3242_11719
Have to increase ip to 25 to get Okada daughter. Okada secondary track id not given.
If my secondary from track 26563 is same as Okada's, then our results match provided the single segment would make my vertex cut (I can't tell just yet because I can't form the single segment into a final track and treat it as such). I also pick up second (coincidental) vertex.
number of primary tracks is :4

Track #	X	Y	Z	thetaU	thetaV	flag	kink angle	P
2789	0.099464	-0.019149	0.313048	0.038176	-0.018842	1	0.000000	0.000000
9367	0.098955	-0.019323	0.325675	0.313774	-0.236506	2	2.796913	0.000000
14440	0.099464	-0.019149	0.313048	-0.202994	-0.128826	0	0.000000	0.000000
16538	0.099464	-0.019149	0.313048	-0.176828	0.017707	0	0.000000	0.000000
26563	0.099464	-0.019149	0.313048	-0.188683	0.079875	1	0.000000	0.000000
23832	0.100705	-0.018637	0.319477	-0.251642	-0.196544	2	2.858780	0.000000
99999	0.099464	-0.019149	0.313048	0.039200	0.324300	0	0.000000	0.000000

****
2789 raw data ID 281 9770 Impact par 0.000001
14440 raw data ID 281 8850 Impact par 0.000003
16538 raw data ID 281 10090 Impact par 0.000003
26563 raw data ID 281 10586 Impact par 0.000001
99999 raw data ID 281 12481 Impact par 0.000011

evt 3242 11719 mod2 2ry int
vtx 1 @pl30(bulk) nh=2

281 9770 0.0380 -0.0189
281 8850 -0.2058 -0.1295
281 10090 -0.1787 0.0177
281 10586 -0.1910 0.0800 --> vtx2
281 12481 0.0392 0.3243

vtx2 @pl23(bulk) nh=1
large ang(tan(th)>1)

3335_02658
I did not get 462_1365 (m_file 25848) but that is probably because it is a single segment track. (I added it later).
I also get track 5736, which okada does not get. It has an impact parameter of 1 micron and seems to be a ligitamate vertex track. (for now I don't see that it's penetrating in the sense that it is not matched to any tracks in plate 46, with out doing and fancy matching)

number of primary tracks is :8

Track #	X	Y	Z	thetaU	thetaV	flag	kink angle	P
5234	-0.100968	0.059156	0.294666	-0.000527	-0.007320	0	0.000000	0.000000
5257	-0.100968	0.059156	0.294666	-0.022287	-0.006770	0	0.000000	0.000000
5398	-0.100968	0.059156	0.294666	-0.010597	-0.003821	0	0.000000	0.000000
5421	-0.100968	0.059156	0.294666	0.017930	-0.003310	0	0.000000	0.000000
5736	-0.100968	0.059156	0.294666	-0.028679	0.002938	0	0.000000	0.000000
5747	-0.100968	0.059156	0.294666	-0.015526	0.003261	0	0.000000	0.000000
7713	-0.100968	0.059156	0.294666	-0.015748	0.042051	0	0.000000	0.000000
15716	-0.100968	0.059156	0.294666	0.028998	-0.013779	1	0.000000	0.000000
7085	-0.101204	0.059072	0.302440	0.121004	-0.049282	2	0.155080	0.000000
99999	-0.100968	0.059156	0.294666	0.053200	-0.039600	0	0.000000	0.000000

****

```
5234  raw data ID 451 1836   Impact par 0.000002
5257  raw data ID 451 1841   Impact par 0.000001
5398  raw data ID 461 1351   Impact par 0.000001
5421  raw data ID 451 1834   Impact par 0.000002
5736  raw data ID 451 1678   Impact par 0.000001
5747  raw data ID 451 1840   Impact par 0.000001
7713  raw data ID 461 1355   Impact par 0.000001
15716  raw data ID 461 1356   Impact par 0.000000
99999  raw data ID 462 1365   Impact par 0.000005
```

evt 3335 02658 mod2 kink
vtx 1 @pl462(ecc base)
451 1836 -0.0002 -0.0076
451 1841 -0.0222 -0.0066
462 1351 -0.0098 -0.0041
451 1834 0.0177 -0.0034
451 1840 -0.0154 0.0032
462 1355 -0.0154 0.0420
462 1356 0.0290 -0.0140 --> vtx2
462 1365 0.0532 -0.0396 --> vtx3

vtx 2 @422-411 iron
411 405 -0.053 0.126

vtx 3 @462-451 iron
no daughter found

3067_14134 matches Okada

track 48979 is same as 152893 (Called 2 tracks because of misalignment)
number of primary tracks is :6

Track #	X	Y	Z	thetaU	thetaV	flag	kink angle	P
39264	-0.096164	0.120103	0.040776	-0.126546	0.006641	0	0.000000	0.000000
***48979	-0.096164	0.120103	0.040776	-0.136936	0.084506	0	0.000000	0.000000
86149	-0.096164	0.120103	0.040776	0.023189	-0.137190	0	0.000000	0.000000
116410	-0.096164	0.120103	0.040776	0.253324	-0.048504	0	0.000000	0.000000
152856	-0.096164	0.120103	0.040776	0.114614	0.044622	1	0.000000	0.000000
95396	-0.096192	0.120037	0.041317	-0.080204	-0.229518	2	0.117548	0.000000
152893	-0.096164	0.120103	0.040776	-0.130855	0.079916	0	0.000000	0.000000

****

39264 raw data ID 71 33633 Impact par 0.000003
48979 raw data ID 61 31161 Impact par 0.000006
86149 raw data ID 71 33415 Impact par 0.000004
116410 raw data ID 71 41884 Impact par 0.000009
152856 raw data ID 71 33683 Impact par 0.000005
152893 raw data ID 71 33766 Impact par 0.000007

evt 3067 14134 mod1 kink
vtx 1 @pl82-71 iron
71 33633 -0.1259 0.0064
71 33415 0.0239 -0.1385
72 41884 0.2593 -0.0487
71 33683 0.1151 0.0447 --> vtx2
71 33766 -0.1450 0.0894

vtx 2 @pl72-61 iron
61 31188 0.219 0.105

3140_22786

I get the same 4 primary tracks as Okada (25386 is duplicate of 46322). I do not get 48907 (okada 221 6016),
but I'm not sure if I believe 48907 is connected to the event. It is only a 2 segment track (both sides of one plate.
The impact par is high (.19mm) and the track starts in same plate as vertex and does not have anything connected to it
downstream. Needs to be investigated further.

number of primary tracks is :6

Track #	X	Y	Z	thetaU	thetaV	flag	kink angle	P
1531	-0.145214	-0.034227	0.020040	0.034749	-0.065638	0	0.000000	0.000000
3860	-0.145214	-0.034227	0.020040	0.049388	0.012950	0	0.000000	0.000000
9883	-0.145214	-0.034227	0.020040	0.003396	-0.071571	0	0.000000	0.000000
***25386	-0.145214	-0.034227	0.020040	-0.218394	0.010114	0	0.000000	0.000000
46322	-0.145214	-0.034227	0.020040	-0.220329	0.011339	0	0.000000	0.000000
48907	-0.145214	-0.034227	0.020040	-0.002624	-0.083544	0	0.000000	0.000000

****

1531 raw data ID 221 5611 Impact par 0.000004
3860 raw data ID 221 5764 Impact par 0.000003
9883 raw data ID 221 5595 Impact par 0.000002
25386 raw data ID 211 6061 Impact par 0.000010
46322 raw data ID 221 5758 Impact par 0.000008
53839 raw data ID 231 4982 Impact par 0.000011
48907 raw data ID 221 6016 Impact par 0.000190

evt 3140 22786 mod1 short
vtx 1 @pl232-221 iron
221 5611 0.0345 -0.0628
221 5764 0.0485 0.0128
221 5595 0.0030 -0.0707
221 5758 -0.2240 0.0113

221 6016 -0.003 -0.084 *

track(*) has large IP. pl231,232 have no track seg.
pl211,212 have track seg

3223_41138
Tracks 3584 and 35830 are not on Okada's list. I don't get 34974 with preliminary vertex search (high impact
Parameter). Looks interesting. Study more.

number of primary tracks` is :7

Track #	X	Y	Z	thetaU	thetaV	flag	kink angle	P
2619	-0.023615	0.062158	0.581225	0.048006	-0.022861	0	0.000000	0.000000
3552	-0.023615	0.062158	0.581225	-0.011441	0.012066	0	0.000000	0.000000
3584	-0.023615	0.062158	0.581225	-0.007064	0.013028	0	0.000000	0.000000
4003	-0.023615	0.062158	0.581225	-0.048563	0.029351	0	0.000000	0.000000
17070	-0.023615	0.062158	0.581225	-0.181853	0.029616	0	0.000000	0.000000
19077	-0.023615	0.062158	0.581225	0.106749	-0.168780	0	0.000000	0.000000
35830	-0.023615	0.062158	0.581225	-0.370665	0.172554	0	0.000000	0.000000
34974	-0.023615	0.062158	0.581225	-0.334459	0.124237	0	0.000000	0.000000

****

```
2619  raw data ID 451 7548   Impact par 0.000000
3552  raw data ID 451 7640   Impact par 0.000000
3584  raw data ID 441 6572   Impact par 0.000000
4003  raw data ID 451 7697   Impact par 0.000001
17070  raw data ID 451 7694   Impact par 0.000002
19077  raw data ID 451 7177   Impact par 0.000002
35830  raw data ID 451 6666   Impact par 0.000002
34974  raw data ID 451 6156   Impact par 0.000098
```

evt 3223 41138 mod7 short
vtx 1 @462-451 iron
451 7548 0.0479 -0.0226
451 7640 -0.0114 0.0121
451 7697 -0.0486 0.0292
451 7694 -0.1830 0.0289
451 7177 0.1077 -0.1705

452 6156 -0.347 0.125 *

track(*) has large IP. pl461,462 have no track seg.
pl451,452,441,442 have track seg.