

This is pdfTeXk, Version 3.1415926-1.40.9 (Web2C 7.5.7) (format=pdflatex 2008.10.25) 4 NOV 2008 23:20

entering extended mode

\write18 enabled.

%&-line parsing enabled.

**cettefoisclabonne.tex

(./cettefoisclabonne.tex

LaTeX2e <2005/12/01>

Babel <v3.8l> and hyphenation patterns for english, usenglishmax, dumylang, nohyphenation, german-x-2008-06-18, ngerman-x-2008-06-18, ancientgreek, ibycus, arabic, basque, bulgarian, catalan, pinyin, coptic, croatian, czech, danish, dutch, esperanto, estonian, farsi, finnish, french, galician, german, ngerman, monogreek, greek, hungarian, icelandic, indonesian, interlingua, irish, italian, latin, mongolian, mongolian2a, bokmal, nynorsk, polish, portuguese, romanian, russian, sanskrit, serbian, slovak, slovenian, spanish, swedish, turkish, ukenglish, ukrainian, uppersorbian, welsh, loaded.

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/article.cls

Document Class: article 2005/09/16 v1.4f Standard LaTeX document class

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/size12.clo

File: size12.clo 2005/09/16 v1.4f Standard LaTeX file (size option)

)

\c@part=\count79

\c@section=\count80

\c@subsection=\count81

\c@subsubsection=\count82

\c@paragraph=\count83

\c@subparagraph=\count84

\c@figure=\count85

\c@table=\count86

\abovecaptionskip=\skip41

\belowcaptionskip=\skip42

\bibindent=\dimen102

)

(/usr/local/texlive/2008/texmf-dist/tex/latex/ae/ae.sty

Package: ae 2001/02/12 1.3 Almost European Computer Modern

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/fontenc.sty

Package: fontenc 2005/09/27 v1.99g Standard LaTeX package

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/t1enc.def

File: t1enc.def 2005/09/27 v1.99g Standard LaTeX file

LaTeX Font Info: Redeclaring font encoding T1 on input line 43.

)

LaTeX Font Info: Try loading font information for T1+aer on input line 100.

(/usr/local/texlive/2008/texmf-dist/tex/latex/ae/t1aer.fd

File: t1aer.fd 1997/11/16 Font definitions for T1/aer.

)))

(/usr/local/texlive/2008/texmf-dist/tex/latex/aeguill/aeguill.sty

Package: aeguill 2003/08/02 1.02 AE fonts with french guillemets (D. Roegel)

)

(/usr/local/texlive/2008/texmf-dist/tex/generic/babel/babel.sty

Package: babel 2008/07/06 v3.8l The Babel package

(/usr/local/texlive/2008/texmf-dist/tex/generic/babel/frenchb.ldf

Language: frenchb 2008/05/08 v2.2a French support from the babel system

(/usr/local/texlive/2008/texmf-dist/tex/generic/babel/babel.def

File: babel.def 2008/07/06 v3.8l Babel common definitions

\babel@savecnt=\count87

\U@D=\dimen103

)

Package babel Info: Making : an active character on input line 119.

Package babel Info: Making ; an active character on input line 120.

Package babel Info: Making ! an active character on input line 121.

Package babel Info: Making ? an active character on input line 122.

\FB@Mht=\dimen104

\std@mcc=\count88

\dec@mcc=\count89

\parindentFFN=\dimen105

* Local config file frenchb.cfg used

*

(/usr/local/texlive/2008/texmf-dist/tex/generic/babel/frenchb.cfg)))

(/usr/local/texlive/2008/texmf-dist/tex/latex/carlisle/scalefnt.sty)

(/usr/local/texlive/2008/texmf-dist/tex/latex/graphics/keyval.sty

Package: keyval 1999/03/16 v1.13 key=value parser (DPC)

\KV@toks@=\toks14

)

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/inputenc.sty

Package: inputenc 2006/05/05 v1.1b Input encoding file

\inpenc@prehook=\toks15

\inpenc@posthook=\toks16

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/applemac.def

File: applemac.def 2006/05/05 v1.1b Input encoding file
)
(/usr/local/texlive/2008/texmf-dist/tex/latex/amsmath/amsmath.sty
Package: amsmath 2000/07/18 v2.13 AMS math features
\@mathmargin=\skip43

For additional information on amsmath, use the '?' option.
(/usr/local/texlive/2008/texmf-dist/tex/latex/amsmath/amstext.sty
Package: amstext 2000/06/29 v2.01

(/usr/local/texlive/2008/texmf-dist/tex/latex/amsmath/amsgen.sty
File: amsgen.sty 1999/11/30 v2.0

\@emptytoks=\toks17

\ex@=\dimen106

)

(/usr/local/texlive/2008/texmf-dist/tex/latex/amsmath/amsbsy.sty

Package: amsbsy 1999/11/29 v1.2d

\pmbraise@=\dimen107

)

(/usr/local/texlive/2008/texmf-dist/tex/latex/amsmath/amsopn.sty

Package: amsopn 1999/12/14 v2.01 operator names

)

\inf@bad=\count90

LaTeX Info: Redefining \frac on input line 211.

\uproot@=\count91

\leftroot@=\count92

LaTeX Info: Redefining \overline on input line 307.

\classnum@=\count93

\DOTSCASE@=\count94

LaTeX Info: Redefining \ldots on input line 379.

LaTeX Info: Redefining \dots on input line 382.

LaTeX Info: Redefining \cdots on input line 467.

\Mathstrutbox@=\box26

\strutbox@=\box27

\big@size=\dimen108

LaTeX Font Info: Redefining font encoding OML on input line 567.

LaTeX Font Info: Redefining font encoding OMS on input line 568.

\macc@depth=\count95

\c@MaxMatrixCols=\count96

\dotsspace@=\muskip10

\c@parentequation=\count97

\dspbrk@|vl=\count98

\tag@help=\toks18

```

\row@=\count99
\column@=\count100
\maxfields@=\count101
\andhelp@=\toks19
\eqnshift@=\dimen109
\alignsep@=\dimen110
\tagshift@=\dimen111
\tagwidth@=\dimen112
\totwidth@=\dimen113
\lineht@=\dimen114
\@envbody=\toks20
\multlinegap=\skip44
\multlinetaggap=\skip45
\mathdisplay@stack=\toks21
LaTeX Info: Redefining \[ on input line 2666.
LaTeX Info: Redefining \] on input line 2667.
)
(/usr/local/texlive/2008/texmf-dist/tex/latex/graphics/graphicx.sty
Package: graphicx 1999/02/16 v1.0f Enhanced LaTeX Graphics (DPC,SPQR)

(/usr/local/texlive/2008/texmf-dist/tex/latex/graphics/graphics.sty
Package: graphics 2006/02/20 v1.0o Standard LaTeX Graphics (DPC,SPQR)

(/usr/local/texlive/2008/texmf-dist/tex/latex/graphics/trig.sty
Package: trig 1999/03/16 v1.09 sin cos tan (DPC)
)
(/usr/local/texlive/2008/texmf/tex/latex/config/graphics.cfg
File: graphics.cfg 2007/01/18 v1.5 graphics configuration of teTeX/TeXLive
)
Package graphics Info: Driver file: pdftex.def on input line 90.

(/usr/local/texlive/2008/texmf-dist/tex/latex/pdftex-def/pdftex.def
File: pdftex.def 2008/07/16 v0.04k Graphics/color for pdfTeX
\Gread@gobject=\count102
))
\Gin@req@height=\dimen115
\Gin@req@width=\dimen116
)
(/usr/local/texlive/2008/texmf-dist/tex/latex/base/textcomp.sty
Package: textcomp 2005/09/27 v1.99g Standard LaTeX package
Package textcomp Info: Sub-encoding information:
(textcomp)      5 = only ISO-Adobe without \textcurrency
(textcomp)      4 = 5 + \texteuro

```

(textcomp) 3 = 4 + \textohm
 (textcomp) 2 = 3 + \textestimated + \textcurrency
 (textcomp) 1 = TS1 - \textcircled - \t
 (textcomp) 0 = TS1 (full)
 (textcomp) Font families with sub-encoding setting implement
 (textcomp) only a restricted character set as indicated.
 (textcomp) Family '?' is the default used for unknown fonts.
 (textcomp) See the documentation for details.
 Package textcomp Info: Setting ? sub-encoding to TS1/1 on input line 71.

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/ts1enc.def
 File: ts1enc.def 2001/06/05 v3.0e (jk/car/fm) Standard LaTeX file
)

LaTeX Info: Redefining \oldstylenums on input line 266.
 Package textcomp Info: Setting cmr sub-encoding to TS1/0 on input line 281.
 Package textcomp Info: Setting cmss sub-encoding to TS1/0 on input line 282.
 Package textcomp Info: Setting cmtt sub-encoding to TS1/0 on input line 283.
 Package textcomp Info: Setting cmvt sub-encoding to TS1/0 on input line 284.
 Package textcomp Info: Setting cmbr sub-encoding to TS1/0 on input line 285.
 Package textcomp Info: Setting cmtl sub-encoding to TS1/0 on input line 286.
 Package textcomp Info: Setting ccr sub-encoding to TS1/0 on input line 287.
 Package textcomp Info: Setting ptm sub-encoding to TS1/4 on input line 288.
 Package textcomp Info: Setting pcr sub-encoding to TS1/4 on input line 289.
 Package textcomp Info: Setting phv sub-encoding to TS1/4 on input line 290.
 Package textcomp Info: Setting ppl sub-encoding to TS1/3 on input line 291.
 Package textcomp Info: Setting pag sub-encoding to TS1/4 on input line 292.
 Package textcomp Info: Setting pbk sub-encoding to TS1/4 on input line 293.
 Package textcomp Info: Setting pnc sub-encoding to TS1/4 on input line 294.
 Package textcomp Info: Setting pzc sub-encoding to TS1/4 on input line 295.
 Package textcomp Info: Setting bch sub-encoding to TS1/4 on input line 296.
 Package textcomp Info: Setting put sub-encoding to TS1/5 on input line 297.
 Package textcomp Info: Setting uag sub-encoding to TS1/5 on input line 298.
 Package textcomp Info: Setting ugq sub-encoding to TS1/5 on input line 299.
 Package textcomp Info: Setting ul8 sub-encoding to TS1/4 on input line 300.
 Package textcomp Info: Setting ul9 sub-encoding to TS1/4 on input line 301.
 Package textcomp Info: Setting augie sub-encoding to TS1/5 on input line 302.
 Package textcomp Info: Setting dayrom sub-encoding to TS1/3 on input line 303.
 Package textcomp Info: Setting dayroms sub-encoding to TS1/3 on input line 304.

 Package textcomp Info: Setting pxx sub-encoding to TS1/0 on input line 305.
 Package textcomp Info: Setting pxss sub-encoding to TS1/0 on input line 306.
 Package textcomp Info: Setting pxtt sub-encoding to TS1/0 on input line 307.
 Package textcomp Info: Setting txr sub-encoding to TS1/0 on input line 308.

Package textcomp Info: Setting txss sub-encoding to TS1/0 on input line 309.
 Package textcomp Info: Setting txtt sub-encoding to TS1/0 on input line 310.
 Package textcomp Info: Setting futs sub-encoding to TS1/4 on input line 311.
 Package textcomp Info: Setting futx sub-encoding to TS1/4 on input line 312.
 Package textcomp Info: Setting futj sub-encoding to TS1/4 on input line 313.
 Package textcomp Info: Setting hlh sub-encoding to TS1/3 on input line 314.
 Package textcomp Info: Setting hls sub-encoding to TS1/3 on input line 315.
 Package textcomp Info: Setting hlst sub-encoding to TS1/3 on input line 316.
 Package textcomp Info: Setting hlct sub-encoding to TS1/5 on input line 317.
 Package textcomp Info: Setting hlx sub-encoding to TS1/5 on input line 318.
 Package textcomp Info: Setting hlce sub-encoding to TS1/5 on input line 319.
 Package textcomp Info: Setting hlcn sub-encoding to TS1/5 on input line 320.
 Package textcomp Info: Setting hlcw sub-encoding to TS1/5 on input line 321.
 Package textcomp Info: Setting hlcf sub-encoding to TS1/5 on input line 322.
 Package textcomp Info: Setting pplx sub-encoding to TS1/3 on input line 323.
 Package textcomp Info: Setting pplj sub-encoding to TS1/3 on input line 324.
 Package textcomp Info: Setting ptmx sub-encoding to TS1/4 on input line 325.
 Package textcomp Info: Setting ptmj sub-encoding to TS1/4 on input line 326.
)
 (./cettefoisclabonne.aux)
 \openout1 = `cettefoisclabonne.aux'.

LaTeX Font Info: Checking defaults for OML/cmm/m/it on input line 13.
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Font Info: Checking defaults for T1/cmr/m/n on input line 13.
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Font Info: Checking defaults for OT1/cmr/m/n on input line 13.
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Font Info: Checking defaults for OMS/cmsy/m/n on input line 13.
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Font Info: Checking defaults for OMX/cmex/m/n on input line 13.
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Font Info: Checking defaults for U/cmr/m/n on input line 13.
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Font Info: Checking defaults for TS1/cmr/m/n on input line 13.
 LaTeX Font Info: Try loading font information for TS1+cmr on input line 13.

(/usr/local/texlive/2008/texmf-dist/tex/latex/base/ts1cmr.fd
 File: ts1cmr.fd 1999/05/25 v2.5h Standard LaTeX font definitions
)
 LaTeX Font Info: ... okay on input line 13.
 LaTeX Info: Redefining \degrees on input line 13.
 LaTeX Info: Redefining \dots on input line 13.

LaTeX Info: Redefining \up on input line 13.

```
(/usr/local/texlive/2008/texmf-dist/tex/context/base/supp-pdf.tex
[Loading MPS to PDF converter (version 2006.09.02).]
\scratchcounter=\count103
\scratchdimen=\dimen117
\scratchbox=\box28
\nofMPsegments=\count104
\nofMParguments=\count105
\everyMPshowfont=\toks22
\MPscratchCnt=\count106
\MPscratchDim=\dimen118
\MPnumerator=\count107
\everyMPtoPDFconversion=\toks23
) <Logo.png, id=1, 273.823pt x 132.0935pt>
File: Logo.png Graphic file (type png)
<use Logo.png> [1{/usr/local/texlive/2008/texmf-var/fonts/map/pdftex/updmap/pd
ftex.map}]
```

```
<./Logo.png (PNG copy)>]
[2] (./cettefoisclabonne.toc [3
```

```
])
\tf@toc=\write3
\openout3 = `cettefoisclabonne.toc'.
```

[4]
Underfull \hbox (badness 10000) in paragraph at lines 57--58

[]

Underfull \hbox (badness 10000) in paragraph at lines 68--69

[]

[5]
Underfull \hbox (badness 10000) in paragraph at lines 82--83

[]

Underfull \hbox (badness 10000) in paragraph at lines 91--92

□

[6]

Underfull \hbox (badness 10000) in paragraph at lines 101--102

□

Underfull \hbox (badness 10000) in paragraph at lines 101--102

□

[7]

Underfull \hbox (badness 10000) in paragraph at lines 119--121

□

Underfull \hbox (badness 10000) in paragraph at lines 119--121

□

Underfull \hbox (badness 10000) in paragraph at lines 126--127

□

Underfull \hbox (badness 10000) in paragraph at lines 126--127

□

Underfull \hbox (badness 10000) in paragraph at lines 128--132

□

Underfull \hbox (badness 10000) in paragraph at lines 128--132

□

Underfull \hbox (badness 10000) in paragraph at lines 128--132

□

[8]

Underfull \hbox (badness 10000) in paragraph at lines 133--134

□

Underfull \hbox (badness 10000) in paragraph at lines 133--134

□

Underfull \hbox (badness 10000) in paragraph at lines 135--136

□

Underfull \hbox (badness 10000) in paragraph at lines 135--136

□

Underfull \hbox (badness 10000) in paragraph at lines 137--138

□

Underfull \hbox (badness 10000) in paragraph at lines 137--138

□

Underfull \hbox (badness 10000) in paragraph at lines 139--141

□

<cs137.png, id=38, 541.0614pt x 310.2792pt>

File: cs137.png Graphic file (type png)

<use cs137.png>

LaTeX Warning: Float too large for page by 103.35793pt on input line 146.

<energychannel.png, id=40, 1073.4504pt x 587.796pt>

File: energychannel.png Graphic file (type png)

<use energychannel.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 152.

<error-energy.png, id=41, 417.2388pt x 249.5724pt>

File: error-energy.png Graphic file (type png)

<use error-energy.png>

LaTeX Warning: Float too large for page by 71.00238pt on input line 158.

[9] [10 <./cs137.png>] [11 <./energychannel.png>] [12 <./error-energy.png>]

Underfull \hbox (badness 10000) in paragraph at lines 163--166

□

Underfull \hbox (badness 10000) in paragraph at lines 163--166

□

<poisson1.png, id=60, 499.6266pt x 319.9152pt>

File: poisson1.png Graphic file (type png)

<use poisson1.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 172.

<poisson2.png, id=61, 362.7954pt x 218.7372pt>

File: poisson2.png Graphic file (type png)

<use poisson2.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 179.

Underfull \hbox (badness 10000) in paragraph at lines 181--183

□

Underfull \hbox (badness 10000) in paragraph at lines 181--183

□

<theoryvspractice.png, id=62, 499.6266pt x 319.9152pt>

File: theoryvspractice.png Graphic file (type png)

<use theoryvspractice.png>

LaTeX Warning: Float too large for page by 87.83025pt on input line 188.

Underfull \hbox (badness 10000) in paragraph at lines 190--192

□

[13] [14 <./poisson1.png>] [15 <./poisson2.png>] [16 <./theoryvspractice.png>]

Underfull \hbox (badness 10000) in paragraph at lines 197--201

□

Underfull \hbox (badness 10000) in paragraph at lines 197--201

□

Underfull \hbox (badness 10000) in paragraph at lines 197--201

□

Underfull \hbox (badness 10000) in paragraph at lines 202--205

□

Underfull \hbox (badness 10000) in paragraph at lines 202--205

□

Underfull \hbox (badness 10000) in paragraph at lines 202--205

□

Underfull \hbox (badness 10000) in paragraph at lines 206--207

□

<gpenlog.png, id=80, 434.5836pt x 286.671pt>

File: gpenlog.png Graphic file (type png)

<use gpenlog.png>

LaTeX Warning: Float too large for page by 102.33025pt on input line 221.

<gpenlin.png, id=81, 510.708pt x 351.2322pt>

File: gpenlin.png Graphic file (type png)

<use gpenlin.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 227.

[17] [18 <./gpenlog.png>] [19 <./gpenlin.png>]

Underfull \hbox (badness 10000) in paragraph at lines 234--237

□

Underfull \hbox (badness 10000) in paragraph at lines 240--243

□

Underfull \hbox (badness 10000) in paragraph at lines 240--243

□

Underfull \hbox (badness 10000) in paragraph at lines 244--247

□

<energy-x.png, id=94, 362.7954pt x 204.765pt>

File: energy-x.png Graphic file (type png)

<use energy-x.png>

LaTeX Warning: Float too large for page by 85.50238pt on input line 252.

<bragg.png, id=95, 381.5856pt x 238.491pt>

File: bragg.png Graphic file (type png)

<use bragg.png>

LaTeX Warning: Float too large for page by 71.00238pt on input line 258.

[20] [21 <./energy-x.png>] [22 <./bragg.png>]

Underfull \hbox (badness 10000) in paragraph at lines 263--271

□

Underfull \hbox (badness 10000) in paragraph at lines 263--271

□

Underfull \hbox (badness 10000) in paragraph at lines 263--271

□

Underfull \hbox (badness 10000) in paragraph at lines 263--271

□

<2theta.png, id=107, 363.2772pt x 218.7372pt>

File: 2theta.png Graphic file (type png)

<use 2theta.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 276.

[23] [24 <./2theta.png>]

Underfull \hbox (badness 10000) in paragraph at lines 281--288

□

Underfull \hbox (badness 10000) in paragraph at lines 281--288

[]

Underfull \hbox (badness 10000) in paragraph at lines 281--288

[]

<taccalibration.png, id=115, 385.9218pt x 225.4824pt>

File: taccalibration.png Graphic file (type png)

<use taccalibration.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 297.

<tacanswer.png, id=116, 363.2772pt x 218.7372pt>

File: tacanswer.png Graphic file (type png)

<use tacanswer.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 303.

<expdecay.png, id=117, 363.2772pt x 218.7372pt>

File: expdecay.png Graphic file (type png)

<use expdecay.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 309.

[25] [26 <./taccalibration.png>] [27 <./tacanswer.png>] [28 <./expdecay.png>]

Overfull \hbox (0.29034pt too wide) in paragraph at lines 315--316

[]T1/aer/m/n/12 Toutes nos me-sures sont conformes aux pré-dic-tions théo-riqu
es. Nous avons

[]

[29] <co60.png, id=137, 539.616pt x 308.8338pt>

File: co60.png Graphic file (type png)

<use co60.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 335.

<na22.png, id=138, 540.5796pt x 308.8338pt>

File: na22.png Graphic file (type png)

<use na22.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 341.

<pb210.png, id=139, 539.616pt x 310.761pt>

File: pb210.png Graphic file (type png)

<use pb210.png>

LaTeX Warning: Float too large for page by 73.33025pt on input line 347.

Overfull \hbox (86.36926pt too wide) in paragraph at lines 351--362

□□
□

[30] [31 <./co60.png>] [32 <./na22.png>] [33 <./pb210.png>]

Overfull \hbox (5.47836pt too wide) in paragraph at lines 444--464

□□
□

[34]

Overfull \hbox (14.08781pt too wide) in paragraph at lines 467--498

□ $\backslash$ OML/cmm/m/it/12 f□ $\backslash$ T1/aer/m/it/12 for Fre-quency of the sample i □
□

[35]

Overfull \hbox (18.5817pt too wide) in paragraph at lines 501--529

□□
□

[36]

Overfull \hbox (55.26485pt too wide) in paragraph at lines 532--542

□□
□

Overfull \hbox (49.26465pt too wide) in paragraph at lines 546--555

□□
□

[37]

Overfull \hbox (61.00049pt too wide) in paragraph at lines 557--566

□□
□

Overfull \hbox (42.22188pt too wide) in paragraph at lines 572--606

91 words of extra memory for PDF output out of 10000 (max. 100000000)