

# Database tags May18

- status on 07.08.2020 (Software release v4.14-01)

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/ModuleLocationReference      ahc2_ModuleLocationReference_180822
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/PedestalMemoryCellOffset     ahc2_pedestalmemorycelloffset_181216
E4DLowGainPedestal            /cd_calice_Ahc2/TestbeamMay2018/LowGainPedestal            ahc2_lg_pedestal_190114
E4DLowGainPedestalMemoryCellOffset /cd_calice_Ahc2/TestbeamMay2018
/LowGainPedestalMemoryCellOffset ahc2_lg_pedestalmemorycelloffset_190227
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E4DSaturationParameters       /cd_calice_Ahc2/TestbeamMay2018/SaturationParameters       ahc2_SaturationParameters_180824
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E4DTimeOffsetMemCell_BufferEvenEventEven /cd_calice_Ahc2/TestbeamMay2018/TimeOffsets_BufferEven_EventEven
ahc2_timeOffsetsBufferEven_EventEven_190517
E4DTimeOffsetMemCell_BufferEvenEventOdd /cd_calice_Ahc2/TestbeamMay2018
/TimeOffsets_BufferEven_EventOdd ahc2_timeOffsetsBufferEven_EventOdd_190517
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E4DOccupancyBxidEvenHighGain /cd_calice_Ahc2/TestbeamMay2018
/Occupancy_ConstantsEvenHigh ahc2_occupancyConstantsEvenHigh_200421_1
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E4DOccupancyBxidOddHighGain /cd_calice_Ahc2/TestbeamMay2018
/Occupancy_ConstantsOddHigh ahc2_occupancyConstantsOddHigh_200421_1
E4DOccupancyBxidOddLowGain /cd_calice_Ahc2/TestbeamMay2018
/Occupancy_ConstantsOddLow ahc2_occupancyConstantsOddLow_200421_1

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 Naming convention for DB tags: `ahc2_<collection>_<yyymmdd>[-<i>]`

## Ahc2ModuleDescription

Tag	recommend	CalSoft	Remark	Date

## Ahc2ModuleConnection

Tag	recommend	CalSoft	Remark	Date
ahc2_ModuleConnection_180822	x		38_layers	22_08_2018

## Ahc2ModuleLocationReference

Tag	recommend	CalSoft	Remark	Date
ahc2_ModuleLocationReference_180822	x		38_layers	22_08_2018

## Ahc2HardwareConnection

Tag	recommend	CalSoft	Remark	Date

ahc2_HardwareConnection_180822	x		38_layers	22_08_2018
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#### Ahc2DetectorTransformation

Tag	recommend	CalSoft	Remark	Date

#### E4DPedestal

Tag	recommend	CalSoft	Remark	Date
ahc2_001			Annas merged calibration constants (problems encountered with module one pedestal values and missing MIP values)	18-04
ahc2_002			based on ahc2_001 corrected by Daniel	18-05
ahc2_pedestal_180821_003			Latest AT pedestal constants extracted from a full muon scan of TB SPS May 2018	18-08
ahc2_pedestal_180906	x		AT Pedestals from SPS Cern testbeam May 2018 extracted from a full muon scan. PedestalAll is calculated for Memory Cells 0-8, avoiding higher cells due to ADC jumps	18-09
ahc2_lg_pedestal_181107	For tests		Low-Gain Pedestals from SPS Cern testbeam May 2018 extracted from HG/LG IC muon runs, noPP, for main HCAL layers 21888/21888 extracted, calculated for memcell 0-8, dummies of 530 ADC	18-11
ahc2_pedestal_192712_first			Same as ahc2_pedestal_180906, but only extracted for first muon scan	19-11
ahc2_pedestal_192712_second			Same as ahc2_pedestal_180906, but only extracted for second muon scan	19-11

#### E4DLowGainPedestal (Low-Gain Pedestal)

Tag	recommend	CalSoft	Remark	Date
ahc2_lg_pedestal_190114	x		Low-Gain Pedestals from SPS Cern testbeam May 2018 extracted from HG/LG IC muon runs, Iteration 2, noPP, for main HCAL layers 21888/21888, calculated for memcell 0-8 via MIP position LG spectrum, IC factor and MIP position HG spectrum, dummies of 530 ADC	19-01

#### E4DPedestalMemoryCellOffset

Tag	recommend	CalSoft	Remark	Date
dummy_pedestal_180821_001	For testing		Dummy values for pedestal offsets (100 for even, -100 for odd memcell)	18-08
ahc2_pedestalmemorycelloffset_180822			AT pedestal offset values for memory cell 0-15 per channel from SPS Cern testbeam May 2018 extracted from a full muon scan	18-08
ahc2_pedestalmemorycelloffset_180906			AT pedestal offset values for memory cell 0-8 per channel from SPS Cern testbeam May 2018 extracted from a full muon scan. Higher cells offset set to 0.0	18-09
ahc2_pedestalmemorycelloffset_181216	x		AT pedestal offset values for memory cell 0-8 per channel from SPS Cern testbeam May 2018 extracted from a full muon scan. Higher cells offset set to 0.0, Module 23, Chip 12, Channel 31, Memcell 4 corrected	18-12
ahc2_lg_pedestalmemorycelloffset_181107	For tests		Low-Gain Pedestals Offsets from SPS Cern testbeam May 2018 extracted from HG/LG IC muon runs, noPP, for main HCAL layers 21888/21888 extracted, for memcell 0-8, dummies of 0.0 ADC	18-11
ahc2_pedestalmemorycelloffset_192712_first			Same as ahc2_pedestalmemorycelloffset_181216 but only for first muon scan	19-11
ahc2_pedestalmemorycelloffset_192712_second			Same as ahc2_pedestalmemorycelloffset_181216 but only for second muon scan	19-11

#### E4DLowGainPedestalMemoryCellOffset (Low-Gain Pedestal)

Tag	recommend	CalSoft	Remark	Date
ahc2_lg_pedestalmemorycelloffset_190118			Low-Gain Pedestal memory cell offsets from SPS Cern testbeam May 2018 extracted from HG/LG IC muon runs, noPP, for main HCAL layers 21888/21888, calculated for memcell 0-8 via MIP position LG spectrum, IC factor and MIP position HG spectrum, dummies of 0.0 ADC	19-01
ahc2_lg_pedestalmemorycelloffset_190227	x		Low-Gain Pedestal memory cell offsets from SPS Cern testbeam May 2018 extracted from HG/LG IC muon runs, noPP, for main HCAL layers 21888/21888, calculated for memcell 0-8 via MIP position LG spectrum, IC factor and MIP position HG spectrum, dummies of 0.0 ADC, dummy values set manually	19-02

#### E4DGainConstants

Tag	recommend	CalSoft	Remark	Date
ahc2_gainconstant_180827	x		merged gain calibration constants by Olin	18-27
ahc2_002			based on ahc_001 corrected by Daniel	18-05
ahc2_gain_constants_192709			Same as ahc2_gainconstant_180827 but randomly smeared by 1.5% (systematic uncertainty)	19-09

#### E4DGainSlopes

Tag	recommend	CalSoft	Remark	Date

#### E4DMipConstants

Tag	recommend	CalSoft	Remark	Date																																																																						
ahc2_001			Annas merged calibration constants (problems encountered with module one pedestal values and missing MIP values)	18-04																																																																						
ahc2_002			<b>(Do not use!)</b> based on ahc_001 corrected by Daniel; Includes empty values!	18-05																																																																						
ahc2_mip_constants_180925	x (no PP runs)		<p>New set of MIP constants extracted from a full muon scan of TB SPS May 2018, 21869/21888 channels</p> <p>Missing 19 channels:</p> <table border="1"> <thead> <tr> <th>ChipID</th> <th>Module</th> <th>Chip</th> <th>Channel</th> <th>Why?</th> </tr> </thead> <tbody> <tr> <td>779</td> <td>3</td> <td>11</td> <td>9,14,22,28,29</td> <td>Empty MIP histograms, only few bins around 0 filled</td> </tr> <tr> <td>779</td> <td>3</td> <td>11</td> <td>12,17,32</td> <td>Dead</td> </tr> <tr> <td>1538</td> <td>6</td> <td>2</td> <td>3</td> <td>Dead</td> </tr> <tr> <td>2056</td> <td>8</td> <td>17</td> <td>17</td> <td>Fit fail: High Landau width</td> </tr> <tr> <td>3848</td> <td>15</td> <td>8</td> <td>32</td> <td>Dead</td> </tr> <tr> <td>5637</td> <td>22</td> <td>5</td> <td>2</td> <td>Fit fail: Landau width</td> </tr> <tr> <td>5900</td> <td>23</td> <td>12</td> <td>31</td> <td>Bad MIP spectrum</td> </tr> <tr> <td>6145</td> <td>24</td> <td>1</td> <td>19</td> <td>Bad MIP spectrum</td> </tr> <tr> <td>6401</td> <td>25</td> <td>1</td> <td>4</td> <td>Bad MIP spectrum</td> </tr> <tr> <td>8455</td> <td>33</td> <td>7</td> <td>5</td> <td>Dead</td> </tr> <tr> <td>8705</td> <td>34</td> <td>1</td> <td>9</td> <td>Bad MIP spectrum</td> </tr> <tr> <td>9476</td> <td>37</td> <td>4</td> <td>20</td> <td>Bad MIP spectrum</td> </tr> <tr> <td>9742</td> <td>38</td> <td>14</td> <td>14</td> <td>Bad MIP spectrum</td> </tr> </tbody> </table>	ChipID	Module	Chip	Channel	Why?	779	3	11	9,14,22,28,29	Empty MIP histograms, only few bins around 0 filled	779	3	11	12,17,32	Dead	1538	6	2	3	Dead	2056	8	17	17	Fit fail: High Landau width	3848	15	8	32	Dead	5637	22	5	2	Fit fail: Landau width	5900	23	12	31	Bad MIP spectrum	6145	24	1	19	Bad MIP spectrum	6401	25	1	4	Bad MIP spectrum	8455	33	7	5	Dead	8705	34	1	9	Bad MIP spectrum	9476	37	4	20	Bad MIP spectrum	9742	38	14	14	Bad MIP spectrum	18-08
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9742	38	14	14	Bad MIP spectrum																																																																						
ahc2_mip_constants_181101	x (PP runs)		<p><b>MIP Constants for PP runs!</b></p> <p>MIP Constants from SPS Cern testbeam June 2018 extracted from all muon runs with PP for main HCAL layers. 21870/21888 extracted, dummies of 230 ADC. See in June section for missing channels</p>																																																																							
ahc2_mip_constants_192709			Same as ahc2_mip_constants_180925 but randomly smeared by 1.5% (systematic uncertainty)	19-09																																																																						

#### E4DMipSlopes

Tag	recommend	CalSoft	Remark	Date

#### E4DDeadCellMap

Tag	recommend	CalSoft	Remark	Date

#### E4DSaturationParameters

Tag	recommend	CalSoft	Remark	Date
ahc2_002	x		2668 pixels for all layers	2018-05
ahc2_SaturationParameters_180824			2934 pixels for all layers (Npix*1.1)	2018-08-24

#### E4DIntercalibration

Tag	recommend	CalSoft	Remark	Date
ahc2_Intercalibration_180614			LED_RUN_20180521	2018-08-24
ahc2_Intercalibration_180824	x		same value as June 2018	2018-08-24

#### E4DPhysicsCalibIntercalibration

Tag	recommend	CalSoft	Remark	Date

---- Timing Section to be updated by expert (Lorenz) August 2020 ----

#### E4DTimeSlopes\_Timeout

Tag	recommend	CalSoft	Remark	Date
ahc2_timeSlopesTimeout_190506	x		USE /cd_calice_Ahc2/TestbeamMay2018/TimeSlopes_Timeout as Db Folder!! Constants obtained with timeout events of 40 & 120 GeV Muons	2019-04

#### E4DTimeOffset\_Timeout

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsTimeout_190506	x		USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffset_Timeout as Db Folder!! Constants obtained with timeout events of 40 & 120 GeV Muons	2019-04

#### E4DTimeOffsetMemCell\_EventTimeout

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsTimeout_Even_190506	x		USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffsetMem_Event_Timeout as Db Folder!! Constants obtained with timeout events of 40 & 120 GeV Muons	2019-04

#### E4DTimeOffsetMemCell\_OddTimeout

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsTimeout_Odd_190506	x	> 04-011	USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffsetMem_Odd_Timeout as Db Folder!! Constants obtained with timeout events of 40 & 120 GeV Muons	2019-04

#### E4DTimeOffsetMemCell\_BufferEvenEventEven

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsBufferEven_EventEven_190517	x	> 04-011	USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffsets_BufferEven_EventEven as Db Folder!! Constants obtained with events of 40 & 120 GeV Muons	2019-05

#### E4DTimeOffsetMemCell\_BufferEvenEventOdd

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsBufferEven_EventOdd_190517	x	> 04-011	USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffsets_BufferEven_EventOdd as Db Folder!! Constants obtained with events of 40 & 120 GeV Muons	2019-05

#### E4DTimeOffsetMemCell\_BufferOddEventEven

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsBufferOdd_EventEven_190517	x	> 04-011	USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffsets_BufferOdd_EventEven as Db Folder!! Constants obtained with events of 40 & 120 GeV Muons	2019-05

#### E4DTimeOffsetMemCell\_BufferOddEventOdd

Tag	recommend	CalSoft	Remark	Date
ahc2_timeOffsetsBufferOdd_EventOdd_190517	x	> 04-011	USE /cd_calice_Ahc2/TestbeamMay2018/TimeOffsets_BufferOdd_EventOdd as Db Folder!! Constants obtained with events of 40 & 120 GeV Muons	2019-05

#### E4DOccupancyBxidEvenHighGain

Tag	recommend	CalSoft	Remark	Date
ahc2_occupancyConstants EvenHigh_200421_1	x	> 04-011		dummy

#### E4DOccupancyBxidEvenLowGain

Tag	recommend	CalSoft	Remark	Date
ahc2_occupancyConstants EvenLow_200421_1	x	> 04-011		dummy

#### E4DOccupancyBxidOddHighGain

Tag	recommend	CalSoft	Remark	Date
ahc2_occupancyConstants OddHigh_200421_1	x	> 04-011		dummy

#### E4DOccupancyBxidOddLowGain

Tag	recommend	CalSoft	Remark	Date
ahc2_occupancyConstants OddLow_200421_1	x	> 04-011		dummy

--- Timing Section to be updated by expert (Lorenz) August 2020 ---

Link to explanation of Low Gain Pedestals:

[Low-Gain Pedestal](#)