

QA of embedding

- StsPoints to StsHits conversion efficiency
- CscPoints to StsHits conversion efficiency
- How to make a map between experimental and MC events?



StsPoints to StsHits conversion efficiency



- Stations 1-3 are Si
- Stations 4-9 are GEM
- Even sectors of GEM are hot zones
- Odd sectors of GEM are main zones

Vasilii Plotnikov, 20.07.2020



StsPoints to StsHits conversion efficiency

MC points embedding denominator by station by sector

	1		2	3	4	5	6	7	8	9 station
	1 355	55 4	4774	834	1333	1864	1820	1280	1904	938
2	2251	8 4	4101	2887	2910	2352	1751	1025	1421	568
;	3=168	80		2361	1600	1401	1353	1821	1122	1934
	4-95	6		472	2947	2322	1339	1607	737	1250
!	5			714						
(6			1229						
se.	7			1199						
	8			149						
	8 E			149						

- The number of MC Points to be converted
- Using only points which give digits in the strips
- Enough statistics in the each sector



StsPoints to StsHits conversion efficiency

MC points embedding efficiency by station by sector



- The lowest efficiency for hot zones of GEM1
- Possibly due to the largest MC Points density according to the pitch size

Vasilii Plotnikov, 20.07.2020



StsPoints to StsHits conversion efficiency

MC points embedding efficiency for station GEM1



- The same efficiency for GEM1 using net of squares with the side length 2cm
- No special regions are visible
- Efficiency rises with the distance from the station center

BM@N CscPoints to StsHits conversion efficiency



- The number of CSC Points to be converted
- Using only points which give digits in the strips
- Enough statistics in the each sector

CscPoints to StsHits conversion efficiency



 Large and uniform conversion efficiency in all CSC sectors



How to make a map between experimental and MC events?

- For run 4649 we have ~6.5K PV
- For MC run we have 50K generated events
- Now we make a loop over exp PV for all MC events
- Does event have reconstructable π⁺ depends on PV (physical issue)
- About 20% reconstructed π^+ now have use the same PV (technical issue)