PR and release status: BSM processes (SUSY, SMEFT), Makefile targets etc.

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https://indico.cern.ch/event/1355149

(previous update was on 19 March)

Status update for my PRs – summary

- Update on my PRs and issues (since March 19 meeting)
  - No update in PR #824 (SUSY): was and still is ready to merge, awaiting review
    - *Still pending issue #825 (susy_gg_tt madevent tests – xsec mismatch Fortran vs cudacpp)*
    - *Still pending issue #826 (susy_gg_t1t1 madevent tests – no xsec in cudacpp madevent)*
  - **New: PR #632 (SMEFT)** is now complete and ready to merge, awaiting review
    - Fixed various issues (614, 616, 633) blocking gg>tt~tt~ for CMS and Zenny's reweighting
    - *Pending minor issue #827 (determine number of BSM parameters when generating CPPProcess.cc)*
    - *New issue #828 (heft_gg_bb has no FFS2_0 calls, unlike heft_gg_h_bb?)*
      - *SM gg>bb~ has 3 diagrams, HEFT gg>h>bb~ adds 1 diagram: HEFT gg>bb~ should have 4? (it only has 3)*
  - **New: PR #798 (Makefile targets)** is now again ~ready to merge, awaiting review
    - After rebasing and fixing conflicts – a few large scale tests will complete today, then good to go
    - This completely separates C++ and CUDA or HIP targets (extends/completes Jorgen's earlier PR)

- Summary of BSM status (when PRs 824 and 632 are eventually merged)
  - SUSY models ~OK (except for issues 825 and 826 above)
  - HEFT models ~OK? (but issue 828 blocks me from testing madevent)
  - SMEFT models look OK

- Next priority for me: git repos and transfer scripts
  - See also the discussion in issue #661 and in Olivier's issue #815

A few other comments

- Nathan's PR #819 (latest SYCL changes in epochX/sycl) is now merged
- WIP on warps and channel ID arrays (issue #765)
  - New: Stefan's PR #830 from the new_interface_wrap branch
  - Based on Olivier's mg5amcnlo gpucpp_wrap branch
  - Question: do (can) we have tests specifically for the new functionality?
- Nathan's Intel GPU support in cudacpp (#805): maybe after the release?
- Process-specific issues on AMD GPUs: segfault in gq_ttq (#806)
  - I suggest we release without waiting for this and we fix it later
- Various other comments from May 2023 issue #671
  - In general: test, test, test (especially the full workflow, and parameter/run cards etc)
- Check what else we still have against madgraph4gpu (e.g. Lugano) before closing it