

TM5-MP - Support #574

Optimization of ebischeme can be problematic

06/13/2016 01:37 PM - Philippe Le Sager

Status:	In Progress	Start date:	06/13/2016
Priority:	Normal	Due date:	
Assignee:	Philippe Le Sager	% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.00 hour

Description

Not sure how much of an issue it is, but an optimization problem came up with the new Cray-Broadwell environment at ECMWF with the intel environment. It happens only with **cb05+M7+with_budget**. With the default ifort environment (ifort 15), it is not possible to compile ebischeme. I got a "catastrophic" error message. The only way to compile that routine in that configuration, was to replace:

```
-fp-model strict
```

with

```
-fp-model strict -fp-model source
```

or

```
-fp-model source
```

Note that it does not compile either with

```
-fp-model precise
```

Not sure what are the consequences of that change. According to manual, *-fp-model source* option "causes intermediate results to be rounded to the precision defined in the source code".

History

#1 - 06/13/2016 01:55 PM - Philippe Le Sager

Somehow the issue is also happening with cbm4, when using some of the without flags. The same change in the optimization flags fixes it.

#2 - 10/24/2017 03:19 PM - Philippe Le Sager

- Status changed from New to Closed

- % Done changed from 20 to 100

A new trial, and success: ebischeme.F90 is compiled without the *-fp-model source* flag.

This has more to do with code changes than compiling environment:

```
[5072] >>> ftn -V
```

```
Intel(R) Fortran Intel(R) 64 Compiler XE for applications running on Intel(R) 64, Version 15.0.1.133 Build 20141023
```

```
Copyright (C) 1985-2014 Intel Corporation. All rights reserved.
```

#3 - 12/20/2017 12:29 PM - Philippe Le Sager

- *Status changed from Closed to In Progress*

Reopened. This is still the case as far as I know.