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TODAC - User's Guide - Luminosity

Command Line Interface

todac luminosity <path> -type <type> [-h] [-label <label>] [-lsLengthSec <lsLengthSec>]

Argument	Required	Default value	Description
<path>	Yes		Path to a CSV file in a proper format (see below for allowed formats of luminosity CSVs)
-type <type>	Yes		Type of luminosity stored in <path> <type> must be one of the following: byLs, byLsXing
-h	No		Prints help
-label <label>	No	A label based on <source> content	Allows to specify database label explicitly Note: <label> must not contain white spaces Note: <label> length must not exceed 50 characters
-lsLengthSec <lsLengthSec>	No	23.310779056686375	Allows to specify custom lsLengthSec (luminosity section length in seconds) value Note: <lsLengthSec> must be greater than 0

Examples

Show help:

```
todac luminosity -h
```

Insert data for a single run:

```
todac luminosity luminosity/fill_2814_lumibyls.csv -type byLs
```

Specify custom label:

```
todac luminosity luminosity/fill_2814_lumibyls.csv -type byLs -label my_own_label
```

Specify custom lsLengthSec value:

```
todac luminosity luminosity/fill_2814_lumibylsXing.csv -type byLsXing -lsLengthSec 22.88421882
```

Web Interface

Browse

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Luminosity type LuminosityByLs
 LuminosityByLsXing

Label

Timestamp

Version

Argument	Required	Default value	Description
Luminosity type	Yes	LuminosityByLs	Type of luminosity
Label	Yes		Note: <label> must not contain white spaces Note: <label> length must not exceed 50 characters
Timestamp	Yes		Note: Must be of following Java format MM/dd/yy HH:mm:ss
Version	No	Latest	Data version

Populate

Luminosity type LuminosityByLs
 LuminosityByLsXing

Label

LsLengthSec

File No file selected.

Argument	Required	Default value	Description
Luminosity type	Yes	LuminosityByLs	Type of luminosity
Label	Yes		Note: <label> must not contain white spaces Note: <label> length must not exceed 50 characters
LsLengthSec	No	23.310779056686375	Allows to specify custom LsLengthSec (luminosity section length in seconds) value Note: <LsLengthSec> must be greater than 0
File	Yes		File to upload

Supported file formats

LuminosityByLs

LuminosityByLs type is stored in CSV files with following column types:

Column name	Value type	Example value
Run:Fill	Two integers separated by a colon	198405:2814
LS	String	1:1
UTCTime	Timestamp (MM/dd/yy HH:mm:ss)	01/30/12 13:52:45
Beam Status	String	RAMP DOWN
E (GeV)	Double	2737.7

Browse

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Delivered(/ub)	Double	10.042
Recorded(/ub)	Double	12.321
avgPU	Double	321.456

Lines starting with a * (star) symbol will be ignored (treated as a comment).

Column names will be validated for compatibility (character casing will be ignored).

Label (if not explicitly specified as program argument) will be extracted from a comment line in following format:

```
* lumitype: HF , datatag: v8 , normtag: HFV2c , worktag: V04-01-09
```

Label extracted from above line will have a following value:

```
HF;v8;HFC2c;V04-01-09
```

Example file

```
*****
* Mon Nov 19 15:19:40 2012 UTC
* lumitype: HF , datatag: v8 , normtag: HFV2c , worktag: V04-01-09
*
* by:
* /afs/cern.ch/work/x/xyz/CMSSW_4_2_4_v1/CMSSW_4_2_4/bin/sl5_amd64_gcc434/lumiCalc2.py
*
* update: NONE
*****
Run:Fill,LS,UTCTime,Beam Status,E(GeV),Delivered(/ub),Recorded(/ub),avgPU
198405:2814,1:1,07/06/12 12:52:23,RAMP DOWN,2737.7,0.0,0.0,0.0
198405:2814,2:2,07/06/12 12:52:46,RAMP DOWN,2110.6,0.0,0.0,0.0
198405:2814,3:3,07/06/12 12:53:09,RAMP DOWN,1970.9,0.0,0.0,0.0
198405:2814,4:4,07/06/12 12:53:33,RAMP DOWN,1831.3,0.0,0.0,0.0
```

LuminosityByLsXing

LuminosityByLsXing type is stored in CSV files with following column types:

Column name	Value type	Example value
run:fill	Two integers separated by a colon	198405:2814
ls	String	1:1
UTCTime	Timestamp (MM/dd/yy HH:mm:ss)	01/30/12 13:52:45
Delivered(/ub)	Double	10.042
Recorded(/ub)	Double	12.321
"[bx,Hz/ub]"	Multiple double values separated by commas	321.456, 21.0, 322.912, 0.0, 1.0, 22.3

Lines starting with a * (star) symbol will be ignored (treated as a comment).

Column names will be validated for compatibility (character casing will be ignored).

Label (if not explicitly specified as program argument) will be extracted from a comment line in following format:

```
* lumitype: HF , datatag: v8 , normtag: HFV2c , worktag: V04-01-09
```

Label extracted from above line will have a following value:

```
HF;v8;HFC2c;V04-01-09
```

Example file

```
*****
* Mon Nov 19 15:06:31 2012 UTC
* lumitype: HF , datatag: v8 , normtag: HFV2c , worktag: V04-01-09
*
* by:
* /afs/cern.ch/work/x/xyz/CMSSW_4_2_4_v1/CMSSW_4_2_4/bin/slc5_amd64_gcc434/lumiCalc2.py
*
* update: NONE
*****
run:fill,ls,UTCTime,delivered(/ub),recorded(/ub),"[bx,Hz/ub]"
198405:2814,1:1,07/06/12 12:52:23,0.0,0.0,0,8.28939131983e-05,1,7.93557370632e-05,2,7.95242188866
198405:2814,2:2,07/06/12 12:52:46,0.0,0.0,0,8.07036147878e-05,1,8.40733090996e-05,2,7.9018767632e
198405:2814,3:3,07/06/12 12:53:09,0.0,0.0,0,6.95836409124e-05,1,8.07036147878e-05,2,8.33993702372
198405:2814,4:4,07/06/12 12:53:33,0.0,0.0,0,8.37363396684e-05,1,8.18830049048e-05,2,8.35678520606
```

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