Analysis Plan during INTT workshop

Name : Jaein Hwang
Institution : Korea Univ.

- Analysis topic

  Calibration and focusing on QA

- Current knowledge/status of this topic

  1st Bad channel determination algorithm is ready/placed in coresoftware

  BCO calibration files are available

  Some scripts to load/save from/in psql database ready

- Goal for the workshop

  1. Make documentation(analysis note in sPHENIX invenio) for next potential manager/users (Takahiro)
  2. Getting information from current analysis module and put them in QA database
     - ~~1).Run length (**Jaein/Takahiro**)~~ will not put in INTT expert database, but will put in our binary database
     - ~~2).Acceptance (**Jaein/Takahiro)**~~
     - ~~3).BCO peak position (**Jaein/Takahiro**)~~
     - 4).INTT hit rates (**Jaein/Takahiro**, normalized by the raw collision rate)
  3. Implement/test algorithm for bad(especially cold) channel determination

- Milestones to reach to your goal

  1. Dedicated time only for sharing information with Takahiro about current software status
  2. Several trials for new version of bad channel determination -> One promising way is to evaluate hit rate half-ladder by half-ladder
  3. Careful data selection with corresponding criteria

PSQL database

Name : Jaein Hwang
Institution : Korea Univ.

- List of coulums QA for now
- Run number / bco peak / bco stddev / nohitch / runtime
- Nohitch : # of 0 hit channels (int)
- Bco peak : peak position (int)
- Runtime[mins] : run time in min (int)
- Bco_stddev : standard deviation of BCO peaks(float)

- Putting all physics run including pp and AuAu is ongoing

- Will plan to bring plot from database to discuss criteria of each QA items.

tntt=# select * from tntt_qa_expert;

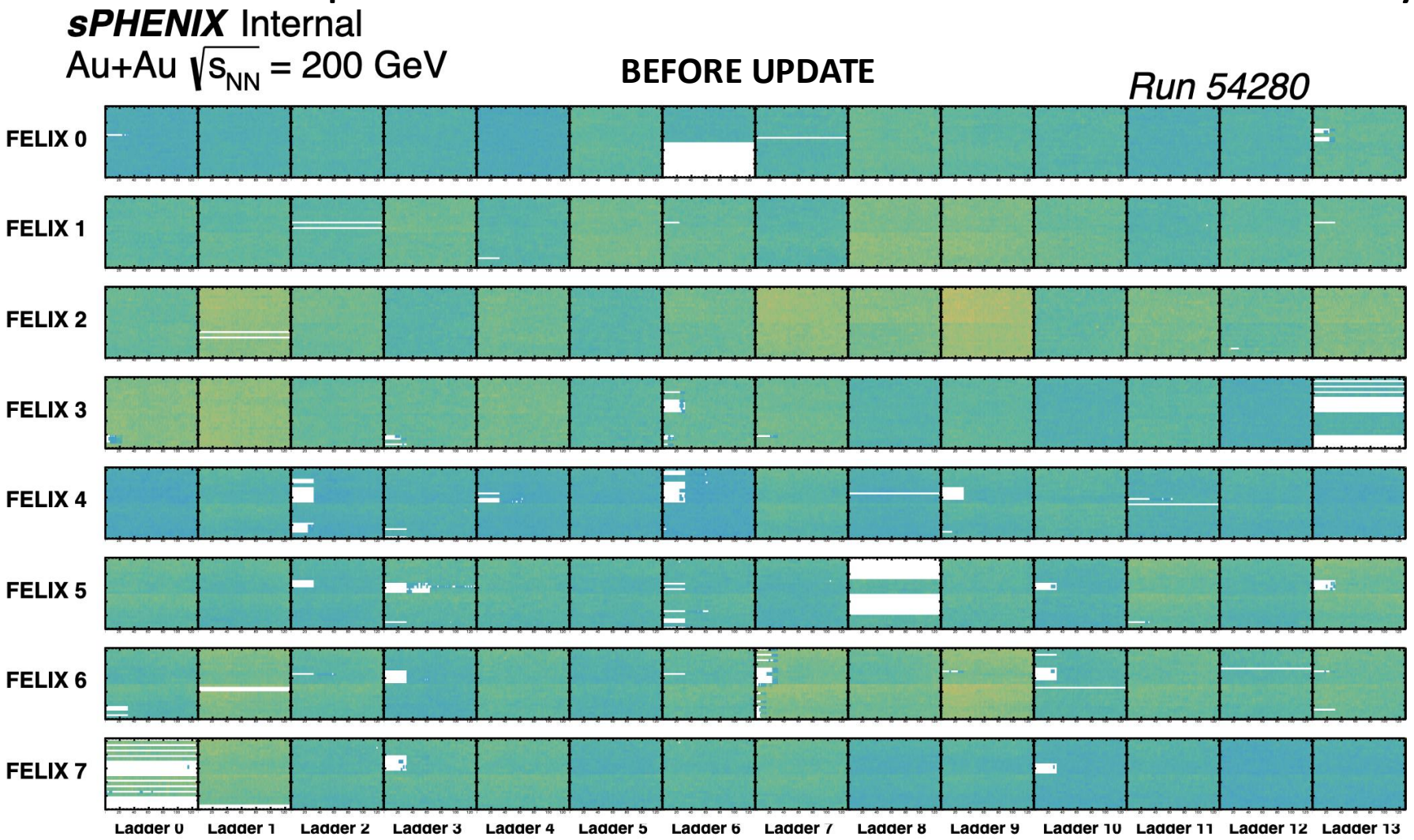
runnumber	bcostddev	bcopeak	nohitch	runtime	bco_stdev	bco_peak
40874			5022	3	23.8413	48
40875			142340	0	31.0223	40
40876			4931	7	28.9279	80
40877			4890	4	15.5109	55
40878			4999	9	11.82	40
40879			4889	3	10.7646	40
40880			4968	0	28.9447	80
40881			4879	1	25.5073	55
40882			4881	0	25.5073	55
40883			4941	0	29.9565	96
40884			4924	12	19.5164	64
40885			51263	2	34.243	55
40886			95670	7	35.5417	55
40887			95746	2	37.2665	37
40888			95670	1	25.0753	55
40889			4860	7	25.542	31
40890			4990	11	24.4544	39
40891			4879	3	34.1062	63
40892			4997	4	35.4979	94
40893			5002	20	34.1683	22
40894			51366	3	43.6468	22
40895			51389	17	43.7692	22
40896			51385	9	36.3057	94
40897			51393	2	35.8184	22
40898			55287	6	42.3814	22
42201			5144	10	0	93
42202			5148	34	0	101
42203			5151	33	0	37
42208			368558	0	3.1493	64
42209			368584	0	0.866	40
42210			5134	60	0	16
42211			5136	63	0	104
42212			5134	60	0	24
42213			5134	18	0	8
42214			5131	47	5.456	96
42215			5143	31	-1	0
42404			5139	9	0	68
42407			5138	20	0	68
42411			5138	35	0	44

Hot Channel determination update

Name : Jaein Hwang
Institution : Korea Univ.

- Last INTT meeting

  Algorithm needed update to detect cold channels more efficiently



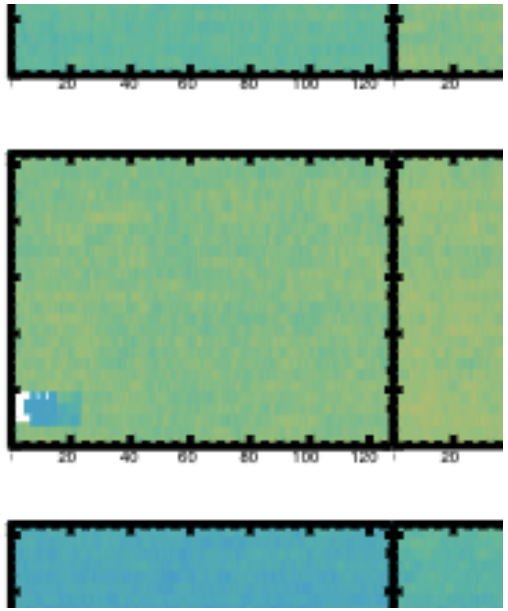
Hot Channel determination update

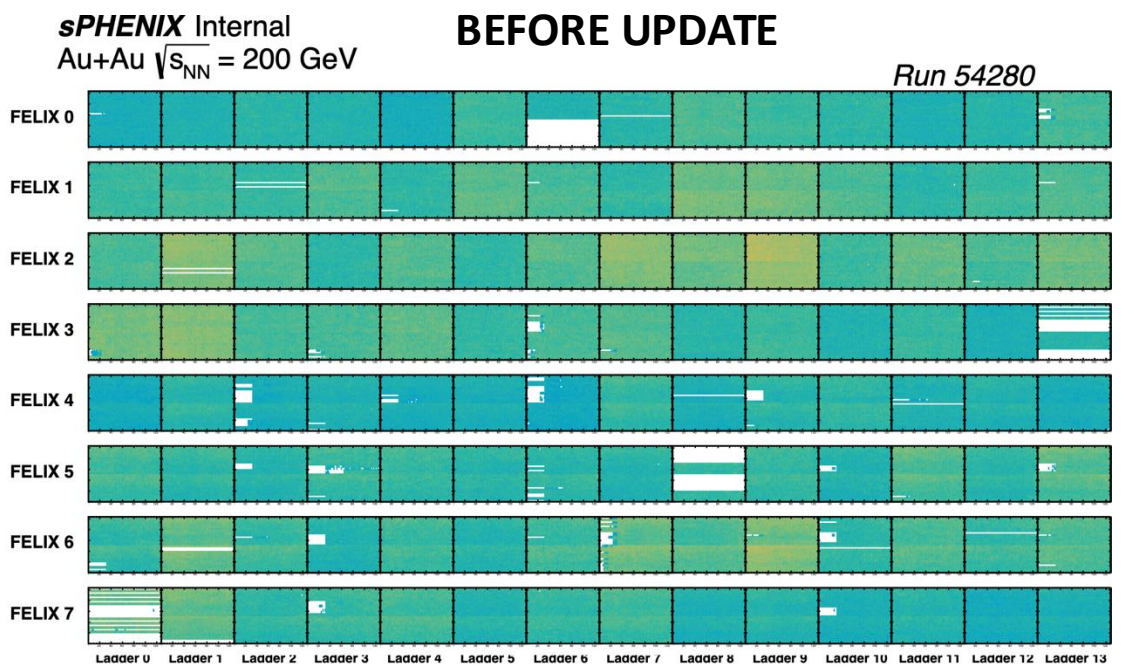
Name : Jaein Hwang
Institution : Korea Univ.

- Last INTT meeting
  Algorithm needed update to detect cold channels more efficiently

BEFORE UPDATE

FELIX 3

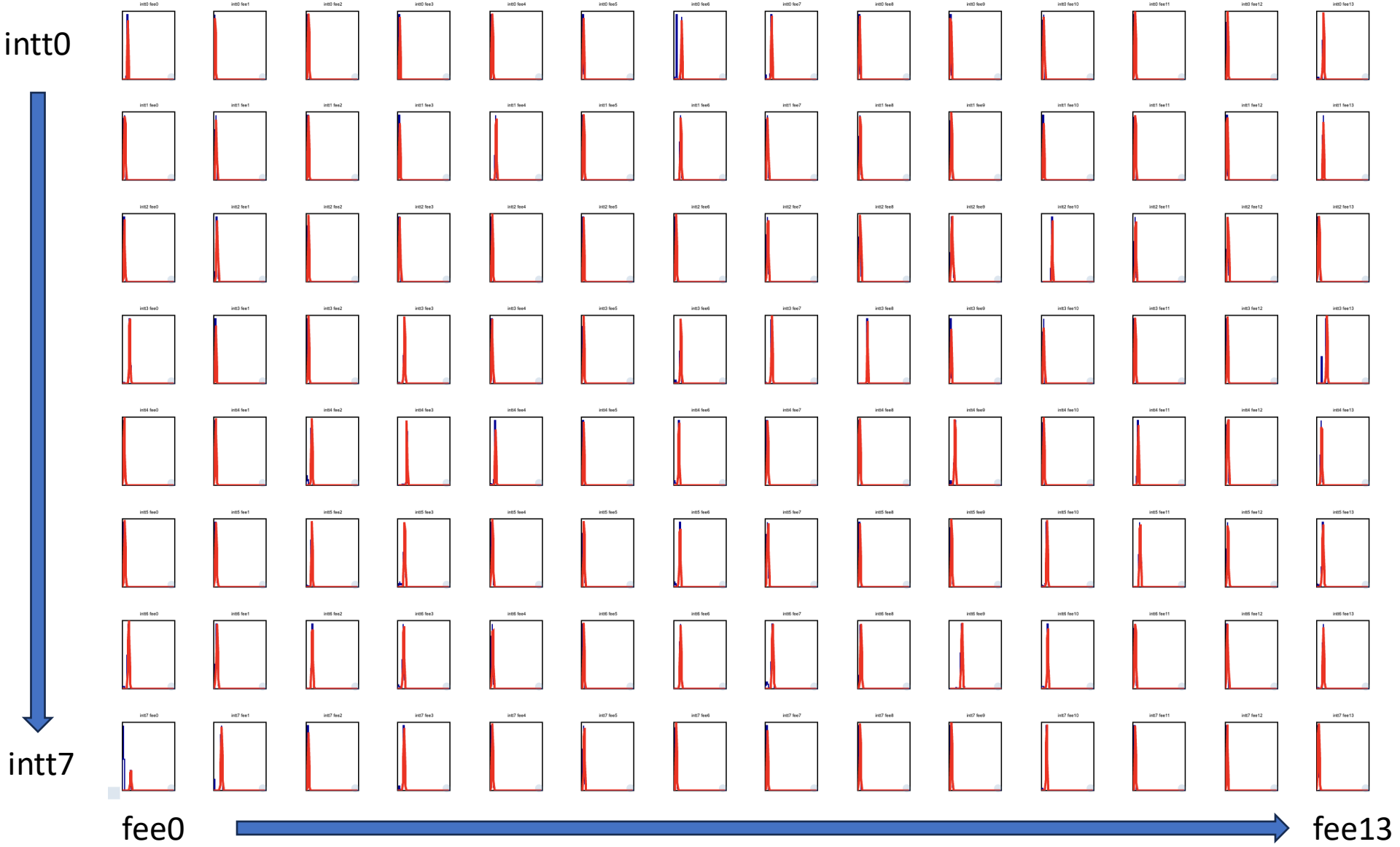




Hot Channel determination update

Name : Jaein Hwang
Institution : Korea Univ.

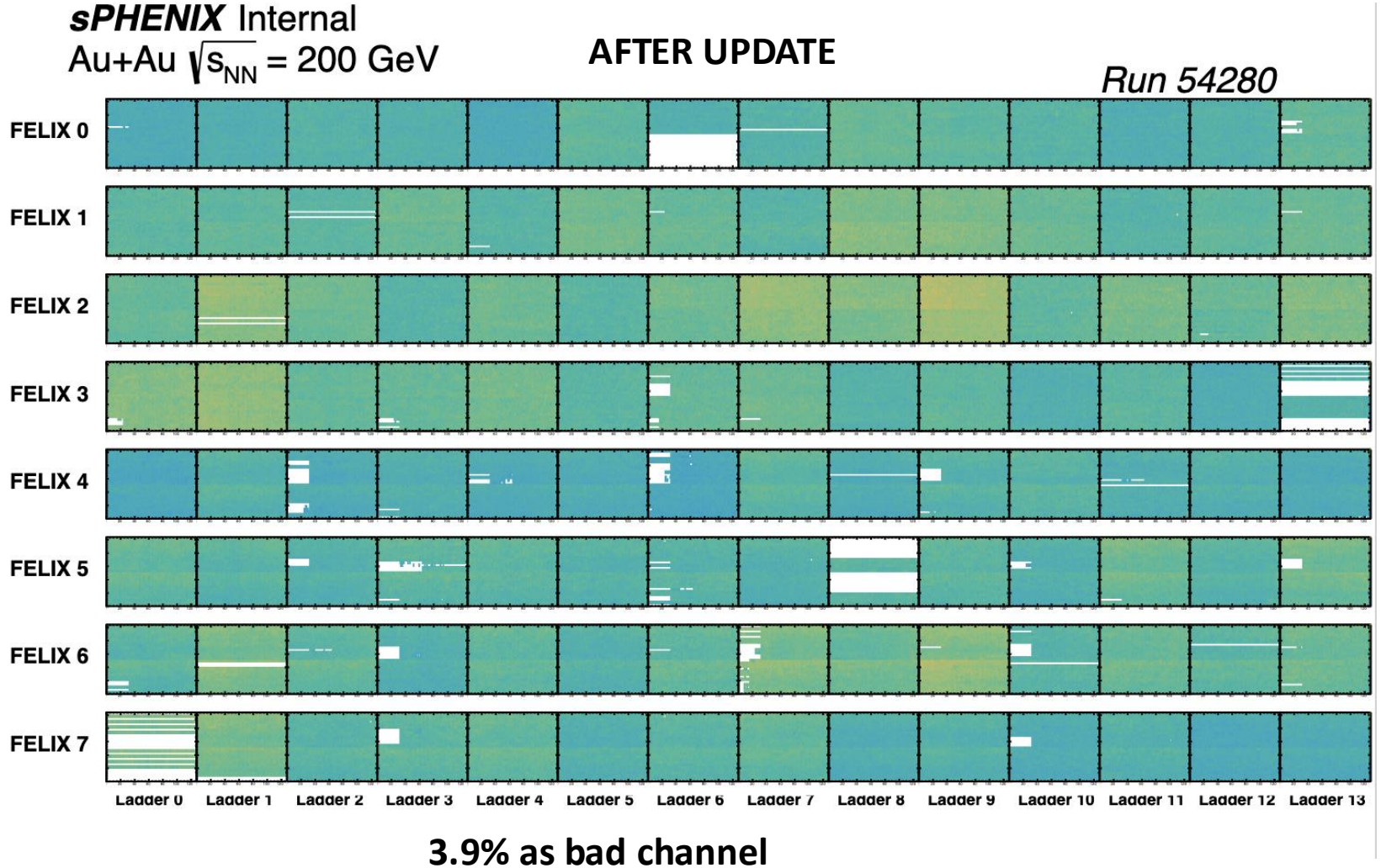
- Do half-ladder by half-ladder fitting(update)



Hot Channel determination update

Name : Jaein Hwang
Institution : Korea Univ.

- Do half-ladder by half-ladder fitting(update)



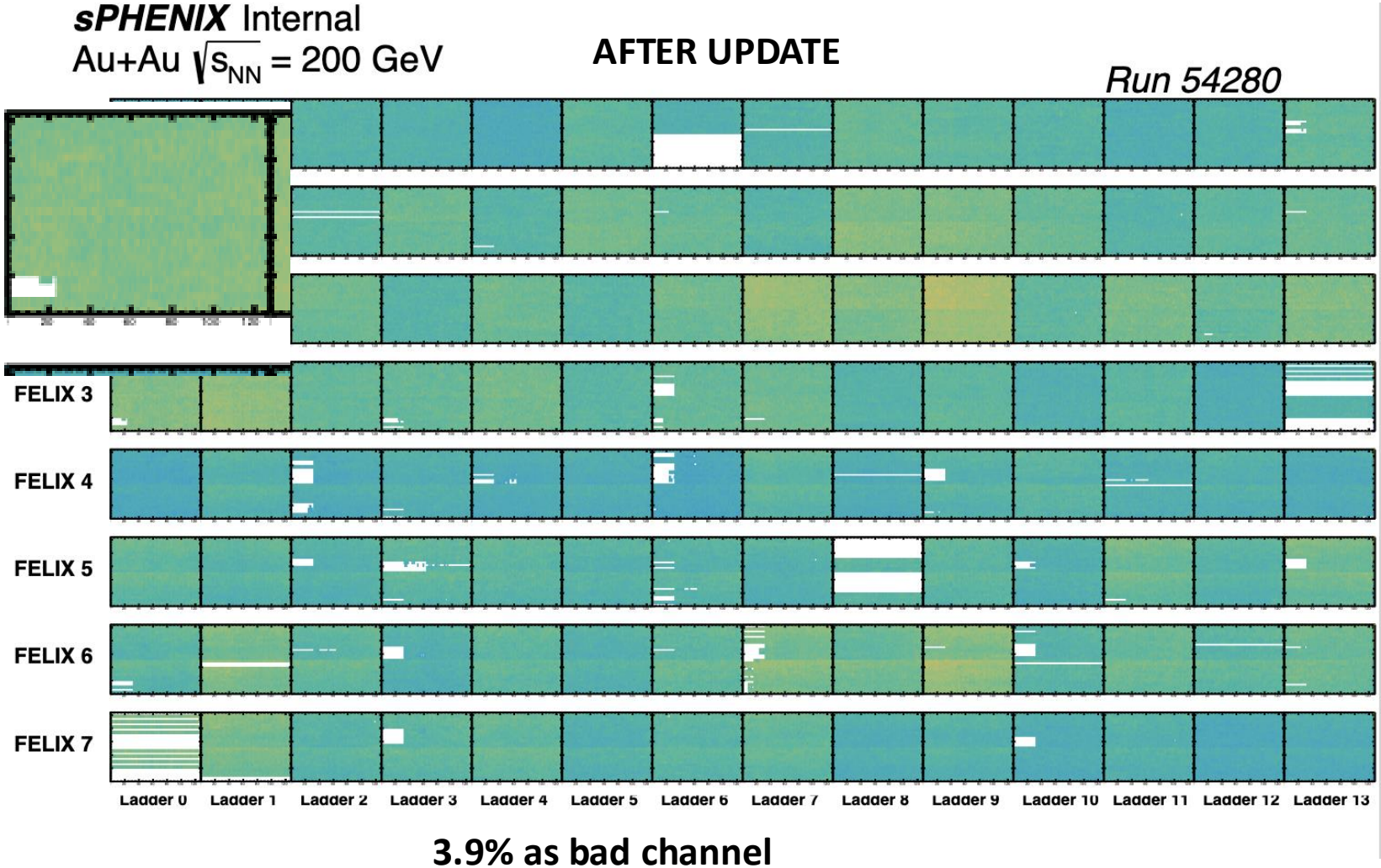
3.9% as bad channel
96.1% as good channels

Hot Channel determination update

Name : Jaein Hwang
Institution : Korea Univ.

- Do half-ladder by half-ladder fitting(update)

FELIX 3



3.9% as bad channel
96.1% as good channels

Plan to do

Name : Jaein Hwang
Institution : Korea Univ.

- Checking hot channel algorithm with pp data is ongoing
- Condor run was not successfully done, need to check details in memory leakage
- Plotting QA items and want to discuss about the criteria.

- Will upload our(Jaein / Takahiro) code in github with documentation in wiki