropolis** theme from Matthias Vogelgesang.
https://github.com/matze/mtheme and **Flux-Beamer** theme from Peter van Berg.
https://github.com/pvanberg/flux-beamer