

# ATLAS Tracer R1.0

web based interactive learning tool of  
ATLAS facilities and physical processes

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## ATLAS Tracer

### New features

- User interface
- XML opening possibility(from server)
- Helper grid
- Geometry cuts
- Info bar
- Track filter

### Coming soon

- Missing ET
- Filter for jets
- “Beautiful” geometries

# User interface

## Tools

Options

**ATLAS TRACER**

**DETECTOR COMPONENTS**

- Pixel
- LAr Barrel
- SCT
- TRT
- LAr EndCap
- Tile Barrel
- Tile EndCap
- Muon Barrel
- Muon EndCap

**EVENTS**

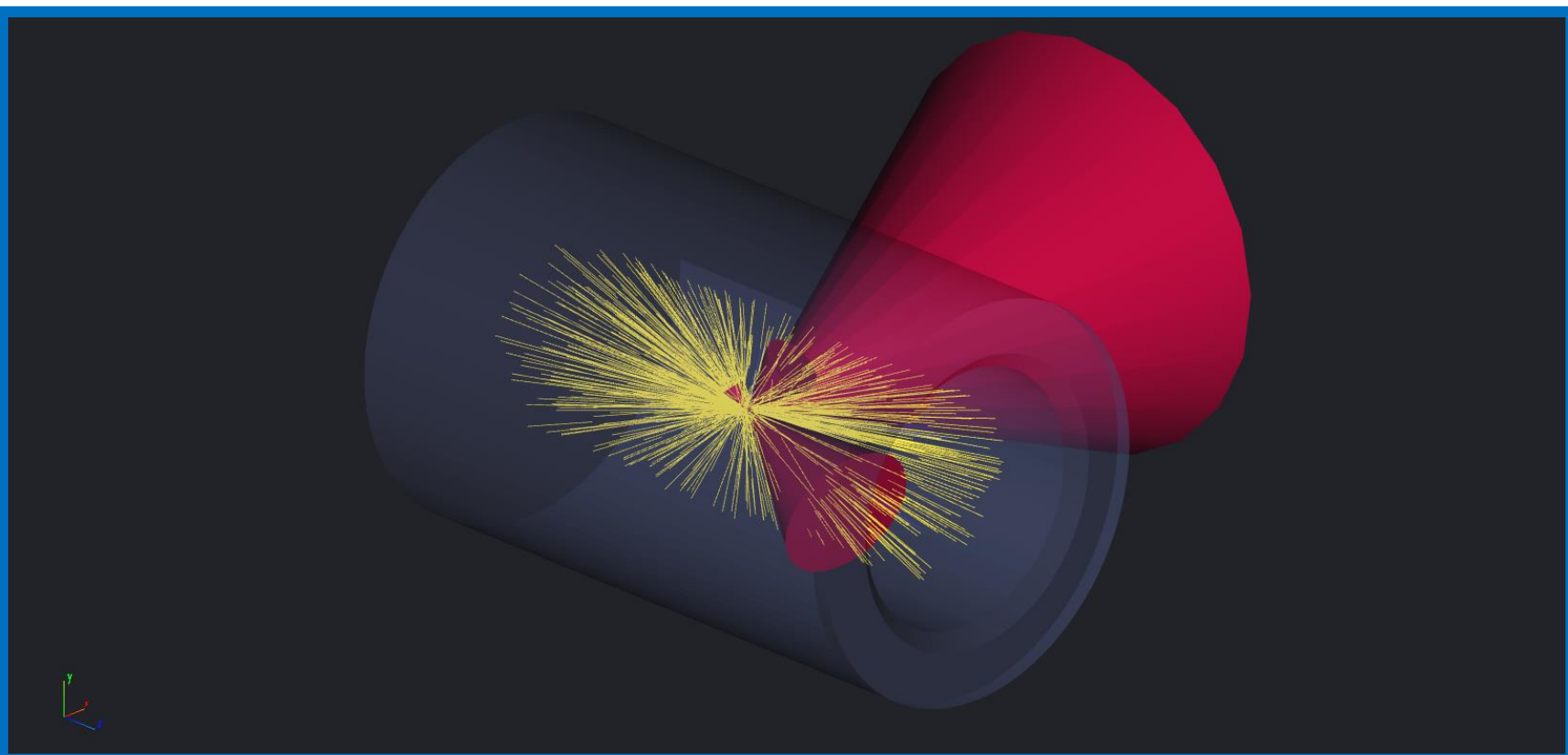
Track Filter

Jet

Visitors: 000430

Tools

- Folder icon
- Navigation arrows (< >)
- Detector component icons (yellow cubes)
- Hand icon
- Grid icon
- Lighting icons (sun, moon, lightbulb)
- Info icon (i)



Scene

Jet	storegate	key	$\phi$	$\eta$	pT	E	ET	isGood	isBad	isUgly	hecf	n90cells	n90const	emfrac	quality	qLAr	jvf	time	clus time	Out-Of-Time	Energy fraction	fracSamplingMax	sMax	tileGap3f	fcorCell	fcorJet	fcorDotx
AntiKt4TopoJets	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

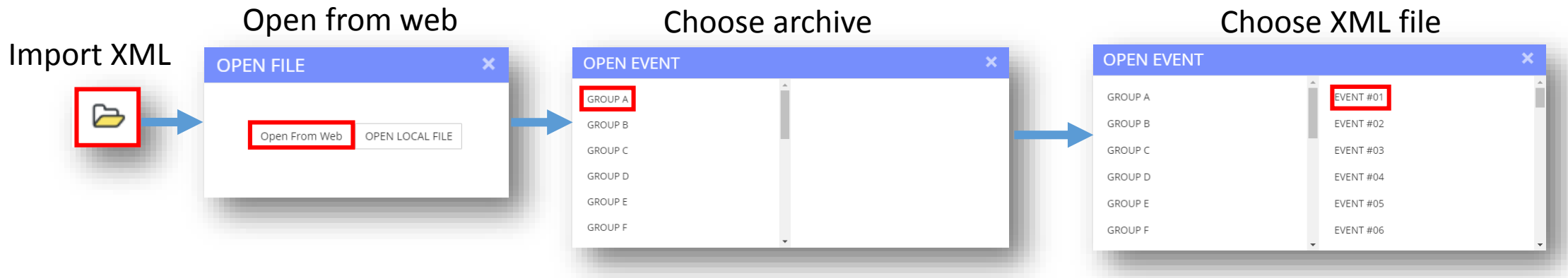
Event	event	date	time	number	property	lumiBlock	runNumber	Version
Event	03/50	2012-06-11	02:17:53UTC	2877925	default	100	204796	17.2.4.10

Track	$\phi$	$\eta$	pT	P	tL	chi2	numDot	numPixelHits	numSCTHits	numTRTHits	$\theta$	charge	e/ $\mu$
Track	0.000	0.000	0.000	0.000	null	0.000	0.000	0.000	0.000	0.000	0.000	+/-	null

Info Box

# Multiple XML opening possibility(from server)



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- Muon EndCap

EVENTS

Track Filter

Jet

jet	storegate	key	$\phi$	$\eta$	pT	E	ET	isGood	isBad	isUgly	hecf	n90cells	n90const	emfrac	quality	qLAr	jvf	time	clus	time	Out-Of-Time	Energy	fraction	fracSamplingMax	sMax	tileGap3f	fcorCell	fcorJet	fcorDotx
Antik44Topojets	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

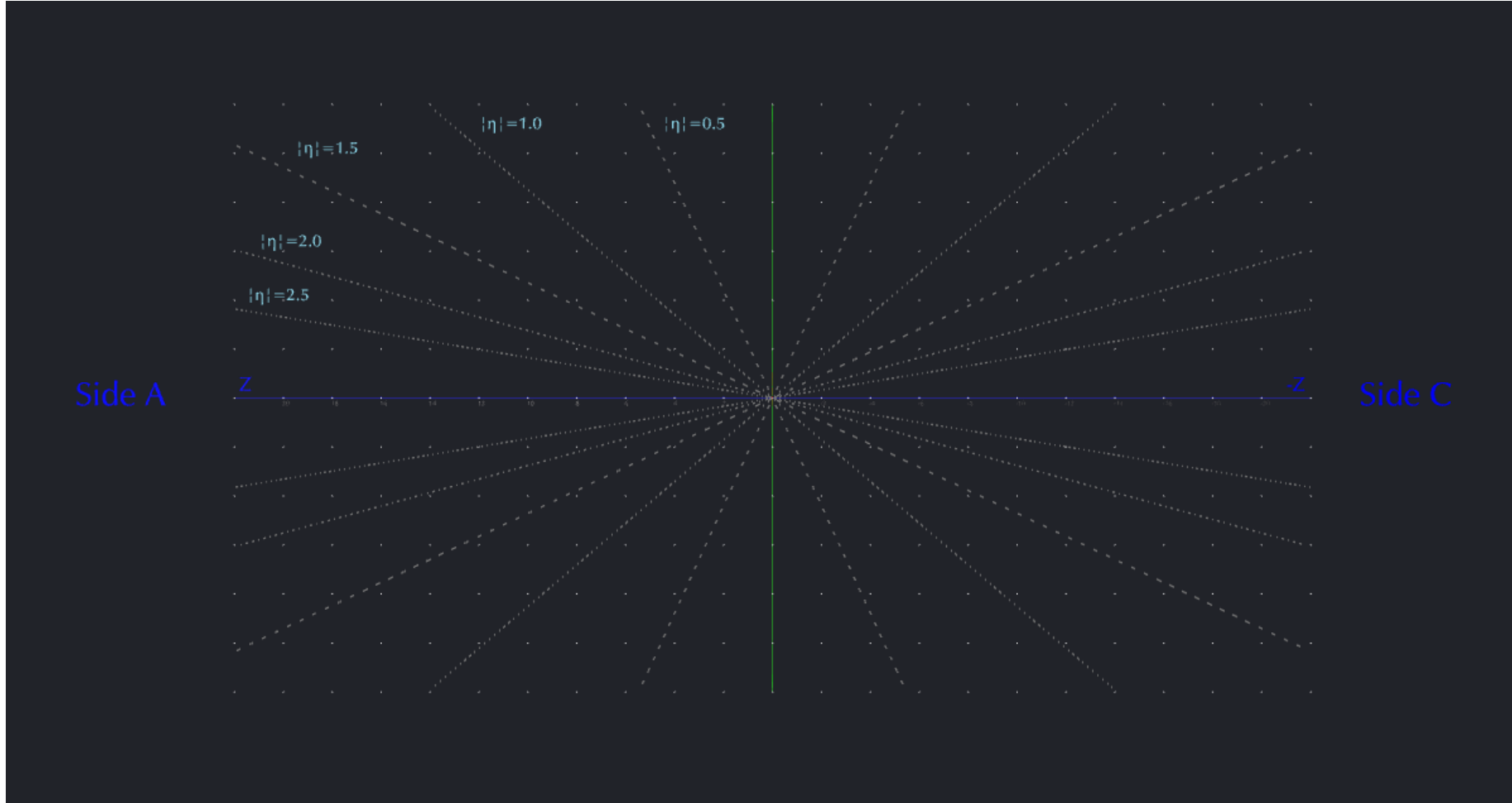
Event	event	date	time	number	property	lumiBlock	runNumber	Version
	01/50	2012-06-10	12:20:12CEST	56406477	default	336	204769	17.2.4.10

Track	$\phi$	$\eta$	pT	P	tl	chi2	numDot	numPixelHits	numSCTHits	numTRTHits	$\theta$	charge	e/ $\mu$
	0.000	0.000	0.000	0.000	null	0.000	0.000	0.000	0.000	0.000	0.000	+/	null

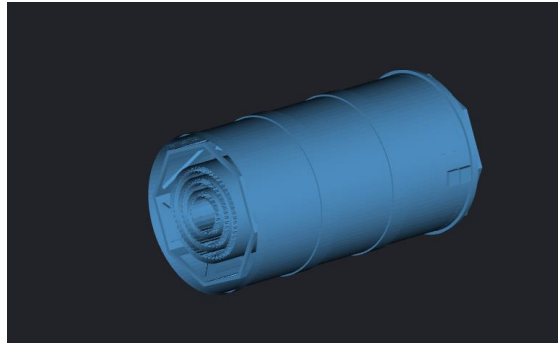
Visitors: 000434

Switch between XML files

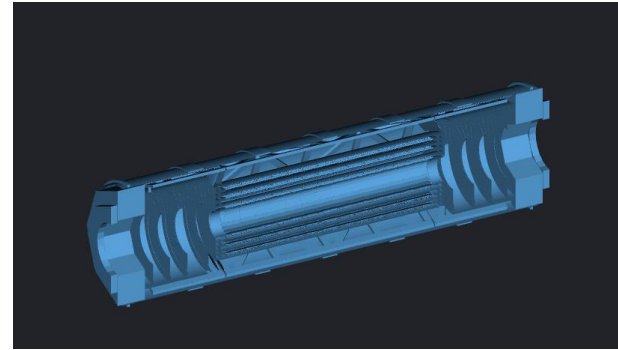
# Helper grid



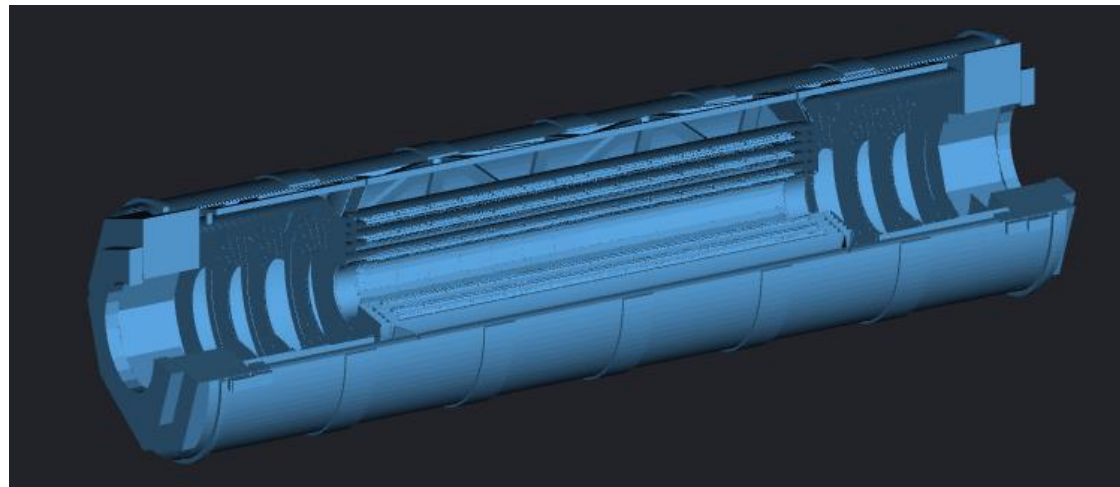
# Geometry cuts



Cut by XOY plane



Cut by YOZ plane



$\frac{1}{4}$  cut

## Info bar

Jet	storegate key	$\phi$	$\eta$	pT	E	ET	isGood	isBad	isUgly	hecf	n90cells	n90const	emfrac	quality	qLAr	jvf	time	clus time	Out-Of-Time	Energy fraction	fracSamplingMax	sMax	tileGap3f	fcorCell	fcorJet	fcorDotx			
	AntiKt4TopoEMJets	-2.994		1.857		61.100		200.486		61.118	1.000	0.000	0.000	0.000	35	1	0.989	0.070	0.070	0.000	0.413	0.473	0.006	0.672	6	0.000	0.000	0.000	0.000
Event	event	date	time	number	property	lumiBlock	runNumber	Version																					
	01/50	2012-06-10	12:20:12CEST	56406477	default	326	204769	17.2.4.10																					
Track	$\phi$	$\eta$	pT	P	tL	chi2	numDot	numPixelHits	numSCTHits	numTRTHits	$\theta$	charge	e/ $\mu$																
	-2.643	2.356	0.465	0.404	null	20.234	17.000	6.000	10.000	0.000	0.19	-	e																

Jet or track click displays information

## Track filter

Track	Filter
$\varphi >$	value
$\eta >$	value
$p_T >$	value
$P >$	value
$\theta >$	value

charge  +  -

Filtering tracks by its parameters



## Coming soon

- Missing ET
- Filter for jets
- “Beautiful” geometries