Calo Systematic macro for run 23

➢ **One simple macro that adds nodes**
- https://github.com/sPHENIX-Collaboration/macros/blob/master/common/Sys_Calo.C
- Add Register_Tower_sys() to F4A macro to add nodes

➢ **Pseudo code**

```
#include "Sys_Calo.C"
…
void Fun4All_mac(…){
  Fun4AllInputManager *in = new Fun4AllDstInputManager("DST_TOWERS")
  …
  Register_Tower_sys()
  …
   re-clustering if needed
   analysis module
  …
}
```

```
List of Nodes in Fun4AllServer:
Node Tree under TopNode TOP
TOP (PHCompositeNode)/
    DST (PHCompositeNode)/
      Sync (IO,SyncObjectv1)
      EventHeader (IO,EventHeaderv1)
      MBD (PHCompositeNode)/
        MbdOut (IO,MbdOutV2)
        MbdPmtContainer (IO,MbdPmtContainerV1)
        MbdVertexMap (IO,MbdVertexMapv1)
      GLOBAL (PHCompositeNode)/
        GlobalVertexMap (IO,GlobalVertexMapv1)
        MinimumBiasInfo (IO,MinimumBiasInfov1)
        CentralityInfo (IO,CentralityInfov2)
      CEMC (PHCompositeNode)/
        TOWERS_CEMC (IO,TowerInfoContainerv2)
        TOWERINFO_CALIB_CEMC (IO,TowerInfoContainerv2)
        CLUSTERINFO_CEMC (IO,RawClusterContainer)
        CLUSTERINFO_POS_COR_CEMC (IO,RawClusterContainer)
        TOWERS_SZ_CEMC (IO,TowerInfoContainerv1)
        TOWERINFO_SZ_CALIB_CEMC (IO,TowerInfoContainerv1)
        TOWERINFO_CALIB_SYST1CEMC (IO,TowerInfoContainerv2)
        TOWERINFO_CALIB_SYST2CEMC (IO,TowerInfoContainerv2)
        TOWERINFO_CALIB_SYST3UCEMC (IO,TowerInfoContainerv2)
        TOWERINFO_CALIB_SYST3DCEMC (IO,TowerInfoContainerv2)
        TOWERINFO_CALIB_SYST4CEMC (IO,TowerInfoContainerv2)
      HCALIN (PHCompositeNode)/
        TOWERS_HCALIN (IO,TowerInfoContainerv2)
```

➢ **Users should analyze new nodes as if it were the default calibration and the difference with default is the systematic uncertainty.**

➢ **Only systematics on EMCal are included**

➢ **These EMCal systematics are not final but realistic**