

Funny Characters in Abstracts, Web pages, Photo albums

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GSI Helmholtzzentrum für
Schwerionenforschung GmbH
Darmstadt, Germany

JACoW Team Meeting 2009
DESY@Hamburg, Germany
November, 2009

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Funny characters and what you see

 Using text export from SPMS you might get this

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Using text export from SPMS you might get this

i»¿AlcÃ;ntara-NÃ°Ã±ez AlvÃ¨s-CondÃ© JaÅ, ocha Å abjan
 GÃ¥lander AndrÃ© ArÃ©valo Åsagar AnÅ¾e BasÃlio
 ÄEutiÄ† BÃœr BjÃ¶rklund HeÃŸler KarÄ¶nik ElkiÄ|r
 FlÃ¶ttmann JanÅ;a GaÅ;per JÃ,rgensen JirdÃ©n UrÅ;iÄ¶
 JuhÃ;sz JuhÃ;sz KoroÅ;ec KetenoÃŸlu KarslÄ± OlvegÃ¥rd
 KrempaskÃ½ MuÃ±oz NoÃ«l Markoviá,± RistiÄ†-Ä¶uroviÄ†

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☞ As you now know, with the right encoding it will look like this

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Alcántara-Núñez Alvès-Condé Jałocha Šabjan
Gålander André Arévalo Žagar Anže Basílio
Čutić Bär Björklund Heßler Karčnik Elkiær
Flöttmann Janša Gašper Jørgensen Jirdén Uršič
Juhász Juhász Korošec Ketenoğlu Karslı Olvegård
Krempaský Muñoz Noël MarkoviĀ Ristić-Đurović

Funny characters and how to find them

- ➡ After Abstract Submission is closed and after (or even before) assigning Paper codes, you may run the JPSP scripts to spot problematic characters. These characters may appear as

Funny characters and how to find them

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These characters may appear as

ï□°	⇒	π	Ã...	⇒	Å	Ã%00	⇒	É
Ã-	⇒	Ö	Ã1/4	⇒	μ	Ãÿ	⇒	β
Ãç	⇒	â	Ã⊗	⇒	ä	â%00¥	⇒	≥
Ã¶	⇒	ö	Ã³	⇒	ñ	â1/4	⇒	ó

Funny characters and how to find them


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These characters may appear as

$\ddot{i}\square^{\circ}$	\Rightarrow	π	$\tilde{A}...$	\Rightarrow	\AA	$\tilde{A}\%_{00}$	\Rightarrow	\acute{E}
$\tilde{A}-$	\Rightarrow	\ddot{O}	$\tilde{I}^{1/4}$	\Rightarrow	μ	$\tilde{A}\ddot{Y}$	\Rightarrow	β
$\tilde{A}\text{\textcircled{C}}$	\Rightarrow	\hat{a}	$\tilde{A}\text{\textcircled{X}}$	\Rightarrow	\ddot{a}	$\hat{a}\%_{00}\text{\textcircled{Y}}$	\Rightarrow	\geq
$\tilde{A}\text{\textcircled{I}}$	\Rightarrow	\ddot{o}	\tilde{I}^3	\Rightarrow	\tilde{n}	$\hat{a}^{1/4}$	\Rightarrow	\acute{o}

- or on the Abstract web page

Funny characters and how to find them

 After Abstract Submission is closed and after (or even before) assigning Paper codes, you may run the JPSP

TUPPO052 On the Field Dependent Surface Resistance Observed in Superconducting Niobium Cavities

- **W. Weingarten**
CERN, Geneva

Individual niobium superconducting RF (SRF) cavities for accelerator application are nowadays performing up till the believed limitations (surface magnetic field B of ~ 200 mT and a low field surface resistance R_s of a few n Ω). It is also observed that R_s may increase with B (dubbed Q-slope/Q-drop). A theoretical expression for this increase was derived from the two-fluid model, depending on typical parameters such as the electrical conductivity, penetration depth, temperature T , frequency f , \blacklozenge A least square fit of measured data against the theoretical expression for R_s allowed to determine these parameters and to compare them with generally accepted values. The measured data consisted of about 1400 quadruples (R_s , B , f , T) collected from cavity tests of a very broad provenience in shape, cell number, frequency, surface treatment, niobium quality \blacklozenge With this approach it is hoped that stochastic factors cancel out and that the fundamental parameters of the niobium metal prevail. A quantitative explanation for the Q-slope/Q-drop is proposed which is based on the number of normal electrons located at the uppermost niobium surface layer that increases with T and B .

Character set for use in Abstracts

 see JPSP manual version 081104 Chapter 4.4

Character set for use in Abstracts

4.4 Special Characters in Abstracts

The script »spmsbatch.pl« is equipped to recognize an expanding set of characters and notations. It is able to transpact these correctly into the abstract booklet, the proceedings volume, and the web site. Abstract authors can use these notations and special characters to structure the text, write small math formulas and use the correct spelling for accented words.

4.4.1 Set of accented characters

The characters in this table can be entered as codes in ISO-8859-1 (without Euro currency character), ISO-8859-15 (with Euro), UTF-8 (these are the characters in column »In«) or as HTML entities (column »HTML«). The character shown in the browser window will look like the character in column »Out« (depending on chosen font).

In	HTML	Out	In	HTML	Out	In	HTML	Out	In	HTML	Out	In	HTML	Out	In	HTML	Out
À	À	À	á	Á	Á	â	Â	Â	ã	Ã	Ã	ä	Ä	Ä	å	Å	Å
â	â	â	á	´	á	à	à	à	ã	ã	ã	ä	ä	ä	å	å	å
á	´	á	à	`	à	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	å	å
ã	ã	ã	ä	ä	ä	å	å	å	â	ˆ	â	ã	ã	ã	ä	ä	ä
ä	ä	ä	å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	å	å
å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	ä	ä	å	å	å
â	â	â	ã	ã	ã	ä	ä	ä	å	å	å	â	â	â	ã	ã	ã
ã	ã	ã	ä	ä	ä	å	å	å	â	ˆ	â	ã	ã	ã	ä	ä	ä
ä	ä	ä	å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	å	å
å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	ä	ä	å	å	å
â	â	â	ã	ã	ã	ä	ä	ä	å	å	å	â	â	â	ã	ã	ã
ã	ã	ã	ä	ä	ä	å	å	å	â	ˆ	â	ã	ã	ã	ä	ä	ä
ä	ä	ä	å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	å	å
å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	ä	ä	å	å	å
â	â	â	ã	ã	ã	ä	ä	ä	å	å	å	â	â	â	ã	ã	ã
ã	ã	ã	ä	ä	ä	å	å	å	â	ˆ	â	ã	ã	ã	ä	ä	ä
ä	ä	ä	å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	å	å
å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	ä	ä	å	å	å
â	â	â	ã	ã	ã	ä	ä	ä	å	å	å	â	â	â	ã	ã	ã
ã	ã	ã	ä	ä	ä	å	å	å	â	ˆ	â	ã	ã	ã	ä	ä	ä
ä	ä	ä	å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	å	å
å	å	å	â	ˆ	â	ã	˜	ã	ä	ä	ä	å	ä	ä	å	å	å

4.4.2 Set of recognized math characters (L^AT_EX mode)

The characters in this table can be entered as T_EX/L^AT_EX codes (these are the characters in column »T_EX«) or as HTML entities (column »HTML«). The character shown in the browser window will look like the character in column »Out« (depending on chosen font).

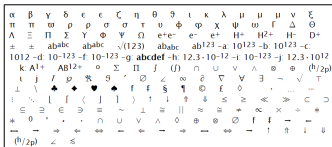
T _E X	HTML	Out	T _E X	HTML	Out	T _E X	HTML	Out	T _E X	HTML	Out
\alpha	α	α	\beta	β	β	\gamma	γ	γ	\Gamma	Γ	Γ
\delta	δ	δ	\Delta	Δ	Δ	\epsilon	ε	ε	\zeta	ζ	ζ
\eta	η	η	\theta	θ	θ	\Theta	Θ	Θ	\iota	ι	ι
\kappa	κ	κ	\lambda	λ	λ	\Lambda	Λ	Λ	\mu	μ	μ
\micro	--	μ	\nu	ν	ν	\xi	ξ	ξ	\Xi	Ξ	Ξ
\pi	π	π	\Pi	Π	Π	<pi>	--	π	\rho	ρ	ρ
\sigma	σ	σ	\Sigma	Σ	Σ	\varsigma	ς	ς	\tau	τ	τ
\upsilon	υ	υ	\phi	φ	φ	\Phi	Φ	Φ	\chi	χ	χ
\psi	ψ	ψ	\Psi	Ψ	Ψ	\omega	ω	ω	\Omega	Ω	Ω

Character set for use in Abstracts

4.4.3 Math characters available in L^AT_EX notation

In	Out	In	Out	In	Out	In	Out	In	Out
\deg	°	\sum	∑	\prod	∏	\int	∫	\oint	∮
\bigcap	∩	\bigcup	∪	\bigvee	∨	\bigwedge	∧	\bigotimes	⊗
\bigoplus	⊕	\hbar	ℏ	\imath	ı	\jmath	ȷ	\ell	ℓ
\wp	℘	\Re	ℜ	\Im	ℑ	\prime	′	\emptyset	∅
\angle	∠	\infty	∞	\partial	∂	\nabla	∇	\forall	∀
\exists	∃	\neg	¬	\surd	✓	\top	⊤	\bot	⊥
\clubsuit	♣	\diamondsuit	♢	\heartsuit	♥	\spadesuit	♠		
\dag	†	\ddag	‡	\S	§	\P	¶	\copyright	©
\pounds	£	\diamond	◊	\Box	□	\cdot	·	\ldots	...
\cdots	⋯	\vdots	⋮	\ddots	⋱	\lfloor	⌊	\lceil	⌈
\angle	∠	\rfloor	⌋	\rceil	⌉	\rangle	⌋	\uparrow	↑
\downarrow	↓	\Uparrow	↑	\Downarrow	↓	\leq	≤	\geq	≥
\ll	≪	\gg	≫	\subset	⊂	\supset	⊃	\subseteq	⊆
\supseteq	⊇	\in	∈	\ni	∋	\equiv	≡	\sim	≈
\perp	⊥	\simeq	≈	\parallel	∥	\approx	≈	\cong	≅
\neq	≠	\propto	∝	\times	×	\times	×	\div	÷
\ast	*	\star	*	\circ	∘	\bullet	•	\cap	∩
\cup	∪	\vee	∨	\wedge	∧	\diamond	◊	\oplus	⊕
\otimes	⊗	\oslash	⊘	\dagger	†	\ddagger	‡	\longmapsto	↪
\Longrightarrow	↪	\Longleftarrow	↩	\leftarrow	←	\rightarrow	→	\leftrightarrow	↔
\Rightarrow	⇒	\leftrightharpoonright	⇔	\Leftarrow	⇐	\mapsto	↦	\lessgtr	≲
\hbar	ℏ								

A web page showing Greek and Math characters:



Character set for use in Abstracts

4.4.4 Set of recognized "writings"

The script will interpret the following character sequences as shorthand for superscripts, subscripts or highlighting. The character sequence in this table can be entered as written, some characters are necessary to recognize the shorthand: the visible space »`␣`« stands for a required space, the red question mark »?« stands for any character except numeric.

Characters entered as in column »In« will be formatted like what you find in column »Out« (depending on chosen font).

In	Out	In	Out	In	Out	In	Out
e ⁺ e ⁻	e ⁺ e ⁻	e ⁻ _␣	e ⁻ _␣	e ⁺ _␣	e ⁺ _␣	<code>\textbf{abc}</code> , <code>(\bf abc)</code>	abc
H ₊	H ⁺	H ₂₊	H ²⁺	H _␣	H _␣	<code>\textit{abc}</code> , <code>(\it abc)</code>	<i>abc</i>
D ₊	D ⁺			microsec	μs	<code>\textsl{abc}</code> , <code>(\sl abc)</code>	<i>abc</i>
+ _␣	±	+/ _␣	±	<code>\sqrt{123}</code>	<code>\sqrt{123}</code>	<code>\textsf{abc}</code> , <code>(\sf abc)</code>	abc
ab ⁺ (abc)	ab ^{abc}	ab ⁵ *(abc)\$	ab ^{abc}	ab ¹²³ ?	ab ^{123?}	<code>\cite{abc}</code>	[abc]
ab _␣ (abc)	ab _{abc}	ab ₅ *(abc)\$	ab _{abc}			<code>\bibitem{abc}</code>	[abc]
10e123	10 ¹²³	10 ⁻ 123	10 ¹²³	10 ⁺ 123 _␣	10 ¹²³ _␣	<code>\emph{abc}</code>	<i>abc</i>
10e-123	10 ⁻¹²³	10 ⁻ -123	10 ⁻¹²³	<code>__abcde f__</code>	abcde f	<code>\small{abc}</code>	<small>abc</small>
10-123 _␣	10 ⁻¹²³ _␣	12.3e12 _␣	12.3 × 10 ¹² _␣				

4.4.5 List Formatting

A different case of recognized "writing" is shown next. Formatting a list in an abstract is not possible, because hard line breaks and other formatting rules are not allowed. With a list in a grouping character sequence (start list with »[« and end list »+«) it is possible to use a low level formatting. Each item of the list has to be preceded by either »N)« (for numeric itemize lists: 1), 2), 3), ...) , »a)« (for alpha itemize lists: a), b), ...) , or »-)« (for an unordered list: -, -, ...). A Web page showing an itemized list:

The 2-D electromagnetic model of a fast-ramping magnet in BOKKE consists of

1. a representation of strands by line currents,
2. a coupling of the finite element method and the boundary element method to take into account the field contribution of the magnet yoke, as well as eddy-current effects in conductive bulk material,
3. a model for persistent currents,
4. a model for inter-strand coupling currents, and
5. a model for inter-strand coupling currents in Rutherford-type cables.

We will present the coupling of all these effects in the mathematical framework of the theory of discrete electromagnetism.

The 2-D electromagnetic model of a fast-ramping magnet in BOKKE consists of

- a. a representation of strands by line currents,
- b. a coupling of the finite element method and the boundary element method to take into account the field contribution of the magnet yoke, as well as eddy-current effects in conductive bulk material,
- c. a model for persistent currents,
- d. a model for inter-strand coupling currents, and
- e. a model for inter-strand coupling currents in Rutherford-type cables.

We will present the coupling of all these effects in the mathematical framework of the theory of discrete electromagnetism.

The above formatting was achieved by introducing the start/stop codes ([+, +]) into the text as could be seen in the following listing:

The 2-D electromagnetic model of a fast-ramping magnet in BOKKE consists of [+] a representation of strands by line currents, 2) a coupling of the finite element method and the boundary element method to take into account the field contribution of the magnet yoke, as well as eddy-current effects in conductive bulk material, 3) a model for persistent currents, 4) a model for inter-strand coupling currents, and 5) a model for inter-strand coupling currents in Rutherford-type cables. +) We will present the coupling of all these effects in the mathematical framework of the theory of discrete electromagnetism.

Due to the way an abstract text is arranged in the SPMS database and in XML (just one line of characters) at the moment just one itemized list per abstract works in the intended way.

Extended set of accented characters

À à Á á Â â Ä ä Å å Æ æ

Ç ç È è É é Ê ê Ë ë

İ Ĭ Ñ ñ

Ò ò Ó ó Ô ô Ö ö Æ æ Ø ø

ß Ù ù Ú ú Û û Ü ü

Ỳ ỳ ÿ

Č č Š š

and many many more...

Set of recognized math characters (\LaTeX mode)

<code>\alpha</code>	α	<code>\beta</code>	β	<code>\gamma</code>	γ
<code>\delta</code>	δ	<code>\epsilon</code>	ϵ	<code>\varepsilon</code>	ε
<code>\zeta</code>	ζ	<code>\eta</code>	η	<code>\theta</code>	θ
<code>\vartheta</code>	ϑ	<code>\iota</code>	ι	<code>\kappa</code>	κ
<code>\lambda</code>	λ	<code>lambda</code>	λ	μ	μ
<code>\micro</code>	μ	<code>\mu</code>	μ	<code>\nu</code>	ν
<code>\xi</code>	ξ	<code><pi></code>	π	<code>\pi</code>	π
<code>\varpi</code>	ϖ	<code>\rho</code>	ρ	<code>\varrho</code>	ϱ
<code>\sigma</code>	σ	<code>sigma</code>	σ	<code>\varsigma</code>	ς
<code>\tau</code>	τ	<code>\upsilon</code>	υ	<code>\phi</code>	ϕ
<code>\varphi</code>	φ	<code>\chi</code>	χ	<code>\psi</code>	ψ
<code>\omega</code>	ω	<code>\Gamma</code>	Γ	<code>\Delta</code>	Δ
<code>\Theta</code>	Θ	<code>\Lambda</code>	Λ	<code>\Xi</code>	Ξ
<code>\Pi</code>	Π	<code>\Sigma</code>	Σ	<code>\Upsilon</code>	Υ
<code>\Phi</code>	Φ	<code>\Psi</code>	Ψ	<code>\Omega</code>	Ω

Set of recognized "writings"

e+e-	e ⁺ e ⁻	e- _␣	e ⁻ _␣	e+ _␣	e ⁺ _␣
H+	H ⁺	H2+	H ²⁺	H- _␣	H ⁻ _␣
D+	D ⁺				
+ -	±	+/-	±		
ab ^{abc}	ab ^{abc}	ab ^{^{abc}} \$	ab ^{abc}	\sqrt{123}	√123
ab_{abc}	ab _{abc}	ab\$_{abc}\$	ab _{abc}	ab ^{123?}	ab ^{123?}
10e123	10 ¹²³	10 ^{^123}	10 ¹²³	10**123 _␣	10 ¹²³ _␣
10e-123	10 ⁻¹²³	10 ^{^-123}	10 ⁻¹²³	_abcdef_	abcdef
10-123 _␣	10 ⁻¹²³ _␣	12.3e12 _␣		12.3 × 10 ¹² _␣	
A1+	A ¹⁺ ,	AB12+	AB ¹²⁺	microsec	μs

Math characters available (“ \LaTeX mode”)

\deg	Σ	Π	\int	\oint	\cap	\cup	\vee	\wedge	\otimes	\oplus	\hbar
ι	\jmath	ℓ	\wp	\Re	\Im	\prime	\emptyset	\sphericalangle	∞	∂	∇
\forall	\exists	\neg	$\sqrt{\quad}$	\top	\perp	\backslash	\clubsuit	\diamond	\heartsuit	\spadesuit	\dagger
\ddagger	\S	\P	\copyright	\diamond	\square	\cdot	\dots	\dots	\dots	\dots	\ddots
\L	\lrcorner	\langle	\lrcorner	\lrcorner	\rangle	\uparrow	\downarrow	\Uparrow	\Downarrow	\leq	\geq
\ll	\gg	\subset	\supset	\subseteq	\supseteq	\in	\ni	\equiv	\sim	\perp	\approx
\parallel	\approx	\cong	\neq	\propto	\times	\times	\div	$*$	\star	\circ	\circ
\bullet	\cdot	\cap	\cup	\vee	\wedge	\diamond	\oplus	\otimes	\oslash	\dagger	\ddagger
\rightarrow	\leftarrow	\longleftrightarrow	\mapsto	\rightrightarrows	\Leftrightarrow	\Leftrightarrow	\leftarrow	\leftleftarrows	\rightarrow	\Rightarrow	\leftrightarrow
\Leftrightarrow	\mapsto	\uparrow	\Uparrow	\downarrow	\Downarrow	\hbar	\sphericalangle	\lesssim			

Math characters on a Web page in Unicode (UTF8)

Paper Title

Page

[PM01](#)**Use of Optical Transition Radiation Interferometry for Energy Spread And Divergence Measurements**[89](#)

- **R.B. Fiorito, A.G. Shkvarunets**

Institute for Research in Electronics and Applied Physics, University of Maryland, College Park, MD, USA

OTR interferometry (OTRI) has been shown to be an excellent diagnostic for measuring the rms divergence and emittance of relativistic electron beams when the energy spread $\Delta\gamma/\gamma$ is less than the normalized rms divergence $\sigma = \gamma\Theta_{rms}$. This is the case for most beams previously diagnosed with OTRI. To extend this diagnostic capability to beams with larger energy spreads, we have calculated the effects of all the parameters effecting the visibility of OTR interferences, V ; i.e. energy spread, angular divergence, the ratio of foil separation to wavelength ratio, d/λ and filter bandpass. We have shown that:

1. for a given $\Delta\gamma/\gamma$, the sensitivity of V to σ is proportional to the observation angle Θ_0 , the fringe order n and the ratio d/λ ;
2. the sensitivity of V to $\Delta\gamma/\gamma$ is independent of Θ_0 and n but is proportional to d/λ .

Character from user input

- ➡ The list of recognized and correctly converted characters is constantly growing.

Character from user input

- 👉 The list of recognized and correctly converted characters is constantly growing.
- 👉 If you find characters in your conference, which are not covered by the scripts or converted incorrectly, please inform me and I will extend the script (almost) immediately.

Acceptable characters



The way in which software for photo presentation will construct directories and file names might pose problems for the JACoW server.

Acceptable characters

- ☞ The way in which software for photo presentation will construct directories and file names might pose problems for the JACoW server.
- ☞ Therefore we should stay with ISO 9660 + Rock Ridge/Joliet extensions:
 - file system with long filenames up to 255 characters
 - allowed characters are A-Z, a-z, 0-9, » . _ «,
no » * / \ ; : \$ % «

Acceptable characters

- ☞ The way in which software for photo presentation will construct directories and file names might pose problems for the JACoW server.
- ☞ Therefore we should stay with ISO 9660 + Rock Ridge/Joliet extensions:
 - file system with long filenames up to 255 characters
 - allowed characters are A-Z, a-z, 0-9, » . _ «,
no » * / \ ; : \$ % «
- ☞ My suggestion is to take the free available tool JAlbum.



jalbum.net

