Source Calibration: Tool to Monitor Failing Channels

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Code Modification

Extension to program ReadSrcData.cc:
(program run when creating history plots)

- Scans through database
- Checks which gains didn’t change
- Identifies the intervals for each crystal in which gain didn’t change
- Identifies crystals that at the latest time hadn’t been updated
- Database loadings with only digi-correction change excluded
Current Output for Later Comparison

- Directory /srccal.store/failingChannels/outputReadSrcData/
  contains now file pastRun0321.output for comparison

- First number: how many database loadings with no gain change

2 th,ph= 1 21 cr,sl,ch= 9 1 45 is stuck since Thu Jun 8 12:30:00 2006
  ENDCAP PROBLEM: NO PEAK IN SPECTRUM

2 th,ph= 3 73 cr,sl,ch= 9 10 14 is stuck since Thu Jun 8 12:30:00 2006
  EMPTY

2 th,ph= 38 37 cr,sl,ch= 5 8 17 is stuck since Thu Jun 8 12:30:00 2006
  SECOND TIME HIGH SIGGAIN

3 th,ph= 1 11 cr,sl,ch= 8 8 19 is stuck since Mon May 1 16:00:00 2006
  ENDCAP PROBLEM: NO PEAK IN SPECTRUM

3 th,ph= 1 40 cr,sl,ch= 9 6 44 is stuck since Mon May 1 16:00:00 2006
  ENDCAP PROBLEM: NO PEAK IN SPECTRUM

3 th,ph= 3 63 cr,sl,ch= 9 8 14 is stuck since Mon May 1 16:00:00 2006
  ENDCAP PROBLEM: PEAK WEAK IN SPECTRUM

4 th,ph= 37 48 cr,sl,ch= 5 4 20 is stuck since Fri Mar 31 16:30:00 2006
  EMPTY

4 th,ph= 43 118 cr,sl,ch= 7 1 30 is stuck since Fri Mar 31 16:30:00 2006
  EMPTY

5 th,ph= 2 73 cr,sl,ch= 8 4 43 is stuck since Fri Feb 24 15:45:00 2006
  NOISY, NO PEAK VISIBLE

8 th,ph= 36 94 cr,sl,ch= 7 9 7 is stuck since Wed Dec 21 11:15:00 2005
  EMPTY

9 th,ph= 27 36 cr,sl,ch= 1 3 13 is stuck since Mon Nov 28 13:30:00 2005
  EMPTY
9 th, ph = 27 38 cr, sl, ch = 1 3 21 is stuck since Mon Nov 28 13:30:00 2005 EMPTY
10 th, ph = 25 38 cr, sl, ch = 1 3 23 is stuck since Thu Nov 10 17:30:00 2005 EMPTY
16 th, ph = 22 6 cr, sl, ch = 0 3 26 is stuck since Wed Sep 7 09:11:00 2005 EMPTY
22 th, ph = 11 45 cr, sl, ch = 1 6 61 is stuck since Thu Mar 24 19:40:00 2005 WEAK CHANNEL
22 th, ph = 14 45 cr, sl, ch = 1 6 50 is stuck since Thu Mar 24 19:40:00 2005 WEAK CHANNEL
22 th, ph = 15 45 cr, sl, ch = 1 6 49 is stuck since Thu Mar 24 19:40:00 2005 WEAK CHANNEL
26 th, ph = 1 51 cr, sl, ch = 9 8 19 is stuck since Thu Mar 17 17:27:00 2005 ENDCAP PROBLEM: NO PEAK IN SPECTRUM
34 th, ph = 13 45 cr, sl, ch = 1 6 51 is stuck since Sun Aug 1 01:26:00 2004 WEAK CHANNEL
55 th, ph = 16 45 cr, sl, ch = 1 6 48 is stuck since Tue Feb 3 15:05:00 2004 WEAK CHANNEL
56 th, ph = 25 73 cr, sl, ch = 2 5 19 is stuck since Tue Feb 3 14:50:00 2004 BAD SPECTRUM
58 th, ph = 51 39 cr, sl, ch = 5 7 58 is stuck since Thu Jan 29 13:11:00 2004 EMPTY
60 th, ph = 12 45 cr, sl, ch = 1 6 60 is stuck since Mon Jan 5 18:17:00 2004 WEAK CHANNEL
68 th, ph = 10 45 cr, sl, ch = 1 6 62 is stuck since Thu Dec 11 18:45:00 2003 WEAK CHANNEL
74 th, ph = 22 43 cr, sl, ch = 1 5 30 is stuck since Fri Aug 22 14:00:00 2003 EMPTY
83 th, ph = 7 48 cr, sl, ch = 9 4 27 is stuck since Thu Jan 23 12:00:00 2003 EMPTY
83 th, ph = 9 45 cr, sl, ch = 1 6 63 is stuck since Thu Jan 23 12:00:00 2003 WEAK CHANNEL
83 th, ph = 30 118 cr, sl, ch = 3 10 6 is stuck since Thu Jan 23 12:00:00 2003 BAD SPECTRUM
154 th, ph = 32 81 cr, sl, ch = 2 8 0 is stuck since Fri Feb 2 20:00:00 2001 EMPTY
159 th, ph = 3 40 cr, sl, ch = 9 4 39 is stuck since Tue Oct 3 13:00:00 2000 EMPTY
159 th, ph = 32 87 cr, sl, ch = 2 10 0 is stuck since Tue Oct 3 13:00:00 2000 EMPTY
159 th, ph = 38 35 cr, sl, ch = 5 9 13 is stuck since Tue Oct 3 13:00:00 2000 EMPTY
Distribution of Intervals of Non-Calibration: Currently Stuck Crystals

- Horizontal axis: Number of consecutive database loadings without gain change
- Right plot same as left, just on log scale
Distribution of Intervals of Non-Calibration: All Ever Stuck Crystals

- Like previous page, but all ever stuck crystals
Distribution of Intervals of Non-Calibration: Currently Stuck Crystals

- Currently stuck crystals only
- 2-D plot in hardware space
- Z-axis: How many consecutive loadings crystal is stuck
History Plots Updated

- Does include Run 321, not 322
- All plots posted at SrcCal web space

Good Luck!

J M Bauer, p. 8 August 24, 2006