

Two nozzles

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Muon Collider Physics and Detector Meeting

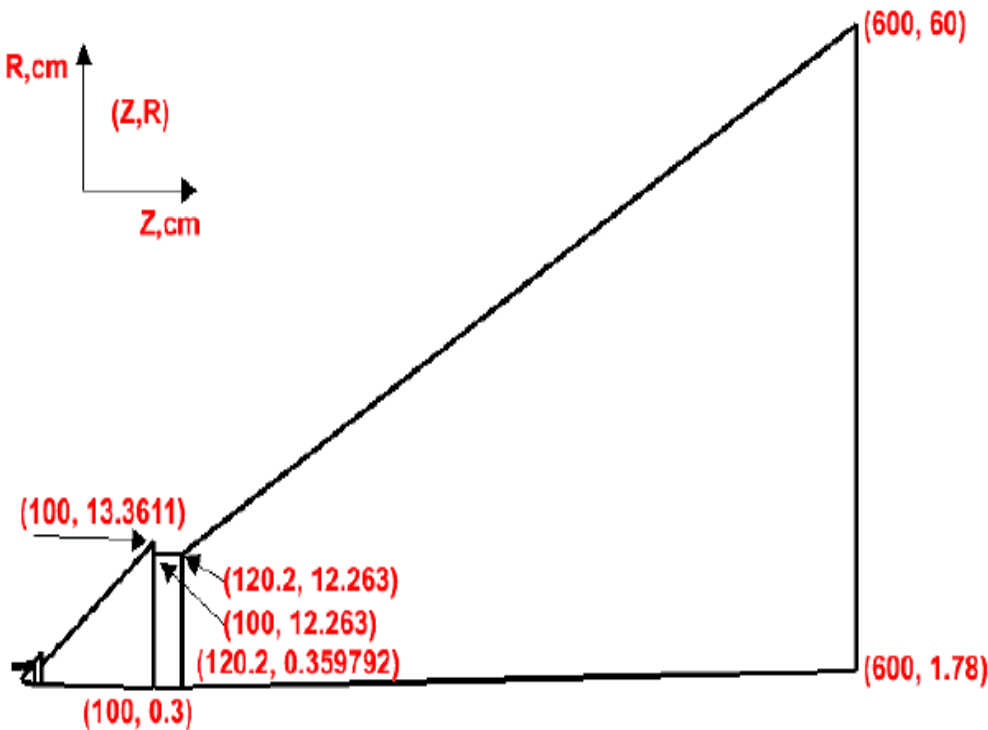
November 17, 2010

Fermilab

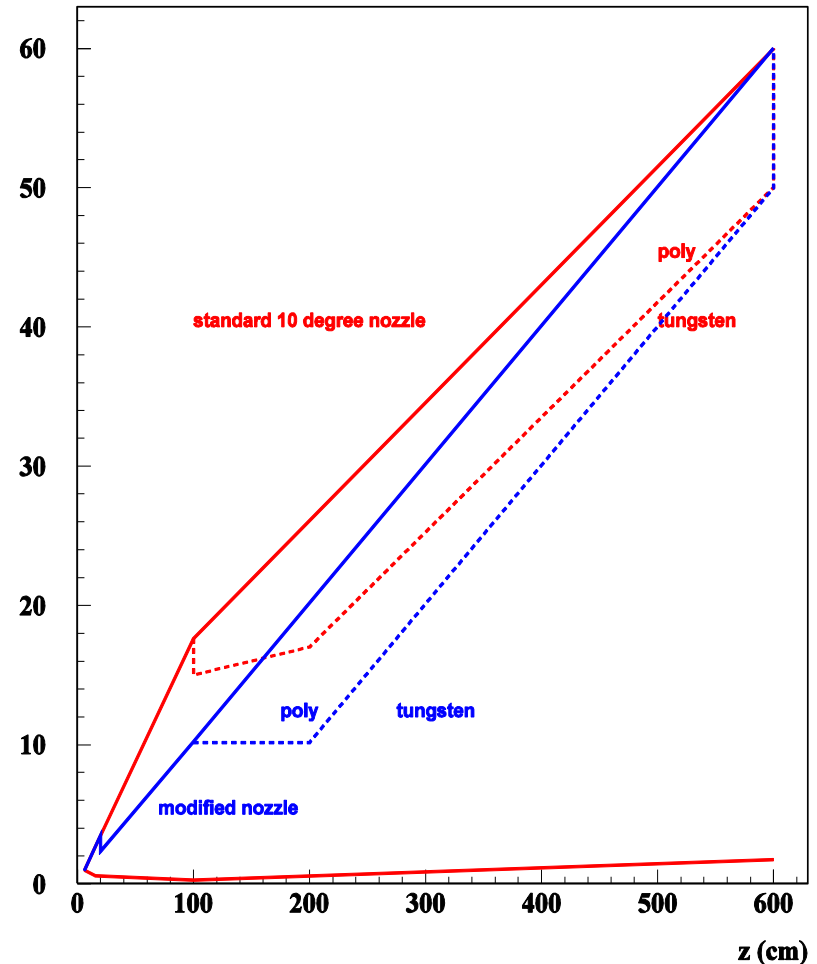
New v.s. old nozzle geometry

Terentiev – 11/10/2010

General view

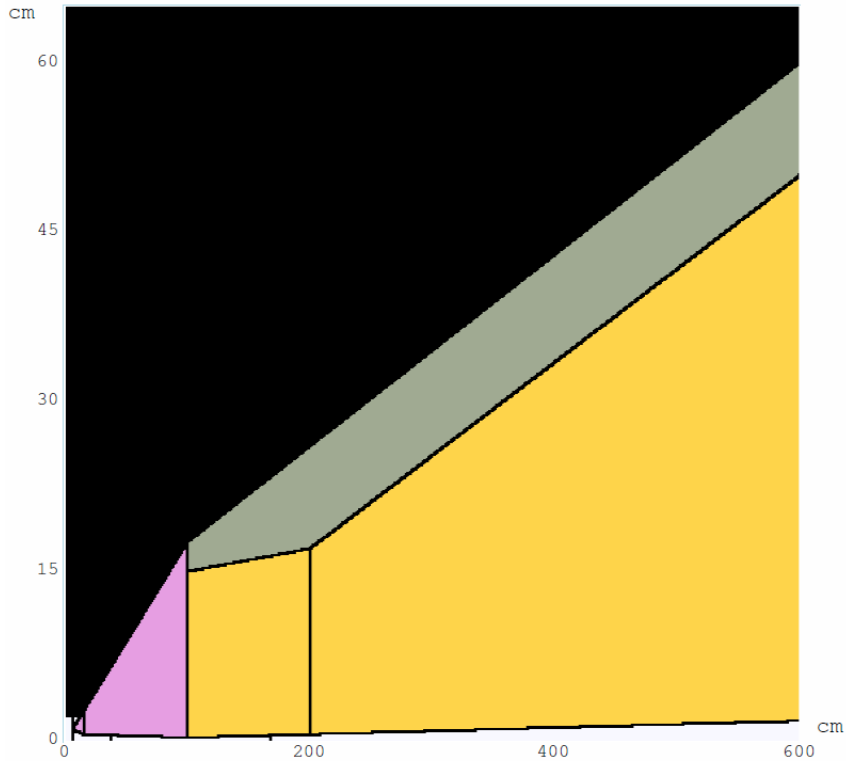


Included to MARS background simulations

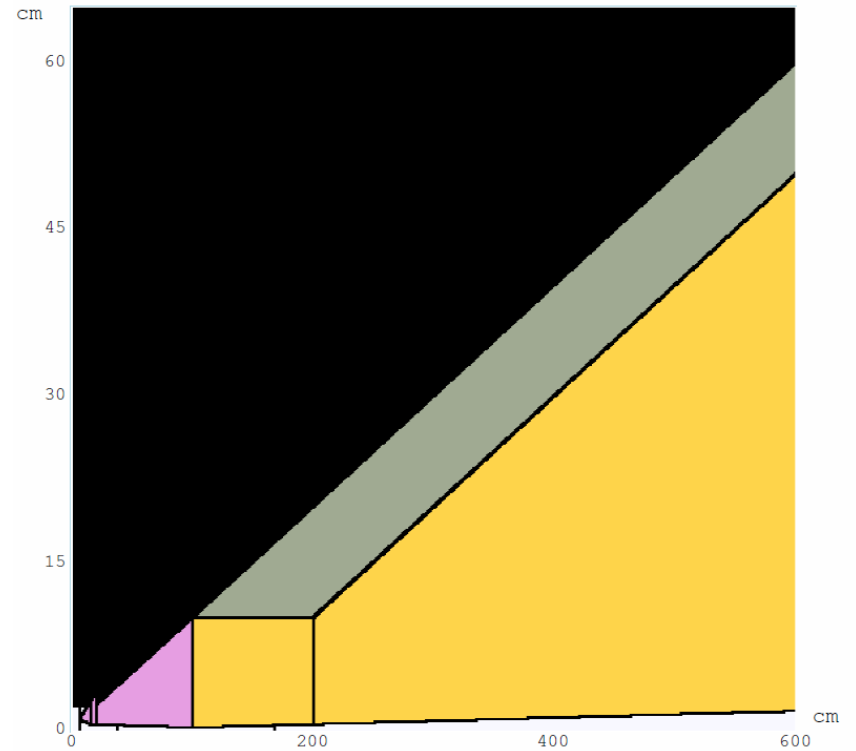


Nozzle geometry in MARS

Standard 10 degree nozzle



New nozzle



Comparison new and old shielding

Tungsten radiation length – 0.35 cm
 Tungsten nuclear interaction length – 10 cm.
 10 cm tungsten -29 gamma/electron interactions.
 10 cm tungsten – 1 proton/neutron interaction.

new/old shielding ratio

	number	energy
Gamma	26	28
Positron	14	8
Electron	26	15
Muon	38	3.5
Neutron	3.2	2.2
Ch hadron	2.5	2.8

