

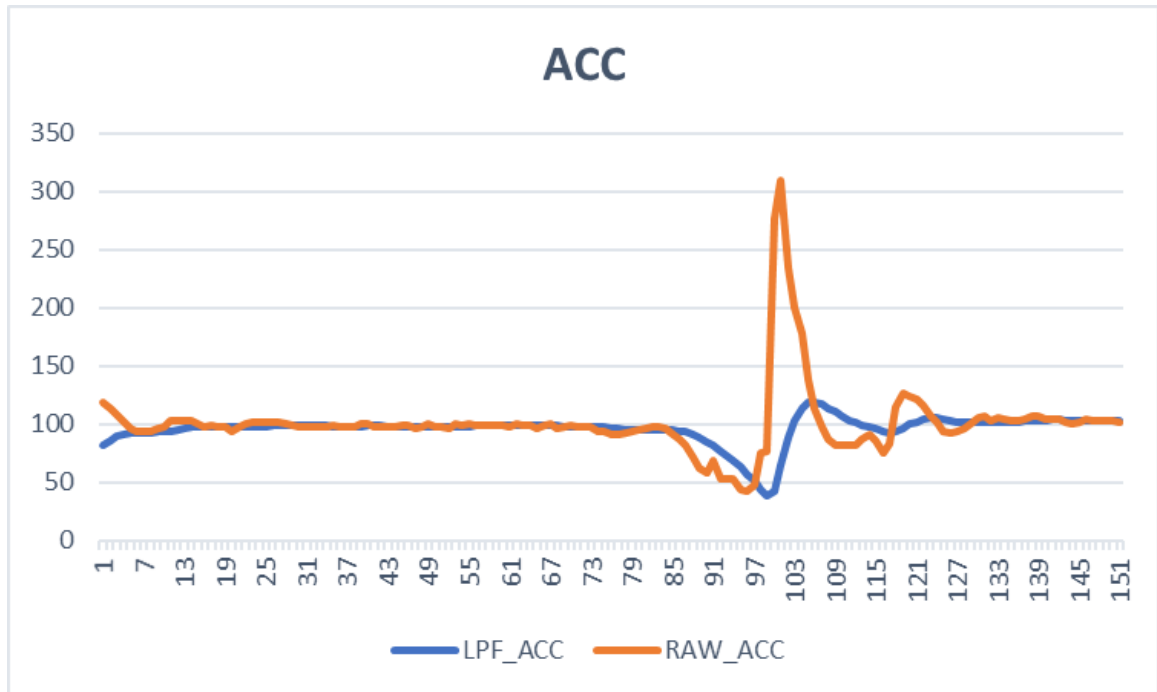
Person's Movement

*결과가 다른 일부 동작에 대해서만 분석

NO.	동작		S51(해민)	S52(상훈)	S54(성욱)
D01	쭈그려 앉기		X	X	X
D02	완전히 앉기		X	X	X
D03	의자에 털썩 앉기		X	X	X
D04	걷기(5걸음)		X	X	X
D05	달리기(5걸음)		X	X	X
D06	옆으로 걷기(5걸음)		X	X	X
D07	짐들기		X	X	X
D08	스트레칭(5회 반복)		X	X	X
D09	점프 후 착지		X	X	X
D10	제자리 회전		X	X	X
D11	앉았다 일어나기(5번 반복)		X	X	X
D12	등 때리기(충격)		X	X	X
D13	사다리 오르기(3칸)		X	X	X
D14	사다리 내려오기(3칸)		X	X	X
D15	의자 위 빠르게 올라갔다 내려오기		X	X	X
D16	점프 (점프하여 단차가 있는 곳에 오르기)		X	X	X
D17	뒤로 털썩 눕기		O	X	X
D21	단차가 있는 곳에서 내려오기		O	X	O
D22	단차가 있는 곳에서 점프해 내려오기		X	O	O
D23	앞으면서 단차가 있는 곳 내려오기		X	X	X
...					
F02	뒤로 넘어지기	사다리 두칸	X	O	O
F03		사다리 세칸	X	O	O
F05	앞으로 걸어 넘어지기	사다리 두칸	X	O	X
F06		사다리 세칸	X	X	X
F08	앞으로 그대로 넘어지기	사다리 두칸	X	X	X

▼ 뒤로 탈썩 눕기

▼ S51(71)



```

0096: AG < -676, -6088, -2664> 10958, -784, 582>, RMS < 81, 93, 88> 167, 82>, JUMP ( 0, 0, 0, 0), AVG < 96, 62>, PX < -3, 0, 3, 0> 20, 0, 10958>, FALL [ 6, 0, 0, 2, 0(00), 7, 0 : 0], TF < 0>, 35
< 259, 216>
0097: AG < -648, -5537, -1779> 12118, -751, 543>, RMS < 71, 91, 82> 185, 93>, JUMP ( 0, 0, 0, 0), AVG < 95, 72>, PX < -3, 2, 5, 0> 21, 0, 12118>, FALL [ 7, 0, 0, 2, 0(00), 8, 0 : 0], TF < 0>, 35
< 239, 247>
0098: AG < -564, -4924, -1120> 13144, -741, 468>, RMS < 62, 88, 74> 201, 105>, JUMP ( 0, 0, 0, 0), AVG < 95, 82>, PX < -4, 4, 7, 0> 22, 0, 13144>, FALL [ 8, 0, 0, 2, 0(00), 9, 0 : 0], TF < 0>, 35
< 214, 280>
0099: AG < -462, -4791, 87> 13976, -870, 484>, RMS < 58, 84, 67> 213, 117>, JUMP ( 0, 0, 0, 0), AVG < 94, 93>, PX < -4, 6, 9, 0> 23, 0, 13976>, FALL [ 9, 0, 0, 2, 0(00), 10, 0 : 0], TF < 0>, 35
< 191, 315>
0100: AG < -373, -5445, 1646> 14711, -856, 651>, RMS < 69, 81, 64> 225, 129>, JUMP ( 0, 0, 0, 0), AVG < 93, 105>, PX < -5, 9, 12, 0> 24, 0, 14711>, FALL [ 10, 0, 0, 2, 0(00), 11, 0 : 0], TF < 0>, 35
0101: AG < -673, -4098, 1513> 15095, -415, 481>, RMS < 53, 77, 61> 230, 141>, JUMP ( 0, 0, 0, 0), AVG < 92, 117>, PX < -6, 13, 16, 0> 25, 0, 15095>, FALL [ 11, 0, 0, 2, 0(00), 12, 0 : 0], TF < 0>, 35
0102: AG < -1327, -3818, 1711> 15584, 69, 369>, RMS < 53, 73, 57> 237, 151>, JUMP ( 0, 0, 0, 0), AVG < 91, 128>, PX < -7, 16, 19, 0> 26, 0, 15584>, FALL [ 1, 0, 1, 0, 43(43), 13, 0 : 0], TF < 0>, 35
< 175, 421>
0103: AG < -1462, -2433, 3336> 16295, 906, 274>, RMS < 53, 68, 53> 249, 162>, JUMP ( 0, 0, 0, 0), AVG < 89, 140>, PX < -7, 20, 23, 0> 27, 0, 16295>, FALL [ 2, 0, 2, 0, 90(45), 14, 0 : 0], TF < 0>, 35
< 159, 454>
0104: AG < -1435, -1896, 2628> 17014, 1637, 444>, RMS < 43, 63, 49> 260, 173>, JUMP ( 0, 0, 0, 0), AVG < 88, 151>, PX < -8, 24, 27, 0> 28, 0, 17014>, FALL [ 3, 0, 3, 0, 141(47), 15, 0 : 0], TF < 0>, 35
< 149, 486>
0105: AG < -1531, -428, 3076> 17481, 2100, 734>, RMS < 42, 57, 44> 268, 183>, JUMP ( 0, 0, 0, 0), AVG < 86, 162>, PX < -9, 28, 31, 0> 29, 0, 17481>, FALL [ 4, 1, 4, 0, 197(49), 16, 0 : 0], TF < 0>, 35
< 138, 518>
0106: AG < -734, 92, 3822> 17795, 2396, 845>, RMS < 47, 51, 42> 274, 194>, JUMP ( 0, 0, 0, 0), AVG < 84, 172>, PX < -10, 32, 35, 0> 30, 0, 17795>, FALL [ 5, 2, 5, 0, 255(51), 17, 2 : 5], CF < -10>, TF
0107: AG < 330, 2374, 5676> 18837, 1627, 1017>, RMS < 75, 44, 47> 288, 204>, JUMP ( 0, 0, 0, 0), AVG < 81, 183>, PX < -11, 37, 40, 0> 31, 0, 18837>, FALL [ 6, 3, 6, 0, 308(51), 18, 5 : 6], CF < -10>, TF
< 87, 35 < 109, 613> -> 171>
0108: AG < 638, 2684, 5689> 20020, 807, 1693>, RMS < 77, 38, 50> 315, 215>, JUMP ( 0, 0, 0, 0), AVG < 78, 193>, PX < -12, 42, 45, 0> 32, 0, 20020>, FALL [ 7, 4, 7, 0, 349(49), 19, 5 : 7], CF < -10>, TF
< 87, 35 < 109, 613> -> 171>

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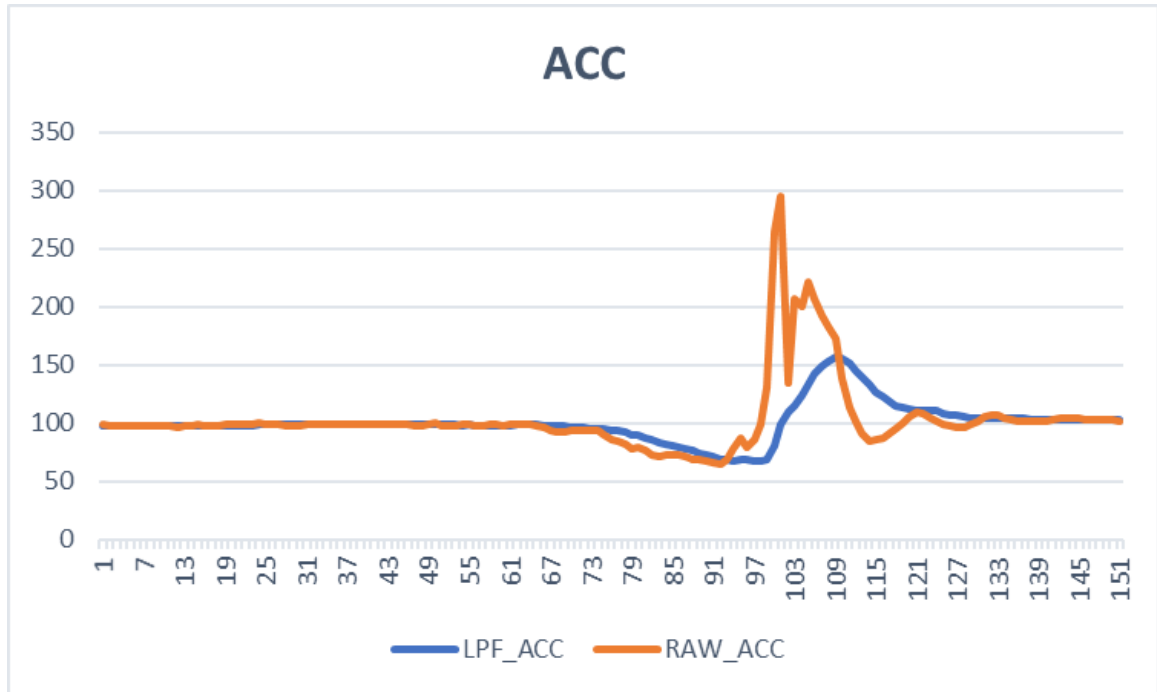
FallDetectorCheckPitchUpDown(PFALL_DETECTOR pObj, PFALL_DETECTOR_SENSOR_DATA pData) {
    if (pObj->pitch_up_counter > 20) {
        if (pData->gx > 6500 && pObj->pitch >= pObj->cfg->PITCH_ANGLE_BACK && pObj->FallHistory.wLowFallCounter > 6) {
            return FallDetectorOnFallDetected(pObj, 71);
        }
    }
}

```

- pitchUpCounter: 32 & gyroX : 20620 & pitch : 42 & LowCounter 7

→ 뒤로 빠르게 넘어가면서 pitchUpCounter, gyroX 값이 증가, 경도 추락을 위한 격발 조건에 걸림

▼ S52



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< 400, 000>
0482: AG < 567, -5937, 96>< 8147, -1507, 878>, RMS < 72, 82, 73><127, 79>, JUMP ( 0, 236, 0, 0), AVG < 92, 68>, PX < -2, -3, 12, 0><28, 0, 8147>, FALL [14, 0, 0, 6, 0(00), 8, -5 : 0], TF < 0>, 35
< 216, 221>
0483: AG < 279, -5957, 375>< 8445, -1651, 814>, RMS < 72, 80, 72><131, 85>, JUMP ( 0, 236, 0, 0), AVG < 91, 73>, PX < -3, -1, 14, 0><29, 0, 8445>, FALL [15, 0, 0, 6, 0(00), 9, -5 : 0], TF < 0>, 35
< 215, 238>
0484: AG < 85, -5953, 588>< 8572, -1702, 728>, RMS < 73, 79, 72><133, 91>, JUMP ( 0, 236, 0, 0), AVG < 90, 79>, PX < -3, 1, 16, 0><30, 0, 8572>, FALL [16, 0, 0, 6, 0(00), 10, -5 : 0], TF < 0>, 35
< 217, 255>
0485: AG < -12, -5742, 1022>< 8742, -1590, 519>, RMS < 71, 78, 72><135, 96>, JUMP ( 0, 236, 0, 0), AVG < 89, 85>, PX < -4, 4, 19, 0><31, 0, 8742>, FALL [17, 0, 0, 6, 0(00), 11, -5 : 0], TF < 0>, 35
< 216, 272>
0486: AG < -182, -5521, 1255>< 8996, -1438, 273>, RMS < 69, 76, 71><139, 101>, JUMP ( 0, 236, 0, 0), AVG < 88, 90>, PX < -5, 7, 22, 0><32, 0, 8996>, FALL [18, 0, 0, 6, 0(00), 12, -5 : 0], TF < 0>, 35
< 213, 288>
0487: AG < -393, -5260, 1095>< 9146, -1358, 17>, RMS < 68, 74, 69><141, 105>, JUMP ( 0, 236, 0, 0), AVG < 87, 95>, PX < -5, 9, 24, 0><33, 0, 9146>, FALL [19, 0, 0, 6, 0(00), 13, -5 : 0], TF < 0>, 35
< 208, 302>
0488: AG < -482, -4848, 2545>< 9242, -1352, -290>, RMS < 67, 73, 68><142, 109>, JUMP ( 0, 236, 0, 0), AVG < 86, 100>, PX < -6, 12, 27, 0><34, 0, 9242>, FALL [20, 0, 0, 6, 0(00), 14, -5 : 0], TF < 0>, 35
< 204, 315>
0489: AG < -370, -4450, 3120>< 9486, -1367, -501>, RMS < 66, 71, 67><146, 113>, JUMP ( 0, 236, 0, 0), AVG < 85, 104>, PX < -7, 15, 30, 0><35, 0, 9486>, FALL [21, 0, 0, 6, 0(00), 15, -5 : 0], TF < 0>, 35
< 201, 327>
0490: AG < -443, -4351, 3145>< 9729, -1237, -608>, RMS < 65, 69, 66><149, 117>, JUMP ( 0, 236, 0, 0), AVG < 84, 109>, PX < -8, 18, 33, 0><36, 0, 9729>, FALL [22, 0, 0, 6, 0(00), 16, -5 : 0], TF < 0>, 35
< 198, 339>
0491: AG < -531, -4486, 3379>< 9836, -962, -677>, RMS < 68, 68, 66><151, 121>, JUMP ( 0, 236, 0, 0), AVG < 82, 113>, PX < -8, 21, 36, 0><37, 0, 9836>, FALL [23, 0, 0, 6, 0(00), 17, -5 : 0], TF < 0>, 35
< 199, 351>
0492: AG < -1712, -5071, 3598>< 9764, -624, -597>, RMS < 78, 67, 69><149, 125>, JUMP ( 0, 236, 0, 0), AVG < 81, 117>, PX < -9, 24, 39, 0><37, 1, 9764>, FALL [24, 0, 0, 6, 0(00), 18, -5 : 0], TF < 0>, 35
< 211, 363>
0493: AG < -351, -5028, 5121>< 10166, 601, -1037>, RMS < 87, 68, 75><156, 128>, JUMP ( 0, 236, 0, 0), AVG < 79, 120>, PX < -9, 27, 42, 0><38, 0, 10166>, FALL [25, 0, 0, 6, 0(00), 19, -5 : 0], TF < 0>, 35
< 233, 374>
0494: AG < 420, -3921, 5194>< 10852, 202, -786>, RMS < 79, 68, 78><166, 131>, JUMP ( 0, 236, 0, 0), AVG < 78, 124>, PX < -10, 30, 45, 0><39, 0, 10852>, FALL [26, 0, 0, 6, 0(00), 20, -5 : 0], TF < 0>, 35
< 244, 384>
0495: AG < 1017, -1699, 6845>< 11859, -803, -1094>, RMS < 86, 67, 78><182, 136>, JUMP ( 0, 236, 0, 0), AVG < 77, 128>, PX < -11, 34, 49, 0><40, 0, 11859>, FALL [27, 0, 0, 6, 0(00), 21, -5 : 0], TF < 0>, 35
< 252, 395>
0496: AG < 845, -2357, 7714>< 13408, -1626, 816>, RMS < 99, 67, 81><213, 143>, JUMP ( 0, 236, 0, 0), AVG < 76, 132>, PX < -11, 37, 52, 0><41, 0, 13408>, FALL [28, 0, 0, 6, 0(00), 22, -5 : 0], TF < 0>, 35
< 254, 406>
0497: AG < -85, -1696, 10543>< 17561, -1348, -949>, RMS < 130, 69, 97><269, 155>, JUMP ( 0, 236, 0, 0), AVG < 75, 138>, PX < -12, 41, 56, 0><42, 0, 17561>, FALL [ 0, 0, 0, 7, 0(00), 23, -5 : 0], TF < 0>, 35
< 315, 434>

```

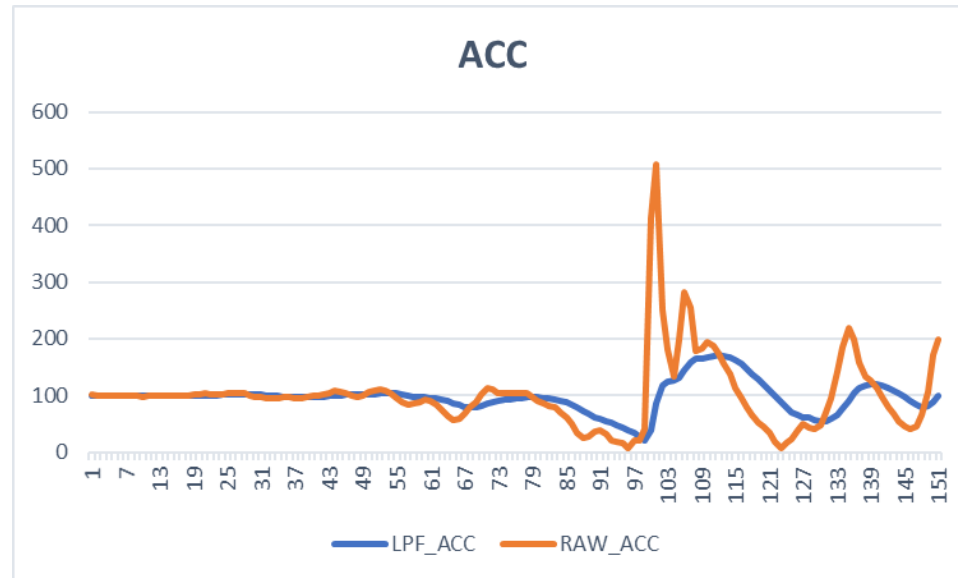
- pitchUpCounter: 41& gyroX : 13848& pitch : 37& LowCounter 0

→ 뒤로 넘어감에 따라 pitchUpCounter가 증가하였지만, S51과 달리 상대적으로 천천히 넘어가면서 ACC_RMS 값이 임계값(60) 이하로 감소한 샘플이 존재하지 않음

***S54 동일**

▼ 단차가 있는 곳에서 내려오기

▼ S51(1)



```

< 211, 56>
1322: AG < -91, -3657, 1945>< 601, -946, -876>, RMS < 50, 83, 65>>< 21, 18>, JUMP ( 0, 256, 0, 0), AVG < 89, 18>, PX < -10, 12, 3, 0>< 0, 0, 601>, FALL [ 6, 0, 0, 19, 0(00), 0, 0 : 0], TF < 0>, 35
< 183, 55>
1323: AG < 129, -2561, 1194>< -53, -827, -1128>, RMS < 34, 78, 54>>< 21, 17>, JUMP ( 0, 256, 0, 0), AVG < 89, 18>, PX < -10, 13, 4, 0>< 0, 0, 601>, FALL [ 7, 0, 1, 0, 46(46), 0, 0 : 0], TF < 0>, 35
< 146, 53>
1324: AG < 49, -1969, 549>< -486, -361, -1298>, RMS < 24, 72, 42>>< 21, 16>, JUMP ( 0, 256, 0, 0), AVG < 88, 17>, PX < -11, 14, 5, 0>< 0, 0, 601>, FALL [ 8, 0, 2, 0, 104(52), 0, 0 : 0], TF < 0>, 35
< 108, 51>
1325: AG < 153, -2030, 1054>< -268, 52, -1136>, RMS < 27, 67, 34>>< 17, 15>, JUMP ( 0, 256, 0, 0), AVG < 88, 16>, PX < -11, 14, 5, 0>< 0, 0, 601>, FALL [ 9, 0, 3, 0, 170(56), 0, 0 : 0], TF < 0>, 35
< 85, 48>
1326: AG < -399, -2228, 1965>< 41, 87, -699>, RMS < 36, 62, 33>>< 10, 14>, JUMP ( 0, 256, 0, 0), AVG < 87, 16>, PX < -12, 15, 6, 0>< 0, 0, 41>, FALL [10, 0, 4, 0, 237(59), 0, 0 : 0], TF < 0>, 35
< 87, 45>
1327: AG < -336, -2170, 2270>< 824, 342, -220>, RMS < 38, 58, 34>>< 14, 13>, JUMP ( 0, 256, 0, 0), AVG < 85, 15>, PX < -12, 16, 7, 0>< 1, 0, 824>, FALL [11, 1, 5, 0, 303(60), 0, 0 : 11], CF < -10>, TF
< 0>, 35 < 101, 42>
1328: AG < -230, -1686, 2041>< 1067, 933, 72>, RMS < 32, 55, 34>>< 21, 11>, JUMP ( 0, 256, 0, 0), AVG < 84, 13>, PX < -13, 16, 7, 0>< 2, 0, 1067>, FALL [12, 2, 6, 0, 369(61), 0, 0 : 12], CF < -10>, TF
< 0>, 35 < 108, 30>
1329: AG < -441, -1617, 470>< 520, 1738, 28>, RMS < 21, 51, 30>>< 27, 10>, JUMP ( 0, 256, 0, 0), AVG < 82, 12>, PX < -14, 17, 8, 0>< 2, 1, 520>, FALL [13, 3, 7, 0, 439(62), 0, 0 : 13], CF < -10>, TF
< 0>, 35 < 91, 34>
1330: AG < -547, -1091, 910>< 303, 2521, 152>, RMS < 18, 47, 24>>< 38, 8>, JUMP ( 0, 256, 0, 0), AVG < 80, 11>, PX < -14, 18, 9, 0>< 2, 2, 303>, FALL [14, 4, 8, 0, 515(64), 0, 0 : 14], CF < -10>, TF
< 0>, 35 < 71, 20>
1331: AG < -196, -88, 1427>< 639, 3073, 435>, RMS < 17, 43, 20>>< 48, 10>, JUMP ( 0, 256, 0, 0), AVG < 77, 10>, PX < -15, 19, 10, 0>< 3, 0, 639>, FALL [15, 5, 9, 0, 595(66), 0, 1 : 15], CF < -10>, TF
< 0>, 35 < 56, 28>
1332: AG < -552, -272, -265>< 1046, 3356, 598>, RMS < 8, 38, 14>>< 54, 13>, JUMP ( 0, 256, 0, 0), AVG < 74, 10>, PX < -16, 19, 10, 0>< 4, 0, 1046>, FALL [16, 6, 10, 0, 681(68), 0, 1 : 16], CF < -10>, TF
< 0>, 35 < 43, 31>
1333: AG < -497, 610, -1515>< 1614, 3005, 676>, RMS < 20, 33, 6>>< 53, 18>, JUMP ( 0, 256, 0, 0), AVG < 71, 11>, PX < -17, 20, 11, 0>< 5, 0, 1614>, FALL [17, 7, 11, 0, 775(70), 0, 1 : 17], CF < -10>, TF
< 0>, 35 < 45, 45>
1334: AG < 55, 1378, -912>< 2214, 2745, 531>, RMS < 20, 27, 8>>< 54, 22>, JUMP ( 0, 256, 0, 0), AVG < 68, 14>, PX < -17, 20, 11, 0>< 6, 0, 2214>, FALL [18, 8, 12, 0, 867(72), 0, 1 : 18], CF < -10>, TF
< 0>, 35 < 48, 53>
1335: AG < 35, 1044, 71>< 1477, 519>, RMS < 40, 21, 16>>< 51, 25>, JUMP ( 0, 256, 0, 0), AVG < 64, 17>, PX < -18, 21, 12, 0>< 6, 1, 1477>, FALL [19, 9, 13, 0, 951(73), 0, 1 : 19], CF < -10>, TF
< 0>, 35 < 40, 55>
1336: AG < -3762, -32767, -7381>< -9293, 2834, -4599>, RMS < 412, 39, 82>>< 148, 25>, JUMP ( 0, 256, 0, 0), AVG < 61, 20>, PX < -19, 22, 13, 0>< 0, 0, 0>, FALL [20, 10, 13, 1, 951(73), 1, 1 : 0], TF < 0>, 35
< 472, 72>

```

- HighCounter : 19 & LowCounter : 13 & LPF_ACC5 : 16 → Highcounter를 FallCounter로 사용하였음을 알 수 있음
- Over count : 1 (pitch : 21 & delta : 12 vv_avg : 73)

▼ over_count2 증가 조건

<FOR NOT JUMP IN PAST>

1. pitch > 15 & Pitch_delta > 5 & pitch > 23 & (vv_avg > 70 || pitch ≥ pitch_angle_back(35))

a. over_count2 : 5

2. pitch > 15 & Pitch_delta > 5 & vv_avg > 60

a. $\text{over_count2} : (5 * (\text{pitch}-15)) / (\text{pitch_angle_back}(35)-15)$ (이 값이 >0 일때)

<FOR STRETCHING>

1. $\text{pitch} < 6 \ \& \ \text{wBendDownCounter} > 1$

a. $\text{over_count2} : (\text{wBendDownCounter}/2)+1$

b. $\text{over_count2} > \text{DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT}$
(8) → $\text{over_count2} :$
 $\text{DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT}$ (8)

c. $\text{wOverCount} > 0 \ \& \ \text{wOverCount} + \text{num} >$
 $\text{DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT}$ (8) →
 $\text{over_count2} : \text{DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT} -$
 wOverCount

d. $(\text{num} > 0) \rightarrow \text{over_count2} : -\text{num}$

<NOT a JUMP & NO STRETCHING>

1. $\text{wOverCount} < 1 \ \& \ \text{wBendDownCounter} < 1 \ \& \ \text{vv_avg} > 85 :$

a. $\text{over_count2} : 4$

2. $\text{wOverCount} < 1 \ \& \ \text{wBendDownCounter} < 1 \ \& \ \text{vv_avg} > 75 :$

a. $\text{over_count2} : 2$

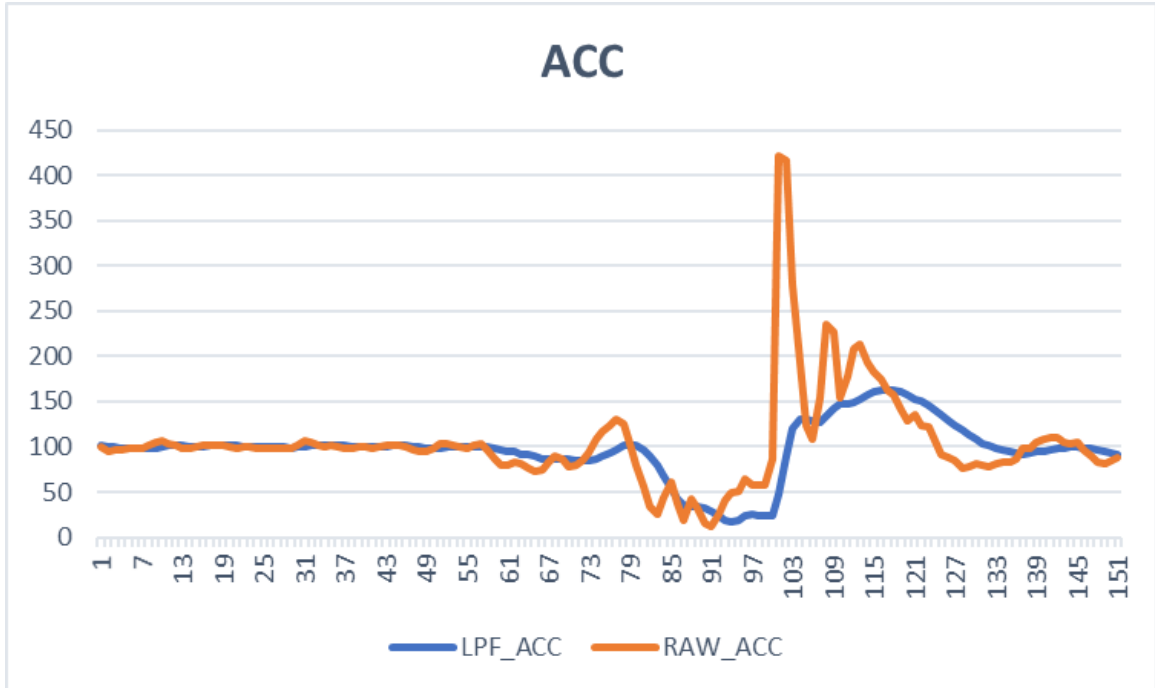
→ 충격을 흡수하기 위해 무릎을 굽히는 등의 행동이 있었고 Fallcount 가 더 증가하는
요인으로 작용했을 것으로 추정

→ 격발 이후(1336) 의 값들을 보면, FALL [20, 10, 13, 1, 951(73), 1, 1 : 0] 로 이전 샘플에서 Overcount가 감소하지 않았다면, 격발 하지 않았을 것으로 추정 (실험 높이가 78cm 이상(130cm) 로 현재 조건에서는 격발 되는 것이 정상)

***S54의 경우, Over count가 증가하지 않음(임계값20) → S51에 비해 pitch 값이 10
으로 적기에 over_count**

조건에 해당하지 않음

▼ S52



```

0203: AG < 519, -2563, 2315> 3922, -724, 580>, RMS < 42, 34, 9>< 61, 19>, JUMP ( 0, 0, 0), AVG < 79, 25>, PX < 2, -2, -2, 0>< 3, 0, 3922>, FALL [ 8, 4, 6, 0, 453(75), 0, 0 : 8], CF <-10>, TF
< 0>, 35 < 98, 71>
0204: AG < 776, -2314, 1043> 5159, -1064, 860>, RMS < 32, 34, 18>< 81, 17>, JUMP ( 0, 0, 0), AVG < 77, 23>, PX < 2, -2, -2, 0>< 4, 0, 5159>, FALL [ 9, 5, 7, 0, 535(76), 1, 0 : 9], CF <-10>, TF
< 0>, 35 < 92, 60>
0205: AG < 318, -880, 1015> 5640, -947, 1048>, RMS < 16, 32, 20>< 88, 20>, JUMP ( 0, 0, 0), AVG < 74, 21>, PX < 2, -2, -2, 0>< 5, 0, 5640>, FALL [10, 6, 8, 0, 615(76), 2, -2 : 10], CF <-10>, TF
< 0>, 35 < 90, 56>
0206: AG < -658, 435, 658> 5444, -951, 1492>, RMS < 12, 29, 15>< 87, 26>, JUMP ( 0, 0, 0), AVG < 71, 21>, PX < 2, -1, -1, 0>< 5, 1, 5444>, FALL [11, 7, 9, 0, 700(77), 3, -2 : 11], CF <-10>, TF
< 0>, 35 < 60, 63>
0207: AG < -1506, 1444, -69> 5185, -482, 1689>, RMS < 25, 24, 9>< 83, 31>, JUMP ( 0, 0, 0), AVG < 68, 22>, PX < 2, -1, -1, 0>< 5, 2, 5185>, FALL [12, 8, 10, 0, 791(79), 4, -3 : 12], CF <-10>, TF
< 0>, 35 < 53, 77>
0208: AG < -2913, 1667, -465> 4341, -132, 1984>, RMS < 41, 19, 18>< 72, 36>, JUMP ( 0, 0, 0), AVG < 65, 26>, PX < 2, 0, 0, 0>< 0, 0, 4341>, FALL [13, 9, 11, 0, 873(79), 0, 2 : 13], CF <-10>, TF
< 0>, 35 < 78, 93>
0209: AG < -4080, 98, -625> 2572, 895, 2518>, RMS < 49, 17, 30>< 56, 38>, JUMP ( 0, 0, 0), AVG < 61, 30>, PX < 2, 1, 1, 0>< 0, 0, 2572>, FALL [14, 10, 12, 0, 943(78), 0, 2 : 14], CF <-10>, TF
< 0>, 35 < 115, 105>
0210: AG < -2800, -3081, -721> 183, 3595, 1457>, RMS < 51, 19, 35>< 59, 35>, JUMP ( 0, 0, 0), AVG < 58, 33>, PX < 2, 1, 1, 0>< 0, 0, 183>, FALL [15, 11, 13, 0, 1008(77), 0, 2 : 15], CF <-10>, TF
< 0>, 35 < 141, 109>
0211: AG < 683, -1033, 1469> -2488, 3927, -272>, RMS < 64, 23, 35>< 71, 29>, JUMP ( 0, 0, 0), AVG < 54, 33>, PX < 1, 2, 2, 0>< 0, 0, 183>, FALL [16, 12, 14, 0, 1073(76), 0, 2 : 16], CF <-10>, TF
< 0>, 35 < 164, 102>
0212: AG < 2943, -3440, 1634> -5191, 2212, -153>, RMS < 58, 25, 39>< 86, 20>, JUMP ( 0, 0, 0), AVG < 51, 31>, PX < 1, 2, 2, 0>< 0, 0, 183>, FALL [17, 13, 15, 0, 1134(75), 1, 0 : 17], CF <-10>, TF
< 0>, 35 < 173, 80>
0213: AG < 4418, -1022, 1314> -6669, 975, 890>, RMS < 57, 24, 40>< 103, 13>, JUMP ( 0, 0, 0), AVG < 47, 27>, PX < 1, 2, 2, 0>< 0, 0, 183>, FALL [18, 14, 16, 0, 1194(74), 2, -2 : 18], CF <-10>, TF
< 0>, 35 < 179, 62>
0214: AG < 3085, -64, 2842> -6545, 132, 1183>, RMS < 57, 23, 44>< 101, 14>, JUMP ( 0, 0, 0), AVG < 43, 22>, PX < 1, 2, 2, 0>< 0, 0, 183>, FALL [19, 15, 17, 0, 1250(73), 3, -2 : 19], CF <-10>, 0, 195,
< 0>, TF < 0>, 35 < 172, 47>
0215: AG < 427, -5303, -4815> -7309, 605, 1451>, RMS < 87, 24, 44>< 114, 23>, JUMP ( 0, 0, 0), AVG < 39, 19>, PX < 0, 2, 2, 0>< 0, 0, 183>, FALL [20, 16, 18, 0, 1310(72), 4, -3 : 20], CF <-10>, 0, 195,
< 0>, 35 < 89, 35 < 201, 30>
0216: AG < -6604, -32767, -9003> -10506, -2824, 4206>, RMS < 422, 47, 130>< 177, 36>, JUMP ( 0, 0, 0), AVG < 37, 21>, PX < 0, 1, 1, 0>< 0, 0, 183>, FALL [20, 17, 18, 1, 1310(72), 5, -3 : 0], TF <-1>, 35
< 566, 73>

```

- HighCounter : 20 & LowCounter : 18 & LPF_ACC5 : 40 → Highcounter를 FallCounter로 사용하였음을 알 수 있음

- Over count : -3 (pitch : 21 & delta : 12 vv_avg : 73)

▼ over_count2 증가 조건

<FOR NOT JUMP IN PAST>

1. pitch > 15 & Pitch_delta > 5 & pitch > 23 & (vv_avg > 70 || pitch ≥ pitch_angle_back(35))
2. over_count2 : -3 (pitch : 16 & BendDownCounter : 4 &

<FOR STRETCHING>

1. pitch < 6 & wBendDownCounter > 1

a. **over_count2 : (wBendDownCounter/2)+1**

b. **over_count2 > DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT**
(8) → **over_count2 :**
DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT (8)

c. **wOverCount >0 & wOverCount + num >**
DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT (8) →
over_count2 : DEFAULT_BEND_DOWN_THRESHOLD_UP_LIMIT -
wOverCount

d. **(num > 0) → over_count2 : -num**

<NOT a JUMP & NO STRETCHING>

1. **wOverCount < 1 & wBendDownCounter <1 & vv_avg > 85 :**

a. **over_count2 : 4**

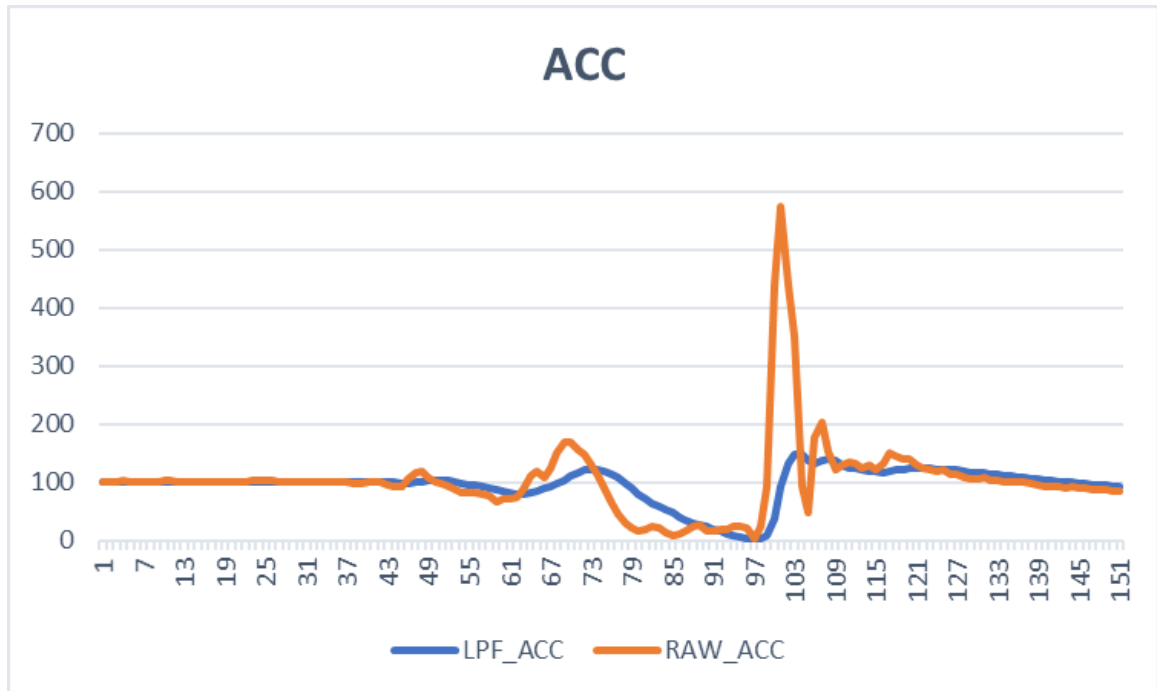
2. **wOverCount < 1 & wBendDownCounter <1 & vv_avg > 75 :**

a. **over_count2 : 2**

→ 단차를 내려오면서 상체를 앞으로 숙여 WBendCounter가 증가한 것으로 보임. 이로 인해 overcount가 증가하여 Fall count는 20으로 다른 샘플들과 동일함에도 격발 되지 않은 것으로 추정

▼ 단차가 있는 곳에서 점프해 내려오기

▼ S51



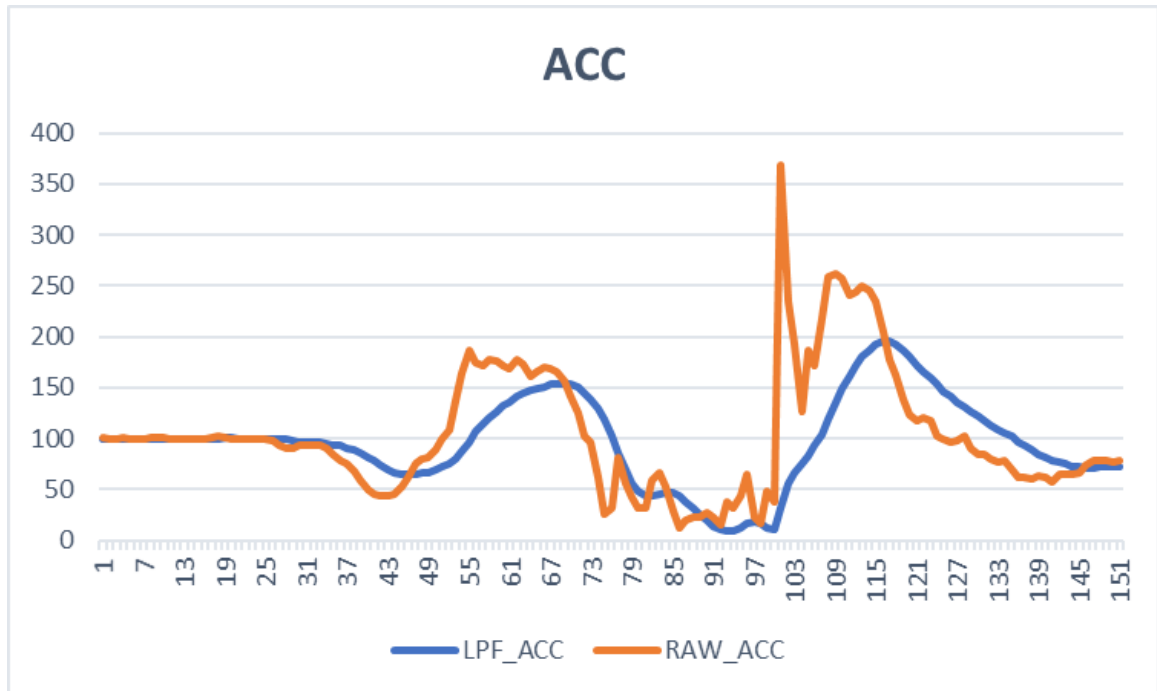
```

1168: AG < 394, -192, 1351>< 495, -776, 1345>, RMS < 17, 79, 27>< 24, 33>, JUMP ( 0, 160, 4, 0), AVG < 99, 36>, PX < -10, 4, 3, 0>< 0, 0, 495>, FALL [ 4, 0, 3, 0, 177(59), 0, 0 : 0], TF < 0>, 35
< 66, 106>
1169: AG < 412, -468, 1352>< -626, -950, 1692>, RMS < 18, 71, 21>< 31, 30>, JUMP ( 0, 160, 4, 0), AVG < 98, 34>, PX < -11, 5, 4, 0>< 0, 0, 495>, FALL [ 5, 0, 4, 0, 256(64), 0, 0 : 5], CF <-10>, TF
< 0>, 35 < 55, 99>
1170: AG < 443, -1330, 1504>< -1781, -977, 1564>, RMS < 25, 64, 21>< 39, 25>, JUMP ( 0, 160, 4, 0), AVG < 98, 32>, PX < -12, 6, 5, 0>< 0, 0, 495>, FALL [ 6, 0, 5, 0, 335(67), 0, 0 : 6], CF <-10>, TF
< 0>, 35 < 60, 88>
1171: AG < 94, -1316, 1254>< -2159, -1065, 938>, RMS < 22, 59, 22>< 39, 20>, JUMP ( 0, 160, 4, 0), AVG < 97, 28>, PX < -13, 7, 6, 0>< 0, 0, 495>, FALL [ 7, 1, 6, 0, 413(68), 0, 0 : 7], CF <-10>, TF
< 0>, 35 < 65, 75>
1172: AG < 187, -372, 1130>< -2037, -678, 231>, RMS < 14, 53, 20>< 32, 16>, JUMP ( 0, 160, 4, 0), AVG < 95, 24>, PX < -13, 7, 6, 0>< 0, 0, 495>, FALL [ 8, 2, 7, 0, 493(70), 0, 0 : 8], CF <-10>, TF
< 0>, 35 < 61, 61>
1173: AG < -324, 603, -90>< -1695, -363, -377>, RMS < 8, 47, 12>< 27, 12>, JUMP ( 0, 160, 4, 0), AVG < 93, 20>, PX < -14, 8, 7, 0>< 0, 0, 495>, FALL [ 9, 3, 8, 0, 581(72), 0, 0 : 9], CF <-10>, TF
< 0>, 35 < 44, 48>
1174: AG < -607, 817, -215>< -802, -686, -462>, RMS < 12, 40, 5>< 17, 10>, JUMP ( 0, 160, 4, 0), AVG < 91, 16>, PX < -15, 8, 7, 0>< 0, 0, 495>, FALL [ 10, 4, 9, 0, 676(75), 0, 0 : 10], CF <-10>, TF
< 0>, 35 < 34, 38>
1175: AG < -1190, 420, 143>< 196, -291, -611>, RMS < 15, 34, 7>< 10, 9>, JUMP ( 0, 160, 4, 0), AVG < 88, 13>, PX < -16, 9, 8, 0>< 0, 0, 196>, FALL [ 11, 5, 10, 0, 769(76), 0, 0 : 11], CF <-10>, TF
< 0>, 35 < 35, 31>
1176: AG < -1932, 79, 71>< 522, 56, -1165>, RMS < 23, 30, 13>< 19, 7>, JUMP ( 0, 160, 4, 0), AVG < 85, 10>, PX < -17, 10, 9, 0>< 1, 0, 522>, FALL [ 12, 6, 11, 0, 856(77), 0, 0 : 12], CF <-10>, TF
< 0>, 35 < 50, 26>
1177: AG < -2047, -293, -729>< 977, 986, -1790>, RMS < 26, 27, 18>< 34, 6>, JUMP ( 0, 160, 4, 0), AVG < 81, 8>, PX < -17, 10, 9, 0>< 2, 0, 977>, FALL [ 13, 7, 12, 0, 938(78), 0, 0 : 13], CF <-10>, TF
< 0>, 35 < 64, 22>
1178: AG < -1191, 582, -468>< 1756, 1939, -1890>, RMS < 17, 23, 19>< 49, 7>, JUMP ( 0, 160, 4, 0), AVG < 76, 7>, PX < -18, 11, 10, 0>< 3, 0, 1756>, FALL [ 14, 8, 13, 0, 1019(78), 0, 0 : 14], CF <-10>, TF
< 0>, 35 < 66, 20>
1179: AG < 49, 1324, -141>< 1757, 2591, -1201>, RMS < 16, 19, 15>< 51, 10>, JUMP ( 0, 160, 4, 0), AVG < 71, 7>, PX < -19, 11, 10, 0>< 4, 0, 1757>, FALL [ 15, 9, 14, 0, 1104(78), 0, 0 : 15], CF <-10>, TF
< 0>, 35 < 59, 23>
1180: AG < 461, 1226, -730>< 1453, 2407, -685>, RMS < 18, 15, 12>< 43, 14>, JUMP ( 0, 160, 4, 0), AVG < 66, 8>, PX < -19, 12, 11, 0>< 4, 1, 1453>, FALL [ 16, 10, 15, 0, 1192(79), 0, 0 : 16], CF <-10>, TF
< 0>, 35 < 51, 31>
1181: AG < 330, 909, -1244>< 734, 2572, -218>, RMS < 19, 11, 14>< 40, 16>, JUMP ( 0, 160, 4, 0), AVG < 61, 10>, PX < -20, 12, 11, 0>< 4, 2, 734>, FALL [ 17, 11, 16, 0, 1278(79), 0, 0 : 17], CF <-10>, TF
< 0>, 35 < 53, 40>
1182: AG < 426, 1355, -1353>< 501, 2259, 468>, RMS < 23, 8, 17>< 35, 18>, JUMP ( 0, 160, 4, 0), AVG < 55, 13>, PX < -21, 12, 11, 0>< 0, 0, 501>, FALL [ 18, 12, 17, 0, 1361(80), 0, 0 : 18], CF <-10>, TF
< 0>, 35 < 60, 48>
1183: AG < 331, 1988, -125>< -11, 2320, 780>, RMS < 24, 5, 19>< 37, 19>, JUMP ( 0, 160, 4, 0), AVG < 49, 15>, PX < -21, 13, 12, 0>< 0, 0, 501>, FALL [ 19, 13, 18, 0, 1442(80), 0, 0 : 19], CF <-10>, 0, 164,
3, 0>, TF < 0>, 35 < 66, 53>
1184: AG < 213, 1332, 930>< -1129, 1993, 897>, RMS < 20, 2, 18>< 37, 19>, JUMP ( 0, 160, 4, 0), AVG < 44, 17>, PX < -22, 13, 12, 0>< 0, 0, 501>, FALL [ 20, 14, 19, 0, 1524(80), 0, 0 : 20], CF <-10>, 0, 164,
3, 0>, TF < 0>, 35 < 67, 56>
1185: AG < -201, -117, 1360>< -2120, 1693, 796>, RMS < 4, 1, 13>< 43, 19>, JUMP ( 0, 160, 4, 0), AVG < 38, 18>, PX < -23, 13, 12, 0>< 0, 0, 501>, FALL [ 21, 15, 20, 0, 1611(80), 0, 0 : 21], CF <-10>, 0, 164,
3, 0>, TF < 0>, 35 < 48, 57>
1186: AG < 970, -1410, -1123>< -3098, 2628, 1851>, RMS < 25, 2, 40>< 82, 10>, JUMP ( 0, 160, 4, 0), AVG < 31, 19>, PX < -24, 14, 13, 0>< 0, 0, 501>, FALL [ 22, 16, 21, 0, 1707(81), 0, 0 : 22], CF <-10>, 0, 168,
1, 67>, TF < 0>, 35 < 69, 30>
1187: AG < -1411, -5777, -1122>< -1208, 3414, 143>, RMS < 51, 0, 28>< 83, 25>, JUMP ( 0, 160, 4, 0), AVG < 25, 20>, PX < -25, 14, 13, 0>< 0, 0, 501>, FALL [ 23, 17, 22, 0, 1792(81), 0, 0 : 23], CF <-10>, 0, 164,
1, 67>, TF < 0>, 35 < 120, 24>
1188: AG < -2299, -22767, -14090>< -8422, 5005, 364>, RMS < 437, 38, 138>< 149, 33>, JUMP ( 0, 160, 4, 0), AVG < 27, 23>, PX < -26, 13, 12, 0>< 0, 0, 501>, FALL [ 23, 18, 22, 1, 1779(80), 1, 0 : 0], TF < 0>, 35
< 553, 78>
1189: AG < -8278, -32767, -32766>< -32766, 6621, 2072>, RMS < 574, 92, 308>< 511, 64>, JUMP ( 0, 160, 4, 0), AVG < 28, 32>, PX < -26, 9, 8, 0>< 0, 0, 501>, FALL [ 0, 0, 0, 2, 0(00), 2, 0 : 0], TF < 1>, 35
< 1102, 122>

```

- HighCounter : 22& LowCounter : 16 & LPF_ACC5 : 4 → Highcounter를 FallCounter로 사용하였음을 알 수 있음
- Over count : 0
- CollisionFall 로 인식되었으나, Downnum-10으로 임계값 증가하여 격발되지 않음

▼ S52(3)



```

0188: AG < -546, -4174, -1086>< -812, -929, -552>, RMS < 52, 47, 49>< 20, 18>, JUMP ( 0, 174, 6, 0), AVG <106, 26>, PX < -12, -14, 8, 0>< 0, 0, 0>, FALL [10, 6, 9, 0, 626(69), 0, 0 : 10], CF <-10>, TF
< 0>, 35 < 177, 65>
0189: AG < -625, -2072, -1027>< -284, -229, -661>, RMS < 29, 46, 44>< 11, 16>, JUMP ( 0, 174, 6, 0), AVG <101, 22>, PX < -12, -14, 8, 0>< 0, 0, 0>, FALL [11, 7, 10, 0, 682(68), 0, 0 : 11], CF <-10>, TF
< 0>, 35 < 147, 55>
0190: AG < -642, -419, -728>< 794, 204, -909>, RMS < 12, 43, 32>< 18, 15>, JUMP ( 0, 174, 6, 0), AVG < 96, 19>, PX < -13, -13, 9, 0>< 1, 0, 794>, FALL [12, 8, 11, 0, 750(68), 0, 0 : 12], CF <-10>, TF
< 0>, 35 < 93, 49>
0191: AG < -984, 1074, -836>< 2077, 865, -1065>, RMS < 20, 38, 18>< 37, 16>, JUMP ( 0, 174, 6, 0), AVG < 90, 17>, PX < -13, -13, 9, 0>< 2, 0, 2077>, FALL [13, 9, 12, 0, 832(69), 0, 0 : 13], CF <-10>, TF
< 0>, 35 < 61, 47>
0192: AG < -737, 1782, 59>< 3174, 1124, -1379>, RMS < 23, 32, 11>< 55, 19>, JUMP ( 0, 174, 6, 0), AVG < 84, 16>, PX < -13, -12, 10, 0>< 3, 0, 3174>, FALL [14, 10, 13, 0, 921(70), 0, 0 : 14], CF <-10>, TF
< 0>, 35 < 55, 50>
0193: AG < -388, 1615, 1002>< 4291, 1322, -1664>, RMS < 23, 25, 13>< 73, 24>, JUMP ( 0, 174, 6, 0), AVG < 78, 18>, PX < -13, -11, 11, 0>< 4, 0, 4291>, FALL [15, 11, 14, 0, 1008(72), 0, 0 : 15], CF <-10>, TF
< 0>, 35 < 66, 59>
0194: AG < -2, 1723, 1430>< 5317, 1447, -1850>, RMS < 27, 20, 17>< 88, 30>, JUMP ( 0, 174, 6, 0), AVG < 71, 20>, PX < -14, -11, 11, 0>< 5, 0, 5317>, FALL [16, 12, 15, 0, 1091(72), 1, 0 : 16], CF <-10>, TF
< 0>, 35 < 73, 73>
0195: AG < -257, 1511, 951>< 5802, 1574, -1971>, RMS < 22, 14, 20>< 96, 37>, JUMP ( 0, 174, 6, 0), AVG < 64, 25>, PX < -14, -10, 12, 0>< 6, 0, 5802>, FALL [17, 13, 16, 0, 1171(73), 2, -2 : 17], CF <-10>, TF
< 0>, 35 < 72, 91>
0196: AG < -623, 753, 808>< 6341, 2173, -2014>, RMS < 15, 11, 19><106, 45>, JUMP ( 0, 174, 6, 0), AVG < 57, 31>, PX < -14, -9, 13, 0>< 7, 0, 6341>, FALL [18, 14, 17, 0, 1252(73), 3, -2 : 18], CF <-10>, TF
< 0>, 35 < 64, 112>
0197: AG < 126, 112, 3103>< 6649, 1825, -2423>, RMS < 37, 9, 20><111, 52>, JUMP ( 0, 174, 6, 0), AVG < 51, 37>, PX < -14, -8, 14, 0>< 8, 0, 6649>, FALL [19, 15, 18, 0, 1332(74), 4, -2 : 19], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 74, 134>
0198: AG < -959, -688, 2281>< 6218, 1765, -1994>, RMS < 31, 9, 25><103, 59>, JUMP ( 0, 174, 6, 0), AVG < 45, 44>, PX < -14, -6, 16, 0>< 8, 1, 6218>, FALL [20, 16, 19, 0, 1407(74), 5, -2 : 20], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 83, 156>
0199: AG < 378, -1767, 3177>< 5605, 2200, -1755>, RMS < 44, 12, 29>< 95, 63>, JUMP ( 0, 174, 6, 0), AVG < 40, 51>, PX < -15, -5, 17, 0>< 8, 2, 5605>, FALL [21, 17, 20, 0, 1478(73), 6, -2 : 21], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 112, 174>
0200: AG < 2020, -2005, 4406>< 5035, 999, -1971>, RMS < 64, 16, 39>< 83, 66>, JUMP ( 0, 174, 6, 0), AVG < 35, 57>, PX < -15, -4, 18, 0>< 8, 0, 5035>, FALL [22, 18, 21, 0, 1539(73), 7, -2 : 22], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 139, 100>
0201: AG < 895, -155, 1723>< 4989, -312, -1500>, RMS < 23, 18, 41>< 79, 68>, JUMP ( 0, 174, 6, 0), AVG < 32, 61>, PX < -15, -2, 20, 0>< 8, 0, 4989>, FALL [23, 19, 22, 0, 1598(72), 0, 0 : 23], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 131, 197>
0202: AG < 375, 1308, -294>< 3160, -244, -204>, RMS < 16, 16, 25>< 48, 67>, JUMP ( 0, 174, 6, 0), AVG < 29, 64>, PX < -15, -1, 21, 0>< 8, 0, 3160>, FALL [24, 20, 23, 0, 1673(72), 0, 0 : 24], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 103, 201>
0203: AG < 57, -1659, -3580>< 1089, -288, 321>, RMS < 48, 12, 6>< 17, 62>, JUMP ( 0, 174, 6, 0), AVG < 27, 65>, PX < -15, 1, 23, 0>< 8, 0, 1089>, FALL [25, 21, 24, 0, 1767(73), 0, 0 : 25], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 87, 197>
0204: AG < -2109, -1902, -1200>< -1783, -842, -830>, RMS < 38, 10, 18>< 32, 54>, JUMP ( 0, 174, 6, 0), AVG < 25, 63>, PX < -16, 2, 24, 0>< 8, 0, 1089>, FALL [26, 22, 25, 0, 1849(73), 0, 0 : 26], CF <-10>, 0, 27,
7, 187>, TF < 0>, 35 < 102, 183> -> (73)

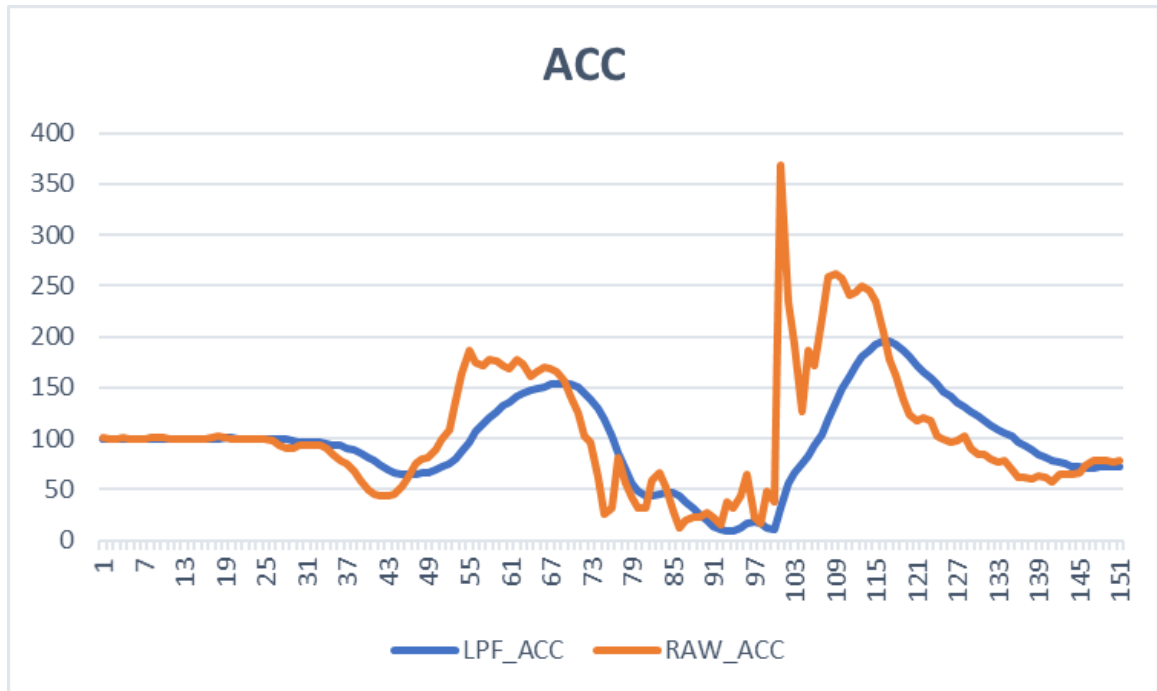
```

- JUMPMAXVALUE가 183으로 overcount: 6 → 땅에 닿기 1샘플 전에 격발된 것을 확인할 수 있음

***S54도 비슷한 양상이므로 생략**

▼ 뒤로 넘어지기

▼ S51



```
0275: AG < 3, -4566, 317>< 3757, -2257, -2012>, RMS < 55, 75, 60>< 73, 59>, JUMP ( 0, 0, 0, 0), AVG < 88, 57>, PX < 5, 9, 12, 0><28, 0, 3757>, FALL [ 1, 0, 1, 0, 40(40), 0, 0 : 0], TF < 0>, 35
< 177, 174>
0276: AG < -962, -4108, 533>< 3874, -2117, -2153>, RMS < 51, 72, 57>< 74, 61>, JUMP ( 0, 0, 0, 0), AVG < 87, 58>, PX < 5, 10, 13, 0><29, 0, 3874>, FALL [ 2, 0, 2, 0, 83(41), 0, 0 : 0], TF < 0>, 35
< 168, 178>
0277: AG < -915, -3827, 872>< 3761, -1637, -2322>, RMS < 49, 69, 53>< 71, 62>, JUMP ( 0, 0, 0, 0), AVG < 86, 59>, PX < 6, 11, 14, 0><29, 1, 3761>, FALL [ 3, 0, 3, 0, 130(43), 0, 0 : 0], TF < 0>, 35
< 155, 182>
0278: AG < -480, -3510, 344>< 3465, -1191, -2678>, RMS < 43, 66, 50>< 69, 63>, JUMP ( 0, 0, 0, 0), AVG < 84, 60>, PX < 7, 12, 15, 0><29, 2, 3465>, FALL [ 4, 0, 4, 0, 180(45), 0, 0 : 0], TF < 0>, 35
< 143, 186>
0279: AG < -14, -2779, 122>< 3383, -1058, -2857>, RMS < 33, 63, 44>< 69, 63>, JUMP ( 0, 0, 0, 0), AVG < 83, 61>, PX < 7, 13, 16, 0>< 0, 0, 3383>, FALL [ 5, 0, 5, 0, 236(47), 0, 2 : 5], CF < -10>, TF
< 0>, 35 < 125, 180>
0280: AG < -116, -1863, 477>< 3581, -1111, -2630>, RMS < 23, 59, 36>< 69, 64>, JUMP ( 0, 0, 0, 0), AVG < 81, 62>, PX < 8, 14, 17, 0>< 1, 0, 3581>, FALL [ 6, 1, 6, 0, 300(50), 0, 2 : 6], CF < -10>, TF
< 0>, 35 < 99, 190>
0281: AG < -362, -1211, 87>< 3727, -1027, -2190>, RMS < 15, 54, 28>< 67, 64>, JUMP ( 0, 0, 0, 0), AVG < 79, 63>, PX < 9, 15, 18, 0>< 2, 0, 3727>, FALL [ 7, 2, 7, 0, 372(53), 0, 2 : 7], CF < -10>, TF
< 0>, 35 < 71, 191>
0282: AG < -417, -1522, 365>< 3663, -832, -2076>, RMS < 19, 50, 23>< 65, 64>, JUMP ( 0, 0, 0, 0), AVG < 77, 63>, PX < 10, 16, 19, 0>< 2, 1, 3663>, FALL [ 8, 3, 8, 0, 449(56), 0, 2 : 8], CF < -10>, TF
< 0>, 35 < 57, 192>
0283: AG < -294, -1604, 1049>< 3806, -478, -2371>, RMS < 23, 46, 21>< 68, 64>, JUMP ( 0, 0, 0, 0), AVG < 75, 63>, PX < 10, 17, 20, 0>< 3, 0, 3806>, FALL [ 9, 4, 9, 0, 528(58), 0, 2 : 9], CF < -10>, TF
< 0>, 35 < 54, 193>
0284: AG < -418, -912, 128>< 4635, -44, -2841>, RMS < 12, 43, 19>< 82, 65>, JUMP ( 0, 0, 0, 0), AVG < 72, 64>, PX < 11, 19, 22, 0>< 4, 0, 4635>, FALL [ 10, 5, 10, 0, 609(60), 0, 2 : 10], CF < -10>, TF
< 0>, 35 < 54, 193>
0285: AG < -684, -521, 1005>< 5874, -182, -3422>, RMS < 16, 39, 15><103, 68>, JUMP ( 0, 0, 0, 0), AVG < 69, 65>, PX < 12, 20, 23, 0>< 5, 0, 5874>, FALL [ 11, 6, 11, 0, 694(63), 1, 1 : 11], CF < -10>, TF
< 0>, 35 < 51, 197>
0286: AG < -773, -815, 2185>< 7237, -727, -3986>, RMS < 29, 35, 18><126, 73>, JUMP ( 0, 0, 0, 0), AVG < 67, 66>, PX < 13, 21, 24, 0>< 6, 0, 7237>, FALL [ 12, 7, 12, 0, 776(64), 2, 1 : 12], CF < -10>, TF
< 0>, 35 < 57, 200>
0287: AG < -564, -1167, 1979>< 7759, -1019, -4362>, RMS < 28, 33, 23><136, 80>, JUMP ( 0, 0, 0, 0), AVG < 64, 70>, PX < 14, 22, 25, 0>< 7, 0, 7759>, FALL [ 13, 8, 13, 0, 853(65), 3, 1 : 13], CF < -10>, TF
< 0>, 35 < 73, 221>
0288: AG < -251, -1407, 1393>< 7319, -1108, -4241>, RMS < 24, 32, 24><130, 86>, JUMP ( 0, 0, 0, 0), AVG < 61, 74>, PX < 15, 24, 27, 0>< 7, 1, 7319>, FALL [ 14, 9, 14, 0, 929(66), 4, 2 : 14], CF < -10>, TF
< 0>, 35 < 81, 239>
0289: AG < -284, -954, 1151>< 6796, -1259, -3960>, RMS < 18, 30, 23><121, 91>, JUMP ( 0, 0, 0, 0), AVG < 58, 79>, PX < 16, 25, 28, 0>< 7, 2, 6796>, FALL [ 15, 10, 15, 0, 1006(67), 5, 2 : 15], CF < -10>, TF
< 0>, 35 < 70, 257>
0290: AG < -796, -131, 2053>< 6852, -966, -3625>, RMS < 26, 28, 21><119, 94>, JUMP ( 0, 0, 0, 0), AVG < 55, 84>, PX < 17, 27, 30, 0>< 8, 0, 6852>, FALL [ 16, 11, 16, 0, 1005(67), 6, 3 : 16], CF < -10>, TF
< 0>, 35 < 68, 271>
0291: AG < -230, -1028, 2791>< 8513, 247, -3127>, RMS < 45, 26, 25><110, 95>, JUMP ( 0, 0, 0, 0), AVG < 52, 89>, PX < 18, 29, 32, 0>< 8, 1, 8513>, FALL [ 17, 12, 17, 0, 1100(68), 7, 3 : 17], CF < -10>, TF
< 0>, 35 < 69, 283> > 131
```

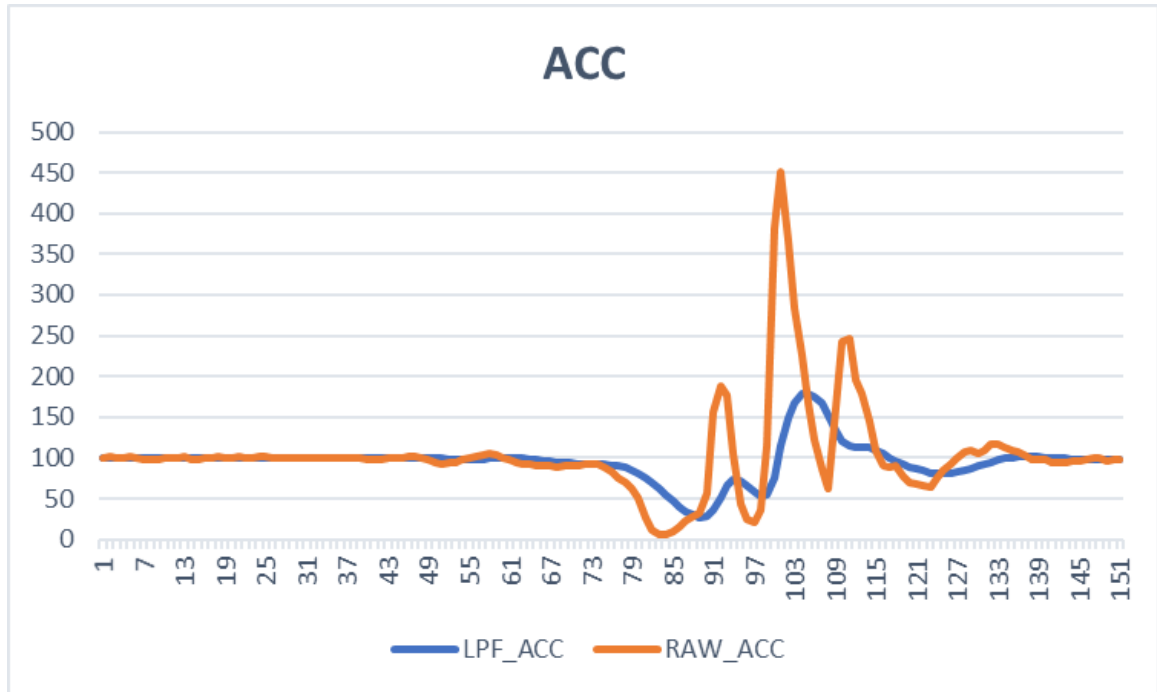
- JUMPMAXVALUE가 183으로 overcount: 6 → 땅에 닿기 1샘플 전에 격발된 것을 확인할 수 있음
- Over count : 3

→ S51 과 마찬가지로 앞으면서 뒤로 넘어가는 형태로 추락. S51과 달리 pitch 값이 29로 스트레칭으로 인식되지 않음

***S53 비슷한 양상을 보임**

▼ 앞으로 걸어 넘어지기

▼ S51



```

0137: AG < 1067, -3855, 1059>< 415, -759, -54>, RMS < 50, 81, 64>< 13, 12>, JUMP ( 0, 0, 0, 0), AVG < 93, 12>, PX < 2, 8, 6, 0>< 0, 0, 415>, FALL [13, 0, 0, 5, 0(00), 0, 0 : 0], TF < 0>, 35
< 182, 38>
0138: AG < 874, -2045, 385>< -146, -1181, -456>, RMS < 27, 76, 52>< 18, 16>, JUMP ( 0, 0, 0, 0), AVG < 92, 12>, PX < 2, 8, 6, 0>< 0, 0, 415>, FALL [ 1, 0, 1, 0, 44(44), 0, 0 : 0], TF < 0>, 35
< 148, 258>
0139: AG < 640, -773, 153>< -1361, -1104, -582>, RMS < 12, 69, 36>< 28, 7>, JUMP ( 0, 0, 0, 0), AVG < 90, 11>, PX < 2, 9, 7, 0>< 0, 0, 415>, FALL [ 2, 0, 2, 0, 112(56), 0, 0 : 0], TF < 0>, 35
< 89, 29>
0140: AG < 219, -141, -364>< -2169, -906, -629>, RMS < 5, 62, 22>< 37, 4>, JUMP ( 0, 0, 0, 0), AVG < 88, 9>, PX < 2, 9, 7, 0>< 0, 0, 415>, FALL [ 3, 0, 3, 0, 190(63), 0, 0 : 0], TF < 0>, 35
< 44, 21>
0141: AG < 269, 232, -231>< -2686, -790, -649>, RMS < 5, 54, 11>< 43, 4>, JUMP ( 0, 0, 0, 0), AVG < 86, 7>, PX < 2, 9, 7, 0>< 0, 0, 415>, FALL [ 4, 1, 4, 0, 279(69), 0, 0 : 0], TF < 0>, 35
< 22, 15>
0142: AG < 282, 777, 182>< -3003, -433, -690>, RMS < 10, 47, 5>< 47, 8>, JUMP ( 0, 0, 0, 0), AVG < 84, 6>, PX < 2, 9, 7, 0>< 0, 0, 415>, FALL [ 5, 2, 5, 0, 374(74), 0, 2 : 5], CF < -10>, TF
< 0>, 35 < 20, 16>
0143: AG < -15, 1139, 675>< -3243, -309, -532>, RMS < 16, 40, 5>< 50, 12>, JUMP ( 0, 0, 0, 0), AVG < 81, 7>, PX < 2, 8, 6, 0>< 0, 0, 415>, FALL [ 6, 3, 6, 0, 469(78), 0, 2 : 6], CF < -10>, TF
< 0>, 35 < 31, 26>
0144: AG < -89, 1148, 1498>< -3670, -486, -352>, RMS < 23, 34, 11>< 56, 17>, JUMP ( 0, 0, 0, 0), AVG < 78, 9>, PX < 2, 8, 6, 0>< 0, 0, 415>, FALL [ 7, 4, 7, 0, 558(79), 0, 2 : 7], CF < -10>, TF
< 0>, 35 < 49, 37>
0145: AG < -632, 996, 2021>< -4348, -426, -383>, RMS < 28, 30, 18>< 66, 22>, JUMP ( 0, 0, 0, 0), AVG < 74, 12>, PX < 2, 8, 6, 0>< 0, 0, 415>, FALL [ 8, 5, 8, 0, 640(80), 0, 2 : 8], CF < -10>, TF
< 0>, 35 < 67, 51>
0146: AG < -898, -810, 2386>< -5007, -71, -461>, RMS < 32, 27, 21>< 76, 28>, JUMP ( 0, 0, 0, 0), AVG < 71, 17>, PX < 2, 7, 5, 0>< 0, 0, 415>, FALL [ 9, 6, 9, 0, 719(79), 1, 2 : 9], CF < -10>, TF
< 0>, 35 < 83, 67>
0147: AG < -2097, -4027, 902>< -5255, -78, -454>, RMS < 56, 28, 25>< 80, 34>, JUMP ( 0, 0, 0, 0), AVG < 68, 22>, PX < 2, 7, 5, 0>< 0, 0, 415>, FALL [10, 7, 10, 0, 794(79), 2, 2 : 10], CF < -10>, TF
< 0>, 35 < 116, 84>
0148: AG < -4274, -12033, -1832>< -2818, -870, -289>, RMS < 157, 36, 58>< 45, 37>, JUMP (157, 148, 0, 57), AVG < 65, 27>, PX < 2, 6, 4, 0>< 0, 0, 415>, FALL [11, 8, 11, 0, 836(76), 0, 2 : 11], CF < -10>, TF
< 0>, 35 < 205, 99>
0149: AG < -2958, -15113, -1045>< -2405, -848, -557>, RMS < 108, 50, 111>< 82, 38>, JUMP (108, 149, 0, 145), AVG < 61, 31>, PX < 2, 5, 3, 0>< 0, 0, 415>, FALL [11, 9, 11, 1, 836(76), 0, 2 : 11], TF < 0>, 35
< 681, 109>
0150: AG < -1472, -14039, -2941>< -5081, 2314, -1175>, RMS < 176, 65, 144>< 87, 40>, JUMP (188, 150, 6, 221), AVG < 61, 35>, PX < 2, 4, 2, 0>< 0, 0, 415>, FALL [ 0, 0, 0, 2, 0(00), 1, 2 : 0], TF < 0>, 35

```

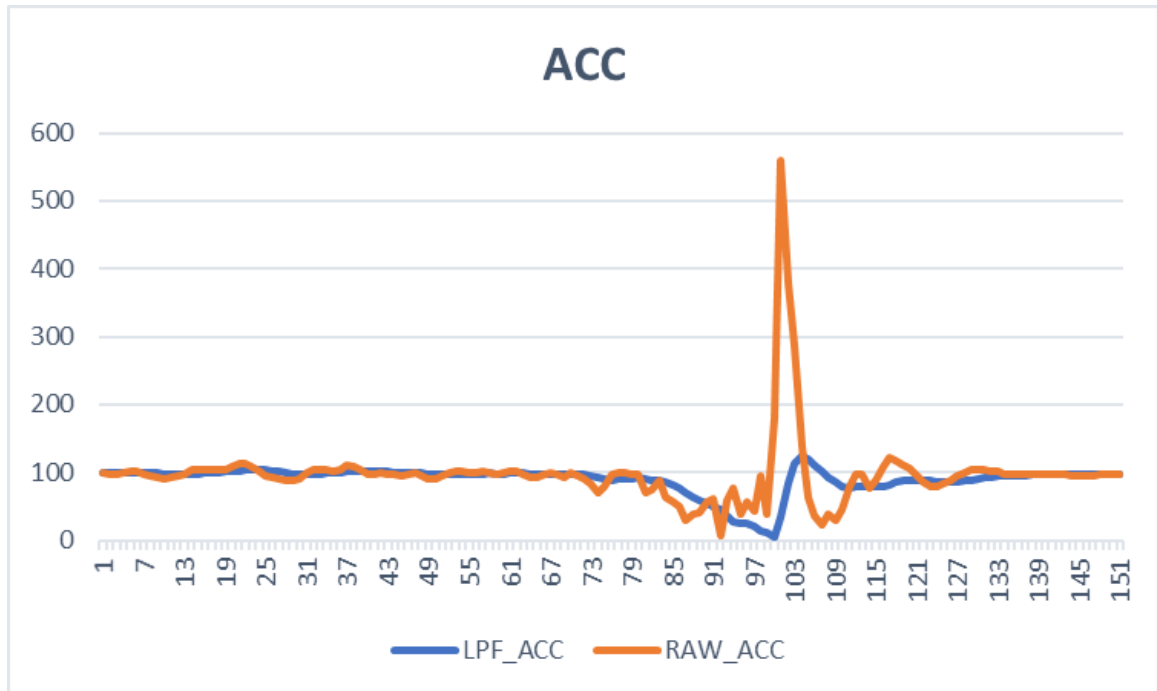
- Over count : 2

→ Fallcount가 1로 조정됨을 확인 할 수 있음(Lowcounter 증가하지 않음)

→ 내려오면서 발이 먼저 닿고 넘어지기 때문에 추락 길이가 부족함 (낙상에 가까운 동작임)

***나머지 미격발 샘플 비슷한 양상을 보임**

▼ S52(1)



```

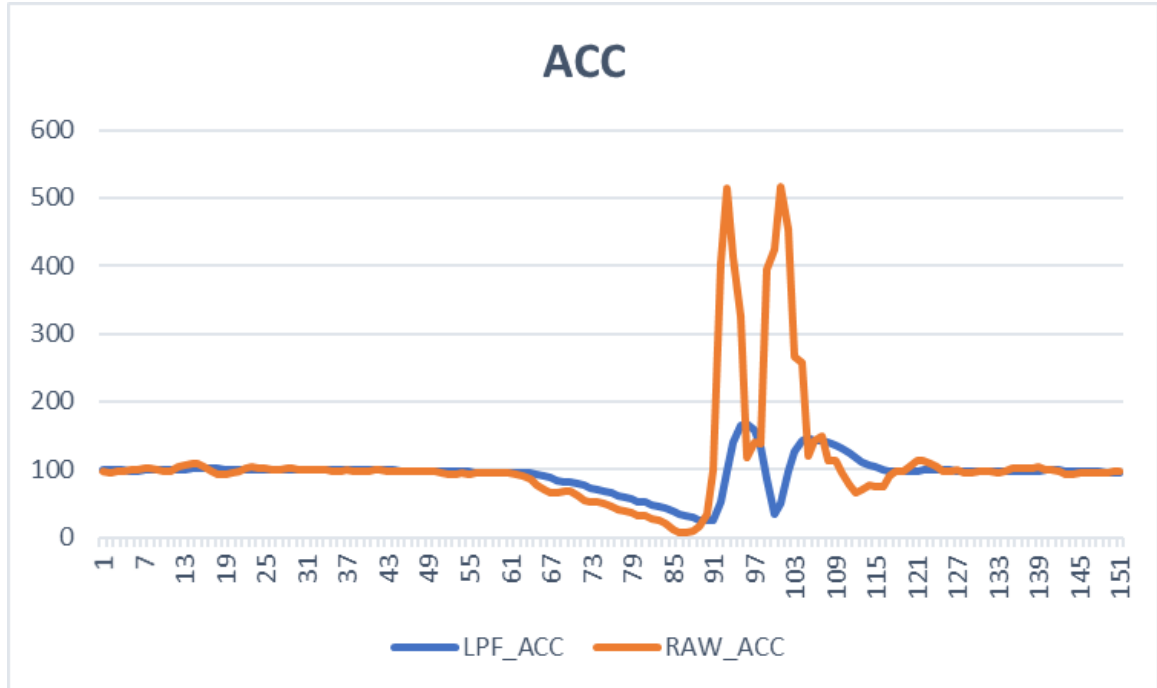
0485: AG < 2685, -4799, 2219>< -6117, -8312, 2635>, RMS < 71, 91, 90><162, 94>, JUMP ( 0, 0, 0, 0), AVG < 94, 77>, PX < 14, 5, -4, 0>< 0, 0, 1>, FALL [ 1, 0, 0, 11, 0(80), 4, 0 : 0], TF < 0>, 35
< 264, 258>
0486: AG < 303, -5460, 2934>< -7589, -7797, 3408>, RMS < 75, 88, 81><173, 102>, JUMP ( 0, 0, 0, 0), AVG < 94, 85>, PX < 14, 4, -1, 0>< 0, 0, 1>, FALL [ 2, 0, 0, 11, 0(80), 5, 0 : 0], TF < 0>, 35
< 242, 282>
0487: AG < 1192, -5871, 4186>< -7216, -7250, 3469>, RMS < 89, 87, 81><164, 118>, JUMP ( 0, 0, 0, 0), AVG < 93, 94>, PX < 14, 3, -2, 0>< 0, 0, 1>, FALL [ 3, 0, 0, 11, 0(80), 6, 0 : 0], TF < 0>, 35
< 235, 306>
0488: AG < 897, -5085, 1386>< -7073, -7186, 2622>, RMS < 64, 86, 78><158, 116>, JUMP ( 0, 0, 0, 0), AVG < 92, 101>, PX < 14, 1, -4, 0>< 0, 0, 1>, FALL [ 4, 0, 0, 11, 0(80), 7, 0 : 0], TF < 0>, 35
< 228, 328>
0489: AG < -2016, -3613, 2082>< -7929, -6584, 1893>, RMS < 56, 82, 67><159, 121>, JUMP ( 0, 0, 0, 0), AVG < 92, 108>, PX < 14, -1, -6, 0>< 0, 0, 1>, FALL [ 5, 0, 0, 11, 0(80), 8, 0 : 0], TF < 0>, 35
< 209, 347>
0490: AG < -3367, -1927, 1159>< -9045, -5341, 1663>, RMS < 49, 76, 55><162, 125>, JUMP ( 0, 0, 0, 0), AVG < 91, 114>, PX < 13, -3, -8, 0>< 0, 0, 1>, FALL [ 6, 0, 1, 0, 45(45), 9, 0 : 0], TF < 0>, 35
< 169, 362>
0491: AG < -1470, -1144, 1564>< -8769, -3539, 1385>, RMS < 29, 69, 44><145, 128>, JUMP ( 0, 0, 0, 0), AVG < 89, 120>, PX < 13, -5, -10, 0>< 0, 0, 1>, FALL [ 7, 0, 2, 0, 101(50), 10, 0 : 0], TF < 0>, 35
< 134, 376>
0492: AG < 892, -1225, 2811>< -8995, -3551, 1271>, RMS < 38, 64, 36><148, 129>, JUMP ( 0, 0, 0, 0), AVG < 88, 123>, PX < 12, -7, -12, 0>< 0, 0, 1>, FALL [ 8, 0, 3, 0, 165(55), 11, 0 : 0], TF < 0>, 35
< 116, 382>
0493: AG < 869, 300, 3245>< -9395, -4612, 1507>, RMS < 41, 59, 33><161, 131>, JUMP ( 0, 0, 0, 0), AVG < 86, 126>, PX < 11, -10, -15, 0>< 0, 0, 1>, FALL [ 9, 1, 4, 0, 232(58), 12, -7 : 9], CF < -10>, TF
< 0>, 35 < 108, 388>
0494: AG < 969, 2020, 4065>< -9240, -4937, 2241>, RMS < 56, 54, 37><163, 135>, JUMP ( 0, 0, 0, 0), AVG < 84, 129>, PX < 11, -12, -17, 0>< 0, 0, 1>, FALL [ 10, 2, 5, 0, 295(59), 13, -7 : 10], CF < -10>, TF
< 0>, 35 < 135, 395>
0495: AG < 2819, 2027, 3525>< -9790, -5041, 2492>, RMS < 60, 50, 44><172, 138>, JUMP ( 0, 0, 0, 0), AVG < 81, 132>, PX < 10, -15, -20, 0>< 0, 0, 1>, FALL [ 11, 3, 6, 0, 351(58), 14, -8 : 11], CF < -10>, TF
< 0>, 35 < 157, 404>
0496: AG < 483, 323, -328>< -12984, -6124, 3413>, RMS < 8, 45, 37><225, 145>, JUMP ( 0, 0, 0, 0), AVG < 79, 135>, PX < 9, -17, -22, 0>< 0, 0, 1>, FALL [ 12, 4, 7, 0, 414(59), 15, -8 : 12], CF < -10>, TF
< 0>, 35 < 124, 418>
0497: AG < -2294, 3986, -1210>< -13969, -5459, 4076>, RMS < 58, 36, 22><237, 155>, JUMP ( 0, 0, 0, 0), AVG < 76, 140>, PX < 8, -20, -25, 0>< 0, 0, 1>, FALL [ 13, 5, 8, 0, 492(61), 16, -8 : 13], CF < -10>, TF
< 0>, 35 < 126, 430>
0498: AG < -1771, 5838, 1613>< -14066, -3212, 3762>, RMS < 77, 28, 40><227, 163>, JUMP ( 0, 0, 0, 0), AVG < 72, 147>, PX < 7, -23, -28, 0>< 0, 0, 1>, FALL [ 14, 6, 9, 0, 552(61), 17, -8 : 14], CF < -10>, TF
< 0>, 35 < 143, 463>
0499: AG < 244, 2677, 1647>< -13126, -1105, 2963>, RMS < 38, 25, 47><206, 168>, JUMP ( 0, 0, 0, 0), AVG < 69, 153>, PX < 6, -26, -31, 0>< 0, 0, 1>, FALL [ 15, 7, 10, 0, 605(60), 18, -8 : 15], CF < -10>, TF
< 0>, 35 < 173, 486>
0500: AG < 2269, 3787, 1443>< -10404, -3742, 1773>, RMS < 56, 24, 45><170, 170>, JUMP ( 0, 0, 0, 0), AVG < 66, 160>, PX < 5, -29, -34, 0>< 0, 0, 1>, FALL [ 16, 8, 11, 0, 660(60), 19, -8 : 16], CF < -10>, TF
< 0>, 35 < 171, 501>
0501: AG < -2105, 1070, -2614>< -7574, -5204, 2538>, RMS < 43, 21, 36><145, 168>, JUMP ( 0, 0, 0, 0), AVG < 62, 164>, PX < 3, -32, -37, 0>< 0, 0, 1>, FALL [ 17, 9, 12, 0, 724(60), 20, -8 : 17], CF < -10>, TF
< 0>, 35 < 137, 506>
0502: AG < -6642, -2570, -3075>< -5567, -2893, 3028>, RMS < 94, 14, 32><106, 163>, JUMP ( 0, 0, 0, 0), AVG < 59, 166>, PX < 2, -35, -40, 0>< 0, 0, 1>, FALL [ 18, 10, 13, 0, 792(60), 21, -8 : 18], CF < -10>, TF
< 0>, 35 < 193, 501>
0503: AG < -768, -2899, -1278>< -4971, 261, 1470>, RMS < 39, 11, 40>< 79, 154>, JUMP ( 0, 0, 0, 0), AVG < 55, 164>, PX < 1, -38, -43, 0>< 0, 0, 1>, FALL [ 19, 11, 14, 0, 852(60), 0, 0 : 19], CF < -10, 0, 484,
0, 0>, TF < 0>, 35 < 176, 485>
0504: AG < 10145, -1709, -10520>< -6176, -4413, 405>, RMS < 181, 4, 49><115, 146>, JUMP ( 181, 504, 0, 81), AVG < 50, 160>, PX < 1, -40, -45, 0>< 0, 0, 1>, FALL [ 20, 12, 15, 0, 903(60), 1, 0 : 20], CF < -10, 0, 484,
0, 0>, TF < 0>, 35 < 314, 463> -> (12)

```

- 다른 미격발 샘플과는 달리 발이 닿는 부분이 값이 크게 튀지 않아, Highcounter가 이어진 것을 확인 할 수 있음

▼ 앞으로 그대로 넘어지기

▼ S54



```

0>, 35 < 136, 25>
163: AG < 568, -2979, 1135>< 1080, -321, -214>, RMS < 39, 59, 43>< 17, 7>, JUMP ( 0, 0, 0, 0), AVG < 81, 8>, PX < -5, -1, 1, 0>< 5, 0, 1080>, FALL [ 6, 1, 6, 0, 296(49), 0, 2 : 6], CF <-10>, TF
0>, 35 < 125, 23>
164: AG < 523, -2710, 1345>< 994, -424, -525>, RMS < 37, 56, 40>< 18, 6>, JUMP ( 0, 0, 0, 0), AVG < 79, 7>, PX < -5, -1, 1, 0>< 5, 1, 994>, FALL [ 7, 2, 7, 0, 356(50), 0, 2 : 7], CF <-10>, TF
0>, 35 < 117, 21>
165: AG < 397, -2549, 775>< 608, -733, -650>, RMS < 32, 53, 37>< 17, 6>, JUMP ( 0, 0, 0, 0), AVG < 77, 7>, PX < -5, -1, 1, 0>< 5, 2, 608>, FALL [ 8, 3, 8, 0, 419(52), 0, 2 : 8], CF <-10>, TF
166: AG < 111, -2405, 1039>< 305, -1181, -456>, RMS < 32, 51, 35>< 19, 6>, JUMP ( 0, 0, 0, 0), AVG < 75, 6>, PX < -5, 0, 2, 0>< 0, 0, 305>, FALL [ 9, 4, 9, 0, 484(53), 0, 2 : 9], CF <-10>, TF
0>, 35 < 101, 18>
167: AG < 428, -2243, 596>< -110, -1490, -346>, RMS < 28, 48, 32>< 23, 7>, JUMP ( 0, 0, 0, 0), AVG < 73, 6>, PX < -5, 0, 2, 0>< 0, 0, 305>, FALL [ 10, 5, 10, 0, 552(55), 0, 2 : 10], CF <-10>, TF
0>, 35 < 92, 19>
168: AG < 853, -1969, 513>< -659, -1661, -415>, RMS < 26, 45, 30>< 27, 8>, JUMP ( 0, 0, 0, 0), AVG < 70, 6>, PX < -5, 0, 2, 0>< 0, 0, 305>, FALL [ 11, 6, 11, 0, 622(56), 0, 2 : 11], CF <-10>, TF
169: AG < 695, -1403, 615>< -1194, -1862, -375>, RMS < 20, 43, 26>< 34, 10>, JUMP ( 0, 0, 0, 0), AVG < 68, 7>, PX < -5, 0, 2, 0>< 0, 0, 305>, FALL [ 12, 7, 12, 0, 696(58), 0, 2 : 12], CF <-10>, TF
0>, 35 < 74, 25>
170: AG < 387, -751, 600>< -1975, -2052, 64>, RMS < 12, 39, 21>< 43, 12>, JUMP ( 0, 0, 0, 0), AVG < 65, 8>, PX < -5, 0, 2, 0>< 0, 0, 305>, FALL [ 13, 8, 13, 0, 775(59), 0, 2 : 13], CF <-10>, TF
0>, 35 < 58, 30>
171: AG < 276, -268, 566>< -3090, -2052, 740>, RMS < 8, 35, 15>< 57, 16>, JUMP ( 0, 0, 0, 0), AVG < 62, 10>, PX < -5, 0, 2, 0>< 0, 0, 305>, FALL [ 14, 9, 14, 0, 860(61), 0, 2 : 14], CF <-10>, TF
0>, 35 < 40, 38>
172: AG < 111, -323, 590>< -4279, -1959, 1308>, RMS < 0, 32, 11>< 74, 20>, JUMP ( 0, 0, 0, 0), AVG < 60, 13>, PX < -6, -1, 1, 0>< 0, 0, 305>, FALL [ 15, 10, 15, 0, 949(63), 0, 2 : 15], CF <-10>, TF
0>, 35 < 28, 48>
173: AG < -167, -749, 119>< -5483, -1502, 1614>, RMS < 9, 29, 9>< 90, 26>, JUMP ( 0, 0, 0, 0), AVG < 57, 16>, PX < -6, -1, 1, 0>< 0, 0, 305>, FALL [ 16, 11, 16, 0, 1040(65), 1, 2 : 16], CF <-10>, TF
0>, 35 < 25, 62>
174: AG < -944, -529, -1001>< -6834, -799, 1837>, RMS < 17, 26, 7>< 108, 34>, JUMP ( 0, 0, 0, 0), AVG < 54, 21>, PX < -6, -1, 1, 0>< 0, 0, 305>, FALL [ 17, 12, 17, 0, 1133(66), 2, -2 : 17], CF <-10>, TF
0>, 35 < 34, 80>
175: AG < -2730, -579, -890>< -8320, -164, 2355>, RMS < 35, 24, 14>< 131, 43>, JUMP ( 0, 0, 0, 0), AVG < 51, 27>, PX < -6, -2, 0, 0>< 0, 0, 305>, FALL [ 18, 13, 18, 0, 1219(67), 3, -2 : 18], CF <-10>, TF
0>, 35 < 61, 103>
176: AG < -5219, -5010, -3903>< -10829, -743, 3421>, RMS < 100, 26, 39>< 173, 55>, JUMP ( 0, 0, 0, 0), AVG < 40, 35>, PX < -6, -3, -1, 0>< 0, 0, 305>, FALL [ 19, 14, 19, 0, 1280(67), 4, -3 : 19], CF <-10>, 0, 136,
177: AG < -9972, -29655, -10657>< -15689, -3422, 5409>, RMS < 403, 51, 136>< 258, 74>, JUMP ( 0, 0, 0, 0), AVG < 47, 46>, PX < -7, -4, -2, 0>< 0, 0, 305>, FALL [ 19, 15, 19, 1, 1280(67), 5, -3 : 0], TF < 1>, 35
538, 172>

```

- Over count : -3

→ 앞으로 넘어지면서 BendOverCount가 증가 , 따라서 총 임계값이 조정되어 미격발

***S51제외 나머지 미격발 샘플 비슷한 양상을 보임 → S51: 무릎이 먼저 닿아 해당 동작이 재현이 안됨**