E QCDNUM17 Releases and Updates

QCDNUM17 versions are labeled as `qcdnum-17-rr/uu` where `rr` is the release number, and `uu` is the update number of a given release.[1] Here is an up-to-date list of all releases and updates.

`17-rr/uu dd-mm-yy` – Description

`17-00/08 01-05-17` – Correct bug in `idspfun` which returned the identifier of P_+ (P_-) for argument `'PMI'` (`'PPL'`) instead of the other way around.

`17-00/07 26-02-16` – Correct error in the NLO evolution of singlet fragmentation functions (splitting function matrix was not transposed). Implement NLO matching conditions in the time-like evolution.

`17-00/06 10-07-12` – In the MFNS, the function `asfunc` evolved α_s in the FFNS. The QCDNUM internal α_s tables were not affected by this bug.
– HQSTF: the routine `hqstfun` did not accept the MFNS. Preceding `icbt` by a minus sign now allows for both the FFNS and the MFNS, with any number of flavours.

`17-00/05 10-04-12` – Access to version number and `qcdnum.inc` parameters (via `getint`).
– New routine `mixfns` to set the mixed flavour number scheme.
– New routine `set|getcut` to set (get) evolution cuts on the grid.
– New function `lpassc` to check if a point passes the cuts.
– New routines `pdflst` and `pdftab` for fast pdf interpolations.
– Remove the `mpt0` limit on the number of interpolations in QCDNUM, ZMSTF and HQSTF. In `fastini` the `mpt0` limit still exists.
– Increase storage sizes `nwf0`, `nzmstor` and `nhqstor`.
– ZMSTF: New routine `zmwords` gives access to storage size/use.
– ZMSTF: Possibility to separately calculate gluon or quark contributions to structure functions, order by order (with `zmslowf`).
– HQSTF: New routine `hqwords` gives access to storage size/use.
– HQSTF: When using external pdfs (`iset` = `5`–`9`), the availability of unpolarised pdfs (`iset` = `1`) was imposed. Bug now fixed.

`17-00/04 18-07-11` – Increase storage sizes `nwf0`, `nzmstor` and `nhqstor`.
– Set $Q^2 = 0.25$ GeV^2 in the HQSTF coefficient functions when the input value of $Q^2 < 0$. This avoids problems in `hqfillw` if the low end of the μ^2 grid maps onto negative Q^2.

`17-00/03 30-03-11` – Rename splitting/coefficient functions in QCDNUM and ZMSTF to avoid name clashes with QCDNUM16 and—more important—with LHAPDF (which has QCDNUM16 inside).

`17-00/02 07-10-10` – Comments from the CPC referees included in the write-up.

[1] Updates are bug fixes or changes in the code that do not require modification of user programs. Releases, on the other hand, may affect user code by adding extra functionality to existing QCDNUM routines or by replacing an old routine with a new one. In the latter case, a call to the old routine will always generate an error message pointing to the replacement, the description of which can then be found in the write-up.

`17-00/01 03-09-10` – Adjust internal cuts on the α_s evolution to allow for evolution to lower Q^2. The cuts in the original release were set too tight.

`17-00/00 08-05-10` – Initial release.