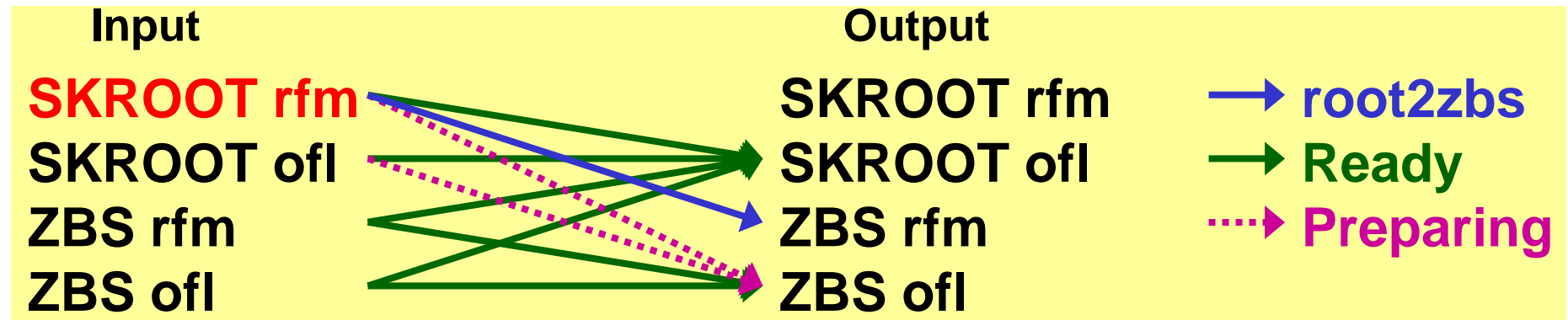


SKOFL status

- The performance problem to read SKROOT rfm files was fixed. Now, there is no I/O problem.



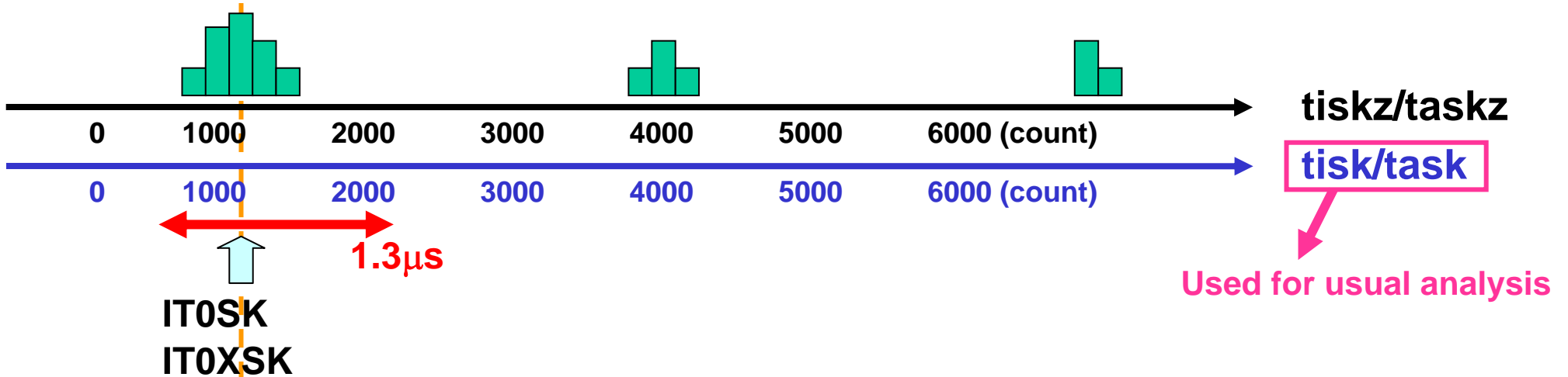
- ATMPD code has been moved to svn/autoconf system. So, switch to use the official ATMPD code.
 - See /usr/local/skofl-trunk/00README
- Functions to disable specific skroot branches are ready. (~ rmbank() for ZBS)
 - /usr/local/skofl-trunk/examples/summer-test/tqreal_root.F
- Basic functions for sub-triggered events are ready.

Sub triggers

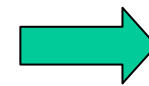
(Horizontal unit is not exact)

New in SK-IV

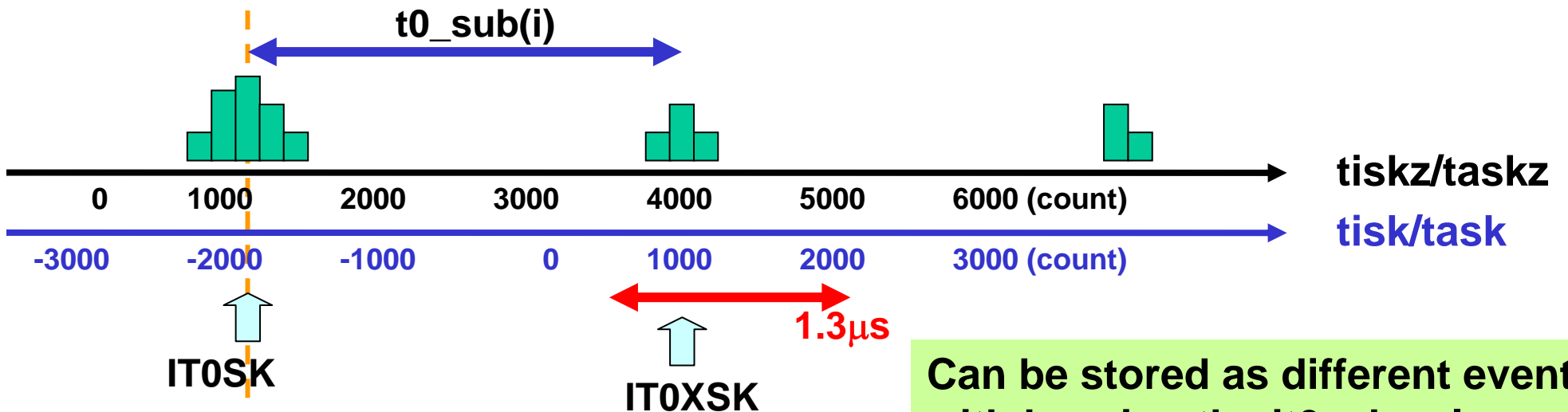
After sk*read()



After set_timing_gate(it0sk+t0_sub(i))



Modify it0xsk, tisk, task, qisk, qask, hit flags



Can be stored as different events with keeping the it0xsk value

Functions for sub triggers

New in
SK-IV

■ Functions:

Any requests
are welcome

■ `softtrg_inittrgtbl()`

- Apply software trigger (raw level)

■ `get_sub_triggers(trigid, ntrig, t0_sub, MAX_TRIG)`

- Obtain sub triggers

- `trigid` (input) trigger ID to search
- `ntrig` (output) number of sub triggers
- `t0_sub(i)` (output) delta-T0 of the sub triggers
- `MAX_TRIG` (input) max. number of ntrig (=array size)

■ `set_timing_gate(T0)`

- Fill `tisk,qisk,task,qask` with the specified T0
- `T0` (input) new T0 (e.g. $it0sk + t0_sub(i)$)

■ Sample programs

■ `/usr/local/skofl-trunk/examples/soft_trig/*.F`

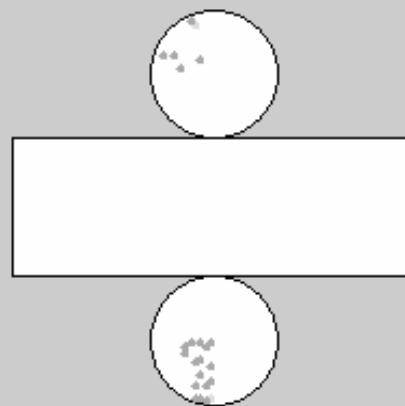
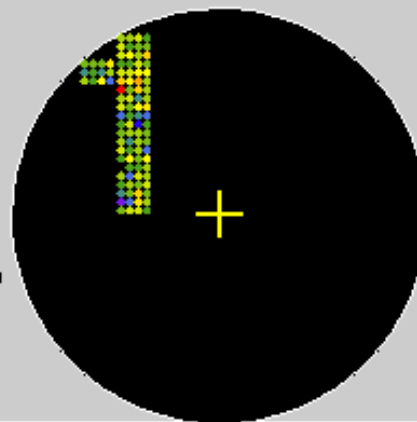
■ `/usr/local/skofl-trunk/examples/lowe/mue_decay.F`

- Select parent muon & decay-e, apply mufit & lowfit, then store both muon & decay-e events.

Parent muon

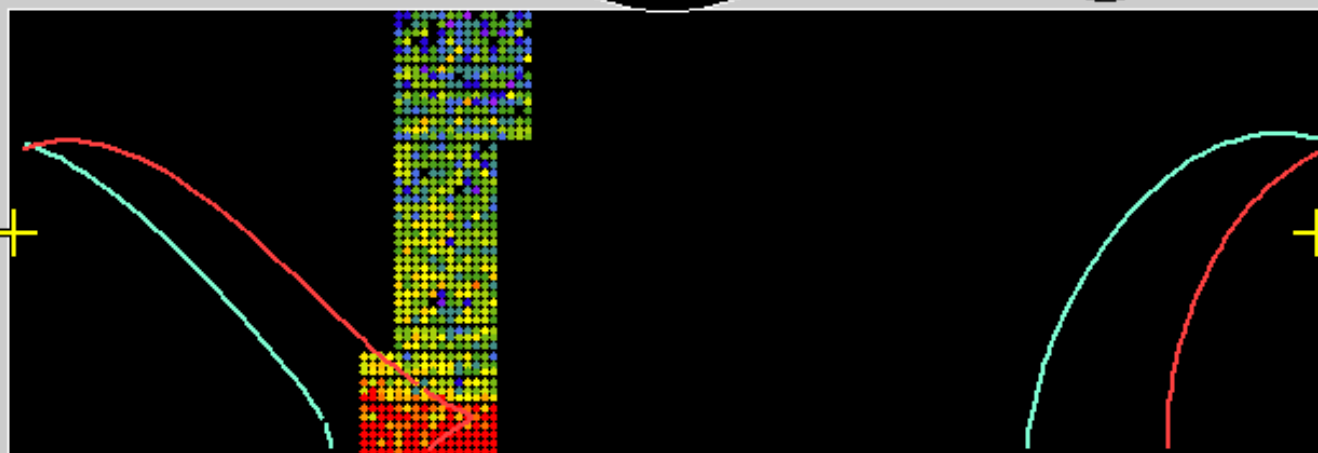
Super-Kamiokande

Run 52130 Sub 1 Ev 18476
08-07-18:10:40:39
Inner: 991 hits, 15991 pE
outer: 0 hits, 0 pE (in-time)
Trigger ID: 0x10000007
D wall: 1690.0 cm
Solar: E= 0.00 gdn=0.00 dirks= 0.00 coss= 0.000

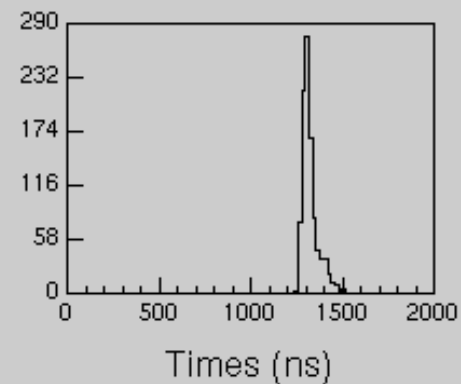
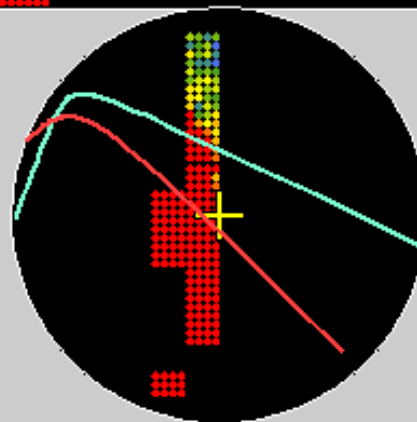


Charge(pe)

- * >26.7
- * 23.3-26.7
- * 20.2-23.3
- * 17.3-20.2
- * 14.7-17.3
- * 12.2-14.7
- * 10.0-12.2
- * 8.0-10.0
- * 6.2- 8.0
- * 4.7- 6.2
- * 3.3- 4.7
- * 2.2- 3.3
- * 1.3- 2.2
- * 0.7- 1.3
- * 0.2- 0.7
- * < 0.2



nufitpe
nuboy



T → ↺ □

■ ● ↻ ✕

<< Next Event

Display Options

<< < spin > >>

Radius(Q)

Time Window

TOF Cut

Charge node

Time node

Raw Times

Residual Times

color scale

8

T Window Start

90

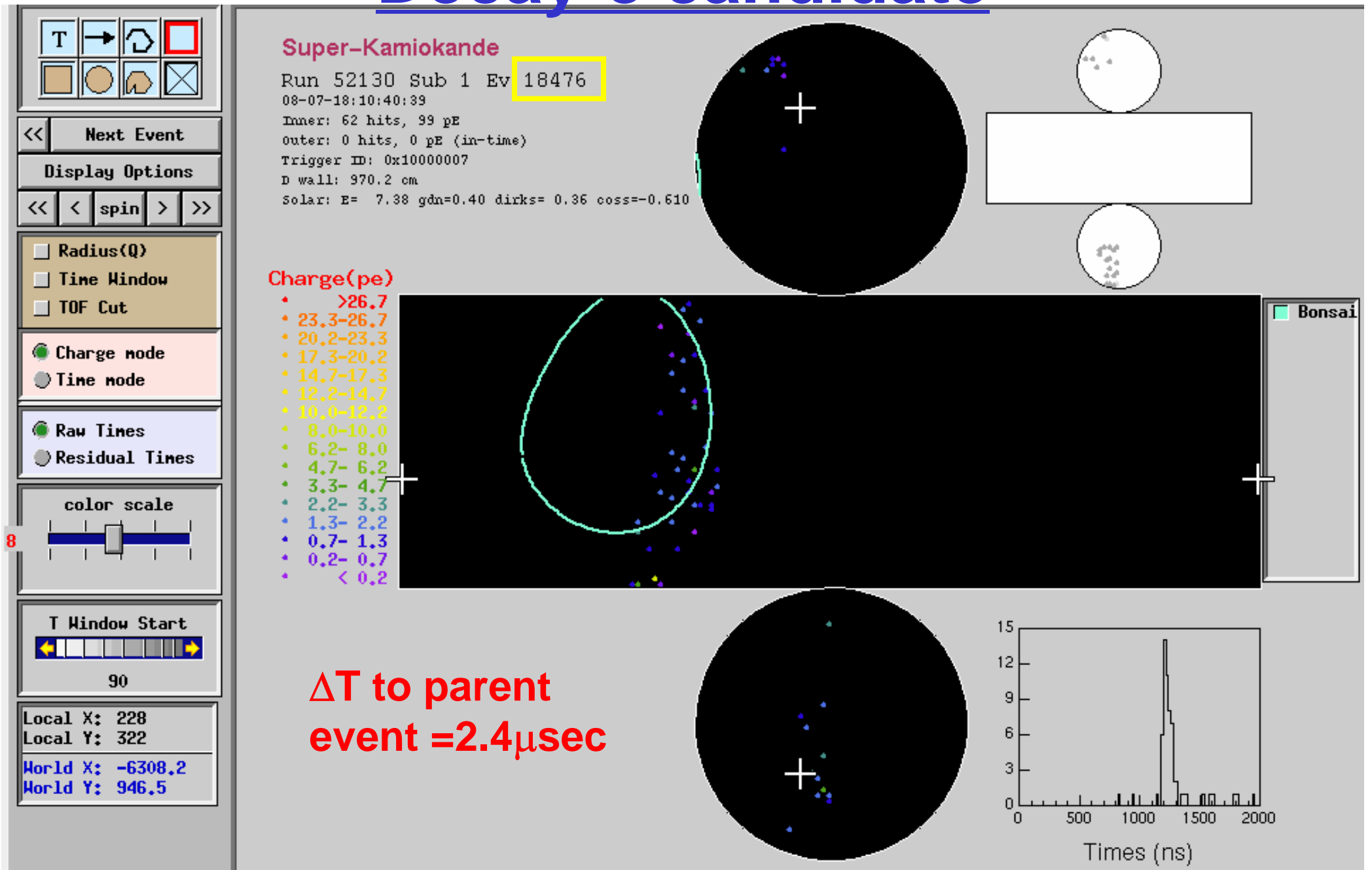
Local X: 247

Local Y: 433

World X: -5975.2

World Y: -999.0

Decay-e candidate



Real-time process

- reformatter / root2zbs / tqreal are ready
- Allocated 100 cores for the real-time processes in sukapXXX.
 - Apply backup Intelligent Trigger in sukapXXX at $\sim 4.5\text{MeV}$ (similar level as SK-III). The primary IT will be done by the WIT system.
- Need to prepare more processes. (badch, dark rate, live time, snwatch, ...) It might be done after SK-IV start.
- Need to prepare real-time analysis programs (by each analysis group).

To do

- **SKOFL library:** basically ready, but continue to improve
- **Real-time analysis:** major programs are ready. Bad channel selection, dark rate calculation, live time calculation, snwatch, new GPS are need to implement/modify/confirm.
- **Data files:** Need to consider the best way for SLE, T2K, WIT, and other standard events, considering file size, etc.