

3/24 木村

To Office of Experimental
Planning and Coordination

Date: 26 Feb. '03

MACHINE TIME EXECUTION
REPORT (02-4-2 CYCLE)

Experimental Group	E522	Reporter	C.J.Yoon, K.Imai
Scheduled Period and Shift	11/20-12/13 (67 shifts)	Main, Sub, Para	

Experimenters

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SUMMARY OF EXECUTION AND RESULTS

During the time from 20, Nov. to 13, Dec. we were assigned 67(356 hours) shifts as first priority. In this period, we had stable physics run except the down time described below. In the first phase of this period, K- intensity was still weak as 1E4/spill and K/beam ratio was 20%. In order to increase the beam intensity, we have opened the momentum slit. As the result, we achieved 2E4/spill for 1E12pps primary beam. Spark of DC-separator was one of the serious problem. Drift chambers were often tripped out with over-current when the sparks continued. In order to avoid this problem, we have optimized the operation condition of the chambers. In addition, high intensity beam due to the sparks caused images of many overlap beam tracks. To remove such images, we have applied the spark signal to the trigger as anti-coincidence. The vertex-hodoscope was also applied to the 2nd-level trigger. With all of these effort, we have injected 7.5E9 K- beam on SCIFI detector in this period. A total number of injected K- was 8.35E9.

From the off-line analysis of sample data, we expect about 37000 events for (K-,K+) and 200 for 2-lambdas from the total data. A number of attained (K-,K+) events with obtained data is just half of our goal. But we expect at least 5-times improvements of the E224 result.

EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME etc.

Executed machine time for physics run is 52 shifts(418 hours) in the assigned 67 shifts.

Down time:

DC-separator Trouble:
6.5 shifts (52. hours)
14:00, 25 Nov. - 18:00, 27 Nov.

COMMENTS

We are checking our yield estimation now because amount of reconstructed (K-,K+) events is less than what we expected. We also hope to obtain another machine time to recover down time above due to DC-separator trouble, 6.5 shifts, and Booster Kicker down which is 12 shifts, in the previous cycle.