

List of steering-templates

The list of [steering-templates](#) required for [data analysis](#) :

convert-ped-tmp.xml

```
<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stYLESHEET type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stYLESHEET type="text/xsl" href="marlin.xsl"? -->

<!--
=====
=====
Steering File generated by Marlin GUI on Thu Apr 23 16:35:16 2015

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's
descriptions and types as well.
         - Extra parameters that aren't categorized as default in a processor lost their description
and type.
=====
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="MyAlibavaConverter"/>
    <processor name="Save"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> </parameter>
    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
  </global>

  <processor name="AIDA" type="AIDAProcessor">
    <!--Processor
that handles AIDA files. Creates on directory per processor.
Processors only need to create and fill the histograms, clouds and
tuples. Needs to be the first ActiveProcessor-->
    <!-- compression of output file 0: false >0: true (default) -->
    <parameter name="Compress" type="int" value="1"/>
    <!-- filename without extension-->
    <parameter name="FileName" type="string" value="@AlibavaHistoPath@/@Output@-alibava-convert-ped"/>
    <!-- type of output file root (default) or xml -->
    <parameter name="FileType" type="string" value="root"/>
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
  </processor>

  <processor name="MyAlibavaConverter" type="AlibavaConverter">
    <!--Reads data streams produced by Alibava and produces the corresponding LCIO output-->
    <!--Name of the collection-->
    <parameter name="RawDataCollectionName" type="string" lcioOutType="TrackerData"> rawdata </parameter>

    <!--Selection of chip that you want to store data from. Chip numbers
start from 0. If not set, all data (i.e. chip 0 and 1) will be
stored-->
    <parameter name="ChipSelection" type="IntVec"> 0 1 </parameter>
    <!--The geometry identification number-->
    <parameter name="GeoID" type="int" value="99"/>
    <!--This is the input file name-->
    <parameter name="InputFileName" type="string" value="@AlibavaNativeFolder@/run@RunNumber@.
@FileExtension@"/>

    <!--Alibava read channels from right to left if you want to revert
```

```

this i.e. make it from left to right set this parameter to true.
CAUTION: This will be applied first!-->
  <parameter name="ReadChannelsReverse" type="bool" value="false"/>
  <!--Run number of file (formatted)-->
  <parameter name="RunNumber" type="string" value="@RunNumber@"/>
  <!--The temperature of the sensors-->
  <!--parameter name="SensorTemperature" type="float" value="111.111"/-->

  <!--The event number that AlibavaConverter should start storing.
  Default value is -1, in this case it will store every event-->
  <!--parameter name="StartEventNum" type="int" value="-1"/-->

  <!--The event number that AlibavaConverter should stop storing.
  Default value is -1, in this case it will store every event-->
  <!--parameter name="StopEventNum" type="int" value="-1"/-->

  <!--Alibava stores a pedestal and noise set in the run header. These
  values are not used in the rest of the analysis, so it is optional to
  store it. By default it will not be stored, but if you want you can set
  this variable to true to store it in the header of slcio file-->
  <!--parameter name="StoreHeaderPedestalNoise" type="bool" value="false"/-->
  <!--The tilt angle of the sensors-->
  <!--parameter name="TiltAngle" type="float" value="0"/-->
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
  <!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
  <!--drops all collections of the given type from the event-->
  <!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit <
/parameter-->
  <!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
  <!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
  <!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
  <!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
  <!-- name of output file -->
  <parameter name="LCIOOutputFile" type="string" value="@AlibavaLcioRawFolder@/raw@RunNumber@.slcio"/>
  <!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
  <parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
  <!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
  <!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""-->
</processor>

</marlin>

```

pedestal-tmp.xml

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stYLESHEET type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stYLESHEET type="text/xsl" href="marlin.xsl"? -->

<!--
=====
=====
Steering File generated by Marlin GUI on Tue Sep 2 09:38:41 2014

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's
descriptions and types as well.
         - Extra parameters that aren't categorized as default in a processor lost their description
and type.
=====
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

```

```

<execute>
  <processor name="AIDA"/>
  <processor name="MyAlibavaPedestalNoiseProcessor"/>
  <processor name="Save"/>
</execute>

<global>
  <parameter name="LCIOInputFiles"> @AlibavaLcioRawFolder@/raw@RunNumber@.slcio </parameter>
  <parameter name="ChannelsToBeUsed" value="@Bonds@"/>
  <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
  <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
  <parameter name="SkipMaskedEvents" value="@SkipMaskedEvents@"/>
  <parameter name="SkipNEvents" value="@SkipNEvents@"/>
  <parameter name="SupressCheck" value="false"/>
  <parameter name="Verbosity" value="@Verbosity@"/>
</global>

<processor name="AIDA" type="AIDAProcessor">
  <!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to
  create and fill the histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
  <!-- compression of output file 0: false >0: true (default) -->
  <parameter name="Compress" type="int" value="1"/>
  <!-- filename without extension-->
  <parameter name="FileName" type="string" value="@AlibavaHistoPath@/@Output@-alibava-pedestal"/>
  <!-- type of output file root (default) or xml -->
  <parameter name="FileType" type="string" value="root"/>
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyAlibavaPedestalNoiseProcessor" type="AlibavaPedestalNoiseProcessor">
  <!--AlibavaPedestalNoiseProcessor computes the pedestal and noise values of each channel-->
  <!--Input raw data collection name-->
  <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> rawdata </parameter>
  <!--Noise collection name, better not to change-->
  <parameter name="NoiseCollectionName" type="string" value="noise_notcmmd"/>
  <!--Pedestal collection name, better not to change-->
  <parameter name="PedestalCollectionName" type="string" value="pedestal_notcmmd"/>
  <!--The filename to store the pedestal and noise values-->
  <parameter name="PedestalOutputFile" type="string" value="@AlibavaLcioRawFolder@/ped@RunNumber@.slcio"
/>
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
  <!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
  <!--drops the named collections from the event-->
  <!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
  <!--drops all collections of the given type from the event-->
  <!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit <
/parameter-->
  <!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
  <!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
  <!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
  <!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
  <!-- name of output file -->
  <parameter name="LCIOOutputFile" type="string" value="@AlibavaLcioRawFolder@/run@RunNumber@.slcio"/>
  <!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
  <parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
  <!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
  <!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

</marlin>

```

commonmode-tmp.xml

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stYLESHEET type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->

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<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
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=====
Steering File generated by Marlin GUI on Thu Apr 23 16:34:54 2015

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's
descriptions and types as well.
         - Extra parameters that aren't categorized as default in a processor lost their description
and type.
=====
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

  <execute>
    <processor name="MyAIDAProcessor"/>
    <processor name="MyAlibavaPedestalSubtraction"/>
    <processor name="MyAlibavaConstantCommonModeProcessor"/>
    <processor name="MyAlibavaCommonModeSubtraction"/>
    <processor name="Save"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> @AlibavaLcioRawFolder@/run@RunNumber@.slcio </parameter>
    <parameter name="ChannelsToBeUsed" value="@Bonds@"/>
    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipMaskedEvents" value="@SkipMaskedEvents@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
  </global>

  <processor name="MyAIDAProcessor" type="AIDAProcessor">
  <!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to
create and fill the histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
  <!-- compression of output file 0: false >0: true (default) -->
  <parameter name="Compress" type="int" value="1"/>
  <!-- filename without extension-->
  <parameter name="FileName" type="string" value="@AlibavaHistoPath@/@Output@-alibava-commonmode"/>
  <!-- type of output file root (default) or xml -->
  <parameter name="FileType" type="string" value="root"/>
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

  <processor name="MyAlibavaPedestalSubtraction" type="AlibavaPedestalSubtraction">
  <!--AlibavaPedestalSubtraction subtracts the provided pedestal values from the input raw data. -->
  <!--Input raw data collection name-->
  <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> rawdata </parameter>
  <!--Output data collection name-->
  <parameter name="OutputCollectionName" type="string" lcioOutType="TrackerData"> tmprecodata <
/parameter>
  <!--Noise collection name, better not to change-->
  <parameter name="NoiseCollectionName" type="string" value="noise_notcmmd"/>
  <!--Pedestal collection name, better not to change-->
  <parameter name="PedestalCollectionName" type="string" value="pedestal_notcmmd"/>
  <!--The filename where the pedestal and noise values stored-->
  <parameter name="PedestalInputFile" type="string" value="@AlibavaLcioRawFolder@
/ped@PedRunNumberFormatted@.slcio"/>
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

  <processor name="MyAlibavaConstantCommonModeProcessor" type="AlibavaConstantCommonModeProcessor">
  <!--AlibavaConstantCommonModeProcessor computes the common mode values of each chip and their errors-->
  <!--Input data collection name (should be pedestal subtracted!)-->
  <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> tmprecodata </parameter>
  <!--Common mode collection name, better not to change-->
  <parameter name="CommonModeCollectionName" type="string" value="commonmode"/>

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<!--The number of iteration that should be used in common mode calculation-->
<!--parameter name="CommonModeErrorCalculationIteration" type="int" value="3"/-->
<!--Common mode error collection name, better not to change-->
<parameter name="CommonModeErrorCollectionName" type="string" value="commonmodeerror"/>
<!--The method with which to calculate the common mode. Options are: constant or slope-->
<parameter name="Method" type="string" value="@Method@"/>
<!--The limit to the deviation of noise. The data exceeds this deviation will be considered as signal
and not be included in common mode error calculation-->
<!--parameter name="NoiseDeviation" type="float" value="2.5"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""-->
</processor>

<processor name="MyAlibavaCommonModeSubtraction" type="AlibavaCommonModeSubtraction">
<!--AlibavaCommonModeSubtraction subtracts the provided common mode values from the input reco
(pedestal subtracted) data. -->
<!--Input reco data collection name-->
<parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> tmpreco data </parameter>
<!--Output data collection name-->
<parameter name="OutputCollectionName" type="string" lcioOutType="TrackerData"> rawdata_cmmd <
/parameter>
<!--Common mode collection name, better not to change-->
<parameter name="CommonModeCollectionName" type="string" value="commonmode"/>
<!--Common mode error collection name, better not to change-->
<parameter name="CommonModeErrorCollectionName" type="string" value="commonmodeerror"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
<!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
<!--drops all collections of the given type from the event-->
<!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit <
/parameter-->
<!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
<!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
<!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
<!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
<!-- name of output file -->
<parameter name="LCIOOutputFile" type="string" value="@AlibavaLcioRawFolder@/run@RunNumber@-cmmd.slcio"
/>
<!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
<parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
<!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
<!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""-->
</processor>

</marlin>

```

pedestal2-tmp.xml

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
=====
Steering File generated by Marlin GUI on Tue Sep 2 09:42:36 2014

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's
descriptions and types as well.
         - Extra parameters that aren't categorized as default in a processor lost their description
and type.
=====
=====
-->

```

```

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="MyAlibavaPedestalNoiseProcessor"/>
    <processor name="Save"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> @AlibavaLcioRawFolder@/run@RunNumber@-cmmd.slcio </parameter>
    <parameter name="ChannelsToBeUsed" value="@Bonds@"/>
    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipMaskedEvents" value="@SkipMaskedEvents@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
  </global>

  <processor name="AIDA" type="AIDAProcessor">
    <!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to
    create and fill the histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
    <!-- compression of output file 0: false >0: true (default) -->
    <parameter name="Compress" type="int" value="1"/>
    <!-- filename without extension-->
    <parameter name="FileName" type="string" value="@AlibavaHistoPath@/@Output@-alibava-pedestal2"/>
    <!-- type of output file root (default) or xml -->
    <parameter name="FileType" type="string" value="root"/>
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
  </processor>

  <processor name="MyAlibavaPedestalNoiseProcessor" type="AlibavaPedestalNoiseProcessor">
    <!--AlibavaPedestalNoiseProcessor computes the pedestal and noise values of each channel-->
    <!--Input raw data collection name-->
    <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> rawdata_cmmd </parameter>
    <!--Noise collection name, better not to change-->
    <parameter name="NoiseCollectionName" type="string" value="noise_cmmd"/>
    <!--Pedestal collection name, better not to change-->
    <parameter name="PedestalCollectionName" type="string" value="pedestal_cmmd"/>
    <!--The filename to store the pedestal and noise values-->
    <parameter name="PedestalOutputFile" type="string" value="@AlibavaLcioRawFolder@/ped@RunNumber@-cmmd.
slcio"/>
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
  </processor>

  <processor name="Save" type="LCIOOutputProcessor">
    <!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
    <!--drops the named collections from the event-->
    <!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
    <!--drops all collections of the given type from the event-->
    <!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit <
/parameter-->
    <!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
    <!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
    <!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
    <!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
    <!-- name of output file -->
    <parameter name="LCIOOutputFile" type="string" value="@AlibavaLcioRawFolder@/run@RunNumber@.slcio"/>
    <!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
    <parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
    <!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
    <!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
  </processor>

</marlin>

```

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
=====
Steering File generated by Marlin GUI on Thu Apr 23 16:35:32 2015

WARNING: - Please be aware that comments made in the original steering file were lost.
- Processors that are not installed in your Marlin binary lost their parameter's
descriptions and types as well.
- Extra parameters that aren't categorized as default in a processor lost their description
and type.
=====
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="MyAlibavaConverter"/>
    <processor name="Save"/>
    <!--processor name="MyAlibavaTimeCutProcessor"/-->
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> </parameter>
    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
  </global>

  <processor name="AIDA" type="AIDAProcessor">
    <!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to
create and fill the histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
    <!-- compression of output file 0: false >0: true (default) -->
    <parameter name="Compress" type="int" value="1"/>
    <!-- filename without extension-->
    <parameter name="FileName" type="string" value="@AlibavaHistoPath@/@Output@-alibava-converter"/>
    <!-- type of output file root (default) or xml)-->
    <parameter name="FileType" type="string" value="root"/>
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
  </processor>

  <processor name="MyAlibavaConverter" type="AlibavaConverter">
    <!--Reads data streams produced by Alibava and produces the corresponding LCIO output-->
    <!--Name of the collection-->
    <parameter name="RawDataCollectionName" type="string" lcioOutType="TrackerData"> rawdata </parameter>
    <!--Selection of chip that you want to store data from. Chip numbers start from 0. If not set, all
data (i.e. chip 0 and 1) will be stored-->
    <parameter name="ChipSelection" type="IntVec"> 0 1 </parameter>
    <!--The geometry identification number-->
    <parameter name="GeoID" type="int" value="99"/>
    <!--This is the input file name-->
    <parameter name="InputFileName" type="string" value="@AlibavaNativeFolder@/run@RunNumber@.
@FileExtension@"/>
    <!--Alibava read channels from right to left if you want to revert this i.e. make it from left to
right set this parameter to true. CAUTION: This will be applied first!-->
    <parameter name="ReadChannelsReverse" type="bool" value="false"/>
    <!--Run number of file (formatted)-->
    <parameter name="RunNumber" type="string" value="@RunNumber@"/>
    <!--The temperature of the sensors-->
    <!--parameter name="SensorTemperature" type="float" value="111.111"/-->
    <!--The event number that AlibavaConverter should start storing. Default value is -1, in this case it
will store every event-->
    <!--parameter name="StartEventNum" type="int" value="-1"/-->
    <!--The event number that AlibavaConverter should stop storing. Default value is -1, in this case it
will store every event-->
    <parameter name="StopEventNum" type="int" value="@MaxRecordNumber@"/>

```

```

    <!--Alibaba stores a pedestal and noise set in the run header. These values are not used in the rest of
the analysis, so it is optional to store it. By default it will not be stored, but if you want you can
set this variable to true to store it in the header of slcio file-->
    <!--parameter name="StoreHeaderPedestalNoise" type="bool" value="false"/-->
    <!--The tilt angle of the sensors-->
    <!--parameter name="TiltAngle" type="float" value="0"/-->
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
    <!--drops the named collections from the event-->
    <!--parameter name="DropCollectionNames" type="StringVec" value="TPCHits HCalHits" /-->
    <!--drops all collections of the given type from the event-->
    <!--parameter name="DropCollectionTypes" type="StringVec" value="SimTrackerHit SimCalorimeterHit" /-->
</parameter-->
    <!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
    <!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
    <!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
    <!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
    <!-- name of output file -->
    <parameter name="LCIOOutputFile" type="string" value="@AlibabaLcioRawFolder@/raw@RunNumber@.slcio"/>
    <!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
    <parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
    <!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
    <!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyAlibabaTimeCutProcessor" type="AlibabaTimeCutProcessor">
<!--AlibabaTimeCutProcessor masks the events if their TDC time value is not in the range specified by
TimeCutMin and TimeCutMax -->
    <!--The maximum tdc time that is acceptable to use that Event-->
    <parameter name="TimeCutMax" type="float" value="55.0"/>
    <!--parameter name="TimeCutMax" type="float" value="100.0"/-->
    <!--The minimum tdc time that is acceptable to use that Event-->
    <parameter name="TimeCutMin" type="float" value="35.0"/>
    <!--parameter name="TimeCutMin" type="float" value="0.0"/-->
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

</marlin>

```

reco-tmp.xml

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
=====
    Steering File generated by Marlin GUI on Tue Sep  2 09:34:23 2014

    WARNING: - Please be aware that comments made in the original steering file were lost.
              - Processors that are not installed in your Marlin binary lost their parameter's
descriptions and types as well.
              - Extra parameters that aren't categorized as default in a processor lost their description
and type.
=====
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

    <execute>
        <processor name="MyAIDAProcessor"/>
        <processor name="MyAlibabaPedestalSubtraction"/>

```



```

    <processor name="MyAlibavaCommonModeProcessor" />
    <processor name="MyAlibavaCommonModeSubtraction" />
    <processor name="Save" />
</execute>

<global>
  <parameter name="LCIOInputFiles"> @AlibavaLcioRawFolder@/raw@RunNumber@.slcio </parameter>
  <parameter name="ChannelsToBeUsed" value="@Bonds@" />
  <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@" />
  <parameter name="MaxRecordNumber" value="@MaxRecordNumber@" />
  <parameter name="SkipMaskedEvents" value="0" />
  <parameter name="SkipNEvents" value="@SkipNEvents@" />
  <parameter name="SupressCheck" value="false" />
  <parameter name="Verbosity" value="@Verbosity@" />
</global>

<processor name="MyAIDAProcessor" type="AIDAProcessor">
  <!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to
  create and fill the histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
  <!-- compression of output file 0: false >0: true (default) -->
  <parameter name="Compress" type="int" value="1" />
  <!-- filename without extension-->
  <parameter name="FileName" type="string" value="@AlibavaHistoPath@/@Output@-alibava-reco" />
  <!-- type of output file root (default) or xml -->
  <parameter name="FileType" type="string" value="root" />
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value="" /-->
</processor>

<processor name="MyAlibavaPedestalSubtraction" type="AlibavaPedestalSubtraction">
  <!--AlibavaPedestalSubtraction subtracts the provided pedestal values from the input raw data. -->
  <!--Input raw data collection name-->
  <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> rawdata </parameter>
  <!--Output data collection name-->
  <parameter name="OutputCollectionName" type="string" lcioOutType="TrackerData"> recodata_notcmmd <
/parameter>
  <!--Noise collection name, better not to change-->
  <parameter name="NoiseCollectionName" type="string" value="noise_cmmd" />
  <!--Pedestal collection name, better not to change-->
  <parameter name="PedestalCollectionName" type="string" value="pedestal_cmmd" />
  <!--The filename where the pedestal and noise values stored-->
  <parameter name="PedestalInputFile" type="string" value="@AlibavaLcioRawFolder@
/ped@PedRunNumberFormatted@-cmmd.slcio" />
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value="" /-->
</processor>

<processor name="MyAlibavaCommonModeProcessor" type="AlibavaConstantCommonModeProcessor">
  <!--AlibavaConstantCommonModeProcessor computes the common mode values of each chip and their errors-->
  <!--Input data collection name (should be pedestal subtracted!)-->
  <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> recodata_notcmmd <
/parameter>
  <!--Common mode collection name, better not to change-->
  <parameter name="CommonModeCollectionName" type="string" value="commonmode" />
  <!--The number of iteration that should be used in common mode calculation-->
  <!--parameter name="CommonModeErrorCalculationIteration" type="int" value="3" /-->
  <!--Common mode error collection name, better not to change-->
  <parameter name="CommonModeErrorCollectionName" type="string" value="commonmodeerror" />
  <!--The method with which to calculate the common mode. Options are: constant or slope-->
  <!--parameter name="Method" type="string" value="slope" /-->
  <!--The limit to the deviation of noise. The data exceeds this deviation will be considered as signal
and not be included in common mode error calculation-->
  <!--parameter name="NoiseDeviation" type="float" value="2.5" /-->
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value="" /-->
</processor>

<processor name="MyAlibavaCommonModeSubtraction" type="AlibavaCommonModeSubtraction">
  <!--AlibavaCommonModeSubtraction subtracts the provided common mode values from the input reco
(pedestal subtracted) data. -->
  <!--Input reco data collection name-->
  <parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> recodata_notcmmd <
/parameter>
  <!--Output data collection name-->
  <parameter name="OutputCollectionName" type="string" lcioOutType="TrackerData"> recodata_cmmd <
/parameter>

```

```

<!--Common mode collection name, better not to change-->
<parameter name="CommonModeCollectionName" type="string" value="commonmode"/>
<!--Common mode error collection name, better not to change-->
<parameter name="CommonModeErrorCollectionName" type="string" value="commonmodeerror"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
<!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
<!--drops all collections of the given type from the event-->
<!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit <
/parameter-->
<!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
<!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
<!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
<!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
<!-- name of output file -->
<parameter name="LCIOOutputFile" type="string" value="@AlibavaLcioRawFolder@/run@RunNumber@.slcio"/>
<!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
<parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
<!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
<!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""-->
</processor>

</marlin>

```

clustering-1-tmp.xml git

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
Steering File generated by Marlin GUI on Thu Apr 23 16:33:56 2015

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's descriptions
         - Extra parameters that aren't categorized as default in a processor lost their description a
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="http://ilcsc
/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="MyAlibavaTimeCutProcessor"/>
    <processor name="MyAlibavaSeedClustering"/>
    <processor name="MyAlibavaClusterConverter"/>
    <processor name="Save"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> @AlibavaLcioRawFolder@/run@RunNumber@.slcio </parameter>
    <parameter name="ChannelsToBeUsed" value="@Bonds@"/>
    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipMaskedEvents" value="0"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
  </global>

  <processor name="AIDA" type="AIDAProcessor">

```

```

<!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to crea
histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
<!-- compression of output file 0: false >0: true (default) -->
<parameter name="Compress" type="int" value="1"/>
<!-- filename without extension-->
<parameter name="FileName" type="string" value="@HistogramPath@/@Output@-alibava-clustering-1"/>
<!-- type of output file root (default) or xml -->
<parameter name="FileType" type="string" value="root"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyAlibavaTimeCutProcessor" type="AlibavaTimeCutProcessor">
<!--AlibavaTimeCutProcessor masks the events if their TDC time value is not in the range specified by Ti
TimeCutMax -->
<!--The maximum tdc time that is acceptable to use that Event-->
<parameter name="TimeCutMax" type="float" value="45.0"/> <!-- was 45.0 -->
<!--parameter name="TimeCutMax" type="float" value="100.0"/>
<!--The minimum tdc time that is acceptable to use that Event-->
<parameter name="TimeCutMin" type="float" value="25.0"/>
<!--parameter name="TimeCutMin" type="float" value="0.0"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyAlibavaSeedClustering" type="AlibavaSeedClustering">
<!--AlibavaSeedClustering finds clusters using seed and neighbour cuts -->
<!--Input collection name, it should be pedestal subtracted-->
<parameter name="InputCollectionName" type="string" lcioInType="TrackerData">recodata_cmmd </paramet
<!--Output data collection name-->
<parameter name="OutputCollectionName" type="string" lcioOutType="TrackerData">alibava_clusters </pa
<!--The signal/noise ratio that neighbour channels have to pass to be added to the cluster-->
<parameter name="NeighbourSNRCut" type="float"> @NeighbourSNRCut@ </parameter>
<!--Noise collection name, better not to change-->
<parameter name="NoiseCollectionName" type="string">noise_cmmd </parameter>
<!--The filename where the pedestal and noise values stored-->
<parameter name="NoiseInputFile" type="string"> @LcioPath@/ped@PedRunNumberFormatted@-cmmd.slcio </f
<!--The signal/noise ratio that channels have to pass to be considered as seed channel-->
<parameter name="SeedSNRCut" type="float"> @SeedSNRCut@ </parameter>
<!--Polarity of the signal. Set this parameter to -1 for negative signals, any other value will be d
signal will be assumed to be positive -->
<parameter name="SignalPolarity" type="int"> @Pol@ </parameter>
<!--The default sensitive axis of the strip sensor(s) according to telescope is X. If sensitive axis
this parameter to zero (0). Any other value will be disregarded and sensitive axis will assumed to be "X"
<parameter name="IsSensitiveAxisX" type="int"> 0 </parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string">DEBUG </parameter-->
</processor>

<processor name="MyAlibavaClusterConverter" type="AlibavaClusterConverter">
<!--AlibavaClusterConverter converts AlibavaClusters to EUTelSparseCluster and :) -->
<!--Input alibava cluster collection name-->
<parameter name="InputCollectionName" type="string" lcioInType="TrackerData">alibava_clusters </param
<!--The value that should be stored in missing coordinate. This number has to be integer since it wil
channel number of the missing coordinate-->
<parameter name="MissingCoordinateValue" type="int">0 </parameter>
<!--The collection name of cluster pulse. This might be hardcoded in EUTelescope framework-->
<parameter name="OutputEUTelClusterPulseCollectionName" type="string">clustercollection </parameter>
<!--The collection name of sparse cluster. This might be hardcoded in EUTelescope framework-->
<parameter name="OutputEUTelSparseClusterCollectionName" type="string">original_zsdata </parameter>
<!--The sensor ID for the data. The actual sensorID will be stored as SensorIDStartsFrom + ChipNumber
<parameter name="SensorIDStartsFrom" type="int">7 </parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<parameter name="Verbosity" type="string">DEBUG0 </parameter>
</processor>

<processor name="MyAlibavaClusterHistoMaker" type="AlibavaClusterHistogramMaker">
<!--AlibavaClustering finds clusters -->
<!--Input data collection name-->
<parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> rawdata </parameter>
<!--Noise collection name-->
<parameter name="NoiseCollectionName" type="string" value="noise_cmmd"/>
<!--The filename where the final noise is stored-->
<parameter name="NoiseInputFile" type="string" value="@AlibavaLcioRawFolder@/ped@PedRunNumberFormatted@
</processor>

```

```

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
<parameter name="DropCollectionNames" type="StringVec"> recodata_notcmmnd rawdata commonmodeerror common
<!--drops all collections of the given type from the event-->
<!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit </parameter-
<!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
<!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
<!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
<!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
<!-- name of output file -->
<parameter name="LCIOOutputFile" type="string" value="@LcioPath@/run@RunNumber@-alibava-clustering.slci
<!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
<parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
<!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
<!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

</marlin>

```

clustering-2-tmp.xml git

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
Steering File generated by Marlin GUI on Thu Apr 23 16:34:06 2015

WARNING: - Please be aware that comments made in the original steering file were lost.
- Processors that are not installed in your Marlin binary lost their parameter's descriptions and types
as well.
- Extra parameters that aren't categorized as default in a processor lost their description and type.
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="
http://ilcsoft.desy.de/marlin/marlin.xsd">

<execute>
<processor name="AIDA"/>
<processor name="MyAlibavaClustering"/>
<processor name="Save"/>
</execute>

<global>
<parameter name="LCIOInputFiles"> @AlibavaLcioRawFolder@/run@RunNumber@.slcio </parameter>
<parameter name="ChannelsToBeUsed" value="@Bonds@"/>
<parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
<parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
<parameter name="SkipMaskedEvents" value="0"/>
<parameter name="SkipNEvents" value="@SkipNEvents@"/>
<parameter name="SupressCheck" value="false"/>
<parameter name="Verbosity" value="@Verbosity@"/>
</global>

<processor name="AIDA" type="AIDAProcessor">
<!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to
create and fill the histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
<!-- compression of output file 0: false >0: true (default) -->
<parameter name="Compress" type="int" value="1"/>
<!-- filename without extension-->
<parameter name="FileName" type="string" value="@HistogramPath@/@Output@-alibava-clustering-2"/>

```

```

<!-- type of output file root (default) or xml )-->
<parameter name="FileType" type="string" value="root"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyAlibavaClustering" type="AlibavaClustering">
<!--AlibavaClustering finds clusters -->
<!--Input data collection name-->
<parameter name="InputCollectionName" type="string" lcioInType="TrackerData"> recodata_cmmd </parameter>
<!--Cluster collection name-->
<parameter name="ClusterCollectionName" type="string" value="alibava_clusters"/>
<!--The cluster snr cut-->
<parameter name="ClusterCut" type="float" value="2.5"/>
<!--The filename to read/write coefficients to-->
<parameter name="FIRCoefficientFile" type="string" value="@LcioPath@/@RunNumber@-coefficients.txt"/>
<!--If filtering is used, it is saved into this collection-->
<parameter name="FIRCollectionName" type="string" value="filteredcollection2"/>
<!--If we want to get the missing coordinate from the telescope this should be set to the telescope
plane id (usually 0-5). Set to -1 to disable this feature-->
<parameter name="GetMissingCoordFromTelescope" type="int" value="2"/>
<!--The maximum accepted clustersize in the sensitive Alibava direction. This should be larger or equal
to MinClustersize!-->
<parameter name="MaxClustersize" type="int" value="10"/>
<!--The maximum number of events read from the telescope. This number should be below the actual number
of events in the telescope. The Alibava event count can be higher.-->
<parameter name="MaxCount" type="int" value="@MaxRecordNumber@"/>
<!--The minimum accepted clustersize in the sensitive Alibava direction. This must be larger or equal
to 1!-->
<parameter name="MinClustersize" type="int" value="1"/>
<!--Noise collection name-->
<parameter name="NoiseCollectionName" type="string" value="noise_cmmd"/>
<!--The filename where the final noise is stored-->
<parameter name="NoiseInputFile" type="string" value="@AlibavaLcioRawFolder@/ped@PedRunNumberFormatted@-
cmmd.slcio"/>
<!--The sensor polarity: -1 for negative cluster signals (p-type sensor), 1 for positive cluster
signals (n-type sensor)-->
<parameter name="Polarity" type="int" value="@Polarity@"/>
<!--FIR filter coefficients from a previous iteration can be read if this is switched on.-->
<parameter name="ReadFIRCoefficients" type="bool" value="true"/>
<!--Take the missing coordinate from a mean of all telescope seeds (false)? Or search for the nearest
one based on the relative position (true).-->
<parameter name="SearchNearest" type="bool" value="true"/>
<!--The seed snr cut-->
<parameter name="SeedCut" type="float" value="5"/>
<!--Sparse cluster collection name, needs to be original_zsdata for hitmaker-->
<parameter name="SparseClusterCollectionName" type="string" value="alibava_nzsdata"/>
<!--Telescope collection name we want to get the unsensitive axis positions from-->
<!--parameter name="TelescopeCollectionName" type="string" value="cluster_m26"/-->
<!--The filename where the telescope data is stored-->
<parameter name="TelescopeFile" type="string" value="@LcioPath@/run@TelescopeRun@-clustering.slcio"/>
<!--The unsensitive axis of our strip sensor-->
<parameter name="UnsensitiveAxis" type="string" value="x"/>
<!--A FIR (finite impulse response) filter can be applied to the input data to minimise crosstalk. This
switches the filter on.-->
<parameter name="UseFIRFilter" type="bool" value="true"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
<!--From the eta distribution coefficients for filtering are calculated. This writes them to disk.-->
<parameter name="WriteFIRCoefficients" type="bool" value="false"/>
<!--For compatibility, two zero coefficients can be written to file.-->
<!--parameter name="WriteZeroCoefficients" type="bool" value="false"/-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
<parameter name="DropCollectionNames" type="StringVec"> recodata_notcmmd rawdata commonmodeerror
commonmode </parameter>
<!--drops all collections of the given type from the event-->
<!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit </parameter--
>

<!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
<!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
<!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
<!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->

```

```

<!-- name of output file -->
<parameter name="LCIOOutputFile" type="string" value="@LcioPath@/run@RunNumber@-alibava-clustering.
slcio"/>
<!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
<parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
<!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
<!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

</marlin>

```

telescope-converter-tmp.xml git

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
Steering File generated by Marlin GUI on Tue Sep 2 09:52:42 2014

WARNING: - Please be aware that comments made in the original steering file were lost.
- Processors that are not installed in your Marlin binary lost their parameter's descriptions
- Extra parameters that aren't categorized as default in a processor lost their description a
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="http://ilcsc
/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="UniversalNativeReader"/>
    <processor name="Mimosa26EUTelAutoPedestalNoiseProcessor"/>
    <processor name="HotPixelMasker"/>
    <processor name="Save"/>
    <processor name="MyEUTelUtilityPrintEventNumber"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> </parameter>
    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFileTelescopeOnly@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
  </global>

  <processor name="AIDA" type="AIDAProcessor">
    <!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to crea
histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
    <!-- compression of output file 0: false >0: true (default) -->
    <parameter name="Compress" type="int" value="1"/>
    <!-- filename without extension-->
    <parameter name="FileName" type="string" value="@HistogramPath@/@Output@-telescope-converter"/>
    <!-- type of output file root (default) or xml -->
    <parameter name="FileType" type="string" value="root"/>
    <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
    <!--parameter name="Verbosity" type="string" value=""/-->
  </processor>

  <processor name="UniversalNativeReader" type="EUTelNativeReader">
    <!--Reads data streams produced by EUDAQ and produced the corresponding LCIO output-->
    <!--This is the depfet produced output collection-->
    <parameter name="DEPFETOutputCollection" type="string" lcioOutType="TrackerData"> rawdata_dep </paramet
    <!--This is the eudrb producer output collection when read in RAW mode-->
    <parameter name="EUBRDRawModeOutputCollection" type="string" lcioOutType="TrackerRawData"> rawdata </pa
    <!--This si the mimotel output collection when read in ZS mode-->

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<parameter name="EUDRBZSModeOutputCollection" type="string" lcioOutType="TrackerData"> zsdata </paramet
<!-- Sorry, this parameter isn't a default parameter for this processor: description and type lost!! -
<parameter name="DEPFETSensorIDVec" value="8"/>
<!-- Sorry, this parameter isn't a default parameter for this processor: description and type lost!! -
<parameter name="EUDRBSensorIDVec"> 0 1 2 3 4 5 </parameter>
<!--Type of sparsified pixel data structure (use SparsePixelType enumerator)-->
<!--parameter name="EUDRBSparsePixelType" type="int" value="1"/-->
<!--The geometry identification number-->
<parameter name="GeoID" type="int" value="100"/>
<!--This is the input file name-->
<parameter name="InputFileName" type="string" value="@NativePath@/run@RunNumber@.raw"/>
<!--Resynchronize the events based on the TLU trigger ID-->
<parameter name="SyncTriggerID" type="bool" value="false"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="Mimosa26EUTelAutoPedestalNoiseProcessor" type="EUTelAutoPedestalNoiseProcessor">
<!--EUTelAutoPedestalNoiseProcessor produces initial pedestal / noise / status with user provided values
<!--Noise local collection-->
<parameter name="NoiseCollectionName" type="string" lcioOutType="TrackerData"> m26_noise </parameter>
<!--Pedestal local collection-->
<parameter name="PedestalCollectionName" type="string" lcioOutType="TrackerData"> m26_pedestal </parame
<!--Pixel status collection-->
<parameter name="StatusCollectionName" type="string" lcioOutType="TrackerRawData"> m26_status </paramet
<!--The initial value of noise (one value for detector)-->
<parameter name="InitNoiseValue" type="FloatVec"> 1 1 1 1 1 1 </parameter>
<!--The initial value of pedestal (one value for detector)-->
<parameter name="InitPedestalValue" type="FloatVec"> 0 0 0 0 0 0 </parameter>
<!--The maximum pixel along x (default 255, one value per detector)-->
<parameter name="MaxXVector" type="IntVec"> 1151 1151 1151 1151 1151 1151 </parameter>
<!--The maximum pixel along y (default 255, one value per detector)-->
<parameter name="MaxYVector" type="IntVec"> 575 575 575 575 575 575 </parameter>
<!--The minimum pixel along x (default 0, one value per detector)-->
<parameter name="MinXVector" type="IntVec"> 0 0 0 0 0 0 </parameter>
<!--The minimum pixel along y (default 0, one value per detector)-->
<parameter name="MinYVector" type="IntVec"> 0 0 0 0 0 0 </parameter>
<!--The sensorID for the generated collection (one per detector)-->
<parameter name="SensorIDVec" type="IntVec"> 0 1 2 3 4 5 </parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="HotPixelMasker" type="EUTelProcessorNoisyPixelFinder">
<!--EUTelProcessorNoisyPixelFinder computes the firing frequency of pixels and applies a cut on this val
remove) hot pixels.-->
<!--The list of sensor IDs that shall be excluded.-->
<!--parameter name="ExcludedPlanes" type="IntVec"> </parameter-->
<!--This is the name of the hot pixel collection to be saved into the output slcio file-->
<parameter name="HotPixelCollectionName" type="string" value="hotpixel_m26" />
<!--This is the name of the LCIO file name with the output hotpixel db (add .slcio)-->
<parameter name="HotPixelDBFile" type="string" value="@DatabasePath@/run@RunNumber@-hotpixel.slcio"/>
<!--Write mode for HotPixelDB file: WRITE_APPEND or WRITE_NEW-->
<!--parameter name="LCIOWriteMode" type="string">WRITE_NEW </parameter-->
<!--This float number [0,1] represents the maximum allowed firing frequency
within the selected number of event per cycle-->
<parameter name="MaxAllowedFiringFreq" type="float"> 0.001 </parameter>
<!--The number of events to be considered for each update cycle-->
<parameter name="NoOfEvents" type="int"> 9999 </parameter>
<!--The sensorID for the generated collection (one per detector)-->
<parameter name="SensorIDVec" type="IntVec"> 0 1 2 3 4 5</parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string">DEBUG </parameter-->
<!--Input of Zero Suppressed data-->
<parameter name="ZSDataCollectionName" type="string" lcioInType="TrackerData"> zsdata_m26 </parameter>
</processor>

<processor name="Save" type="EUTelOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Eventually it adds a EORE at the of the f
missing Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
<parameter name="DropCollectionNames" type="StringVec"> firstFrame secondFrame thirdFrame </parameter>
<!--drops all collections of the given type from the event-->
<!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit </parameter-
<!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
<!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->

```

```

<!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
<!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
<!-- name of output file -->
<parameter name="LCIOOutputFile" type="string" value="@LcioPath@/run@RunNumber@-converter.slcio"/>
<!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
<parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
<!--Set it to true to remove intermediate EORE in merged runs-->
<parameter name="SkipIntermediateEORE" type="bool" value="true"/>
<!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
<!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyEUTelUtilityPrintEventNumber" type="EUTelUtilityPrintEventNumber">
<!--EUTelUtilityPrintEventNumber prints event number to screen depending on the verbosity level-->
<!--Print event number for every n-th event-->
<parameter name="EveryNEvents" type="int" value="1000"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
<!--print the event timestamp as read from LCIO-->
<!--parameter name="printTimestamp" type="bool" value="false"/-->
</processor>

</marlin>

```

telescope-clustering-tmp.xml git

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
Steering File generated by Marlin GUI on Tue Sep 2 09:51:43 2014

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's descriptions
         - Extra parameters that aren't categorized as default in a processor lost their description a
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="http://ilcsc
/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="Mimosa26EUTelAutoPedestalNoiseProcessor"/>
    <processor name="LoadHotPixelDB"/>
    <processor name="Clustering"/>
    <processor name="ClusteringCMS"/>
    <!--processor name="Correlator"/-->
    <processor name="Save"/>
    <processor name="MyEUTelUtilityPrintEventNumber"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> @LcioPath@/run@RunNumber@-converter.slcio </parameter>

```



```

    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFileTelescopeOnly@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
</global>

<processor name="AIDA" type="AIDAProcessor">
<!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to crea
histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
<!-- compression of output file 0: false >0: true (default) -->
<parameter name="Compress" type="int" value="1"/>
<!-- filename without extension-->
<parameter name="FileName" type="string" value="@HistogramPath@/@Output@-telescope-clustering"/>
<!-- type of output file root (default) or xml)-->
<parameter name="FileType" type="string" value="root"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="Mimosa26EUTelAutoPedestalNoiseProcessor" type="EUTelAutoPedestalNoiseProcessor">
<!--EUTelAutoPedestalNoiseProcessor produces initial pedestal / noise / status with user provided values
<!--Noise local collection-->
<parameter name="NoiseCollectionName" type="string" lcioOutType="TrackerData"> m26_noise </parameter>
<!--Pedestal local collection-->
<parameter name="PedestalCollectionName" type="string" lcioOutType="TrackerData"> m26_pedestal </paramet
<!--Pixel status collection-->
<parameter name="StatusCollectionName" type="string" lcioOutType="TrackerRawData"> m26_status </paramet
<!--The initial value of noise (one value for detector)-->
<parameter name="InitNoiseValue" type="FloatVec"> 1 1 1 1 1 1 1 </parameter>
<!--The initial value of pedestal (one value for detector)-->
<parameter name="InitPedestalValue" type="FloatVec"> 0 0 0 0 0 0 0 </parameter>
<!--The maximum pixel along x (default 255, one value per detector)-->
<parameter name="MaxXVector" type="IntVec"> 1151 1151 1151 1151 1151 1151 1151 </parameter>
<!--The maximum pixel along y (default 255, one value per detector)-->
<parameter name="MaxYVector" type="IntVec"> 575 575 575 575 575 575 575 </parameter>
<!--The minimum pixel along x (default 0, one value per detector)-->
<parameter name="MinXVector" type="IntVec"> 0 0 0 0 0 0 0 </parameter>
<!--The minimum pixel along y (default 0, one value per detector)-->
<parameter name="MinYVector" type="IntVec"> 0 0 0 0 0 0 0 </parameter>
<!--The sensorID for the generated collection (one per detector)-->
<parameter name="SensorIDVec" type="IntVec"> 0 1 2 3 4 5 6 </parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="LoadHotPixelDB" type="ConditionsProcessor">
<!--ConditionsProcessor provides access to conditions data transparently from LCIO files or a databases
<!--Initialization of a conditions database handler-->
<!--parameter name="DBCondHandler" type="StringVec" conditionsName /lccd/myfolder HEAD </parameter-->
<!--Initialization of a conditions db file handler-->
<!--parameter name="DBFileHandler" type="StringVec" conditionsName conditions.slcio collectionName </f
<!--Initialization string for conditions database-->
<parameter name="DBInit" type="string" value="localhost:lccd_test:calvin:hobbes"/>
<!--Initialization of a data file handler-->
<!--parameter name="DataFileHandler" type="StringVec" value="conditionsName"/-->
<!--Initialization of a simple conditions file handler-->
<parameter name="SimpleFileHandler" type="StringVec"> hotpixel_m26 @DatabasePath@/run@HotPixelRunNumber
hotpixel_m26 </parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="Clustering" type="EUTelClusteringProcessor">
<!--EUTelClusteringProcessor is looking for clusters into a calibrated pixel matrix.-->
<!--Input calibrated data not zero suppressed collection name-->
<parameter name="NZSDataCollectionName" type="string" lcioInType="TrackerData"> data </parameter>
<!--Noise (input) collection name-->
<parameter name="NoiseCollectionName" type="string" lcioInType="TrackerData"> m26_noise </parameter>
<!--Pixel status (input) collection name-->
<parameter name="StatusCollectionName" type="string" lcioInType="TrackerRawData"> m26_status </paramete
<!--Input of Zero Suppressed data-->
<parameter name="ZSDataCollectionName" type="string" lcioInType="TrackerData"> zsdata_m26 </parameter>
<!--Cluster (output) collection name-->
<parameter name="PulseCollectionName" type="string" lcioOutType="TrackerPulse"> cluster_m26 </parameter>
<!--The list of cluster N to be filled.For example 7 means filling the cluster spectra with the 7 most

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```

pixels-->
  <parameter name="ClusterN" type="IntVec"> 4 6 8 9 </parameter>
  <!--The list of cluster NxN to be filled.For example 3 means filling the 3x3 histogram spectrum-->
  <parameter name="ClusterNxN" type="IntVec" value="3"/>
  <!--Select here which algorithm should be used for clustering.
Available algorithms are:
-> FixedFrame: for cluster with a given size
-> BrickedCluster: for bricked clustering on raw data-->
  <parameter name="ClusteringAlgo" type="string" value="FixedFrame"/>
  <!--Select herewith the type of the data format you are expecting from the sensors.
Available types of the data format:
-> Analog: smooth distribution of pixel ADC values from Min to Max
-> Digital: discrete distribution of pixel ADC values from Min to Max
-> Binary: only two values of the signal - 0 and 1
-->
  <parameter name="DataFormatType" type="string" value="Binary"/>
  <!--The list of sensor ids that have to be excluded from the clustering.-->
  <!--parameter name="ExcludedPlanes" type="IntVec"> </parameter-->
  <!--Threshold in SNR for cluster identification-->
  <parameter name="FFClusterCut" type="float" value="0.0"/>
  <!--Maximum allowed cluster size along x (only odd numbers)-->
  <parameter name="FFClusterSizeX" type="int" value="5"/>
  <!--Maximum allowed cluster size along y (only odd numbers)-->
  <parameter name="FFClusterSizeY" type="int" value="5"/>
  <!--Threshold in SNR for seed pixel identification-->
  <parameter name="FFSeedCut" type="float" value="0.0"/>
  <!--This is the name of the histogram information file-->
  <parameter name="HistoInfoFileName" type="string" value="@HistoInfoFile@"/>
  <!--Switch on or off the histogram filling-->
  <parameter name="HistogramFilling" type="bool" value="true"/>
  <!--This is the name of the hotpixel collection-->
  <parameter name="HotPixelCollectionName" type="string" value="hotpixel_m26"/>
  <!--Threshold in SNR for clusters contained in ZS data-->
  <parameter name="SparseClusterCut" type="float" value="0.0"/>
  <!--Minimum distance between sparsified pixel ( touching == sqrt(2)) -->
  <parameter name="SparseMinDistance" type="float" value="0"/>
  <!--Threshold in SNR for seed pixel contained in ZS data-->
  <parameter name="SparseSeedCut" type="float" value="0.0"/>
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
  <!--Select here which algorithm should be used for clustering.
Available algorithms are:
-> SparseCluster: for cluster in ZS frame
-> SparseCluster2: for cluster in ZS frame with better performance
-> FixedFrame: for cluster with a given size
-> DFixedFrame: for digital cluster with a given size
-> BrickedCluster: for bricked clustering on zs data
-->
  <parameter name="ZSClusteringAlgo" type="string" value="SparseCluster2"/>
</processor>

<processor name="ClusteringCMS" type="EUTelClusteringProcessor">
<!--EUTelClusteringProcessor is looking for clusters into a calibrated pixel matrix.-->
<!--Input calibrated data not zero suppressed collection name-->
<parameter name="NZSDataCollectionName" type="string" lcioInType="TrackerData"> data </parameter>
<!--Noise (input) collection name-->
<parameter name="NoiseCollectionName" type="string" lcioInType="TrackerData"> m26_noise </parameter>
<!--Pixel status (input) collection name-->
<parameter name="StatusCollectionName" type="string" lcioInType="TrackerRawData"> m26_status </paramete
<!--Input of Zero Suppressed data-->
<parameter name="ZSDataCollectionName" type="string" lcioInType="TrackerData"> CMSPixelREF </parameter>
<!--Cluster (output) collection name-->
<parameter name="PulseCollectionName" type="string" lcioOutType="TrackerPulse"> cluster_m26 </parameter>
<!--The list of cluster N to be filled.For example 7 means filling the cluster spectra with the 7 most
pixels-->
<parameter name="ClusterN" type="IntVec"> 99 </parameter>
<!--The list of cluster NxN to be filled.For example 3 means filling the 3x3 histogram spectrum-->
<parameter name="ClusterNxN" type="IntVec" value="3"/>
<!--Select here which algorithm should be used for clustering.
Available algorithms are:
-> FixedFrame: for cluster with a given size
-> BrickedCluster: for bricked clustering on raw data-->
  <parameter name="ClusteringAlgo" type="string" value="FixedFrame"/>
  <!--Select herewith the type of the data format you are expecting from the sensors.
Available types of the data format:
-> Analog: smooth distribution of pixel ADC values from Min to Max

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-> Digital: discrete distribution of pixel ADC values from Min to Max
-> Binary: only two values of the signal - 0 and 1
-->
<parameter name="DataFormatType" type="string" value="Analog"/>
<!--The list of sensor ids that have to be excluded from the clustering.-->
<!--parameter name="ExcludedPlanes" type="IntVec" /> </parameter-->
<!--Threshold in SNR for cluster identification-->
<parameter name="FFClusterCut" type="float" value="0.0"/>
<!--Maximum allowed cluster size along x (only odd numbers)-->
<parameter name="FFClusterSizeX" type="int" value="5"/>
<!--Maximum allowed cluster size along y (only odd numbers)-->
<parameter name="FFClusterSizeY" type="int" value="5"/>
<!--Threshold in SNR for seed pixel identification-->
<parameter name="FFSeedCut" type="float" value="0.0"/>
<!--This is the name of the histogram information file-->
<parameter name="HistoInfoFileName" type="string" value="@HistoInfoFile@"/>
<!--Switch on or off the histogram filling-->
<parameter name="HistogramFilling" type="bool" value="true"/>
<!--This is the name of the hotpixel collection-->
<parameter name="HotPixelCollectionName" type="string" value="hotpixel_m26"/>
<!--Threshold in SNR for clusters contained in ZS data-->
<parameter name="SparseClusterCut" type="float" value="0.0"/>
<!--Minimum distance between sparsified pixel ( touching == sqrt(2)) -->
<parameter name="SparseMinDistance" type="float" value="0"/>
<!--Threshold in SNR for seed pixel contained in ZS data-->
<parameter name="SparseSeedCut" type="float" value="0.0"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
<!--Select here which algorithm should be used for clustering.
Available algorithms are:
-> SparseCluster: for cluster in ZS frame
-> SparseCluster2: for cluster in ZS frame with better performance
-> FixedFrame: for cluster with a given size
-> DFixedFrame: for digital cluster with a given size
-> BrickedCluster: for bricked clustering on zs data
-->
<parameter name="ZSClusteringAlgo" type="string" value="SparseCluster2"/>
</processor>

<processor name="Correlator" type="EUTelCorrelator">
<!--EUTelCorrelator fills histograms with correlation plots-->
<!--List of cluster collections-->
<parameter name="InputClusterCollections" type="string" lcioInType="TrackerPulse"> cluster_m26 </parameter>
<!--Hit collection name-->
<parameter name="InputHitCollectionName" type="string" lcioInType="TrackerHit"> hit </parameter>
<!--Minimum allowed cluster charge to be taken into account for the correlation plots (default = 2)-->
<parameter name="ClusterChargeMinimum" type="int" value="2"/>
<!--Dump the offset X and Y values calculated from the correlation bands (default = true)-->
<parameter name="DumpOffset" type="bool" value="true"/>
<!--How many events are needed to get reasonable correlation plots (and Offset DB)? (default=1000)-->
<parameter name="Events" type="int" value="-1"/>
<!--SensorID of fixed plane-->
<!--parameter name="FixedPlane" type="int" value="0"/-->
<!--This is the name of the hot pixel collection to be saved into the output slcio file-->
<!--parameter name="HotPixelCollectionName" type="string" value="hotpixel"/-->
<!--If there are more then this number of correlated hits (planes->track candidate) (default=5)-->
<!--parameter name="MinNumberOfCorrelatedHits" type="int" value="5"/-->
<!--This is the name of the LCIO file name with the output offset db (add .slcio)-->
<parameter name="OffsetDBFile" type="string" value="@DatabasePath@/run@RunNumber@-offset.slcio"/>
<!--reference hit collection name -->
<!--parameter name="ReferenceCollection" type="string" value="referenceHit"/-->
<!--Maximal values of the hit residuals in the X direction for a correlation band. Note: these numbers
according to the z position of the sensors and NOT according to the sensor id.-->
<!--parameter name="ResidualsXMax" type="FloatVec"> 10 10 10 10 10 10 </parameter-->
<!--Minimal values of the hit residuals in the X direction for a correlation band. Note: these numbers
according to the z position of the sensors and NOT according to the sensor id.-->
<!--parameter name="ResidualsXMin" type="FloatVec"> -10 -10 -10 -10 -10 -10 </parameter-->
<!--Maximal values of the hit residuals in the Y direction for a correlation band. Note: these numbers
according to the z position of the sensors and NOT according to the sensor id.-->
<!--parameter name="ResidualsYMax" type="FloatVec"> 10 10 10 10 10 10 </parameter-->
<!--Minimal values of the hit residuals in the Y direction for a correlation band. Note: these numbers
according to the z position of the sensors and NOT according to the sensor id.-->
<!--parameter name="ResidualsYMin" type="FloatVec"> -10 -10 -10 -10 -10 -10 </parameter-->
<!--Do you want the reference hit collection to be used for coordinate transformations?-->
<!--parameter name="UseReferenceCollection" type="bool" value="true"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->

```

```

    <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="Save" type="EUTelOutputProcessor">
  <!--Writes the current event to the specified LCIO outputfile. Eventually it adds a EORE at the of the f
missing Needs to be the last ActiveProcessor.-->
  <!--drops the named collections from the event-->
  <!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
  <!--drops all collections of the given type from the event-->
  <!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit </parameter-
  <!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
  <!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
  <!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
  <!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
  <!-- name of output file -->
  <parameter name="LCIOOutputFile" type="string" value="@LcioPath@/run@RunNumber@-clustering.slcio"/>
  <!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
  <parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
  <!--Set it to true to remove intermediate EORE in merged runs-->
  <parameter name="SkipIntermediateEORE" type="bool" value="true"/>
  <!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
  <!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyEUTelUtilityPrintEventNumber" type="EUTelUtilityPrintEventNumber">
  <!--EUTelUtilityPrintEventNumber prints event number to screen depending on the verbosity level-->
  <!--Print event number for every n-th event-->
  <parameter name="EveryNEvents" type="int" value="1000"/>
  <!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
  <!--parameter name="Verbosity" type="string" value=""/-->
  <!--print the event timestamp as read from LCIO-->
  <!--parameter name="printTimestamp" type="bool" value="false"/-->
</processor>

</marlin>

```

merger-tmp.xml git

```

<?xml version="1.0" encoding="us-ascii"?>
<!-- ?xml-stylesheet type="text/xsl" href="http://ilcsoft.desy.de/marlin/marlin.xsl"? -->
<!-- ?xml-stylesheet type="text/xsl" href="marlin.xsl"? -->

<!--
=====
Steering File generated by Marlin GUI on Thu Apr 10 11:41:37 2014

WARNING: - Please be aware that comments made in the original steering file were lost.
         - Processors that are not installed in your Marlin binary lost their parameter's descriptions
         - Extra parameters that aren't categorized as default in a processor lost their description a
=====
-->

<marlin xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:noNamespaceSchemaLocation="http://ilcsc
/marlin.xsd">

  <execute>
    <processor name="AIDA"/>
    <processor name="MyAlibavaClusterCollectionMerger"/>
    <processor name="Save"/>
  </execute>

  <global>
    <parameter name="LCIOInputFiles"> </parameter>

```

```

    <parameter name="GearXMLFile" value="@GearFilePath@/@GearFile@"/>
    <parameter name="MaxRecordNumber" value="@MaxRecordNumber@"/>
    <parameter name="SkipNEvents" value="@SkipNEvents@"/>
    <parameter name="SupressCheck" value="false"/>
    <parameter name="Verbosity" value="@Verbosity@"/>
</global>

<processor name="AIDA" type="AIDAProcessor">
<!--Processor that handles AIDA files. Creates on directory per processor. Processors only need to crea
histograms, clouds and tuples. Needs to be the first ActiveProcessor-->
<!-- compression of output file 0: false >0: true (default) -->
<parameter name="Compress" type="int" value="1"/>
<!-- filename without extension-->
<parameter name="FileName" type="string" value="@HistogramPath@/run@RunNumber@-merger"/>
<!-- type of output file root (default) or xml -->
<parameter name="FileType" type="string" value="root"/>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

<processor name="MyAlibavaClusterCollectionMerger" type="AlibavaClusterCollectionMerger">
<!--Merges alibava and telescope cluster collections-->
<!--This is the input file name that telescope cluster collections stored-->
<parameter name="InputTelescopeFileName" type="string"> @LcioPath@/run@TelescopeRun@-clustering.slci
<!--Name of the cluster pulse collection of telescope data-->
<parameter name="TelescopeClusterPulseCollectionName" type="string" lcioInType="TrackerPulse"> clust
<!--Name of the sparse cluster collection of telescope data-->
<parameter name="TelescopeSparseClusterCollectionName" type="string" lcioInType="TrackerData"> origi
/parameter>
<!--This is the input file name that alibava cluster collections stored-->
<parameter name="InputAlibavaFileName" type="string"> @LcioPath@/run@RunNumber@-alibava-clustering.s
<!--Name of the cluster pulse collection of alibava data-->
<parameter name="AlibavaClusterPulseCollectionName" type="string" lcioInType="TrackerPulse"> cluster
/parameter>
<!--Name of the sparse cluster collection of alibava data-->
<parameter name="AlibavaSparseClusterCollectionName" type="string" lcioInType="TrackerData"> origina
/parameter>
<!--Name of the merged/output cluster pulse collection-->
<parameter name="OutputClusterPulseCollectionName" type="string" lcioOutType="TrackerPulse">merged_c
/parameter>
<!--Name of the merged/output sparse cluster collection. DO NOT Change this. This is hard coded in c
<parameter name="OutputSparseClusterCollectionName" type="string" lcioOutType="TrackerData">original
/parameter>
<!--AlibavaEventNumber - TelescopeEventNumber-->
<parameter name="EventIDDifference" type="int"> 0 </parameter>
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string">DEBUG </parameter-->
</processor>

<processor name="Save" type="LCIOOutputProcessor">
<!--Writes the current event to the specified LCIO outputfile. Needs to be the last ActiveProcessor.-->
<!--drops the named collections from the event-->
<!--parameter name="DropCollectionNames" type="StringVec"> TPCHits HCalHits </parameter-->
<!--drops all collections of the given type from the event-->
<!--parameter name="DropCollectionTypes" type="StringVec"> SimTrackerHit SimCalorimeterHit </parameter-
<!-- write complete objects in subset collections to the file (i.e. ignore subset flag)-->
<!--parameter name="FullSubsetCollections" type="StringVec" value="MCParticlesSkimmed"/-->
<!--force keep of the named collections - overrules DropCollectionTypes (and DropCollectionNames)-->
<!--parameter name="KeepCollectionNames" type="StringVec" value="MyPreciousSimTrackerHits"/-->
<!-- name of output file -->
<parameter name="LCIOOutputFile" type="string" value="@LcioPath@/run@RunNumber@-merger.slcio"/>
<!--write mode for output file: WRITE_APPEND or WRITE_NEW-->
<parameter name="LCIOWriteMode" type="string" value="WRITE_NEW"/>
<!--will split output file if size in kB exceeds given value - doesn't work with APPEND and NEW-->
<!--parameter name="SplitFileSizekB" type="int" value="1992294"/-->
<!--verbosity level of this processor ("DEBUG0-4,MESSAGE0-4,WARNING0-4,ERROR0-4,SILENT")-->
<!--parameter name="Verbosity" type="string" value=""/-->
</processor>

</marlin>

```

