SciSoft - Feature #22638

Package a newer assembler suitable for gcc optimizations

05/28/2019 08:39 AM - Christopher Backhouse

Status:	Feedback	**Start date:**	05/28/2019
Priority:	Normal	**Due date:**	
Assignee:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:		**Spent time:**	0.00 hour

Description

Not sure if this is the right place to file this?

On SL6 (novagpvm0?.fnal.gov), compiling with -march=native fails with errors like this

```
/tmp/ccTLDisd.s:43: Error: suffix or operands invalid for `vbroadcastsd'
/tmp/ccTLDisd.s:66: Error: no such instruction: `vpermpd $216,%ymm3,%ymm3'
```

Presumably gcc is relying on features that aren't implemented in the system version of as. It seems to me the gcc product should either package a suitable assembler, or depend on another product which does.

History

#1 - 06/03/2019 10:28 AM - Kyle Knoepfel

- Status changed from New to Feedback

- Tracker changed from Bug to Feature

We do not support code that can be built on arbitrary systems using -march=native. What applications/libraries are you trying to build, and where are you planning on deploying them?

#2 - 06/04/2019 04:02 AM - Christopher Backhouse

This is non-art code to run on FermiGrid or at NERSC. I realize that the binary won't necessarily be portable from the build machine (gpvm) to nodes, but my hot function will certainly benefit from vectorization, and it looks like the assembler won't support it however it's done.

#3 - 06/10/2019 10:28 AM - Kyle Knoepfel

Let's continue this discussion offline. We will setup a meeting.