

Oahu 13 Fork Layout

*****FINAL CONFIGURATION***** email from Carol on 12/12/12

Track 1 == Es

Track 3 == Disc 1, aperture 1 (fiber 2)

Track 5 == Disc 2, aperture 2 (fiber 3)

Track 7 == bare fiber deep, aperture 3 (fiber 4)

Track 9 == bare fiber shallow, aperture 4 (fiber 5)

Track 11 == Disc 3, aperture 5 (fiber 6)

Track 13 == Disc 4, aperture 6 (fiber 7)

Track 14 == white LED via shutter block (no fiber, internal)

Table 1. Top view of fork, Sept 12 GMT (11th HST) to date [Sept 15/16 GMT (15th HST)]. The origin is where the crossbar intersects the center tine, x (positive in the tine direction) and y (positive to the right). The (x,y) are the aperture locations in the plane of the fork.

Tine	Aper.#*	x [cm]	y [cm]	Disk diam [cm]	Fiber #	Track #
Leftmost	1	152.5	236	32	F2	3
Leftmost'	1'	164.5	236	56	F2	3
	2	153	78	7	F3	5
Center left	3	175	4.5	BF deep	F4	7
Center right	4	175	-4.5	BF shlw	F5	9
	5	157	-78.5	16	F6	11
Rightmost	6	156	-236	24	F7	13

*using Jim's numbering system (he looked up from underneath).

The central tine is 2.54 cm in diameter. The BF deep is 49.5cm from the top of the central tine; the BF shallow is 9.3 cm from the top of the central tine.

For the two bare fiber apertures on the central tine, the x distance from the end of the tine to the aperture is about 41cm (was marked ~36cm in the earlier drawing).

On the first three days, the BF deep had a tendency to rotate about z up to about 30deg so it was pointing towards aperture 1. This is because of the prevailing conditions. Terry worked on stabilizing this structure.

On Sept 15 HST (Saturday) the first five floats were painted black. The SMA connector on the disks was adjusted to make it flush to avoid trapping bubbles (the offset was about a millimeter).

The 56 cm disk was swapped for the 32 cm disk on several days. It was fitted into the slot for the 32 cm disk, so the aperture was further out by 11 cm ($0.5 \times (56-32)$). Note the log sheets call this the 50cm disk, but it measures 56 cm and the label says 56 cm.

The fork was remeasured on Sept 21, as we will take it apart later. The x-dimensions were consistent with the table above, to within a centimeter. However, this time, I measured the aperture “y” separations between apertures, not the separation of the tines at the crossbar. For apertures 1 to 2, I got 143 cm, not 158 cm. For apertures 5 & 6, I got 134 cm, not 157.5 cm. This is because there is flexibility in the tines.