```
;
OPTION,ECHO;
! <LHCB1 aperture definitions derived from the LHC Functional Layout Database,
augmented with information from the aperture version of the sequence file in
gaps between beam screens of length > 7. Meter.>;
OPTION,ECHO;
OPTION,-ECHO;
LHCB1$START, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
IR11$START, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
IP1, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
TAS.1R1, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
BPMSW.1R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
BPMSW.1R1.B2, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
MQXA.1R1, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
MCBX.1R1, APERTYPE=RECTELLIPSE,APERTURE={0.0192, 0.0241, 0.0241, 0.0241};
BPMS.2R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.023773, 0.028673, 0.028673,
0.028673};
BPMS.2R1.B2, APERTYPE=RECTELLIPSE,APERTURE={0.023773, 0.028673, 0.028673,
0.028673};
MQXB.A2R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MCBX.2R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MQXB.B2R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
TASB.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MQSX.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MQXA.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MCBXA.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MCX3.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
MCX2.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0241, 0.029, 0.029, 0.029};
DFBXB.3R1, APERTYPE=RECTELLIPSE,APERTURE={0.0361491, 0.02969, 0.0361491,
0.0361491};
MBXW.A4R1, APERTYPE=RECTELLIPSE,APERTURE={0.0412064, 0.0293061, 0.0412064,
0.0412064};
MBXW.B4R1, APERTYPE=RECTELLIPSE,APERTURE={0.0456138, 0.0289716, 0.0456138,
0.0456138};
MBXW.C4R1, APERTYPE=RECTELLIPSE,APERTURE={0.0500213, 0.028637, 0.0500213,
0.0500213};
MBXW.D4R1, APERTYPE=RECTELLIPSE,APERTURE={0.0544287, 0.0283024, 0.0544287,
0.0544287};
MBXW.E4R1, APERTYPE=RECTELLIPSE,APERTURE={0.0588362, 0.0279679, 0.0588362,
0.0588362};
MBXW.F4R1, APERTYPE=RECTELLIPSE,APERTURE={0.0632436, 0.0276333, 0.0632436,
0.0632436};
-- continue IR1 --
MBRC.4R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0314, 0.0265, 0.0314, 0.0314};
-- rest of IR1 --
MQM.A7R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQM.B7R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MCBCH.7R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202,
0.02202};
S.DS.R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MCDO.8R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MB.A8R1.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
-- A full arc --
E.DS.L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
BPM.7L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQM.B7L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQM.A7L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
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MCBCH.7L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202,
0.02202};
DFBAC.7L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0216595, 0.0175956,0.0220684,
0.0220684};
MCBCV.6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0177, 0.0226, 0.0226, 0.0226};
MQML.6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0177, 0.0226, 0.0226, 0.0226};
MQM.6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0177, 0.0226, 0.0226, 0.0226};
BPMR.6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02, 0.02, 0.02, 0.02};
MSIB.C6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02, 0.02, 0.02, 0.02};
MSIB.B6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02, 0.02, 0.02, 0.02};
MSIB.A6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02, 0.02, 0.02, 0.02};
MSIA.B6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02, 0.02, 0.02, 0.02};
MSIA.A6L2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02, 0.02, 0.02, 0.02};
TCL.7R2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
DFBAD.7R2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202,
0.02202};
-- rest of IR2 --
BPM.7R2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQM.A7R2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQM.B7R2.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
-- a full arc --
E.DS.L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
BPM.7L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQ.7L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202, 0.02202};
MQTLI.7L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202,0.02202};
MCBCV.7L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02202, 0.01714, 0.02202,0.02202};
DFBAE.7L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.02203, 0.0171496,
0.02203,0.02203};
MCBCH.6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
MQTLH.F6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
MQTLH.E6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
MQTLH.D6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
MQTLH.C6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
MQTLH.B6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
MQTLH.A6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0226, 0.0177, 0.0226, 0.0226};
BPMR.6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
MBW.F6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
MBW.E6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
MBW.D6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
TCP.6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.03, 0.03, 0.03, 0.03};
TCHSH.6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
MBW.C6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
MBW.B6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
MBW.A6L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0315, 0.023, 0.0315, 0.0315};
BPMW.B5L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0145, 0.025491, 0.0145,0.025491};
MQWA.E5L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0145, 0.025491, 0.0145,0.025491};
MQWA.D5L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0145, 0.025491, 0.0145,0.025491};
TCSG.5L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0145, 0.025491, 0.0145, 0.025491};
TCSM.5L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0145, 0.025491, 0.0145, 0.025491};
MQWA.C5L3.B1, APERTYPE=RECTELLIPSE,APERTURE={0.0145, 0.025491, 0.0145,0.025491};
```