

Adding BCM current information into the event tree is a two step process. It first reads current values from the scaler data, and then assign them to each corresponding event.

First, create current map files. The codes are available from:

[https://github.com/JeffersonLab/hallc\\_replay/tree/master/CALIBRATION/bcm\\_current\\_map](https://github.com/JeffersonLab/hallc_replay/tree/master/CALIBRATION/bcm_current_map)

How to can be found from the same page (see README)

Locate the current map files to, for example, under PARAM/SHMS/BCM/CALIB/. You may need to create the directory if it does not exist already.

To add BCM current values to your event T tree, one needs to replay data with THCBCMCurrent module.

Make sure to copy the parameter files into your parameter directory and do followings:

1) Modify your DEF file:

For HMS:

```
add "H.bcm.*" to hblock_vars.def
```

For SHMS:

```
add "P.bcm.*" to pblock_vars.def
```

2) Add BCMCurrent physics module to your script (example for SHMS below)

\* Add these lines to load a parameter file:

```
const char* CurrentFileNamePattern = "PARAM/SHMS/BCM/bcmcurrent_%d.param";  
gHcParms->Load(Form(CurrentFileNamePattern, RunNumber));
```

\* Add these lines to include the physics module:

```
THCBCMCurrent* pbc = new THCBCMCurrent("P.bcm", "BCM current check");  
gHaPhysics->Add(pbc);
```

You can also find similar instruction for HMS from:

[https://hallcweb.jlab.org/DocDB/0009/000949/001/bcm\\_check\\_module.pdf](https://hallcweb.jlab.org/DocDB/0009/000949/001/bcm_check_module.pdf)