

J-PARC Hadron Hall : EXPERIMENTAL REPORT on RUN#

	Date(submitted)	2018/8/2																
Group	E40	Beam line K1.8																
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<p>Summary and Results</p> <p>In this beam time, we had four purposes to be realized.</p> <p>(1) Detector commissioning with all detector setup In this beam time, LH2 target and fine-segmented hodoscope tracker which covered the masked region of SDC2,3 were installed. We checked all detectors worked well basically.</p> <p>(2) Realize data taking with 20 M/spill beam condition We achieved the expected performance (85% w/ 21 M/spill condition) with an updated DAQ system. The final trigger rates were 13 k/spill for L1 trigger and 5 k/spill for L2 trigger, respectively, for 21 M/spill beam intensity.</p> <p>(3) Σ^- production data taking as much as possible The Σ^- production yield was obtained to be ~ 500 k/day. The accumulated Σ^- yield were $\sim 6\%$ of total sigma number. We found that the Σ^- yield became saturated with an increase of beam intensity. Now we are checking the reason carefully from a detailed analysis.</p> <p>(4) Established CATCH calibration method with liquid H2 target We calibrated CATCH system with pp scattering events by using 0.5 GeV/c and 0.6 GeV/c proton beams</p>																		
<p>SCHEDULED and EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME, Priority etc.</p> <p>Beam condition (-1.32 GeV/c pi- beam, 2 M/spill, 0.5, 0.6 GeV/c p beams)</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Scheduled time,</th> <th>Down time,</th> <th>Data taking time</th> </tr> </thead> <tbody> <tr> <td>June 3rd, 4th</td> <td>26 h,</td> <td>3.5h,</td> <td>22.5h</td> </tr> <tr> <td>June 18th, 19th</td> <td>37 h,</td> <td>6h,</td> <td>31h</td> </tr> <tr> <td>June 27th</td> <td>28 h,</td> <td>1h,</td> <td>27h</td> </tr> </tbody> </table>				Scheduled time,	Down time,	Data taking time	June 3 rd , 4 th	26 h,	3.5h,	22.5h	June 18 th , 19 th	37 h,	6h,	31h	June 27 th	28 h,	1h,	27h
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<p>Comments/Requests</p> <p>In this beam time, due to the shortage of electricity in J-PARC, mainly E40 group was asked to change the beam time schedule not to over the electricity limit. We think this is a big problem. We are worrying that the same problem happens in the next beam time. Please explain to users the reason why this problem happened in this beam time.</p>																		