

FLAG4: Guidelines for editing, style and typography

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Abstract

We collect a set of rules and guidelines for preparing and editing the FLAG sections, including the ones concerning style and typography.

1 FLAG git repository

The central git repository is hosted at bitbucket.org:5069/flag.git (note that the repository used for FLAG-3 is out-of-date and no longer maintained). Compared to our old gitserver bitbucket offers many state-of-the-art collaboration features that makes life for the WGs and the EB easier.

In order to get started at least one WG member will get read access to the main repository. To this end please send your bitbucket user ID to juettner@soton.ac.uk such that the account can be affiliated with the main repository (new bitbucket accounts can be registered under <https://bitbucket.org/account/signup/>).

We follow the forking workflow explained also [here](#).

Forking means that a user generates a copy of the FLAG repository in his bitbucket work space. The user can pull and push from this repository without touching the main FLAG repository.

Under Settings→User and group access please add Andreas Juettnner (5069) and Urs Wenger (uwenger) with read access.

Once a WG wishes to add their updated section to the main repository they will bring their forked repository up-to-date with respect to the main repository and then issue a pull request. The EB will receive a notification, revise the suggested changes and eventually merge the WG contribution into the main branch.

2 Tags for averages

We have automatised the process of compiling the table with all FLAG averages in the introduction of the FLAG review. This guarantees that the latest modifications in individual sections are up-to-date also in the summary table.

For this to work we have defined some macros that we ask you to use when presenting a FLAG average in the text. Here is an example:

```
%FLAGRESULT BEGIN
% TAG      & f+0      & f+0&f+0 &END
% REFS     & \cite{Bazavov:2013maa,Carrasco:2016kpy} &\cite{Bazavov:2012cd,Boyle:2015hfa}
           &\cite{Lubicz:2009ht} &END
% UNITS    & 1 & 1 & 1 &END
% NUMRESULTS & 2 & 2 & 1 &END
% FLAVOURS & 2+1+1 & 2+1 & 2 &END
%FLAGRESULT END
```

```

%FLAGRESULTFORMULA BEGIN
\begin{align}
&\&\label{eq:fplus_direct_2p1p1} \\
&\&\mbox{direct},\,,\Nf=2+1+1:\&\FLAGAVBEGIN f_+(0) \&= 0.9706(27)\FLAGAVEND \\
&\&\&\&\Ref~\mbox{\cite{Bazavov:2013maa,Carrasco:2016kpy}},\&\ \\
&\&\label{eq:fplus_direct_2p1} \\
&\&\mbox{direct},\,,\Nf=2+1:\&\FLAGAVBEGIN f_+(0) \&= 0.9677(27) \FLAGAVEND \\
&\&\&\&\Refs~\mbox{\cite{Bazavov:2012cd,Boyle:2015hfa}},\&\ \\
&\&\label{eq:fplus_direct_2} \\
&\&\mbox{direct},\,,\Nf=2:\&\FLAGAVBEGIN f_+(0) \&= 0.9560(57)(62)\FLAGAVEND \\
&\&\&\&\Ref~\mbox{\cite{Lubicz:2009ht}}, \\
\end{align}
%FLAGRESULTFORMULA END

```

Note that all the lines between %FLAGRESULT BEGIN and %FLAGRESULTFORMULA END are relevant since they will be parsed by the script that generates the summary table.

Note that the tags are also used to generate the bib-files which can be downloaded from the webpage. They contain all the references contributing to an average in order to make referencing easy for the end user.

3 Citations and acronyms

Any new references can be included in the bib-file on github, or submitted in a separate file including only the new bibtex entries.

Do not invent new reference names, but use the proper reference, e.g., `\cite{McNeile:2010ji}` as given in the bibtex entry

```

@Article{McNeile:2010ji,
...
}

```

In the text use the collaboration name and the bibtex-appendage as the temporary acronym, such as HPQCD 10ji for McNeile:2010ji. The proper acronyms, such as HPQCD 10C, will be globally assigned by the EB once the whole document is put together.

4 Abbreviations

Abbreviations should start with a capital letter. They should not be used as the first word in a sentence.

- Sec.~ when referring to a specific section
- Fig.~ ditto
- Eq.~ ditto
- Tab.~ ditto
- Ref.~ used in cases such “As FLAG discussed in Ref. [56]” but not in constructions like “This point was made previously [85].”
- Figs.~, Eqs.~, Tabs.~, Refs.~ in case of plural.

In contrast, we use Appendix as a full word.

Abbreviations such as etc., e.g., i.e., viz. are lower case and not italicized.

We use dof instead of d.o.f.

5 Mathematical symbols and numbers

No sentence should start with a number (unless spelled as a word), or with a math symbol, like F_π . (So, for instance, “The pion decay constant has been computed ...” or “The pion decay constant F_π has been computed ...” instead of “ F_π has been computed...”)

All integer numbers less than 10 should be spelled out in the middle of a sentence.

6 Commas

etc., e.g., i.e., viz.: should always be preceded and followed by commas. (Note that this has not been followed by FLAG in the past.) The same applies to words and expressions such as “namely”, “for example”, “that is”, and “respectively”.

The last comma in the previous sentence (before and) is known as the serial comma. It should be used in a list of multiple items according to the Physical Review Style Guide.

We suggest to use commas after prepositional (or other) phrases that begin a sentence. For example, we put a comma after: “In Sec. 3, we detail ...”

PR would say not to use a comma around a variable just after the phrase that defines it. For example, “The melting temperature T_m is determined,...” not “The melting temperature, T_m , is determined...”

7 Foreign language and loan words

We suggest that the spelling of words borrowed from a non-English language is taken over from the original language, including the pluralization. They should be lower case. So we use for example “ansatz” and “ansätze”, or “plateau” and “plateaux”, or “formulae”.

The word “data” is used in singular form, such as in “Experimental data is progressively more precise”.

8 Dashes

There are four different types of dashes:

- The minus sign (-2) (L^AT_EX: \$-\$).
- The hyphen connecting compounds (Kaluza-Klein, type-II) (L^AT_EX: -).
- The en-dash describes a range (1-10) (L^AT_EX: --).
- The em-dash—used for clauses—should not be surrounded by spaces (L^AT_EX: ---). Could also be a parenthetical phrase.

9 Parentheses and capitals

Parentheses in the text should in general be round (like this), and should not contain extra spaces: [this is wrong]. Square brackets enclose a phrase that already contains parentheses, as in “[as in Eq. (35)]”.

Capitals should be used only after full stops and not after colon, semicolon or parenthesis. (Unless an entire sentence appears with parentheses.) Such as here.

10 “That” vs. “Which”

These two are often used interchangeably, but style guides prefer a distinction exemplified by the following two sentences:

The office, which has two lunchrooms, is located in Cincinnati.

The office that has two lunchrooms is located in Cincinnati.

“Which” is used for a descriptive subclause, enclosed in commas, that can be removed without changing the meaning of the outer sentence. “That” is an essential part of the meaning of the entire sentence.

11 Footnotes

Footnotes should always be placed after the punctuation mark.¹ They should begin with a capital letter and end with a full stop.

12 Hyphenation conventions

A hyphen should be used when two words make a single compound adjective. Example: “lattice-QCD” should be used as an adjective (e.g., “this is a lattice-QCD calculation”) whereas “lattice QCD” as a noun (“the calculation is done in lattice QCD”).

No hyphen is used when a word is negated, such as in “nonzero” or “nonperturbative”.

Examples:

- | | | |
|---|--|---|
| • lattice result | • 1-loop, 2-loop, ...
(not one-loop, ...) | • subsection |
| • lattice determination | • charged-meson decay
constant | • QCD matrix element |
| • lattice simulation | • β -function | • semileptonic |
| • lattice-QCD calculation | • short-distance QCD
correction factor | • semiinclusive |
| • lattice data | • B -factory experiment | • nonstrange |
| • lattice spacing | • $SU(3)$ -breaking ratio | • nonexotic |
| • lattice renormalization | • isospin averaged | • $SU(2)$ isospin-breaking |
| • lattice regularized | • gauge average | • isospin |
| • renormalized | • taste partner | • nonperturbative |
| • lattice renormalization
factors | • taste-Goldstone-pion | • and other non... |
| • lattice estimate | • $\overline{MS}$ scheme | • reanalysis |
| • CP violation | • mid nineties | • chiral symmetry break-
ing |
| • W boson | • twisted mass | • up-down-quark mass |
| • B meson | • isospin breaking | • three-flavour QCD |
| • D meson | • colour code | • four-flavour calculations |
| • D -meson decay con-
stant | • FLAG average | • pion decay constant |
| • b hadron | • low energy | • input quark mass |
| • flavour-changing neu-
tral current | • quark flavours | • short-distance calcula-
tion |
| • Heavy-Quark Effective
Theory | • reanalysis | • b quark (as a noun) |
| • nonrelativistic | • β decay | • isospin-breaking effects |
| • Relativistic Heavy-
Quark Action | • also π^- , τ^- , ... | • symmetry-breaking ef-
fect |
| • heavy-quark physics | • flavour-phenomenology | • elm. self-energy |
| • static heavy-quark limit | • nonsinglet | • isospin-averaged up-
quark mass |
| • four-flavour averages | • nonperturbative | • isospin-breaking correc-
tions/effects |
| • four-fermion operator | • 1-loop | • isospin-breaking quark-
mass ratio |
| • four-quark operator | • light-quark | • low energy pion physics |
| | • heavy-quark | • quark-mass ratio |
| | • state-of-the art | • post-2010 lattice results |
| | • pseudoscalar | • charge conjugation in-
variance |
| | | • form factor |

¹Like this.

- pion-mass splitting
- B -factory experiment
- $SU(3)$ -breaking ratio
- z -parameterization, z -expansion
- w -dependence
- well-known tension
- sea-quark mass
- domain-wall fermion
- step-scaling
- scale-setting error
- final-state meson
- data set

13 Spelling

This concerns GB vs. US spelling, that is, -ise/-ize vs. -ize. The Oxford dictionary recommends:

- | | | |
|-------------------|-------------------|---------------------------------|
| • optimize | (not parametrize) | • quantize |
| • renormalize | • summarize | • factorize |
| • renormalization | • minimize | • normalize |
| • discretization | • stabilize | • generalize |
| • digitize | • emphasize | • sizeable |
| • itemize | • regularize | (sizable is ranked as American) |
| • parameterize | • realize | |