The NoteBeamer Template

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Abstract

This is the document for NoteBeamer template, which provides a method to input Beamers on note papers and make notebook quickly.

GitHub issues: https://github.com/xiamyphys/NoteBeamer/issues

Contents

1	Introduction	1
	1.1 The purpose of this template	1
		1
	1.3 Loading NoteBeamer and its modes	2
2	Modes of NoteBeamer	2
	2.1 The draft mode	2
	2.2 The saturation mode	2
	2.3 The color mode	2
	2.4 The font mode	3
3	Commands of NoteBeamer	3
	3.1 The author, mail, flyleaf, sticker and logo commands	3
	3.2 The notebook command	3
	3.3 The chapter command	4
	3.4 The emptynote & emptyhdunote commands	4
	3.5 The newnote (sss) (ssss) commands	4
4	Version History	4
Α	Document Example	7

1 Introduction

1.1 The purpose of this template

This template provides an easy way to input Beamers on note papers and make notebook quickly. It's optimized for Goodnotes' default paper size and there won't have difference between papers.

If you meet bugs when using this template, or you have better suggestions or ideas, or you want to participate in the development of the template or other templates by me, feel free to contact me on GitHub issues or via email xiamyphys@gmail.com.

Also, you can join my LTEX Template Discussion QQ Group: 760570712 to communicate with me and get the insider preview edition of the template.

1.2 Packages required

This template is based on the template standalone. And it requires tikz package to plot some graphics, kvoptions and etoolbox packages to provide global options, graphics package to provide the draft mode, hyperref package provides link jump function, ctex package to support the Chinese, Simplified language and fontawesome5 package to provide a set of beautiful icons.

I strongly suggest that you should use cmd to implement the commands to update all the packages to the latest version or switch to portable version instead.

tlmgr update --self
tlmgr update --all

Remember to choose the proper mirror source in your region. To learn more, please refer to How do I update my TEX distribution?

1.3 Loading NoteBeamer and its modes

Update your T_EXdistribution or just save the file notebeamer.cls to your project's root directory, then create a .tex file, just input the command \documentclass{notebeamer} on the first line.

The template provides three modes: draft, color and font. Just add the options of the modes separately by commas in the square bracket of the command in your .tex file, such as

\documentclass[draft,darker,libertinus]{notebeamer}

2 Modes of NoteBeamer

2.1 The draft mode

Like most of the templates, this template also provide all modes provided by graphics package such as draft, TEX will only read for size info of pages you input, and a box of the correct size is printed with the filename in.

This can accelerate the speed of compile, and you can preview the effect quickly when you input a file with too many pages and (or) its size is too large. After you make sure that there's no formatting errors, you can cancel this mode just to wait until compiled.

The files corresponding to the commands sticker, logo and flyleaf can be stored in a folder named figure(s), image(s), graphic(s) or picture(s), and you needn't to write these directories again in these commands because this template has already set these directories as indexes. Just as shown in the file tree in the example in Document Example.

2.2 The saturation mode

This mode has three options, lighter light, normal, dark and darker, which can make the color of the covers you create in this template get lighter or darker, and the default option is normal.

2.3 The color mode

This mode has two options, main and colorful, which can make the color of the note line remains or keep the same hues as the cover, and the default option is main.

2.4 The font mode

This mode has two options, times and libertinus, which can deside which font the notebook will use: The default *New Times Roman* font or the *Libertinus* font. You can use Libertinus fonts if you've installed it on your computer, and the default option is times.

3 Commands of NoteBeamer

3.1 The author, mail, flyleaf, sticker and logo commands

```
\author{Your Name} \mail{Your Mail Address}
\flyleaf{titlepage.pdf} \sticker{sticker.png}
\logo[link]{logofile.pdf}[info]
```

• author, mail and flyleaf command.

There will be an author's name or (and) mail on the cover page after you use the command author or (and) mail, also a hyperlink will be added to the email address. A title page will automatically be added after the cover page after you use the command flyleaf.

sticker and logo command.

There will be a sticker on the southeast of the note paper after you add, and there will be a logo on the northwest corner of the cover page and HDU note paper; otherwise it won't.

The first and third variable of the command logo can assign the link and info of the logo, which are optional.

The commands above are all repeatable, which can reassign the values that these commands assigned before.

3.2 The notebook command

```
\notebook[color]{title}[subtitle]
```

This command can create a cover. There are 7 colors for the cover, these colors' Hues are from Hangzhou MTR line 1 – 7, they are H1. Haitang Red, H2. Dangui orange, H3. Lemon yellow, H4. Camphor green, H5. Cyan, H6. Ocean Blue and H7. Romantic purple.

Here, the second value title is mandatory, and it can add the title above the center of the cover page while the third value subtitle is optional, and it can add the subtitle vertically to the lower left of the center. The first variable is from H1 to H7 and the default value is H5.

If a star (*) is added after this command, there will be an empty note after the cover page (or the title page if you assigned in the command flyleaf) automatically.

3.3 The chapter command

\chapter[chaptertitle]{filename} \chapter*[chaptertitle]{filename}

This command has 2 variables: chaptertitle and filename, will assign the following chapter title and the file (such as PDF made from \mathcal{E}T_EX) will be inputted. Here, the value chaptertitle is optional.

If a star (*) is added after this command, the counter chap won't take effect.

3.4 The emptynote & emptyhdunote commands

\emptynote \emptynote* \emptyhdunote \emptyhdunote*
\emptynote[1] \emptynote*[2] \emptyhdunote[3] \emptyhdunote*[4]

Command emptynote will create an empty note paper with the chapter title before and page number following the previous page, and command emptyhdunote will create an empty note paper with logo (may include link) and info were assigned by the command logo but without chapter title on the top of the note paper.

If a star (*) is added after this command, then the note paper created won't include the chapter title and page number. Also, the counter page won't take effect.

There's one optional variable of these command, it decides the number of note papers you will create, and the default value is 1, certainly.

3.5 The newnote (sss) (ssss) commands

\newnote{start page}{end page} % insert 1 image per page \newnotesss{start page}{end page} % insert 3 images per page \newnotessss{start page}{end page} % insert 4 images per page

These commands will create note papers that were inserted images on the left side, the two variables is the start page number and the end page number of the file that was already assigned by the second variable of the command chapter.

4 Version History

In the Advanced Quantum Mechanics class on 19 October 2023, my *obsessive-compulsive disorder* forced me to copy all the content projected by the teacher onto the whiteboard on my iPad, and I found that I only got a few pages full of notes without any knowledge understood in my brain after a class is over. Then, an idea suddenly occurred me: Why not create an automated program to quickly insert the Beamers given by the teacher before class with the format of several images per page? So I can just annotate on it and pay more attention to listen to the teacher. After the class ended that day, I went back to my dormitory and started writing programs in Large.

Version 1.0 was finished developing on 22 October 2023 and released on LaTeX Studio (Xiaoshan, Hangzhou) and Xiaohongshu, where won the favor of many people and even some people who have already retired from \text{Ex} want to re-enter.

On 24 October 2023, a member in the CMC competition WeChat group praised for my template, and proposed his idea: the template could be magically changed to insert a slightly smaller page of notes on the left side and take notes on the right side, because he found that he can only write in the corners when annotating some notes. It's a good idea, then I'm setting about developing the next version of the template.

While considering the suggestions from friends, I am also thinking about how to simplify the previous code. Because in version 1.0, if one want to insert a Beamer with 78 images and make 3 images per page, then he should write the command newnotesss for 26 times, it's so inelegant... However, no matter how I write the loop, it can't meet my expectations or report errors. Then, I asked stackexchange for help, and finally a LaTeX programmer wipet wrote the loop module for me. Here, I want to express my gratitude to him.

Version 2.0a was finished developing on 1 November 2023. This version not only simplified the commands to insert Beamers from to dozens of commands to only 1 command, but redesigned some details and functions. Firstly, this version supports to insert only one page of notes on the left side. What's more, this version supports to insert your school's logo on the cover page and empty note paper. Also, this version supports insert empty note papers without page number and chapter title with just add a star (*) after the command. Finally, this version can add a subtitle on the cover page, and redesign the colors (chosen from Hangzhou MTR) of the cover pages. **Version 2.1a** was finished developing on 9 November 2023. This version has fixed some bugs, and now supports inserting non-consecutive page numbers of the same file, and you can insert a certain number of empty note papers with only one command. Also, this version has redesigned the top and bottom margins and the height between note lines in response to the suggestion from QQ Group member. What's more, this version supports the 'Libertinus' font, which can make users have a better visual effect.

Version 2.2b was finished developing on 11 November 2023. This version has fixed some bugs, and partial commands in this version has changed to use LaTeX2e original commands.

Version 2.3a was finished developing on 15 November 2023. This version added the option to make the note lines colorful, and removed the packages that already available in the kernel.

2023/11/01 Update: Version 2.0a

- Simplify the command of inserting 3 & 4 images per page.
- Redesign the cover page & note paper title.
- Add commands to create empty note paper with(out) chapter title & page number.
- Add commands to create empty note paper with logo and info on the top.

2023/11/09 Update: Version 2.1a

- Fixed the bug of page number errors when inserting the title page.
- Fixed the bug of picture string position when inserting the first page number of courseware when the page number is not 1.
- Supports inserting non-consecutive page numbers of the same file.
- Supports inserting a certain number of empty note papers & HDU empty note papers with only one command.
- Support the 'Libertinus' font.
- Increased the top and bottom margins of the page by 18.8% than before.
- Other detailed adjustments.

2023/11/11 Update: Version 2.2b

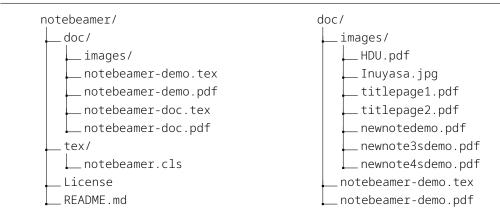
- Fixed the image position error when inserting 3 and 4 images per note page.
- Partially using LETEX2e original commands.

2023/11/15 Update: Version 2.3a

- Added the option to make the note lines colorful.
- Added another options in the mode saturation.
- Removed the packages that already available in the kernel.

A Document Example

```
\documentclass[darker,libertinus,colorful]{notebeamer}
\begin{document}
   % Assign the author & mail address
                              \mail{xiamyphys@gmail.com}
   \author{Axia}
   % Assign the titlepage, sitcker and logo file
   \flyleaf{titlepage1.pdf} \sticker{Inuyasa.jpg}
   % Assign the logo link and info
   \logo[https://sci.hdu.edu.cn]{HDU.pdf}[Hangzhou.Zhejiang]
   % Create a cover page with color H6, title and subtitle
   \notebook[H6]{Quantum Transport}[Dirac Fermion Discussion Group]
   % Assign the chapter title and the file will be inserted after
   \chapter[PHYSICAL REVIEW B VOLUME 50, NUMBER 8]{newnotedemo.pdf}
   % Insert the page 3--4 of the file with the format 1 image per page
   % Change the titlepage in the subsequent notebooks
   \flyleaf{titlepage2.pdf}
   % Create a cover page with color H5, title
   \notebook[H5]{AQM \& SPD}
   \chapter[Introduction \& Fundamental Concepts]{newnote3sdemo.pdf}
   % Insert the page 1--2, 4--6 of the file with the format 3 images per page
   \newnotesss{1}{2}
                              \newnotesss{3}{6}
   \chapter*[SPD Basic: Transport]{newnote4sdemo.pdf}
   % Insert the page 1--2, 4--6, 7--10 of the file with the format 4 images per page
                              \newnotessss{4}{6}
   \newnotessss{1}{2}
                                                    \newnotessss{7}{10}
   % Create an empty note paper with no page number
   \emptynote*[2]
   % Create an empty note paper with logo and info but no page number
   \emptyhdunote*[2]
\end{document}
```



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AQM & SPD	

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Chapter 1. Introduction & Fundamental Concepts	Page 3
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iven a rotation operation characterized by a orthogonal 3×3 matrix R_i	
sociate an operator $\mathcal{D}(R)$ in the appropriate ket space such that	
$ \alpha\rangle_R = D(R) \alpha\rangle$.	
 For describing a spin-1/2, system with no other degrees of freedom, 	
D(R) is a 2 × 2 matrix;	
 for a spin-1 system, D(R) is a 3 × 3 matrix. he appropriate infinitesimal operators could be written as 	
$\hat{U}(\epsilon) = 1 - i\hat{G}\epsilon$, \hat{G} : Hermitian	
At therefore define the angular-momentum operator $\hat{\lambda}_k$ for an infinitesimal station around the <i>k</i> th axis by angle $d\phi$ can be obtained by letting	
$\hat{G} \rightarrow \frac{\hat{A}_{i}}{\hbar}$, $\epsilon \rightarrow d\phi$	
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	preventive is that all expectation values are defined with respect to a well defined state, i.e., the state in which	
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web in our treatment of a time-dependent bins.	the perturbation theory can be evaluated by matrix and siglication. Since the internal time integrations run over	
	the contains time with a method of backlessing for the	
he hubble of electrons required for the formation of the councilation and depiction haves must not significantly	the complex time path, a method of backkeeping for the time labels is required, and these are rations mays of do-	
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$E^{aa}_{\mu\nu} = 2m C V^{aa}/A$, where ν is the driving frequency, C is the capacitators, V^{aa} is the applied bias, and A is the area. In comparison, the total incident flux is		
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ad that up to 30 THz the probability of an electron par-		
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analysis presented in what follows should be valid for		
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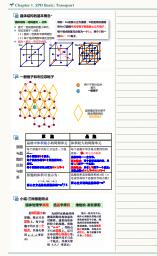
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	B. Model Resultances	 Combas leteras inda as 	of control pasies. He	
	We uplit the total Ramitenian in three pieces: $H = H_{c,a}$, $H_{c,a}$, $H_{c,a}$, $H_{c,a}$, where H_{c} describes the contexts. He	The coupling between the loss entropy regime can be modified a voltages, as is the case in sing previse frequencies, but is the mixed by the detailed geometry is response of charge in the sensit We assume that these parameters write.	is and the central (inter- th time dependent gate	
	We uplit the total Hamiltonian in there piezes $H = H_c + H_T + K_{\rm exc}$, where H_c describes the contacts, H_T is the transling coupling between contacts and the in- teracting region, and $H_{\rm exc}$ model the interacting re- train region, respectively. Bolow we descrease and of these	voltages, as is the case in sing previse functional form of the ti- mined by the detailed assumptive	(b) time dependent gate in-electron pamps. The not dependence is deter- and by the self-consistent	
	DIVER.	We assume that these parameters	eta ta esternal driving- n are known, and simply	
	-L cannot get a space-scale queue structure of the st	We assume that these parameter write $H_T = \sum_{n=1,2,4} V_{nn,n} / \mathbf{e}_n^2$	$d_{n} + H c_{\parallel}$ (8)	
	the leads rapidly broaden into metallic centaris, we view electrons in the leads as negliterarcing enough for an evenal self-consistent autential. Floringly, analyzing a	Here $\{d_n^i\}$ and $\{d_n\}$ form a consider electron resulties and and interacting region.	plote arthonormal set of bilation operators in the	
	time-dependent bias between the source and drain con- tacts corresponds to accumulating or deploting charge in from a direct second site and second sites.	Interacting region.	emiliaries M	
	is form a dipose around the contral repost. The is- sulting electronization potential difference measure that the single-particle energies become time dependent: d ² _{in} →	The form chosen for Name in t	be central interacting re-	
	$r_{ha}(t) = r_{ha}^{0} + \Delta_{a}(t)$ [here α inducts in the left $(\lambda) = right (\lambda t)$ issue]. The occupation of each state by, however, remains unchanged. The occupation, for	gion depends on geometry and s being investigated. Our results local properties, such as densit	te central Interacting re- te physical behavior relating the correct to less of status and Green a make the results more circles examples in de-	
	each contact, is determined by an equilibrium distribu- tion function established in the distant part, before the time-dependence or transformerity demonstrate are trans-	functions, are valid generally. T concrete, we will discuss two pe- ted. In the first, the control regi- neninteracting, but time-depend	t make the results more eticular examples in de- on is taken to consist of	
	m. Thus, the contact Hamiltonian is $\mathcal{H}_{c} = \sum_{i} \epsilon_{kk} \psi[e_{kk}^{i} \epsilon_{kk},, (1)]$	nealistencing, but time-depend $\label{eq:Rescale} H_{con} = \sum_m \epsilon_m t e$	inal levels, Cutur (1)	
	$\begin{split} \mathcal{R}_{\rm c} = \sum_{k,m\in\Lambda,B} \epsilon_{km} (\psi _{\rm in}^k c_{km}, \eqno(1) \end{split}$ and the exact time-dependent Green functions in the loods for the uncoupled system are	The distance of the second	i i i i i i i i i i i i i i i i i i i	
	A B Council Objection	Here d ₁ (d ₁₀) creates (dentro) rs. The choice (i) represents a dependent researching general results for an arbitrary o alyze the case of a single level	simple model for time. Relew we shall present	
	$\begin{split} &= if(\hat{\sigma}_{n,1}^{t})\exp\left[-i\int_{t}^{t}d_{1}\phi_{n,2}(t_{1})\right]\\ g_{n,1}^{t,0}(t,t') &= \pi i\theta(nt+t')([\phi_{n,1}(t_{1},c_{n,1}^{t}(t')]) \end{split}$	 The choice (4) represents a dependent remnant inmeding general results for an addressly a alyze the class of a single level intervaling both as an exactly as predictions of coherence affects i inserts. 	in detail. The latter is fruible comple, and for	
	$g_{h,n}^{2,n}(t, t') = \pm i \theta(\pm t \pm t')([e_{h,n}(t), e_{h,n}^{2}(t')])$	The second enample we will diverse a second ename a second enamed en	n time-dependent exper-	
	$= \mp i \theta (i d \mp t') \exp \left[-i \int_{t'}^{t} dt_{t'} \eta_{tt}(t_1)\right]$. (3)	ing with electron-phenon interna $M_{mn}^{rdsph} = c_0 \mathbf{d}^{\dagger} \mathbf{d} + \mathbf{d}^{\dagger} \mathbf{d} \sum_{n}$	tion, Majalj+a…j. (3)	
	One should note that our model for y ⁻¹ differs from the choice made in the recent study of Chen and Ting. ¹¹ The difference does not allow subsidiations reacted out to In-	In the above, the first term a	records a since site.	
	The should note that we model for g^{-1} differences the choice marks in the scenario study of Chose and Tang ¹³ . The difference does not allow includations carried on the lin- ma requestor is the orders, but is significant in coefficient response, Specifically, Chose and Ting allow the identic- clement generation in the distribution function f to say with Talans, $a_{-1} \rightarrow a_{-1} = 0^{-1} = 0^{-1} = 0^{-1}$ is the sta-	In the above, the first term is while the second term reposes electron on the size with places strops) a planese in mode q, as matrix elessest. The full Har	to the interaction of an are a [a,] creates (de- d M, in the interaction	
	with time: $\mu_{\Lambda} - \mu_{R} = r[V + U(0)]$, where $U(0)$ is the or	matrix element. The full Har	altonian of the system	
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	Chapter 1. Introduction & Fundam	ental Concepts		Page 2
	Define a rotation operator about the z-axis by ang			
	Define a rotation operator about the <i>x</i> -axis by ang $\mathcal{R}_{c}(\phi) = \begin{pmatrix} \cos\phi & -\sin\phi & 0\\ \sin\phi & \cos\phi & 0\\ 0 & 0 & 1 \end{pmatrix}$ We are particularly interested in an infinitement for			
	$R_r(\phi) = \begin{pmatrix} \cos\phi & -\sin\phi & 0\\ \sin\phi & \cos\phi & 0\\ 0 & 0 & 1 \end{pmatrix}$ We are particularly interested in an infinitesimal fo) m of R _r :		
	$R_r(\phi) = \begin{pmatrix} \cos\phi & -\sin\phi & 0\\ \sin\phi & \cos\phi & 0\\ 0 & 0 & 1 \end{pmatrix}$ We are particularly interested in an infinitesimal fo) m of R _r :		
) m of R _r :		
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	$\begin{split} \mathcal{R}_{i}(a) &= \begin{pmatrix} a_{i} & a_{i} & a_{i} & a_{i} \\ a_{i} & a_{i} & a_{i} \\ a_{i} & a_{i} & a_{i} \\ b_{i} & a_{i} & b_{i} \\ a_{i} & a_{i} & b_{i} \\ b_{i} & a_{i} & b_{i} \\ c_{i} & b$) m of R _r :		
	$\label{eq:Relation} \begin{split} \mathcal{R}_{i}(z) &= \begin{pmatrix} z_{i} & z_{i} & z_{i} \\ z_{i} & z_{i} & z_{i} \\ z_{i}$) m of R_{r} : $\epsilon \rightarrow 0$. $\epsilon \rightarrow 0$. Model 2. (1) - 2. (2) - 920 Model 2. (2) - 2. (2)		
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	$\begin{split} \mathcal{R}_{4}(z) &= \left(\begin{array}{c} \max_{0} & -\max_{0} & z \\ 0 & \max_{0} & z \\ 0 & \max_{0} & z \\ 0 & \max_{0} & z \\ 0 \\ 0 & z \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\$) m of R;: e → 0 .		
	$\begin{split} & \mathcal{R}_{\ell}(z) = \left(\begin{matrix} \max_{0}^{-1} & \max_{0}^{-1} & 0 \\ 0 & \max_{0}^{-1} & 0 \end{matrix} \right) \\ We are periodicity interaction to the term of the set of the$) m d R. + + 0 .) .		
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	$\begin{split} \mathcal{K}_{i}(z) = \begin{pmatrix} \max_{i=1}^{n_{i}} & \max_{i=1}^{n_{i}} & z_{i} \\ \max_{i=1}^{n_{i}} & \sum_{i=1}^{n_{i}} & z_{i} \\ \mathcal{K}_{i}(z) = \begin{pmatrix} 1 & \frac{1}{2} & \frac{1}{1} & \frac{1}{2} \\ \frac{1}{2} & \frac{1}{1} & \frac{1}{2} \\ \frac{1}{2} & \frac{1}{1} & \frac{1}{2} \\ \frac{1}{2} & \frac{1}{2} \frac{1}{2} $) m of Re, 		
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