

Change in particle flux: Standard 1.1 degree hole around the beampipe Beampipe hole increased by 3cm in JD

G

th.n: 7.3kHz +12%
 hi.n: 965 Hz +12%
 had: 184 Hz +11%
 c.r.: 35 Hz +10%
 p.r.: 6.3 Hz +1%

th.n. = thermal neutron rate (neutrons < 100 keV)
 hi.n. = high energy neutron rate (neutrons > 100 keV)
 had = charged and neutral hadron rate > 20 MeV
 c.r. = counting rate
 $= 0.0005n + 0.0117 \gamma + (\mu + p + \pi + 0.25e) / 2$
 p.r. = penetrating particle rate
 $= 0.1 \cdot 0.0117 \gamma + (\mu + p + \pi + 0.25e) / 2$

F

th.n: 6.4kHz +12%
 hi.n: 898 Hz +7%
 had: 173 Hz +10%
 c.r.: 34 Hz +7%
 p.r.: 7.0Hz -3%

Forward
Toroid

th.n: 29 kHz +5%
 hi.n: 9.5kHz +7%
 had: 1.9kHz +9%
 c.r.: 222 Hz +7%
 p.r.: 57 Hz +6%

th.n: 8.3kHz +14%
 hi.n: 1.1kHz +17%
 had: 387 Hz +16%
 c.r.: 83 Hz +11%
 p.r.: 17.5Hz +15%

th.n: 2.5kHz +5%
 hi.n: 579 Hz +1%
 had: 31 Hz +2%
 c.r.: 24 Hz +7%
 p.r.: 5.0 Hz -1%

