

**JTC1/SC2/WG2 N3913**

Universal Multiple-Octet Coded Character Set  
International Organization for Standardization  
Organisation Internationale de Normalisation  
Международная организация по стандартизации

**Doc Type: Working Group Document**

**Title: Proposal to encode Metrical Symbols and related characters in the UCS**

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**Status: Expert Contribution**

**Action: For consideration by JTC1/SC2/WG2 and UTC**

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## **1. Introduction**

Metrics is an integral element of every philological discipline, particularly of the Classics. The etymology of the name indicates that it is the „art of measuring“, namely the regulated sequences of long and short syllables which form poetical language in classical Greek and Latin literature. In the varied times and literary genres, the connection of different syllable quantities to verses and of verses to strophes resulted in a large number of metrical systems: e.g. Homer wrote dactylic hexameters, Sappho aeolic poems, the tragedians like Sophocles iambic trimeters for spoken verses and many different systems like anapaests or dactyloepitrites for the choral songs.

Now in the analysis of this variety of meters, not only long and short positions had to be denoted, it was for instance also necessary to mark the position where either long or short element was permitted, possibly with the distinction of the preferred quantity, where substitution of elements was permitted or an expected element was missing, where were the pauses in a verse, the end of a strophe, the avoidance of word-ending at a certain position in a verse, etc. The systematic scholarly investigation and interpretation of those metrical problems was inaugurated at the beginning of the 18th century by the famous Cambridge Classicist Richard Bentley who was the first to detect and describe the form and working of more complicated recurring metrical patterns in poetic Greek and Latin language. The Classics of the 19th century, especially in Germany, pushed metrical research to the highest level, when authorities like G. Hermann, R. Westphal and U. v. Wilamowitz-Moellendorff taught to use metrics as an essential element in the constitution of text editions and in the interpretation of classical literature like the epics of Homer, the lyric poems of Sappho, Pindar and Horatius, the Greek Tragedies by Aeschylus, Sophocles and Euripides, the Comedies of Aristophanes and Plautus and even the Oratory of Demosthenes and Cicero, who also used certain metrical formulas to close their sentence constructions (prose rhythm). The masters in the 20th century, like P. Maas, B. Snell and M. L. West, refined the methods of metrical analysis and disseminated reflection and research on metrics so that today it is a crucial prerequisite and component in studying, editing and interpreting texts, in the Classics and in any modern philology.

Thus, it is obvious that nowadays every scholar of literature, particularly of the classical texts, needs to have available the proper instruments to display, work with and edit metrical signs. As

until now only the very basic metrical signs have existed in Unicode, the situation for students and scholars is more than unsatisfying facing the fact that it is often required to design or write metrical schemes for seminars, lectures, articles and books. It is not possible to make accessible in the Internet the sophisticated and influential metrical writings of the great masters, apart from laborious scans or photos with which one can hardly work. Desperately needed is a complete set of Unicode signs for metrical symbols that would enable students, scholars and writers to use metrical literature in the Internet and to compose, distribute and publish up-to-date and current research.

## 2. Encoding Considerations

The basic metrical symbols are the longum — and the breve ˇ, denoting long and short syllables in a verse, the length of the thus denoted long syllables being the double of the short ones. Also, there are different symbols for dividing the flow of syllables into units of different hierarchical levels (like verses and strophes).

However, verse types (like the hexameter known from classical works like Homer's Odyssey) are not defined by fixed sequences of long and short syllables; in fact, they are defined by patterns where different sequences are allowed at single places, which will occur with different probabilities (like "typical" vs. "exceptional" occurrences). These are denoted by stacking the basic symbols (included pairs of shorts which resemble one long); from bottom to top with decreasing probability. Also, there are special symbols for special cases, like the anceps × for denoting "several possibilities" or symbols meaning "speech is not metrical here".

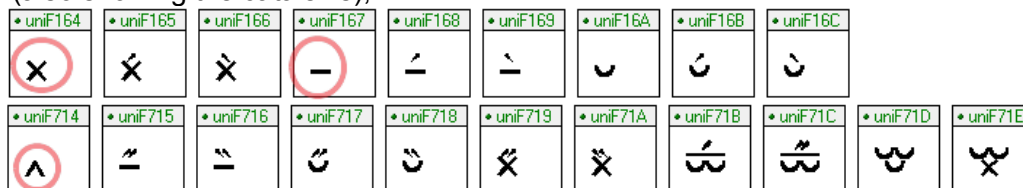
In a special sense, the set of metrical symbols can be regarded as a script of its own, with its own rules and its own special appearance. Therefore, unifications of metrical symbols with existing characters have to be selected with care.

Some metrical symbols already are encoded due to a proposal by Maria Pantelia (Thesaurus Linguae Graecae Project, University of California, Irvine) from 2002 (L2/02-315R2 = ISO/IEC SC2/WG2 N2546, <http://std.dkuug.dk/jtc1/sc2/wg2/docs/n2546.pdf>), together with a lot of archaic Greek characters, Ancient Greek musical notation, New Testament editorial characters, and similar things (documents L2/02-312...318).

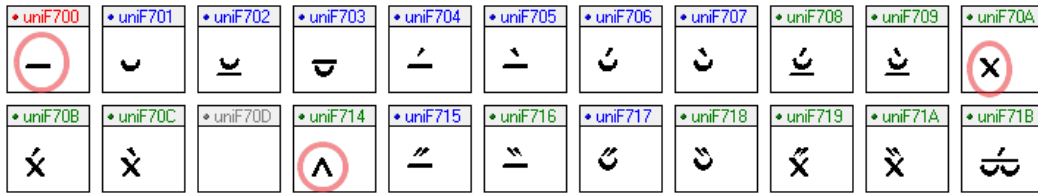
The proposal here follows the encoding principle implicitly established by accepting that proposal, especially by encoding combination of stacked basic symbols as separate characters. This, anyway, has the advantage that no new requests to rendering systems are introduced, as it would be the case when only the basic symbols were encoded, to delegate the stacking to the rendering system.

However, the unification of some of the very basic metrical symbols with existing characters does not have passed the test of time. Especially, the unification of the longum with the en or em dash and the anceps with the multiplication sign is consigned inadequate by several designers of fonts for linguistic or general audience; this is shown by the fact that these fonts contain private use characters for longum and breve, e.g.:

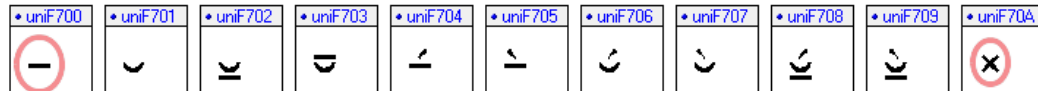
Alphabetum Demo from <http://guindo.pntic.mec.es/jmag0042/alphabet.html>  
(also showing the catalexis);



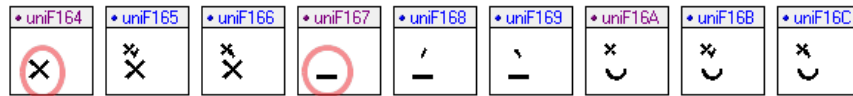
Andron Scriptor Web from <http://www.mufl.info/fonts/> (showing also the catalexis):



Cardo from <http://scholarsfonts.net/cardofnt.html> :



Junicode from <http://junicode.sourceforge.net/> :



The following facts suggest that the mentioned unifications of longum and anceps, as well as unifications of catalexis with "logical and" and the metrical circle "half aeolian base" with one of the circles in the "geometric shapes" block (which all have a dedicated size) are inappropriate:

- The metrical symbols form a closed set for which the font designer must be able to design the relative sizes of the symbols to retain the appearance of this closed set, independent of considerations which apply to other items like similar punctuation marks which may appear in the same font.
- The metrical symbols show a considerable variation of sizes between different designs. Thus, the font designer must be able to select his preferred size, and being able to retain this in the whole set.  
(For instance, the metrical circle appears smaller than the small letter o with some authors, while others use a full cap-height form.)
- Also, many authors place the longum on the baseline, while considerable many of them place it on about the x-height. The character, however, is the same. An en or em dash never appears on the baseline, thus it has a definitive different glyph spectrum. The font designer must be free to make his preferred choice of the vertical positioning, rather to be bound by unifications with characters requiring a fixed vertical position. (This is comparable with having the Greek circumflex (perispomeni, U+0342) disunified from the common tilde (U+0303), as it looks like a tilde in most but not in all fonts.)
- Regarding the longum, it shall be noted that e.g. the recently encoded dash-like character U+10191 ROMAN UNCIA SIGN is not unified with the em or en dash, possibly for similar considerations (to enable harmonizing of appearance with the other Roman currency signs).

*In a certain sense, the set of metrical symbols can be regarded as a script of its own, with its own rules and its own special appearance. Therefore, unifications of metrical symbols with existing characters have to be selected with care, like it is done for characters of any newly encoded script.*

We retain the unification of the ictus with the acute accent, and the unifications of the verse divider and verse end sign with U+007C VERTICAL LINE and U+2016 DOUBLE VERTICAL LINE. However, we propose a new TRIPLE VERTICAL LINE for the strophe end sign, to allow

the font designer to provide a symbol which has an appearance in harmony with the verse end. This is in analogy with other existing triple symbols (like U+2034 TRIPLE PRIME).

Two symbols are proposed which are of general linguistic use, beyond metrics. These are the "large less-than sign" and "large greater-than sign" (meaning "derived from" and "evolves into" in linguistics), which have forms and angles like the "less-than sign" and "greater-than sign", but are usually considerably larger (full cap-height).

Also, two modifier letters, derived from the Greek lambda (or lamda, as it is named in Unicode) and rho, are proposed, as these have a special meaning in editorial comments of classical texts.

Regarding the proposed combining digits, the whole set 0...9 is proposed. These numbers occur to indicate the part number of a verse over metrical symbols as well as over text. Numbers beyond 6 (applicable to hexameters) occur very rare in this way, but at least one example is found. The 0 obviously is not used in this way; however, the combining digits may have other applications beyond the scope of this proposal, e.g. to denote isotopes in nuclear physics (like  $^{238}_{92}\text{U}$ , by applying combining digits to superscript digits; see also fig. 2001a-119). Therefore, the 0 is included to have the complete set of decimal digits here.

Regarding of the placement of the proposed symbols, it is not possible to place them all into the "Miscellaneous Technical" block, as this is almost full. Instead of, the symbols are generally proposed for the "Miscellaneous Symbols and Arrows" block.

### 3. Proposed Characters



Annotations in parentheses address special issues for a character, or reference to figures where such special issues are discussed. (These annotations are not intended to be retained in the character list when copied into the standard.)

#### **Block: Miscellaneous Symbols and Arrows**





##### **Metrical Symbols**

*(Atomic metrical symbols:)*




- × U+2B7C METRICAL ANCEPS  
→ 00D7 multiplication sign  
*(see e.g. fig. 1997a-352a, 1997a-352b)*
- ⤿ U+2B7D METRICAL INVERTED BREVE  
→ 23D1 metrical breve  
*(see fig. 1964a-298, 1993b-107)*
- ⦶ U+2B7E METRICAL CORONA  
= metrical indifference symbol  
*(see fig. 1997b-365/367)*
- U+2B7F METRICAL LONGUM  
*(special issues: 1837a-130, 1839a-15, 1868a-154a, 1993a-3a, 1993a-10b)*
- U+2B80 METRICAL EXTENDED LONGUM  
*(see fig. 1868a-145)*
- └ U+2B81 METRICAL REVERSED TRISEME  
→ 23D7 metrical triseme  
*(see fig. 1869a-38, 1869a-39, 1869a-94, 1982a-XI)*
- U+2B82 METRICAL CIRCLE  
= metrical half aeolian base  
*(see fig.1957a-1, 1982a-XI, 1982a-61, 1993a-18, 1997a-360b)*
- ∧ U+2B83 METRICAL CATALEXIS  
→ 2227 logical and  
*(see fig. 1869a-28, 1869a-35, 1869a-94)*
- .. U+2B84 METRICAL TWO DOT BASE  
→ 2025 two dot leader  
*(see fig. 1834a-216, 1834a-393, 1848a-48)*

- 
 U+2B85 METRICAL DOVETAIL
  - usually has the height of 007C vertical line
  - 0283 latin small letter esh
  - 222B integral*(see fig. 1982a-XI, 1982a-147)*
- 
 U+2B86 METRICAL DOWNWARDS TIE
  - U+20FA combining downwards tie above
  - The left end usually kerns with the characters left to it, while the low right end extends to a point between x-height and the baseline*(see fig. 1997a-350)*

*(Metrical symbols based on anceps:)*

- 
 U+2B87 METRICAL SHORT OVER ANCEPS
   
*(see fig. 1969a-179)*
- 
 U+2B88 METRICAL TWO SHORTS OVER ANCEPS
   
*(see fig. 1993a-18, 1993a-123, 1997a-360a)*
- 
 U+2B89 METRICAL TURNED SHORT OVER TWO SHORTS OVER ANCEPS
   
*(see fig. 1997b-350)*
- 
 U+2B8A METRICAL LONG OVER ANCEPS
   
*(see fig. 1969a-179, 1982-XI, 1997a-350, 1997a-352a, 1997a-362)*














*(Metrical symbols based on breve:)*

- 
 U+2B8B METRICAL TWO SHORTS OVER SHORT
   
*(see fig. 1993a-18)*
- 
 U+2B8C METRICAL TURNED SHORT OVER LONG OVER SHORT
   
= metrical symbol half biceps
   
*(see fig. 1998a-1)*
- 
 U+2B8D METRICAL TWO SHORTS OVER LONG OVER SHORT
   
*(see fig. 1868a-41, 1993a-123)*

*(Metrical symbols based on two shorts:)*

- 
 U+2B8E METRICAL SHORT OVER TWO SHORTS

(see fig. 1834a-61, 1993a-3a)

-  U+2B8F METRICAL TURNED SHORT OVER TWO SHORTS  
(see fig. 1834b-6, 1939b-24, 1834b-50)
-  U+2B90 METRICAL TIE OVER TWO SHORTS  
(see fig. 1848a-83, 1848a-428)
-  U+2B91 METRICAL LONG OVER SHORT OVER TWO SHORTS  
(see fig. 1826-77)
-  U+2B92 METRICAL SHORTENED LONG OVER TWO SHORTS  
(see fig. 1826a-99, 1868a-152)
-  U+2B93 METRICAL LONG OVER TWO SHORTS WITH VERTICAL BAR  
(see fig. 1998-1)
-  U+2B94 METRICAL SHORT OVER LONG OVER TWO SHORTS  
(see fig. 1834a-61, 1834b-63, 1868a-237, 1993a-3a, 1993a-119)
-  U+2B95 METRICAL TWO TURNED SHORTS OVER LONG OVER TWO SHORTS  
= metrical symbol biceps  
(see fig. 1993a-18, 1997b-365, 1997b-367)
-  U+2B96 METRICAL LONG OVER THREE SHORTS  
(see fig. 1834a-XIII)
- (Metrical symbols based on longum:)
-  U+2B97 METRICAL LONG AND SHORT JOINED  
(see fig. 1869a-94)
-  U+2B98 METRICAL ANCEPS OVER LONG  
(see fig. 1843a-114, 1848a-48)
-  U+2B99 METRICAL TWO SHORTS OVER LONG WITH VERTICAL BAR  
(see fig. 1998-1)
-  U+2B9A METRICAL TURNED SHORT OVER TWO SHORTS OVER LONG  
(see fig. 1967a-77, 1997b-350)
-  U+2B9B METRICAL CIRCLE OVER LONG  
(see fig. 1834a-492)

⏏ U+2B9C METRICAL LONG TWO AND ONE SHORTS OVER TRISEME  
(see fig. 1982a-103)

(Metrical symbols based on catalexis:)

∧ U+2B9D METRICAL SHORT OVER CATALEXIS  
(see fig. 1957a-15)

⌒ U+2B9E METRICAL LONG OVER CATALEXIS  
(see fig. 1869a-28, 1993a-10)

⏏ U+2B9F METRICAL TRISEME OVER CATALEXIS  
(see fig. 1993a-10)

⏏ U+2BA0 METRICAL REVERSED TRISEME OVER CATALEXIS  
(see fig. 1868a-646, 1869a-28, 1869a-35)

⏏ U+2BA1 METRICAL TETRASEME OVER CATALEXIS  
(see fig. 1869a-28, 1993a-10)

⏏ U+2BA2 METRICAL PENTASEME OVER CATALEXIS  
(see fig. 1993a-10)

⏏ U+2BA3 METRICAL TWO LONGS OVER CATALEXIS  
(see fig. 1957a-15)

### Metrical Superscript and Subscript Symbols

× U+2BA4 METRICAL SUPERSCRIPT ANCEPS  
≈ <super> 2B7C  
(see fig. 1968a-78, 1968a-79b, 1992a-VIII)

˘ U+2BA5 METRICAL SUPERSCRIPT BREVE  
≈ <super> 23D1  
(see fig. 1968a-78, 1968a-79a)

◌ U+2BA6 METRICAL SUPERSCRIPT TWO SHORTS JOINED  
≈ <super> 23D6  
(see fig. 1982a-146/147, 1993a-174, 1993a-186, 1997a-358)



— U+2BA7 METRICAL SUPERSCRIPT LONGUM  
≈ <sup> 2B7F  
(see fig. 1968a-78, 1968a-79a)

^ U+2BA8 METRICAL SUBSCRIPT CATALEXIS  
≈ <sub> 2B83  
(see fig. 1982a-147, 1993a-186, 1997a-352a/b, 1997a-354)

### **Block: Miscellaneous Technical (2300-23FF)**

#### **Linguistic Symbols**

< U+23F6 LARGE LESS-THAN SIGN  
= derives from (in linguistics)  
→ 003C less-than sign  
→ 27E8 mathematical left angle bracket  
· extends vertically at least to cap-height  
(see fig. 1930a-XX, 1997b-360)

> U+23F7 LARGE GREATER-THAN SIGN  
= evolves into (in linguistics)  
→ 003E greater-than sign  
→ 27E9 mathematical right angle bracket  
(see fig. 1930a-XX, 1968a-192, 1993a-47, 1997b-363)

### **Block: Supplemental Punctuation (2E00-2E7F)**

#### **Metrical Symbols**

||| U+2E48 TRIPLE VERTICAL LINE  
= metrical end of strophe  
→ 2016 double vertical line  
(see fig. 1968a-3, 1957a-39, 1997a-352b, 1997a-354)

| U+2E49 SHORT VERTICAL LINE  
→ 007C vertical line  
· usually has x-height  
(see fig. 1970a-91, 1989b-460, 1993b-107)

′ U+2E4A LOW PRIME  
(see fig. 1848a-84, 1848a-428)

″ U+2E4B LOW DOUBLE PRIME  
(see fig. 1848a-428, 1852a-201)

/// U+2E4C LOW TRIPLE PRIME  
(see fig. 1852a-79, 1875a-299)

### Editorial Symbols











====U+2E4D DOUBLE TWO-EM DASH  
→ 2E3A two-em dash  
(see fig. 2001b-54)

### **Block: Combining Diacritical Marks Extended-A (New Block at U+1AB0...U+1AFF)**


The block position and size is coordinated with the "Preliminary proposal to encode Germanicist phonetic characters in the UCS" by Michael Everson.

### Combining Digits

(see fig. 1834b, 1856a-102, 1968a-61, 1977a-7, 1993a-10b, 1997a-352a)

 U+1AB0 COMBINING DIGIT ZERO ABOVE  
 U+1AB1 COMBINING DIGIT ONE ABOVE  
 U+1AB2 COMBINING DIGIT TWO ABOVE  
 U+1AB3 COMBINING DIGIT THREE ABOVE  
 U+1AB4 COMBINING DIGIT FOUR ABOVE  
 U+1AB5 COMBINING DIGIT FIVE ABOVE  
 U+1AB6 COMBINING DIGIT SIX ABOVE  
 U+1AB7 COMBINING DIGIT SEVEN ABOVE  
 U+1AB8 COMBINING DIGIT EIGHT ABOVE  
 U+1AB9 COMBINING DIGIT NINE ABOVE

### Combining Marks for linguistic and metrical use

 U+1ABA COMBINING QUESTION MARK ABOVE  
= combining doubt mark (linguistic and metrical)  
(see fig. 1982a-75, 1989a-35, 1989a-122)

⊖ U+1ABB COMBINING LONG VERTICAL LINE ABOVE  
· to mark the secondary ictus on classical Greek verses in contrast to the tonal accents  
→ 030D combining vertical line above  
(see fig. 1829a-21, 1829a-22)

⊖ U+1ABC COMBINING DOUBLE LONG VERTICAL LINE ABOVE  
· to mark the primary ictus on classical Greek verses in contrast to the tonal accents  
→ 030E combining double vertical line above  
(see fig. 1829a-21, 1829a-22)

### **Block: Combining Diacritical Marks Supplement**

#### **Double diacritic mark for linguistics**

⊖ U+1DFB COMBINING DOTTED DOUBLE INVERTED BREVE  
→ 0361 combining double inverted breve  
· may also be dashed  
(see fig. 1957a-2, 1993a-3b)

### **Block: Combining Diacritical Marks for Symbols**

#### **Stress marks (Ictuses) for Metrical Symbols**

⊖ U+20F4 COMBINING ACUTE ACCENT ABOVE LEFT  
→ 0301 combining acute accent  
(see fig. 1834b-6, 1939a-24, 1868a-145)

⊖ U+20F5 COMBINING ACUTE ACCENT ABOVE RIGHT  
(see fig. 1834b-6, 1868a-681)

⊖ U+20F6 COMBINING TRIPLE ACUTE ACCENT  
→ 030B combining double acute accent  
(see fig. 1868a-124)

#### **Base marks for Metrical Symbols**

⊖ U+20F7 COMBINING X ABOVE LEFT  
→ 033D combining x above  
(see fig. 1834b-50)

⊖ U+20F8 COMBINING X ABOVE RIGHT

(see fig. 1834b-50)

### Special marks for Metrical Symbols



U+20F9 COMBINING METRICAL TWO SHORTS JOINED ABOVE

(see fig. 1982a-61, 1982a-147)



U+20FA COMBINING DOWNWARDS TIE ABOVE

→ U+2B86 downwards tie

· The left end extends beyond the base character and usually kerns with the characters left of it, while the low right end is placed over the base character

(see fig. 1957a-6, 1997a-352a, 1997a-362)

### Double Arrows



U+20FE COMBINING DOUBLE RIGHTWARDS ARROW ABOVE

→ 20D7 combining right arrow above

(see fig. 1993a-3a)



U+20FF COMBINING DOUBLE RIGHTWARDS ARROW BELOW

→ 20EF combining right arrow below

(see fig. 1993a-3a, 1993a-60)

### Block: Superscripts and Subscripts



U+209D SUPERSCRIPT QUESTION MARK

≈ <super> 003F

= doubt mark (linguistic and metrical)

(see fig. 1989a-22, 1992a-VIII, 1992a-42)



U+209E SUPERSCRIPT COMMERCIAL AT SIGN

≈ <super> 0040

= metrical symbol antilabe

(see fig. 1993a-4, 1993a-119, 1993a-203)

## **Block: Phonetic Extensions Supplement-B (new block; U+AB90...ABAF)**

(The following is copied from the "Proposal to add characters used in Lithuanian dialectology to the UCS" (N3914), where characters are proposed for positions U+AB90...U+ABA1).

This block is intended for phonetic characters which are not Latin by nature, and therefore are not appropriate to be included in the Latin Extended-E block.

(Beside the characters proposed here, there are some characters used in Slovenian dialectology derived from Cyrillic and Greek letters, which may be proposed later. Therefore, the size of two columns seems appropriate.)

The block would be have named "Phonetic Extensions Extended-A" if the (informal) naming scheme for new blocks would be followed; but this name would sound strange.

### **Greek Superscript Modifier Letters**

λ U+ABA2 MODIFIER LETTER SMALL GREEK LAMDA  
≈ <super> 03BB  
(see fig.1992a-VIII, 1993b-160, 2004a-cvii)

ρ U+ABA3 MODIFIER LETTER SMALL GREEK RHO  
≈ <super> 03C1  
· used together with U+1D5E modifier letter small greek gamma  
to form the editorial symbol "raised gamma+rho" used for classical Greek  
(see fig. 1973a-xvi, 1992a-VIII, 1992a-42, 2001b-2, 2004a-cvii)

### **Properties:**

U+2B7C METRICAL ANCEPS;So;0;ON;;;;;N;;;;;  
U+2B7D METRICAL INVERTED BREVE;So;0;ON;;;;;N;;;;;  
U+2B7E METRICAL CORONA;So;0;ON;;;;;N;;;;;  
U+2B7F METRICAL LONGUM;So;0;ON;;;;;N;;;;;  
U+2B80 METRICAL EXTENDED LONGUM;So;0;ON;;;;;N;;;;;  
U+2B81 METRICAL REVERSED TRISEME;So;0;ON;;;;;N;;;;;  
U+2B82 METRICAL CIRCLE;So;0;ON;;;;;N;;;;;  
U+2B83 METRICAL CATALEXIS;So;0;ON;;;;;N;;;;;  
U+2B84 METRICAL TWO DOT BASE ;So;0;ON;;;;;N;;;;;  
U+2B85 METRICAL DOVETAIL;So;0;ON;;;;;N;;;;;  
U+2B86 METRICAL DOWNWARDS TIE;So;0;ON;;;;;N;;;;;  
U+2B87 METRICAL SHORT OVER ANCEPS;So;0;ON;;;;;N;;;;;  
U+2B88 METRICAL TWO SHORTS OVER ANCEPS;So;0;ON;;;;;N;;;;;  
U+2B89 METRICAL TURNED SHORT OVER TWO SHORTS OVER ANCEPS;So;0;ON;;;;;N;;;;;  
U+2B8A METRICAL LONG OVER ANCEPS;So;0;ON;;;;;N;;;;;  
U+2B8B METRICAL TWO SHORTS OVER SHORT;So;0;ON;;;;;N;;;;;  
U+2B8C METRICAL TURNED SHORT OVER LONG OVER SHORT;So;0;ON;;;;;N;;;;;  
U+2B8D METRICAL TWO SHORTS OVER LONG OVER SHORT;So;0;ON;;;;;N;;;;;  
U+2B8E METRICAL SHORT OVER TWO SHORTS;So;0;ON;;;;;N;;;;;  
U+2B8F METRICAL TURNED SHORT OVER TWO SHORTS;So;0;ON;;;;;N;;;;;  
U+2B90 METRICAL TIE OVER TWO SHORTS;So;0;ON;;;;;N;;;;;  
U+2B91 METRICAL LONG OVER SHORT OVER TWO SHORTS;So;0;ON;;;;;N;;;;;  
U+2B92 METRICAL SHORTENED LONG OVER TWO SHORTS;So;0;ON;;;;;N;;;;;

U+2B93 METRICAL LONG OVER TWO SHORTS WITH VERTICAL BAR;So;0;ON;;;;;N;;;;;  
 U+2B94 METRICAL SHORT OVER LONG OVER TWO SHORTS;So;0;ON;;;;;N;;;;;  
 U+2B95 METRICAL TWO TURNED SHORTS OVER LONG OVER TWO SHORTS;So;0;ON;;;;;N;;;;;  
 U+2B96 METRICAL LONG OVER THREE SHORTS;So;0;ON;;;;;N;;;;;  
 U+2B97 METRICAL LONG AND SHORT JOINED;So;0;ON;;;;;N;;;;;  
 U+2B98 METRICAL ANCEPS OVER LONG;So;0;ON;;;;;N;;;;;  
 U+2B99 METRICAL TWO SHORTS OVER LONG WITH VERTICAL BAR;So;0;ON;;;;;N;;;;;  
 U+2B9A METRICAL TURNED SHORT OVER TWO SHORTS OVER LONG;So;0;ON;;;;;N;;;;;  
 U+2B9B METRICAL CIRCLE OVER LONG;So;0;ON;;;;;N;;;;;  
 U+2B9C METRICAL LONG TWO AND ONE SHORTS OVER TRISEME;So;0;ON;;;;;N;;;;;  
 U+2B9D METRICAL SHORT OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2B9E METRICAL LONG OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2B9F METRICAL TRISEME OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2BA0 METRICAL REVERSED TRISEME OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2BA1 METRICAL TETRASEME OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2BA2 METRICAL PENTASEME OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2BA3 METRICAL TWO LONGS OVER CATALEXIS;So;0;ON;;;;;N;;;;;  
 U+2BA4 METRICAL SUPERSCRIPT ANCEPS;So;0;ON;<super> 2B7C;;;;;N;;;;;  
 U+2BA5 METRICAL SUPERSCRIPT BREVE;So;0;ON;<super> 23D1;;;;;N;;;;;  
 U+2BA6 METRICAL SUPERSCRIPT TWO SHORTS JOINED;So;0;ON;<super> 23D6;;;;;N;;;;;  
 U+2BA7 METRICAL SUPERSCRIPT LONGUM;So;0;ON;<super> 2B7F;;;;;N;;;;;  
 U+2BA8 METRICAL SUBSCRIPT CATALEXIS ;So;0;ON;<sub> 2B83;;;;;N;;;;;  
 U+23F6 LARGE LESS-THAN SIGN;So;0;ON;;;;;N;;;;;  
 U+23F7 LARGE GREATER-THAN SIGN ;So;0;ON;;;;;N;;;;;  
 U+2E48 TRIPLE VERTICAL LINE;Po;0;ON;;;;;N;;;;;  
 U+2E49 SHORT VERTICAL LINE;Po;0;ON;;;;;N;;;;;  
 U+2E4A LOW PRIME;Po;0;ET;;;;;N;;;;;  
 U+2E4B LOW DOUBLE PRIME;Po;0;ET;<compat> 2E4A 2E4A;;;;;N;;;;;  
 U+2E4C LOW TRIPLE PRIME;Po;0;ET;<compat> 2E4A 2E4A 2E4A;;;;;N;;;;;  
 U+2E4D DOUBLE TWO-EM DASH;Pd;0;ON;;;;;N;;;;;  
 U+1AB0 COMBINING DIGIT ZERO ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB1 COMBINING DIGIT ONE ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB2 COMBINING DIGIT TWO ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB3 COMBINING DIGIT THREE ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB4 COMBINING DIGIT FOUR ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB5 COMBINING DIGIT FIVE ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB6 COMBINING DIGIT SIX ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB7 COMBINING DIGIT SEVEN ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB8 COMBINING DIGIT EIGHT ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1AB9 COMBINING DIGIT NINE ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1ABA COMBINING QUESTION MARK ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1ABB COMBINING LONG VERTICAL LINE ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1ABC COMBINING DOUBLE LONG VERTICAL LINE ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+1DFB COMBINING DOTTED DOUBLE INVERTED BREVE;Mn;234;NSM;;;;;N;;;;;  
 U+20F4 COMBINING ACUTE ACCENT ABOVE LEFT ;Mn;228;NSM;;;;;N;;;;;  
 U+20F5 COMBINING ACUTE ACCENT ABOVE RIGHT;Mn;232;NSM;;;;;N;;;;;  
 U+20F6 COMBINING TRIPLE ACUTE ACCENT;Mn;230;NSM;;;;;N;;;;;  
 U+20F7 COMBINING X ABOVE LEFT ;Mn;228;NSM;;;;;N;;;;;  
 U+20F8 COMBINING X ABOVE RIGHT;Mn;232;NSM;;;;;N;;;;;  
 U+20F9 COMBINING METRICAL TWO SHORTS JOINED ABOVE;Mn;230;NSM;;;;;N;;;;;  
 U+20FA COMBINING DOWNWARDS TIE ABOVE;Mn;228;NSM;;;;;N;;;;;  
 U+20FE COMBINING DOUBLE RIGHTWARDS ARROW ABOVE ;Mn;234;NSM;;;;;N;;;;;  
 U+20FF COMBINING DOUBLE RIGHTWARDS ARROW BELOW ;Mn;233;NSM;;;;;N;;;;;  
 U+209D SUPERSCRIPT QUESTION MARK;So;0;ON;<super> 003F;;;;;N;;;;;

U+209E SUPERSCRIPT COMMERCIAL AT SIGN;So;0;0N;<super> 0040;;;;N;;;;;  
U+ABA2 MODIFIER LETTER SMALL GREEK LAMDA;Lm;0;L;<super> 03BB;;;;N;;;;;  
U+ABA3 MODIFIER LETTER SMALL GREEK RHO;Lm;0;L;<super> 03C1;;;;N;;;;;

### **Linebreaking properties of punctuation marks:**

The proposed punctuation marks U+2E48 and U+2E49 are vertical lines by nature, and therefore behave in any linebreaking and related processing like U+2016 DOUBLE VERTICAL LINE.

The proposed punctuation marks U+2E4A to U+2E4C (low primes) behave in any linebreaking and related processing like their “high” counterparts U+2030 to U+2032.

The proposed punctuation mark U+2E4D (two-em double dash) behaves in any linebreaking and related processing like its “single” counterpart U+2E3A TWO-EM DASH.

### **Notes on confusables:**

No character proposed in this document is intended to be allowed in IDNs or identifiers. Therefore, no confusability issue is risen by any of them.

## **4. Acknowledgements**

Special thanks to Google for providing scans of numerous 19th century books and publications accessible on the Internet. Without access to these sources, this proposal could not have been made within considerable time.

Many thanks to Anna Pentzlin (student at the Ludwig-Maximilians-Universität of Munich) for providing many examples from 19th century sources.

Many thanks for Michael Everson for providing glyphs for the diacritical marks proposed in this document.

## 5. References

- [1826a] Krebs, Johann Philipp - Praktische Metrik der lateinischen Sprache - Leipzig 1826
- [1829a] Tate, James - An Introduction to the Principal Greek Tragic and Comic Metres - London 1829
- [1834a] Apel, August - Metrik - Leipzig 1834
- [1834b] Munk, Edward - Metrik der Griechen und Römer - Glogau und Leipzig 1834
- [1837a] Woolsey, T. D. - A Selection of Greek Tragedies, with Notes - Boston 1837
- [1839a] Pfau, J. A. - Elemente der griechischen und römischen Metrik - Quedlinburg und Leipzig 1839
- [1843a] Böckh, August - Des Sophokles Antigone - Berlin 1843
- [1844a] Munk, Edward - The Metres of the Greeks and Romans - Boston 1844  
(*English translation of [1834b]*)
- [1848a] Freese, C. - Griechisch-römische Metrik - Dresden+Leipzig 1842
- [1852a] Minckwitz, Johannes - Lehrbuch der deutschen Prosodie und Metrik - Leipzig 1852
- [1856a] Anthon, Charles - A System of Latin Prosody and Metre - New York 1856
- [1868a] Rossbach, A. + Westphal, R. - Metrik der Griechen - Vol. 2; 2nd ed. Leipzig 1868
- [1869a] Schmidt, Heinrich - Leitfaden in der Rhythmik und Metrik der classischen Sprachen für Schulen - Leipzig 1869
- [1875a] Boehmer, Eduard (ed.) - Romanische Studien, vol. I 1871-1875 - Strassburg 1875
- [1957a] Snell, Bruno - Griechische Metrik - Göttingen, 2nd ed. 1957
- [1930a] Gerullis, Georg - Litauische Dialektstudien - Leipzig 1930
- [1964a] Barrett, W. S. - Euripides, Hippolytos - Oxford 1964
- [1967a] Dale, A. M. - Euripides, Helen - Oxford 1967
- [1968a] Korzeniewski, Dieter - Griechische Metrik - Darmstadt 1968
- [1969a] Dale, A. M. - Collected Papers - Cambridge 1969
- [1970a] Biehl, Werner - Euripides, Troades - Leipzig 1970
- [1973a] Biehl, Werner - Euripides, Orestes - Leipzig 1973
- [1977a] Sovijärvi, Antti, & Reino Peltola, eds. 1977. Suomalais-ugrilainen tarkekirjoitus. (Helsingin Yliopiston Fonetiikan Laitoksen Julkaisu; 9) Helsinki: Publicationes Instituti Phonetici Universitatis Helsingiensis. ISBN 951-45-1019-4
- [1982a] West, M. L. - Greek Metre - Oxford 1982 - ISBN 0-19-814018-5
- [1989a] Mahler, Hervicus (ed.) - Pindari Carmina cum Fragmentis, vol. II - Leipzig 1989 - ISBN 3-322-00 673-5
- [1989b] Biehl, Werner - Euripides, Troades - Heidelberg 1989 - ISBN 3-533-04094-1
- [1992a] West, Martin L. - Aeschylus Septem contra Thebas - Stuttgart 1992  
- ISBN 3-519-01019-4



- [1993a] Sicking, C. M. J. - Griechische Verslehre - München 1993 - ISBN 3 406 35252 9
- [1993b] Dover, Kenneth - Aristophanes, Frogs - Oxford 1993 - ISBN 6-19-814773-2
- [1997a] Nesselrath, Heinz-Günther - Einleitung in die griechische Philologie - Leipzig/Stuttgart 1997, ISBN-13: 978-3519074359
- [1997b] Graf, Fritz (ed.) - Einführung in die lateinische Philologie - Leipzig/Stuttgart 1997 - ISBN 3-519-07434-6
- [1998a] Anaxiphorminx font, attributed to: Pfeijffer, I. L., University of Leiden, The Netherlands, 1998. The font is found on the Internet at different places, sometime together with a Word document describing it, which shows “David J. Perry, 1998” as author in its properties. The font apparently is widely used to create documents with metrics. Three of the characters found there, for which we found no evidence in printed material so far, are included here.
- [2001a] Girdeinis, Aleksas: Kalbotyros darbai (Studies in linguistics): straipsniai, studijos, esė, recenzijos. T. 3: 1988–2000. Vilnius, Mokslo ir enciklopedijų leidybos inst., 2001. ISBN 5-420-01480-7
- [2001b] Hutchinson, G. O. - Greek Lyric Poetry - New York 2001 - ISBN 0-19-924017-5
- [2004a] Austin, Colin, et al. - Aristophanes, Thesmophoriazousae - New York 2004 - ISBN 0-19-926527-5

## 6. Examples and Figures

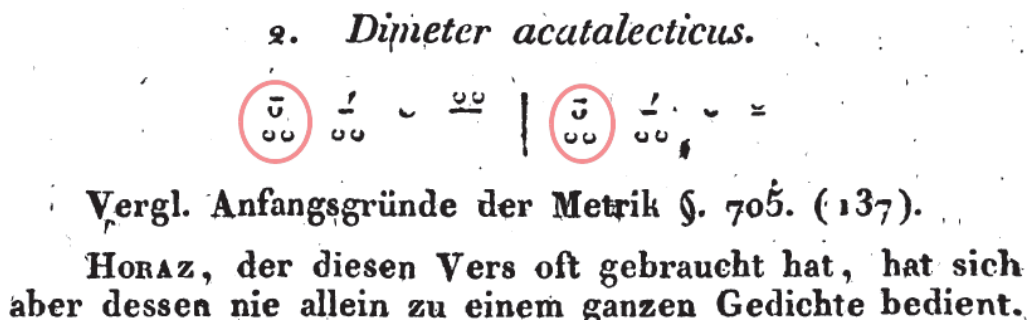
The figures are numbered by the referenced work (consisting of the year of edition and the letter, as in the "references" list, followed by a hyphen the page number, and following by a second letter if more than one figure is taken from a page.

E.g.: "Fig. 1848a-83" means "See ref. [1848a], p.83").

References to already encoded characters are usually given in parentheses.

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Fig. 1826a-77: Showing specimens for U+2B91.



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Fig. 1826a-99: Showing specimens for U+2B92 (e.g.the third character in the second row after the first vertical line; with an ictus applied which is unified with the acute accent (U+0301)

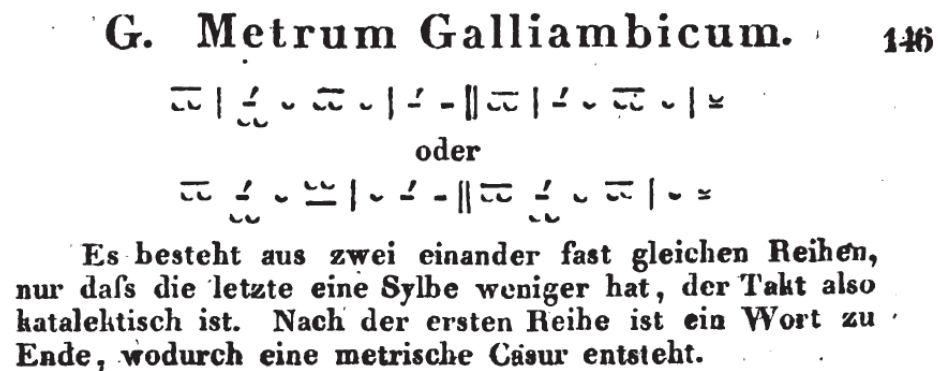


Fig. 1829a-21: Showing specimens for U+01D8 on a longum, in a work which avoids the acute here as it uses the same combining characters on text in contrast to the tonal accents (one of which the acute accent is in classical Greek); see fig. 1829a-22.

**X.—The Ictus Metricus of Anapestic Verse.**

1. The metrical ictus has been briefly explained at the beginning of this Introduction. Its application to the dipodias of Anapestic verse is quite clear and perspicuous: the ictus falls on the last syllable of the  $\cup\cup\text{—}$  and its companion  $\text{—}\text{—}$ , and on the first of the  $\text{—}\cup\cup$  and its accompanying  $\text{—}\text{—}$ .

Fig. 1829a-22: Showing specimens for U+01D8 and U+01D9 on text.

Fourthly, in lines of mixed movement Anapestic and Dactylic:

Ibid. 508. δυο πρεσβυτα ξυνθιασωτα του ληρειν και παραπαειν.  
 529. ουτε μυροισιν μυρισαι στακτοις, οποταν νυμφην αγα-  
 γησθον.

Fig. 1834a-XIII: Showing specimen for U+2B96.

wäre? Mit dem dreizeitigen Fuss (  $\cup\cup\cup$  )  
 ist ja die dreizeitige Länge (  $\text{—}\cup\cup\cup$  ) eben

Fig. 1834a-61: Showing specimens for U+2B8E (green), U+2B94 (red).

Zuweilen finden auch an der Stelle der metrischen Kürze zwei kurze Sylben Statt, diese bezeichnet man alsdann durch das doppelte Zeichen der Kürze über dem einfachen.  $\overline{\cup\cup}$  Lässt eine solche Stelle auch die prosodische Länge zu, so setzt man das Zeichen der Länge dazwischen  $\overline{\text{—}\cup\cup}$  z. B. •

$\overline{\cup\cup}$   $\overline{\text{—}\cup\cup}$   $\text{—}\text{—}$   $\overline{\cup\cup}$   $\text{—}\text{—}$

Fig. 1834a-216: Showing specimens for U+2B84.

Verses die Basis seyn. Hermann bezeich  
diese Basis so :

— — — | — — — — —  
Κυπρι-δος θαλος ωλεσεν  
hoc non pollicitus tuae.

Fig. 1834a-393: Showing specimens for U+2B84.

Hermann die beiden nebeneinanderstehen-  
unbestimmten Sylben durch die von ihm  
gedachte Basis (De Metris. S. 217.)

— — — — | . . . | — — — — —

Fig. 1834a-492: Showing a specimen for U+2B9B.

schöneren, lebendigeren Rhythmus dar, nämlich  
diesen :

— | — — — — | — — — — — | — — — — — | — — — — —  
♪ | ♪ ♪ ♪ ♪ | ♪ ♪ ♪ ♪ ♪ ♪ | ♪ ♪ ♪ ♪ | ♪ ♪ ♪ ♪  
σο-φοι δε και το μηδεν αγαυ επος αινησαν περισσε:

Fig. 1834b-6: Showing specimens for U+2B90, with U+20F4 (red) and U+20F5 (green).

Das Zeichen der Länge ist —, das der Kürze ∪.  
So wie uns Rhythmus eine bestimmte Aufeinanderfolge von Ak-  
sen und Thefen war, so ist Metrum eine bestimmte Aufeinan-  
derfolge von Längen und Kürzen:  
Einem bestimmten Rhythmus können verschiedene Metra ange-  
paßt werden:  
∪ —, — —, ∪ ∪, — ∪ ∪;  
und umgekehrt, einem bestimmten Metrum verschiedene Rhythmen:  
— ∪ ∪, — ∪ ∪

Fig. 1834b-7: Showing specimens for U+1AB1, 1DF2, 1DF4.

Das rhythmische Verhältniß der Gleichheit: 1:1, 2:2, 4:4, läßt sich folgenden metrischen Formen substituiren:

1 | 1, 2 | 2, 2 | 2, 2 | 2, 4 | 4  
 ∪ | ∪, ∪∪ | ∪∪, - | ∪∪, ∪∪ | - . - | -

Fig. 1834b-50: Showing base marks: U+20F7 over U+2B8F (red), (U+033D) over (U+2304) and U+ (green; the last two are not U+2B98), U+20F8 over U+2B8F (blue)

∪∪, ∪∪, welche alle in Gebrauch sind. Außer dieser Basis findet sich noch eine jambische: ∪<sup>x</sup> (∪<sup>x</sup>, -<sup>x</sup> ∪∪, ∪∪<sup>x</sup>). Beide werden zuweilen mit einander vertauscht. Indes bedient sich Pindar immer nur der einen Form, ohne sie mit der andern zu verwechseln.

Fig. 1834b-63: Showing a specimen of U+2B94 (second line before "acatalecta"). Also, showing an example where the baseline is occupied by the middle element of the stack (counting also the ictus). However, the metrical part is simply encoded as: (U+23D2) (U+0301) (U+23D4) (U+23D1) (U+23D4) (U+23D1) U+2B94 (U+23D2) (U+0301) (U+23D4) (U+23D1) (U+23D4) (U+23D2)

### 3. Die Tripodie, Tripodia trochaica.

∪<sup>˘</sup>∪<sup>˘</sup>∪<sup>˘</sup> acatalecta.

∪<sup>˘</sup>∪<sup>˘</sup>∪<sup>˘</sup> catalectica.

Jene dient zuweilen bei Lyrikern als Schluß einer rhythmischen Partie, z. B. Pind. Olymp. IV. Epod. 10.  
 εοικόντα χρόνον,

Fig. 1839a-15: Showing specimens for use of the longum U+2B7F on the baseline.

(in trisyllabum). Zweisylbige Füße, wie Trochäen, sind demnach bloß katalektisch in syllabam, Daktylen in syllabam und disyllabum; bei Choriamben kommt nur, wenn auch selten, die Katalexis in disyllabum (∪<sup>˘</sup>∪<sup>˘</sup> - ∪<sup>˘</sup>∪<sup>˘</sup>) vor, weil sie katalektisch in trisyllabum keinen rechten Schluß gewähren würden; auch Jonici a majore sind nur katalektisch in disyllabum (∪<sup>˘</sup>∪<sup>˘</sup> - ∪<sup>˘</sup>∪<sup>˘</sup>).

Fig. 1839a-24: Showing a specimen of the sequence U+20F4 (U+033D) U+2B8F

2. Die griechischen Dichter, namentlich die Dramatiker und  
 äolischen Lyriker sind in der Behandlung der Basis sehr frei ge-  
 wesen, indem sie dieselbe unter den mannichfaltigsten Formen erschei-  
 nen ließen. Es kommt bei ihnen der Tribrachys (̈́ ̈́ ̈́), der  
 Spondeus (̈́ —), Anapaäst (̈́ ̈́ —) und sogar der Dak-  
 tylus (̈́ ̈́ ̈́) statt des Trochäus vor, und in der freieren Stro-

Fig. 1837a-130: Showing specimens for the longum U+2B7F in a position below the baseline, in clear contrast to the em dashes found in the first line.

**332 — 342 = 343 — 353.**

**Verse 1. Choriambic dimeter.** ̈́ ̈́ ̈́ —, ̈́ — ̈́ ̈́. (But see Herm. Elem. p. 337, ed. Glasg. 6, a diiambus taking the place of a choriamb.)

Fig. 1843a-114: Showing specimen for U+2B90 (start of second line), U+2B98 (start of third and fourth line). The small ancepts over the U+2B90 can be represented by (U+033D).

**Zweite Strophe 926 — 933. 934 — 941.**  
 Ⓞ̈́ ̈́ ̈́ — ̈́ ̈́ ̈́ — ̈́ ̈́ ̈́ — ̈́ ̈́ ̈́ \*)  
 ̈́ — ̈́ ̈́ ̈́ — ̈́ ̈́ — ̈́ ̈́ —  
 ̈́ ̈́ ̈́ ̈́ — ̈́ ̈́ ̈́ — — ̈́ ̈́ ̈́ —

Fig. 1844a-9: Same characters as in fig. 1834b-6, using another font.

The sign for a long is —, for a short ̈́.  
 As we found rhythm to be a definite succession of arses  
 and theses, so *metre is a definite succession of longs and shorts.*

Different metres may be adapted to a particular rhythm :

̈́ ̈́ —, — —, ̈́ ̈́ —, — ̈́;

and, the reverse, different rhythms to a particular metre :

— ̈́ ̈́, — ̈́ ̈́.



Fig. 1844a-61: Compare with fig. 1834b-50.

This smallest trochaic rhythm is sometimes found before other longer ones as an introduction, and is then called a *basis*

(*βᾶσις*). We shall always mark the basis with x,  $\overset{x}{-}\overset{-}{\cup}$ .

This trochaic basis contains the following forms:  $\overset{x}{-}\overset{-}{\cup}$ ,  $\overset{x}{-}\overset{-}{-}$ ,  $\overset{x}{\cup}\overset{x}{\cup}$ ,  $\overset{x}{\cup}\overset{x}{-}$ , all of which are in use. Besides this basis an

iambic one occurs:  $\overset{-}{\cup}\overset{-}{-}$  ( $\overset{-}{\cup}\overset{-}{-}$ ,  $\overset{-}{-}\overset{-}{-}$ ,  $\overset{-}{\cup}\overset{-}{\cup}$ ,  $\overset{-}{-}\overset{-}{\cup}$ ). They are sometimes interchanged. Pindar, however, uses always one form

Fig. 1844a-75: Compare with fig. 1834b-63.

(3) *The Tripody.*—*Tripodia trochaica.*

$\overset{/}{-}\overset{-}{\cup}\overset{-}{\cup}\overset{-}{\cup}$  acatalecta, Ithyphallicus.

$\overset{/}{-}\overset{-}{\cup}\overset{-}{\cup}$  catalectica.

Fig. 1848a-48: Showing specimens for U+2B84, U+2B98, (and U+23D2).

\*) Hermann bezeichnet sie .. .., Böckh  $\overset{x}{-}\overset{-}{\cup}$ .

Fig. 1848a-83: Showing specimen for U+2B90.

Ictus auf. Tonlos neben einem Ictus können nur eine oder zwei Kürzen oder eine Länge sein, es sei denn nach einer aufgelösten Länge ( $\overset{/}{\cup}\overset{/}{\cup}\overset{/}{\cup}$ ); sonst sind drei tonlose Kürzen hinter einander zu verschiedenen

Fig. 1848a-84: Showing a specimen for U+2E4A (in the second line), different from the comma (in the third line) in size, slanting angle, and shape.

Anfang einer neuen Reihe ein; so ist wohl lieber zu messen  
 $\overset{/}{-}\overset{/}{\cup}\overset{/}{\cup}\overset{/}{\cup}\overset{/}{\cup}\overset{/}{\cup}\overset{/}{\cup}$ , Pind. Ol. V ep. 1.  
als mit Böckh in Monopodie, Tetrapodie und Tripodie zu theilen.

Fig. 1848a-427: Showing specimens for U+2E4A (second last line), U+2E48, U+ (last line).

## II. 244.

- - - - -  
 - - - - - „ h  
 - - - - - st.

Fig. 1852a-79: Showing specimens for U+2E4C.

Die letzte Sylbe natürlich ist, da der Vers ein Ganzes bildet und für sich abgeschlossen erscheint, für das Ohr gleichgültig, wie die letzte Sylbe des Hexameters. Daher bietet er nun folgendes Schema:

- - - - -

### Beispiele:

Langsam drang sein Wort „ tief in barbarisches Herz.  
 Unheilvolles Geschick, „ welches die Götter gesandt.  
 Bald, an der Fahrt Endziel, „ nah' ich dem römischen Port.  
 Trag ich den Anker beglückt „ werfen im Land der Geburt.

Fig. 1852a-201: Showing specimens for U+2E4B.

## §. 212.

- - - - -  
 - - - - -  
 - - - - -  
 - - - - -

### B. B.:

Seele der Welt kommst du als Hauch in die Brust des  
 Menschengeschlechts und gebierst ewigen Wohl laut?  
 Große Bilder entstehen und große  
 Worte beklemmen das Herz.





Fig. 1868a-152: *Showing specimens for U+2B92 (end of second and third last line) .*

a. Den thetisch anlautenden μέτρα καταληκτικά fehlt in der Apothesis die ἄρσις des letzten Tactes

± ∪ ± ∪ ± ∪ ± (∪)  
 ± ∪ ∪ ± ∪ ∪ ∪ ± (∪∪)  
 ± ∪ ∪ ± ∪ ∪ ± ∪ ∪ ± (∪∪)  
 ± ∪ ∪ ± ∪ ∪ ∪ ∪ ± (∪∪)

Fig. 1868a-237: *Showing specimens for U+2B94.*

Im anapästischen Logaödikon kann an Stelle des anlautenden Anapästes auch ein Spondeus oder Iambus stehen, die Apothesis ist wie bei den ungemischten Anapästen gewöhnlich katalektisch (Hephästion führt dies als die einzige Form des anapästischen Logaödikons an). So z. B. das aus 4 Anapästen und einem katalektischen Diambus bestehende Ἀρχεβούλειον, welches wir nach der Zahl seiner Einzeltacte als katalektische Hexapodie bezeichnen können.

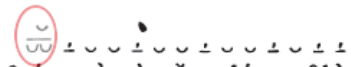
  
 Ἄγέτω θεός, οὐ γὰρ ἔχω δίχα τῶδ' αἶδειν.  
 Νύμφῃ, σὺ μὲν ἀστερίαν ὑφ' ἄμαξαν ἦδη.  
 Φιλωτέρα ἄρτι γὰρ ἃ Κυκελὰ μὲν Ἔννα.

Fig. 1868a-601: *Showing a specimen for U+20F5.*

Ῥγ. 4 ῆρ. 7 δέξατ'. αἴσιον δ' ἐπί οἱ Κρονίων | Ζεὺς πατὴρ ἔκ-  
λαγῆε βροντάν

± ∪ ± ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪ ± ∪ ∪ ∪ ∪ ∪ ∪ ± ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪

Fig. 1868a-646: *Showing specimens for U+2BA0.*

Gewöhnlich findet in diesen Versen innerhalb oder am Ende des Trochäus ein Wortende statt. Hier ist wie bei der Cäsar des elegischen Verses eine Pause gestattet, durch welche die auslautende Kürze des Trochäus der Länge desselben im Zeitumfange gleich gestellt wird, z. B.

ἀγηχιόρων ὀπόταν προῖοιμίων  
 --- ∪ ∪ --- ∪ ∪ --- ∪ ∪ --- ∪ ∪ ---  
 ἄ τε πρυτανεία λέλογχας | Ἔστια  
 --- ∪ ∪ --- ∪ ∪ --- ∪ ∪ --- ∪ ∪ ---

Fig. 1869a-28: Showing specimens for U+2BA8, U+2B9E, U+2BA0, U+2BA1

des Aufschlages eine Pause haben kann. Diese Pause wird in der Notenschrift wie in der metrischen Zeichenschrift durch verschiedene Zeichen je nach ihrer Zeitdauer angegeben:

- die Achtelpause ♪, ^.
- die Viertelpause ♪, ⋯.
- die 3/8-Pause ♪, ⋮.
- die halbe Pause =, ⋮.

2. Der Schluss mit einem verkürzten Takte heisst κατάληξις und der so schliessende Vers katalektisch (στίχος καταληκτικός, μέτρον καταληκτικόν). Schliesst dagegen der Vers mit ganzem Takte, so heisst er „voll endend“ (ἀκατάληκτος).

Fig. 1869a-35: Showing specimens for U+2BA8 (red), U+2BA0 (green).

Γ. ἰώ, ὦ, μεγάλα τοι κόραι δυστυχεῖς  
 Νυκτὸς ἀτιμοπονδεῖς.

Fig. 1869a-38: Showing a specimen for U+2B81.

So sind denn die rhythmischen Zeitmomente der griechischen Poesie und folglich auch der griechischen Vocal-Musik in Notenschrift und metrischer Schrift die folgenden:

- ♪ Achtelnote ♪
- ♪ Viertelnote \_
- ♪ 3/8-Note ⋮
- ♪ halbe Note =
- ♪ 5/8-Note ⋮

Fig. 1869a-39: Showing specimens for U+2B81.

Δύ' ἡμέραι γυναικός εἰσιν ἥδισται,  
 ὅταν γάμη τις κάκφερη τεθνηκυῖαν. Hipp.



Fig. 1875a-299: Showing a specimen for U+2E4C (red), showing its basic shape different from the comma (green).

Ad numerum septimum in altioribus multiplicatum, quamvis apud neutrum virum doctissimum quidquam observatum sit, vocalem u adscripsi. Rationes musicae ex numeris simplicissimis satis apparent. Variationes vocalium iam accuratius notari poterunt, e. g. i" (quod sub numero 72 sonat), a,,, (n. 25), porro æ³, æ₂, æ₂, æ— 2, quorum significatio facile intelligitur. Ad seriem medianam quod attinet, novis expe-

Fig. 1930a-XX: Showing specimens for U+23F6 (red) and U+23F7 (green).

- [u] = weites, ungespanntes [u]: R 1 p ùž < ùž, tuř·gu < tuřguje .  
 Da [u] oft auch nicht besonders gespannt ist, fällt nur ausgeprägtes [u] ins Ohr. Es begegnet öfter dort, wo [u] > [v] werden kann.
- [u] = vorgeschobenes, gemischtes [u]: R 1 p pakā·ju < pakājuje .
- [u] = unsilbisches u: Ž T *îeus* < *tévas*, R 2 *çius* < *gyvus* .
- [v] = geblähtes [u]: R 1 ž *nùtvpe* < *nütüpè*, R 3 *sù kariétv* < *sù karietà* .

Fig. 1957a-1: Showing specimens for U+2B82.

## 2. Zeichenerklärung<sup>1)</sup>

- longum (d.h. langes Element im metrischen Schema = Platz für eine Länge)
- ˘ breve (Platz für eine Kürze)
- × anceps (Platz für Länge oder Kürze)
- ≅ anceps (Länge häufiger als Kürze)
- ≅ anceps (Kürze häufiger als Länge)
- ≅ longum, wo auch 2 Kürzen erscheinen (sog. aufgelöste Länge)
- ≅ 2 brevia, wo auch Länge erscheint
- 2 ancipitia, wo selten Doppelkürze erscheint
- ^ Fehlen eines Elements: a) am Anfang eines äolischen Grundmaßes (Akephalie); b) am Ende einer Periode (Katalexe)

Fig. 1957a-2: Showing a specimen for U+1DFB.

- ⊗ Gedichtanfang oder -ende
- ||| Strophenende
- || Pause (= Periodenende)
- | regelmäßiges Wortende
- ∴ gesuchtes Wortende
- : - ∴ Wechselschnitt (Wortende vor oder nach dem longum gefordert)
- : - ∴ Wechselschnitt (Wortende meist nach dem longum, sonst davor)
- ↪ Brücke (Wortende zwischen den beiden Elementen verboten)
- ↪↪ erstrebte Brücke (Wortende zwischen den beiden Elementen vermieden)

Fig. 1957a-6: Showing a specimen for U+20FA, applied to the longum at right, while it kerns over the left "long over short".

außerdem noch im Wortende steht. So erklärt sich wohl das Gesetz, das von **PORSON** für das Ende des iambischen Trimeters und des troch. Tetrameters entdeckt ist, das aber noch weiter gilt<sup>1</sup>), daß außerhalb der Mittelzäsur (od. -dihärese) nach Länge im anceps kein Wort enden darf (Schema: . . . ~ - ↪ ~ . . .).

Fig. 1957a-15: Showing specimens for U+2B9D (green), U+2BA3 (red).

**ALKMAN** fr. 60, das allerdings nur vermutungsweise **ALKMAN** zugesprochen ist, ließe sich wohl so rekonstruieren:

3 da ^ ^ | ~ 4 da ^ ^ | \*\*  
 < 3 da ^ ^ | ~ 4 da ^ ^ | \*\* >  
 \*\* 4 da ^ | 4 da ^ ^- ||| <sup>3</sup>).



Fig. 1957a-39: Showing specimens for U+2E48, used in text.

e) Tragödie und Komödie

α) Aufbau der Strophen

Während die Chorlieder der Lyriker triadisch in der Form gebaut sind, daß die Dreiheit Strophe, Antistrophe und Epode öfter wiederholt wird (s. o. S.13 und 16; Schema:  $a \parallel a \parallel b \parallel a \parallel a \parallel b \parallel \dots$ ), ist es im Drama das übliche, daß paarweis respondierende Strophen einander folgen, die allenfalls durch ein nicht respondierendes Stück (astrophon) abgeschlossen werden können; Schema:  $a \parallel a \parallel b \parallel b \parallel \dots (n \parallel)$ . Gelegentlich treten solche Astropha auch zwischen die respondierenden Strophen (Mesoden)<sup>2)</sup> oder auch davor (Prosoden). Sophokles und Euripides haben meist in einem Chorlied 2 Strophenpaare, Aischylos dagegen durchweg noch mehr<sup>3)</sup>. Erst unter dem Einfluß des sogenannten jüngeren Dithyrambos (s. u. S. 45) treten Astropha in den Chorliedern hervor<sup>4)</sup> und entstehen vor allem die großen Schauspielerarien.

Fig. 1964a-298: Showing a specimen for U+2B7D.

	β	1	-	-	-	∪	∪	-	∪	-
765		2	-	∪	-	∪	∪	-	∪	-
		3	-	∪	-	∪	∪	-	-	-
755		4	∩	-	∪	∪	-	∪	-	∪
770		5	∩	-	∪	∪	-	∪	-	∪
		6	-	-	∪	-	-	-	∪	-
760		7	-	-	∪	-	-	-	∪	-
		8	-	-	∪	-	-	-	∪	-
		9	-	-	∪	-	-	-	∪	-
775		10	-	-	∪	-	-	-	∪	-
									∪	-
									.	∪




Fig. 1968a-3: Showing a specimen for U+2E48 (start of last line, besides other symbols in a list of symbols in the book).

## 2. Erklärung der metrischen Zeichen und Abkürzungen

- (elementum) longum
- ∪ (elementum) breve
- × (elementum) anceps
- ∩ anceps (Länge häufiger als Kürze) } In zweistrophigen Chor-
- ∪ anceps (Kürze häufiger als Länge) } liedern steht das Element
- der Strophe über dem Ele-
- ment der Gegenstrophe.
- ∩ longum, das in zwei Kürzen aufgelöst werden kann
- ∞ (elementum) biceps, d. h. zwei brevia, die durch eine Länge er-
- setzt werden können
- ∧ bedeutet, daß dem genannten Versmaß bzw. Vers vorn (Ake-
- phalie) oder hinten (Katalexe) ein Element fehlt. (Wird inner-
- halb eines Verses ein Element unterdrückt, so spricht man
- von Synkope)
- | Wortende, entweder regelmäßig oder an der einen in Frage
- kommenden Stelle
- ⋮ gesuchtes Wortende
- || Pause (Hiat, brevis in longo) oder Periodenende. (Näheres s. u. S. 9)
- ||| Strophenende

Fig. 1968a-61: Showing specimens for U+1AB1 to U+1AB6.

Plat. Com. 188, 1 K. = Edm.

οὗτος, τίς εἶ; λέγε ταχύ· τί σιγαῖς; οὐκ ἐρεῖς;

– 1 | ∪ 2 | ∪∪ 3 | ∪ 4 – | 5 ∪ 6 ||

Edmonds athetiert τί: – 1 | ∪ 2 | ∪ 3 ∪ ∪ | 4 – | 5 ∪ 6 ||

Die Porsonsche Brücke ist nicht beachtet.



Fig. 1968a-78: Showing specimens for U+2BA7, U+2BA5.

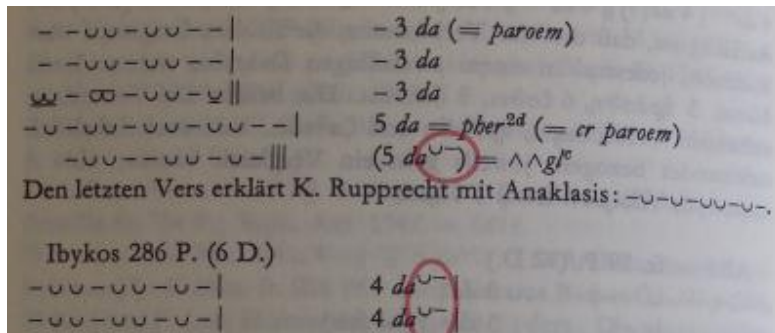


Fig. 1968a-79a: Showing specimens for U+2BA7, U+2BA5, in contrast to the common (not-superscripted) versions of longum and breve.

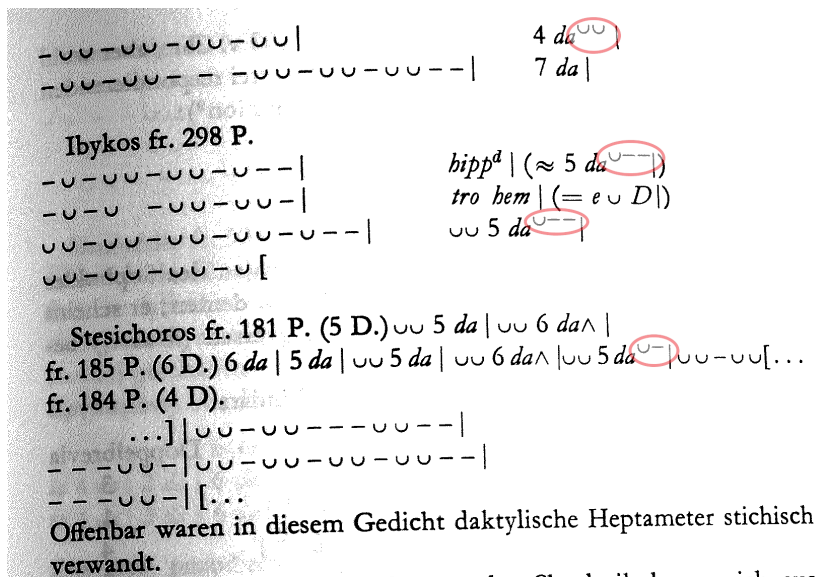


Fig. 1968a-79b: Showing a specimen for U+2BA5, U+2BA4, U+2BA7.

lich auf die alexandrinische Editionstechnik zurückzuführen. Die Partheneionstrophe Alkmans läßt sich für unser Empfinden ohne weiteres in Strophe, Gegenstrophe und Epode ( $\sigma\tau\rho$ .  $2\ tro\wedge \parallel \wedge hipp\parallel$   $2\ tro\wedge \parallel \wedge hipp\parallel\parallel$ .  $\xi\pi\omega\delta$ .  $3\ tro \parallel 3\ tro \parallel 4\ tro \parallel 4\ da^{uu} \parallel 4\ da^{u\times}\parallel\parallel$ ) gliedern. Jedoch wird für zwei weitere Fragmente des Alkman Einstrophig-

Fig. 1967a-77: Showing specimens for U+2B9A.

178 παιᾶνα νέκυσιν ὀλομένοις λάβῃ.      - . - ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪  
 190 κλαγγαῖσι Πανὸς ἀναβοᾷ γάμουσ.      sync. tr. trim. cat.

An alternative version of the last lines which has found much favour, is:

177 φόνια φόνι' ἀχάριτας ἴν' ἐπὶ      ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪ tr. dim.  
 188 ὄρεσι φυγάδα νόμον ἰεῖσα      ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪  
     δάκρυσι παρ' ἐμέθεν ὑπὸ μέλαθρα      ∪ ∪ ∪ ∪ ∪ ∪ ∪ ∪  
     γοερὸν, ὑπὸ δὲ πέτρινα μύχαλα      + tr. dim.

Fig. 1968a-192: Showing specimens for U+23F7.

Anakr. 352 P.  
 ὁ Μεγιστῆς δ' ὁ φιλόφρων δέκα δὴ μῆνες ἐπεὶ τε 4 ión |  
 στεφανοῦται τε λύγῳ καὶ τρύγα πίνει μελιηδέα. 4 ión |

Das sogenannte Anaklomenon (*anacr*) ist aus einem regelmäßigen Dimeter durch Anaklasis (Vertauschung der bezeichneten Elemente) entstanden:

∪ ∪ - ' - ∪ ∪ - - (>) ∪ ∪ - ∪ - ∪ - - |.

Anakr. 356 a 1 P.      ἄγε δὴ φέρ' ἡμῖν ὦ παῖ

Fig. 1969a-179: Showing specimens for U+2B8A (red), U+2B87 (green).

near the end of the rhythm. The second line must be taken for what it appears to be, an elegiambus set on aeolic base (tragic style)—a kind of long and daring extension of the glyconic type of colon:

-  $\bar{x}$  - ∪ ∪ - ∪ ∪ -  $\bar{x}$  - ∪ -

This sends us back for another look at the first line, which can easily (with μελέαν πάθαν) be given the same pattern:

∪ ∪ ∪ - ∪ ∪ - ∪ ∪ -  $\bar{x}$  - ∪ -

Fig. 1970a-91: Showing specimens for U+2E49.

b 1302–1316 = 1317–1332 Stropha altera, 38 metra

ba cr ia ||

interiectio extra metrum

ia ia ba ||

ia cr ia

1320 ia ia ia ||

ia cr ba ||

Fig. 1973a-xvi: Showing a specimen for U+ABA3.

non omnia eorum exemplorum, quae Di Benedetto adfert<sup>4</sup>), idonea sunt:

1030 οὐκέτι (οὐκ ἔτι **O**) **M<sup>ve</sup>O**, ut vid. Σ: οὐκέτ' εἰ cett.: cf. Ion 1289 (coni. Dobree); hic, ni fallor, ellipsis verbi, quae in **M<sup>ve</sup>O** versatur, ut lectio difficilior praefenda est.

Fig. 1977a-7: Showing specimens for U+1AB1...U+1AB4, used on common letters.

La usefoneettista painotusta osoitettaessa käytetään jompaakumpaa pääpainon merkkiä tarkoittamaan puhetahdin vahvasti painotettua l. vahvaa tavua ja sivupainon merkkiä tarkoittamaan puhe- tai esitahdin puolivahvasti painotettua l. puolivahvaa tavua. Esim. vepsÄ + / ka·tsu vaigi | i·vaške se | + / l̥ä·ks li:kahl | ra·dole da:i | +; + / 'kanta,kämme | 'vissillä | 'arvok,küdellä | + ,sitä | 'väistämä,töntä | 'tosi,asi(ä) | +. Puhetahdin vahvojen tavujen suhteellista lausepainollisuutta voidaan osoittaa pääpainon merkin sijasta tavun ensimmäisen vokaalin (tai muun sonantin) yläpuolella olevalla pienikokoisella numerolla (<sup>1 2 3 4</sup>), jolloin <sup>4</sup> tarkoittaa painon vahvinta ja <sup>1</sup> heikointa astetta. Esim. + tai | <sup>1</sup>eivät,hän ne | <sup>3</sup>nuokān | <sup>4</sup>käsit,tel | + ,olep | <sup>4</sup>pieni(ä) ,eivätkä | <sup>4</sup>lijjain | <sup>4</sup>sūri(a) | +.

**Fig. 1982a-XI:** Showing specimens for U+0002 (orange), U+2B81 (red; in contrast to the “unreversed” triseme (U+23D7)), U+2B82 (green), U+2B85 (blue)

## METRICAL SYMBOLS

-	long
∪	short
x	anceps
⌘	long syllable in anceps position
⌘	usually long
∅	usually short
⌘	resolvable long
3	resolved long
B	contractible biceps
::	contracted biceps
┌	triseme (equivalent to -∪)
┐	triseme (equivalent to ∪-)
└	tetraseme (equivalent to --)
○○	two positions of which at least one must be long
	word-end ( : often word-end; :/: more/less often word-end)
(	bridge, i.e. word-end avoided
∫	dovetailing, i.e. word-end one position later
	period-end (or beginning)
	strophe-end (or beginning)
⊗	beginning or end of composition
::	change of speaker
~	in responsion with

Fig. 1982a-61: Showing specimens for U+2B82 (red), U+20F9 (green).

Here, the metrical circle has the size of the anceps, to accomplish a harmonic view when the “combining metrical two shorts joined above” is applied. Using e.g. the Unicode “white circle” (U+25CB) is typographically inappropriate here.

### Aeolic

The ‘aeolic’ category is so called because of the part played in it by the asymmetric cola, particularly the following forms:

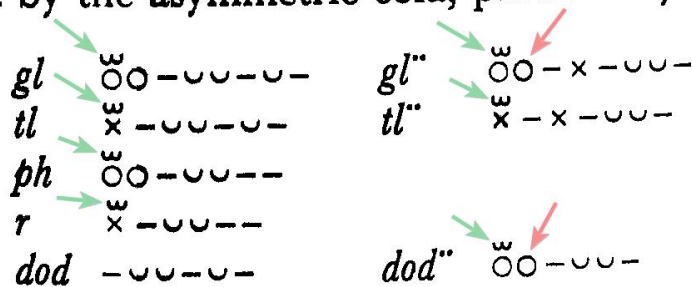


Fig. 1982a-75: Showing specimens for U+1ABA.

It is interesting to note a certain parallelism between the development of the strophes in *O.* 12 (466?) and *P.* 4 (462):

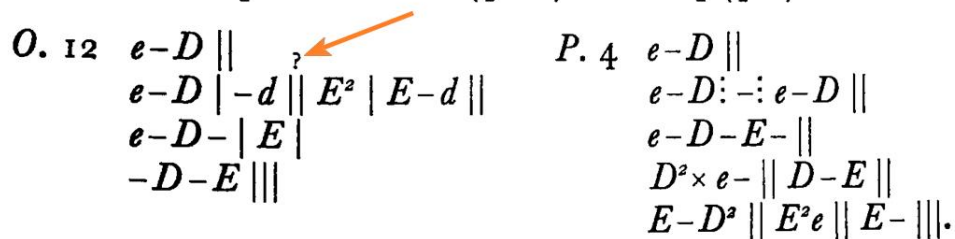


Fig. 1982a-103: Showing specimens for U+2B9C.

The syncopated *Μουσεῖα* in *Hel.* 174 responds with *ὄτι ποτ’ ἔλακεν* in 186,  $\overset{\circ}{\circ} \cup \cup \cup$ . The text has been suspected, but we found **response** of syncopated with full metra in Bacchylides,

Fig. 1982a-146: Showing specimens for U+2B9C.

Period-end is shown by hiatus at 13; at 12 and 18 it is suggested by the melodic cadences together with the grammatical pauses. Catalexis appears nowhere. The frequency with which metron-end coincides with word-end may be gauged from the above example. The order of frequency of the four possible forms of metron is  $-v-$ ,  $-vv$ ,  $v-v$ ,  $v-vv$ . The four instances of  $v-vv$  all occur in the first paeon. Long positions may be divided between two notes although occupied by a single long syllable; e.g.  $\alpha\acute{\iota}\omicron\lambda\omicron\iota\varsigma$  is metrically  $-v-$ , but melodically  $v-v-v-v$ .

There was probably a long tradition of cretic-paeonic hymns at Delphi. Cf. *h. Ap.* 514–19; *PMG* 950(a), (b); 1031 (invocation of Dionysus at a  $\theta\upsilon\mu\epsilon\lambda\iota\kappa\acute{o}\varsigma$   $\acute{\alpha}\gamma\omega\acute{\nu}$ : tetrameters in the form  $\overset{\omega}{\text{cr}} \overset{\omega}{\text{cr}} \overset{\omega}{\text{cr}} \text{cr}$ ).

In *CA* 185, no. 6 we see the metre used for a concert aria (Helen deserted by Menelaus). The technique is similar to that of the Athenian paeans.

Fig. 1982a-147: Showing specimens for U+2B85 (red), U+2BA8 (green), U+ 2BA6 (blue), U+20F9 (orange).

The majority of ritual chants and formulae are iambic. We find trimeters<sup>23</sup> and various shorter cola,  $2ia$ ,  $2ia_{\wedge}$ ,  $2tr$ ,  $lk$ .<sup>24</sup> Choriambic may appear:

854  $\upsilon\sigma\omicron\nu \upsilon\sigma\omicron\nu \acute{\omega} \phi\acute{\iota}\lambda\epsilon \text{Z}\epsilon\upsilon \text{κατὰ τῆς ἀρούρας}$  (=  $lk | ar$ )  
 876c  $\chi\epsilon\lambda\iota\chi\epsilon\lambda\acute{\omega}\nu\alpha, \tau\acute{\iota} \pi\omicron\iota\epsilon\acute{\iota}\varsigma \acute{\epsilon}\nu \tau\omega\acute{\iota} \mu\acute{\epsilon}\sigma\omega\iota;$   $\overset{\omega}{ia} \int ch | ia ||$   
 —  $\acute{\epsilon}\rho\iota\alpha \mu\alpha\rho\acute{\upsilon}\omicron\mu\alpha\iota \text{καὶ κρόκαν Μιλησίαν.}$   $\overset{\omega}{ia} \overset{\wedge}{ia} | \overset{\wedge}{ia} | ia ||$

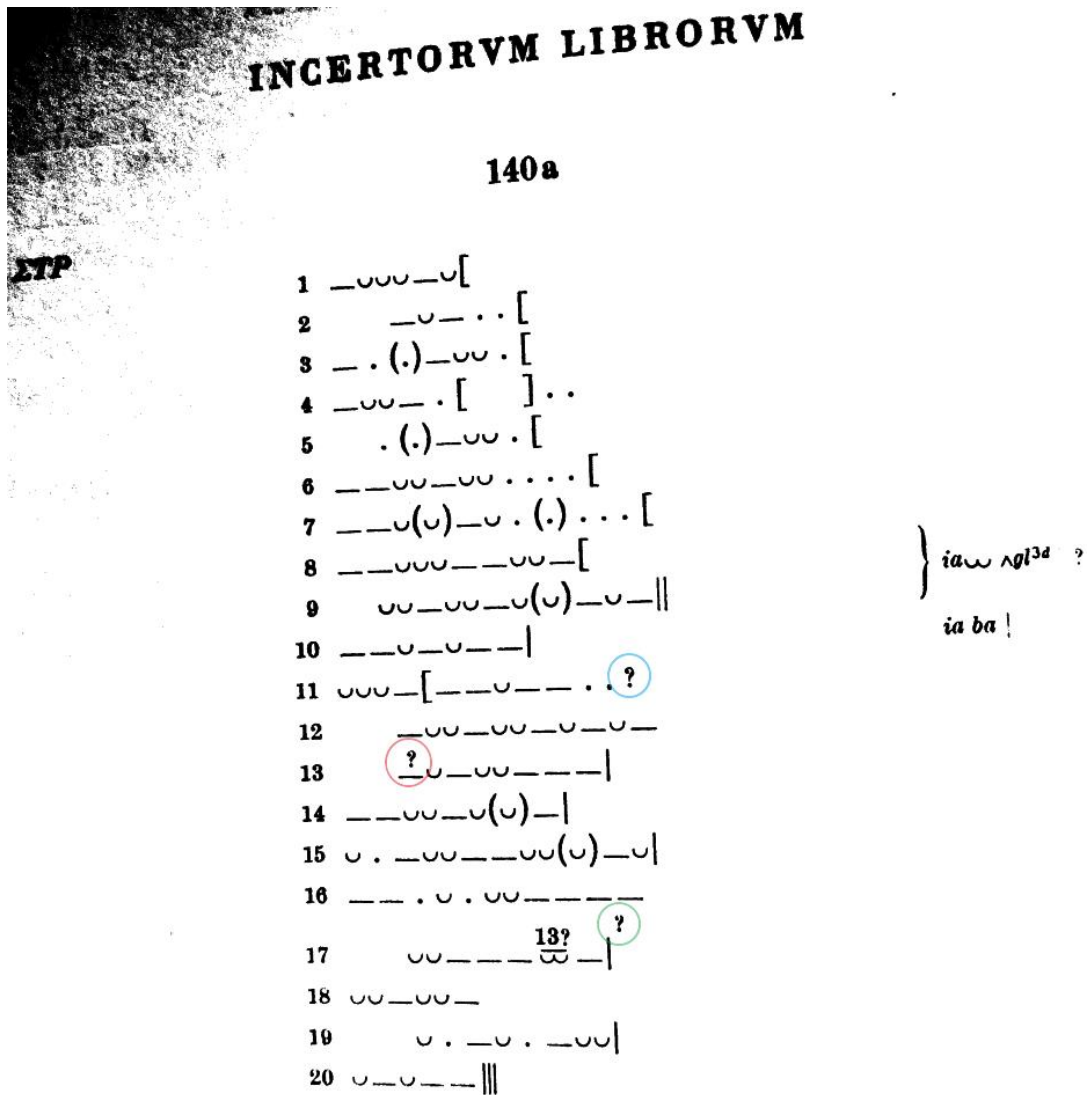
Fig. 1989a-35: Showing a specimen for U+1ABA.

VIIa = fr. 52g (A)

-6  $v-v[$   
 $- - [$   
 $\cdot - [$   
 -3  $-v[$   
 $v - [$   
 $\overset{\omega}{v} \overset{\omega}{v} \overset{\omega}{v} - . [ ? ] |||$

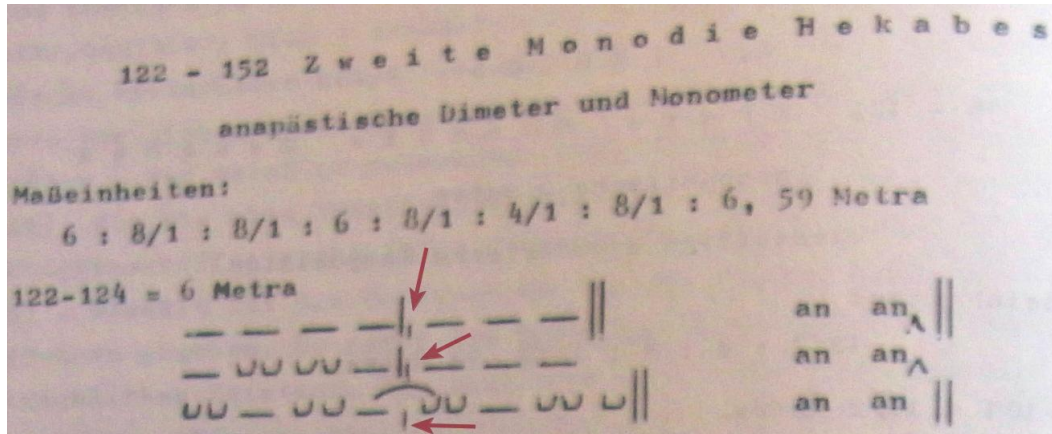


Fig. 1989a-122: Showing specimens for U+1ABA (red) and U+209D (green), in contrast to a common question mark (blue).



metrum: responsiones perspexit Sn.; aut corruptela aut alia colometria vid. fuisse in v. 13

Fig. 1989b-460: Showing specimens for U+2E49.





**Fig. 1992a-VIII:** Showing specimens for U+209D (red), U+2BA4 (green), U+ABA3 (blue), and U+ABA2 (orange).

VIII		INDEX SIGLORVM
SIGLA CETERA		
$\Omega$		lectio omnium codicum vel utique archetypi
$\Sigma$		scholium vetus ( $\Sigma^a$ scholii lemma; $\Sigma_1$ scholium in cod. I)
$\Sigma^*$		scholium incertae aetatis
$\Phi$		commentarius paraphrasticus in triadem, saec. fere xii
$\Theta$		Thomae Magistri textus
$T^\sigma$		Triclinius in scholio suo
$A^1, A^2$		A a prima /ab altera manu correctus
$A^a, A^c$		A ante/post correctionem
$A^{a?}, A^{a?}$		A, fort. a.c./fort. A a.c.
$A^{a2}, A^{as}$		A ante correctionem ab altera manu/a scholiorum scriba factam
$A^x$		A ante vel post correctionem (incertum utrum)
$A^{gl}$		glossema in A, vel lectio quasi glossema adscripta
$A^{\gamma\theta}$		varia lectio cum $\gamma\theta$ . in A adscripta
$A^{mg}$		A in margine
$A^r$		A in rasura
$A^s$		A tum correctus cum scholia addita sunt
$A^{ss}$		lectio in A super lineam scripta
$A^t$		A in textu, altera lectione inter lineas vel in margine adscripta
$A^{uv}$		A ut videtur
$A^+$		A cum alio quodam codice (vel plus uno) qui saepe ab eodem hyparchetypo pendet (cf. pp. VIII sqq.)

719 ἐκφύγοις M<sup>t</sup>: -οι fere cett. 720 ἔφριξα B<sup>γe</sup>, πέφριξα H<sup>t</sup>  
ὠλεσί- MBOλ: οὐλεσί- H: ὀλεσι- cett. 721 post h. v. sch. ᾧ  
γὰρ νύκτωρ παρεκελεύσατο καὶ γέγονε in textu habent codd.  
praeter MKT (in mg. K) 722 παναληθῆ Ω: corr. Dind.<sup>5</sup> (cf.  
946) 725 βλαψίφρονος (-ας H<sup>a1</sup>N<sup>ss</sup>+) οἰδιπόδα (-ποδος V,  
-πόδαο HB<sup>c2</sup>Υ) Ω: corr. T 726 δ' om. I<sup>t</sup>V 727 κλήρους  
M<sup>a?</sup>Θξ: -οις cett. 728 σκυθῶν Ω: corr. Dind.<sup>12</sup> 732 καὶ ἄν  
καὶ WεQ<sup>c</sup>λ φθιμένοισι Ω (-σιν T): φθιμένους (Bourdelot)  
<ἄν> Blomf.<sup>4</sup>, <ἐγ>κατέχειν Headlam<sup>5</sup> 57 734 αὐτοκτόνως  
κλ: αὐτόκτονοι Fb<sup>c</sup>: αὐτοκτόνωσιν M<sup>a</sup>: αὐτοκτάνωσιν M<sup>s</sup>I:  
αὐτοὶ κτάνωσι(v) cett. 736 γαῖα Dind.<sup>4</sup> 640: χθονία Ω: νεο-  
τέρα Weil<sup>7</sup>: κάγχωρία Newman<sup>1</sup> 56

**Fig. 1993a-3a:** Showing specimens for U+2B8E, U+2B94 (red), and U+20FE, U+20FF (green).

The blue arrows denote dot and dieresis (U+0307, U+0308) applied to U+2B7F.

- (1) *im Versschema*
- (2) *in der Wiedergabe konkreter Verse*

-	(1) <i>Longum</i> (2) <i>lange Silbe</i>
˘	(1) <i>Breve</i> (2) <i>kurze Silbe</i>
˘˘	(1) <i>Doppelbreve</i>
×	(1) <i>Anceps</i>
˙	(1) <i>respondierende Länge statt Doppelbreve</i>
˙˘	(1) <i>respondierende Länge statt Breve (Cholosis)</i>
˙˙	(1) <i>respondierende Länge an einer Stelle, wo Ambiguität (Breve/Doppelbreve) besteht</i>
˘˘	(1) <i>respondierende Doppelkürze statt Longum (bzw. Anceps)</i>
⌘	(2) <i>Abwechslung von Länge und Doppelkürze an markierter Stelle</i>
⌘	(2) <i>Abwechslung von Doppelkürze und Länge an nicht-markierter Stelle</i>
⌘	(2) <i>Abwechslung von Länge und Kürze</i>
⌘	(2) <i>Anceps bisweilen realisiert als Doppelkürze</i>
˘˘	(2) <i>Breve bisweilen realisiert als Doppelkürze</i>
	(1) <i>Zäsur</i> (2) <i>(feste) Wortgrenze</i>
⋮	(1) <i>erstrebte Wortgrenze</i> (2) <i>überdurchschnittlich frequente Wortgrenze</i>
⋮	(1) <i>Wechselschnitt</i>
	<i>Versende</i>
	<i>Ende einer Strophe bzw. Epode</i>
⊗	<i>Anfang/Ende eines Gedichts</i>
,	<i>Grenze zwischen zwei Metra bzw. metrischen Gruppen</i>
)	(2) <i>keine Wortgrenze</i>
(	(2) <i>meistens keine Wortgrenze</i>
˘	<i>respondiert mit</i>
≡	<i>repräsentiert</i>
↗	<i>steigend</i>
↘	<i>fallend</i>
^	(1) <i>Katalexis</i>

Fig. 1993a-3b: Enlarged excerpt from fig. 1993a-3a, showing a specimen for U+1DFB.



  
 (2) keine Wortgrenze  
 (2) meistens keine Wortgrenze

Fig. 1993a-4: Showing specimens for U+209E (red).  
 (The symbol between the letters marked blue is considered to be U+02C8).

4	Zeichenerk
h	(2) Hiat
s	-v-
d	-vv-
ss	-vvv-
dd	-vvvv-
s's	-v--v-
d'd	-vv--vv-
as	v-
ad	vv-
~s~	~v~
~d~	~vv~
š	--š--
đ	--đ--
δ	Dochmius
@	Antilabe
+/-	markierte/nicht-markierte Stelle
V	Vokal
C	Konsonant

Fig. 1993a-10a: Showing specimens for U+U+2B9E, U+2B9F, U+2BA1, U+2BA2.

1.1.4 Ein vom Rhythmus geforderter χρόνος, der nicht durch einen Teil der λέξις zur Darstellung gebracht wird, heißt χρόνος κενός<sup>7</sup> oder λεῖμμα (λ). Dem verschiedenen Umfang der χρόνοι entsprechend gibt es χρόνοι κενοὶ δίσημοι (π), τρίσημοι (τ), τετράσημοι (λ) und πεντάσημοι (λ).

**Fig. 1993a-10b:** Showing specimens for U+1AB3, U+1AB4, U+1AB6, U+1AB8.  
 Also, this specimen shows a modern work font putting the longum on the baseline.

**1.1.7 Eine Reihe von zwei bis sechs Füßen wird κῶλον genannt und besteht aus Füßen entweder desselben (z. B. –υ, –υ, –υ) γένος oder verschiedener (–υυ, –υυ, –υ, –υ) γένη.** Um als oberstes Prinzip das feste Verhältnis (2:1) zwischen Längen und Kürzen beibehalten zu können, hat man z. B. bei abwechselnden Daktylen und Trochäen eine Abwechslung von 3/4- und 4/4-Takt anzunehmen (–υυ–υυ–υυ = 4/4 |||| ||||| 3/4 |||| |||).

Isochronie der Füße wird in solchen Fällen durch Wechsel des Tempos erreicht:

6 3 3 6 3 3 8 4 8 4.

**Fig. 1993a-18:** Showing specimens for U+2B82 (red), U+2B95 (blue), U+2B8B (green), U+2B88 (purple).  
 Note that for the metrical circle U+2B82 (red), a small glyph is used here.

**1.6.1.1 Die Möglichkeit freier Responision von Längen und Kürzen ist nach MAAS beschränkt auf die folgenden Typen:**

- (*elementum*) *anceps*, wenn Länge und Kürze sich decken (– ~ υ, notiert als x);
- (*elementum*) *biceps*, wenn Länge und zwei Kürzen sich decken (– ~ υυ, notiert als ☺);
- ‚Anaklasis‘: –x ~ x– (notiert als ○○);
- ‚Äolische Basis‘: –x ~ υx ~ υυ (notiert als xx);
- ‚teilbares‘ Breve: υ ~ υυ (notiert als ♪);
- ‚teilbares‘ Anceps: υ ~ – ~ υυ (notiert als ☿).

**Fig. 1993a-40:** Showing specimens for U+2B7F, using a font where its glyphic appearance is completely different from any dashes or minus signs.  
 (Note: the page number was not readable in the scan, therefore, the page number part of this figure is arbitrary. The page is the one with the chapter headline "I. Prinzipien, Terminologie").

**1.2 Die Beschreibung und Erklärung der rhythmischen Gestalt eines griechischen Verses hat anzufangen mit der Beobachtung der relevanten Merkmale aller Beispiele dieses Verses in einem bestimmten Gedicht oder einer bestimmten Gruppe von Gedichten.** Die so gefundenen Merkmale pflegen wir in einem Schema zu notieren (z. B. –υυ☺; –υυυ–υυ–υυ), das sorgfältig zu unterscheiden ist vom *Versschema*, das heißt von der Wiedergabe der Normgestalt, die dem Dichter vor Augen gestanden hat (x–υυ; x–υυ–υυ–||) und die in den einzelnen Versen verwirklicht (oder variiert) wird. Dieses Versschema ist zu betrachten als Repräsentation eines *Basisschemas*, das nur die Anzahl und Reihenfolge der markierten (+) und unmarkierten (–) Elemente festlegt: – + – + – + – + – + –.



Fig. 1993a-47: Showing specimens for U+23F7.

1. *Kontraktion*: ein Doppelbreve wird an einer bestimmten Stelle stets durch eine lange Silbe vertreten (z. B.  $\text{--}\ddot{\text{v}}\text{--} > \text{--}\text{v}\text{--}$ );
2. *Resolution*: ein Longum wird an einer bestimmten Stelle stets von zwei kurzen Silben vertreten (z. B.  $\text{--}\text{v}\text{--} > \text{--}\text{v}\text{v}\text{--}$ );
3. *Cholosis*:<sup>9</sup> ein Breve wird an einer bestimmten Stelle stets von einer langen Silbe vertreten (z. B.  $\text{--}\text{v}\text{--} > \text{--}\text{v}\text{--}$ ).

Fig. 1993a-60: Showing specimens for U+20FF (red), (and showing use of U+20D7, blue).  
 (Note: the page number was not readable in the scan, therefore, the page number part of this figure is arbitrary. The page is the one with the chapter headline "1. Daktylischer Hexameter").

Die, seit *HEPHAISTION* wiederholt vertretene, katalektische Interpretation des Hexameterschlusses ( $\text{--}\text{v}\text{v}\text{--}, \text{--}\text{v}\text{v}\|\|$ ) ist aus rhythmischen Gründen unwahrscheinlich: der durch die Zäsur bewirkte Umbruch der rhythmischen Bewegung sowie die gegen Ende des Verses durch die bukolische Dihäresis herbeigeführte Rückkehr zur fallenden Bewegung des Versanfangs

( $\text{--}\text{v}\text{v}\text{--}\text{v}\text{v}\text{--}\text{v}\text{v}\text{--}\text{v}\text{v}\text{--}\|\|$ )

Fig. 1993a-119: Showing specimens for U+209E (red) and U+2B94 (green).

korrespondierenden Stellen:  $\text{--}\text{v}\text{v}\text{--}\text{v}\text{v}\text{--}\text{v}\text{v}\text{--}\text{v}\text{v}\text{--}\|\|$ .<sup>42</sup> Wo die Sequenz in (meist respondierenden) lyrischen Partien in der Tragödie erscheint, zeigt sie überwiegend Wortende nach dem dritten Longum (Soph., *El.* 130–3 ~ 146–9, 166–70 ~ 187–90).<sup>43</sup> Am Ende eines mit  $\text{--}\text{v}\text{v}\text{--}\|\|$  schließenden daktylischen Tetrameters findet sich – anders als z. B. in den ‚lyrischen‘ Hexametern bei Eur., *Suppl.* 277 und 278 – kein Hiat. Schwache Wortgrenzen am Ende der Sequenz finden sich z. B. bei Alkm., *PMG* 56,1, und Soph., *Ant.* 350, Eur., *Phoen.* 1496, Ar., *Nub.* 569.<sup>44</sup>

### 6.2.6 dddd\_

Der daktylische Hexameter erscheint bisweilen als Sprechvers (nach White<sup>45</sup> „recitative“) in der Komödie, wie z. B. Ar., *Eq.* 1080–95, *Pax* 1063–1114, 1270–83.<sup>46</sup> Die Verse zeigen nicht selten Antilabe und haben auch sonst Merkmale, die sich mit dem üblichen Ethos des Hexameters<sup>47</sup> schlecht vertragen, wie Ar., *Eq.* 1083–4:

@ ποίαν Κυλλήνην; @ τὴν τούτου χεῖρ' ἐποίησεν  
 Κυλλήνην ὀρθῶς, ὅτι φησ', ἔμβαλε κυλλῆ.

Fig. 1993a-123: Showing specimens for U+2B8D (red) and U+2B88 (green).

6.3.1.4 Obwohl das *archebouleion* (☞⋯⋯⋯⋯⋯||:☘ddds\_) nach HEPHAISTION (28, 15 C.) von Archeboulos *κατακόρως* verwendet wurde, ist von ihm nur ein einziger Vers dieser Form erhalten (μόρον οὐ νοέοντες ἐφιστάμενον κατάντην: Trichas 384, 26 C. = SH 124). Der Vers wurde von Kallimachos stichisch ver-

Fig. 1993a-174: Showing specimens for U+2BA6.

Die von der bisherigen Forschung<sup>58</sup> im wesentlichen akzeptierten Responsionsfreiheiten lassen sich folgendermaßen kategorisieren:

1. ⋯⋯⋯⋯ ~ ⋯⋯⋯⋯ (Str. 20): daß zwei Beispiele eines und desselben Verses Resolution an verschiedenen Stellen zeigen, ist in Versen dieser Art zwar ungewöhnlich, dürfte jedoch weniger Anstoß erregen, weil es sich um zwei an und für sich durchaus denkbare Realisierungen des Versschemas (xs'ss) handelt.
2. ⋯⋯⋯⋯ (V. 87) und ⋯⋯⋯⋯ (V. 110) (xs'☞s, steigend) ~ ⋯⋯⋯⋯ (Str. 21) (☞s'☞s, fallend): die Versionen sind durch die zusätzliche Resolution isosyllabisch;<sup>59</sup> außerdem sind die beiden Varianten des Versbeginns in anderen Versen belegt (☞s... in Strophe 1 und xs... *passim*). Vergleichbar ist ⋯⋯⋯⋯⋯⋯ (V. 68) (☞s's'☞s\_) ~ ⋯⋯⋯⋯⋯⋯ (Str. 2) (☞s'sss\_), wo es zwei- bzw. einmal Juxtaposition gibt, durch eine zusätzliche Resolution jedoch Isosyllabie entsteht. Skandiert man jedoch Μίρωι nicht ⋯⋯ (so SNELL), sondern ⋯⋯ (so FÜHRER und WEST), dann ergibt sich ein Fall wie

Fig. 1993a-186: Showing specimens for U+2BA6 (red) and U2BA8 (green).

5. Ar., *Ach.* 492 ~ 568 (xsxsxs ~ ☞s'ss's) besteht die Abweichung darin, daß es zweimal Juxtaposition statt Prolongation (und demzufolge einen verschiedenen Status der betreffenden Kürzen) gibt.
6. Seltsam ist Ar., *Pax* 350/1 ~ 588/9, wo ☞s's's'☞s'☞s' (12 Elemente, 15 Silben) und ☞s'sss'☞s' (14 Elemente, 16 Silben: stumpf gegenüber klingend, drei bzw. zwei Juxtapositionen, drei bzw. zwei Resolutionen) nicht nur miteinander, sondern außerdem noch mit 389/90 (sss'ds\_ oder auch ssdds\_: 13 Elemente, 14 Silben) respondieren.<sup>24</sup>

Fig. 1993a-203: Showing specimens for U+209E.

1.5.3 649-67 ~ 678-96 (*Amoibaion*)

1.	∪_∪_∪_ ∪_∪_ ∪_ _∪_	^ ss' s' s' s
2.	@ ∪_∪_∪_ _∪_∪_	x s x s
3.	@ ∪_∪_∪_∪_ _∪_∪_∪_ _∪_∪_	^ ss' s' s' s' sss
4.	@ _∪_∪_∪_ @ _∪_ @ _∪_∪_∪_	x s x s x s
5.	@ ∪∪_∪_∪_ _∪_∪_∪_ _∪_∪_∪_∪_∪_∪_∪_∪_∪_	δδδδ
6.	@ _∪_∪_∪_ _∪_∪_∪_∪_∪_	x s x ~ s x s
7.	_∪_∪_∪_ _∪_∪_ _∪_∪_∪_	x s x s x s
8.	@ _∪_∪_∪_∪_∪_∪_	s' sss
9.	_∪∪∪∪∪_ _∪∪∪∪∪_ _∪_∪_ _∪_∪_ _∪_∪_	δδδδ
10.	_∪_∪_∪_ _∪_∪_∪_∪_∪_∪_∪_∪_	s' s' s s s s s s
11.	∪_∪_∪_∪_∪_∪_	^ s s s s _ .



Fig. 1993b-107: Showing specimens for U+2B7D + (U+0323) (red), U+2B7D (green), U+2E49 (blue).

## METRICAL SYMBOLS

1. In abstract description of a metre:
  - (1) position occupied by a long syllable  
(2) last position of verse
  - ◡ position occupied by a short syllable
  - × position which may be occupied by either a long or a short syllable
  - ◡◡ position which may be occupied by ◡-, -◡, or --
  - ◡ last position in verse
  - | point at which word-end always occurs
  - ⋮ point at which word-end usually occurs
  - ⌒ two successive positions are occupied by syllables of the same word
  
2. In scanning a given sequence of words:
  - long syllable
  - ◡ short syllable
  - × syllable which may be scanned as long or short
  - ◡ open syllable containing long vowel or diphthong, scanned short because the following word begins with a vowel
  - ◡ syllable which would be short if the next syllable belonged to the same verse
  - | (1) (in responding verses) point at which word-end occurs in both strophe and antistrophe  
(2) (in non-responding verses) point at which word-end occurs and the fact that it does is, or might be, of metrical interest
  - || point at which hiatus or ◡ occurs (note that since the unit of trochaic rhythm is -◡-× it is impossible to prove | by means of ◡ in trochaics)
  - | (between consonants) the preceding vowel is short, but the syllable containing it is scanned long
  - ⌒ (1) (beneath consonants) the preceding vowel is short and the syllable containing it is scanned short  
(2) (beneath vowels) the two vowels together are scanned as one syllable

Fig. 1993b-160: Showing a specimen for U+ABA2.

1004 in. ὁ χορῆ ἔτι K (cf. Σ<sup>RV</sup>) ὦ] ὁ ΣΡαc. ἐλλήνηνων V 1005 λήρον] κλήρον λΣ<sup>V</sup>: ληρόν Radermacher 1006 Αἰ. om. R 1007 τούτων] αὐτὸν R  
 φάσκει R: φάσκης M<sup>ac</sup> διαπορεῖν A ἐμέ A K 1008 in. Εὐ. V ἀπό-  
 κριναί μοι] πυνθάνομαι S.E. χρῆ] δεῖ R 1009 Εὐ.] Αἰ. V ὅτι] ὅτι τε A  
 βελτίστους A 1010 πόλεσιν E<sup>pc</sup> U VSI: -σι a Αἰ.] dic. R: om. V<sup>ac</sup> ταύτ'  
 R 1011 μοχθηροῦς R A: -ροτάτους K τ' ἀπέ- V 1013 Αἰ. om. K<sup>ac</sup>  
 1014 -δρησι- Phryn. 1015 μηδ' . . . μηδὲ] μήτ' . . . μήτε V A K μηδ' ἔπα- R  
 1016 -λόφας R 1018 Εὐ.] Δι. A ante κρα-] Δι. R V K -ψεις V K  
 1019 in. Εὐ. a: del. Θ<sup>pc</sup>: om. Vb3 οὐ τί V A K δρᾶς A αὐτοῦς οὕτως A γεν-  
 ναίους] ἀνδρείους V K: -ως A ἐδίδαξας R A: ἐξέδειξας V 1020 Δι. om. R  
 1021 ἄρεος A K Δι.] dic. R: Εὐ. A K alt. Αἰ.] dic. R 1023 Δι.] Εὐ. M<sup>ac</sup>  
 1024 ἔνεκα R V K: εἴνεκα U VSI

Fig. 1997a-350: Showing specimens for U+2B89 (red), U+2B9A (orange), U+2B8A (green), U+x095 (blue), U+20FA (purple)

Das Generalschema des euripideisch liberalisierten *trim* der Tragödie ist (ohne die Eigennamenlizenzen)

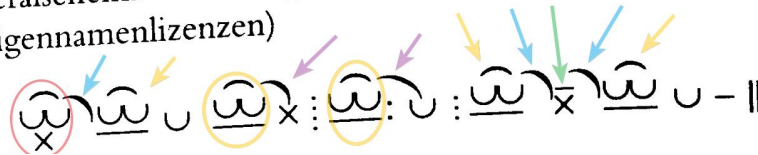


Fig. 1997a-352a: Showing specimens for U+2B7C, U+2732 (red), U+1AB1, U+1AB2, U+1AB3

samt seiner katalektischen Form  $\overset{1}{x} - \overset{2}{x} | - \overset{3}{\cup} - - ||$  (ia trim<sub>λ</sub>) sowie als Kola die daktylischen Stücke  $-\cup\cup-\cup\cup-$  (*hem*),  $-\cup\cup-\cup\cup-\cup\cup-\cup\cup$  (*da tetr*),  $x-\cup\cup-\cup\cup-x$  (*x hem x*) und die iambischen  $x-\cup-x-\cup-$  (*ia*)

Fig. 1997a-352b: Showing specimens for Ux27BC (green), U+2BA8 (red), U+2E48 (blue)

In Archil. 168–196a finden sich die folgenden Epoden:

- (1) 2gliedrig homogen:
  - 1. ia trim || ia dim ||| (172–81; Hippon. 118 W.)
  - 2. da hex || da tetr<sub>λ</sub> ||| (195)
- (2) 2gliedrig heterogen:
  - 3. ia trim || hem ||| (182–7; Hippon. 115–7 W.)
  - 4. da hex || ia dim ||| (193–4)
  - 5. x hem x | (||?) ith || (|||?) (168–71)

**Fig. 1997a-354:** Showing specimens for U2BA8, U+2E48.

In der triadischen Großbauform Strophe – Gegenstrophe – Epode treten *da* und Daktyloepitriten (6.5.2) bei Stesichoros auf, in der *Geryoneis* S7–87:

Str./Ant. <sup>1</sup>⊖ 3 *da*<sub>Δ</sub> || <sup>2</sup>⊖ 7 *da*<sub>Δ</sub> || <sup>3</sup>⊖ 5 *da*<sub>Δ</sub> || <sup>4</sup>⊖ 14 *da*<sub>ΔΔ</sub> ||  
Ep. <sup>1</sup>⊖ 7 *da*<sub>Δ</sub> || <sup>2</sup>14 *da*<sub>Δ</sub> || <sup>3</sup>(⊖?) 6 *da*<sub>ΔΔ</sub> ||

**Fig. 1997a-358:** Showing specimens for U+2BA6.

Kretiker (–⊖– *cr*, ‘päonisch’ –⊖ ⊖ *cr*<sup>ω</sup>) sind in der Lyrik und in der Tragödie als Versmaß ganzer Strophen oder Perioden selten (Alcm. 58: 4 *cr* | –⊖– – – ||, Aesch. *Suppl.* 418–22 = 423–7: 11 *cr* ||) und Eur. *Or.* 1420–24: 12 *cr* ||), in der Komödie dagegen (besonders beim frühen Aristophanes) umso häufiger. Das Stasimon Ar. *Ach.* 971–87 = 988–99 z. B. beginnt mit drei aus *cr* und *cr*<sup>ω</sup> gemischten Perioden zu 6 || 5 || 6 || Metren, es folgt 9mal der beliebte *tetr cr*<sup>ω</sup> *cr*<sup>ω</sup> *cr*<sup>ω</sup> *cr* ||, den Schluß bildet ein *tro tetr*<sub>Δ</sub> ||.

**Fig. 1997a-360a:** Showing specimens for U+2B88.

<sup>1</sup> – ⊖ – ⊖ – : (⊖) – ⊖ – ⊖ – – || D : x D – ||  
<sup>2</sup> – ⊖ – ⊖ – : x – ⊖ – – || D : x e – ||  
<sup>3</sup> – ⊖ – ⊖ – : x – ⊖ – ⊖ – – || D : x D – ||  
<sup>4</sup> – ⊖ – ⊖ – | x – ⊖ – ⊖ – : (⊖) – ⊖ – – || D | x D : x e – ||  
<sup>5</sup> – ⊖ – ⊖ – | x – ⊖ – x – ⊖ – – || D | x E – ||

Die gelegentlich ‘daktylische’ Doppelkürze im Anceps, durch die der 1. Vers z. B. zum *hex* wird, ist eine Eigenheit des Stesichoros.

**Fig. 1997a-360b:** Showing specimens for U+2B82 (metrical circle) and U+2B7C (anceps). In this example, the metrical circle resembles U+25CB WHITE CIRCLE.

Die Grundkola äolischer Lieder sind mit ihren überwiegend antiken Namen:

der Glyconus	○○ – ⊖ – ⊖ –	<i>gl</i>
der Pherecrateus	○○ – ⊖ –	<i>ph</i>
der Hipponactus	○○ – ⊖ – ⊖ –	<i>hipp</i>
der Telesilleus	x – ⊖ – ⊖ –	<i>tel</i> (= <sup>^</sup> <i>gl</i> )
das Reizianum	x – ⊖ –	<i>reiz</i> (= <sup>^</sup> <i>ph</i> )
der Hagesichoreus	x – ⊖ – ⊖ –	<i>haq</i> (= <sup>^</sup> <i>hipp</i> )

Letztlich handelt es sich um die Varianten eines Grundkolons. ○○ bezeichnet die von G. Hermann als ‘(äolische) Basis’ beschriebene Erscheinung zweier Ancepspositionen xx,

**Fig. 1997a-362:** Showing specimens for U+2B8A (red) and U+20FA (green).

teilt bei Aristophanes die Freiheiten des *trim* (6.3.3) und kehrt in strengerer Form bei Menander *Dysc.* 880–958 wieder; der schon von Epicharm gepflegte katalektische anapästische *tetr* (4 *an*<sub>λ</sub> ||)

$$\overset{1}{\bar{u}} \bar{u} \bar{u} \bar{u} : \overset{2}{\bar{u}} \bar{u} \bar{u} \bar{u} | \overset{3}{\bar{u}} \bar{u} \bar{u} - \overset{4}{\bar{u}} - - ||$$

soll in der Tragödie allein von Phrynichos benutzt worden sein (3 T 12) und ist inzwischen in dem Satyrspiel(?) - Fragment adesp. F 646a (*Musa Tragica* 250-3) aufgetaucht. – Über die *an* s. u. 6.5.1.

Der vereinzelt für Ions *Omphale* (19 F 20) bezeugte akatalektische iambische *tetr* ist überraschend in Soph. *Ichn.* 298–328 in der Form

$$\overset{1}{x} - \cup - \overset{2}{x} - \cup - : \overset{3}{x} : - \cup - \overset{4}{x} - \cup - ||$$

aufgetaucht: Die Hauptzäsur ist hier auffällig oft durch Wortende nach langem 2. Anceps ( $\overset{1}{x} - \cup - \overset{2}{x}$ ) antizipiert.

**Fig. 1997b-360:** Showing a specimen for U+23F7.

Das Phänomen erklärt eine Reihe von Doppelformen wie *magis*, *satis* neben *mage*, *sate* usw., ursprünglich die ersteren vor Vokal, die letzteren vor Konsonant (-*ě* < -*is*); sehr rasch kam es zur Verwechslung der beiden Formen (Plaut. *Mil.* 539 *magis facete*); der umgekehrte Fall liegt vor bei *potes*, *potest* < \**pote es*, \**pote est* < *poti(s) es*, *poti(s) est*.

**Fig. 1997b-361:** Showing a specimen for U+2B7E, showing its typographical appearance being different from a turned breve.

Der **Trimeter**

$$x - \cup - x - \cup - x - \cup \grave{\text{a}}$$

ist ähnlich konstruiert wie sein griechisches Pendant. Die Zäsur tritt vorwiegend nach dem 5. Element auf:

Sen. *Tro.* 3 *ānīmūmqŭē rēbūs | crēdūlūm lāētīs dēdīt*

Petron. *Sat.* 89 (*Tr. hal.* 1) *iām dēcīmā māestōs, | ĩntēr āncĭpĭtēs mētūs;*



Fig. 1997b-363: Showing specimens for U+23F6.

rere sprachliche Bedingungen erfüllt sein:

6.2.12.1 Die lange, zu kürzende ( $\text{—} \text{>} \cup$ ) Silbe (*brevianda*) darf nicht tontragende Silbe sein. Man wird folglich die folgenden Jambenkürzungen als Anzeichen von Textverderbnis durch handschriftliche Tradition anzusehen oder nach metrischen Alternativen zu suchen haben:

Plaut. Merc. 327 *bene ambulato. :: bene valēto.*

Plaut. Truc. 504 *venīre salvom.*

Fig. 1997b-365: Showing specimens for U+2B95 (red), U+2B7E (green).

The lower part of this figure, showing the same characters, is from [1997b] p.367.

- $\cup$  **elementum breve**: kann nur von einer einzelnen kurzen Silbe gebildet werden.
- $\text{—}$  **elementum longum**: vorzugsweise von einer langen Silbe gebildet, kann aber auch von zwei kurzen gebildet werden.
- $\frac{\cup\cup}{\cup\cup}$  **elementum biceps**: vorzugsweise von zwei kurzen Silben gebildet, kann aber auch von einer einzelnen langen Silbe gebildet werden.
- $\times$  **elementum anceps**: kann von einer kurzen oder langen Silbe oder zwei kurzen Silben gebildet werden.
- $\text{a}$  **elementum indifferens**: wird immer von einer einzelnen Silbe, ob kurz oder lang, gebildet.

Fig. 1997b-367: Showing specimens for U+2B95, U+2B7E (last character in last line).

werden ausschließlich aus langen Silben gebildet. Der Hexameter, von Ennius in den *Annales* eingeführt, wird zum epischen Vers schlechthin, findet aber auch in anderen Gattungen Verwendung (wie in der bukolischen, satirischen usw.); das Schema ist folgendes:

$\text{—} \frac{\cup\cup}{\cup\cup} \text{—} \frac{\cup\cup}{\cup\cup} \text{—} \frac{\cup\cup}{\cup\cup} \text{—} \frac{\cup\cup}{\cup\cup} \text{—} \frac{\cup\cup}{\cup\cup} \text{—} \text{a}$

Fig. 1998a-1: Showing specimens for U+2B93, U+2B99, U+2B8C.

# ANAXIPHORMINX

WINDOWS TRUETYPE V. 4

SYMBOL		KEY	ANSI
(14 pt)	SCANSION SYMBOLS		
—	longum	q	113
˘	breve	k or w	107/119
×	anceps	x	120
⋮	responding long for double short	f	102
⋮	responding long for single short	g	103
⋮	responding long where there is ambiguity	h	104
3	responding double short for long	r	114
3 3	long/double short	t	116
B	double short/long	y	121
D	single short/long	a	97
κ	long/single short	u	117
3 3	short/long/double short	i	105
3 3	anceps/double short ('teilbares Anceps')	b	98
3 3	single short/double short ('teilbares Breve')	o	111
˘	long with ictus	ê	234
˘	short with ictus	ë	235
⋮	double short/long with word boundary	à	224
⋮	long/double short with word boundary	â	226
⊖	half 'biceps'	m	109
⊖	'biceps'	n	110
o	(half) 'Anaklasis'	ã	227
^	kenos (leimma)	^	94
⌈	trisemos	T	84
⌈⌈	tetrasemos	W	87
⌈⌈⌈	pentasemos	X	88
⌈^	kenos disemos	j	106
⌈⌈	kenos trisemos	L	76
⌈⌈^	kenos tetrasemos	M	77
⌈⌈⌈	kenos pentasemos	Q	81
⋮	long with two dots	Â	194
⋮	long with three dots	Ê	202

**Fig. 2001a-119:** *Showing specimens for U+1FD3 applied over a subscript character.*

Atsižvelgiant į periferinius priebalsius ir jų poziciją, visus skiemenis tradiciškai galima skirstyti į uždaruosius ir atvirosius, taip pat pridengtuosius ir nepridengtuosius. Atvirieji yra tie skiemenys, kurie neturi finalinės priebalsinės dalies, t.y. baigiasi balsiu arba dvibalsiu ( $C_0^3 V^{(v)}$ ); uždaryjū skiemenų ( $C_0^3 V^{(v)} C_1^3$ ) gale eina priebalsiai (įskaitant mišriųjų dvigarsių antruosius dėmenis; plg. Pakerys, 1986, 303)<sup>4</sup>. Nepridengtiesiems skiemenims priklauso skiemenys, prasidedantys centru ( $V^{(v)} C_0^3$ ), o skiemenys, prieš kurių centrą eina periferinė priebalsinė dalis, vadinami pridengtaisiais ( $C_1^3 V^{(v)} C_0^3$ ). Šią skiemenų klasifikaciją galima pavaizduoti taip<sup>5</sup>:

**Fig. 2001b-2:** *Showing a specimen for U+ABA3.*

<sup>ac</sup> , a.c.	ante correctionem
<sup>pc</sup> , p.c.	post correctionem
c	post correctionem, si prior lectio legi non potest
il, i.l.	in linea
<sup>sl</sup> , s.l.	supra lineam
<sup>sscr</sup> , sscr.	suprascriptum, suprascriptis
<sup>gl</sup>	in codice lectio tamquam glossema scripta est
<sup>yp</sup>	in codice lectioni praepositum est γράφεται, sim.
v	verso
r	recto
acc.	accentus
codd.	codices
coni.	coniecit
corr.	correxit, correcto, etc.
del.	deleuit, deleteo, etc.
e.p.	editor primus
recc.	recentiores
rell.	reliqui
[a]	a deest in omnibus testibus
a <sub>1</sub>	a deest in uno teste, non omnibus
{â}	â contra testes delendum est
[[a]]	a in Π deletum est
`a'	a addidit Π supra lineam

Fig. 2001b-54: Showing specimens for U+2E4D.

		<i>Bacchylides</i>	
54			
		γνώμας, ὅτι τ' αὐριον ὄψεται	ep. 6
80		μοῦνον ἀλίου φάος, χῶτι πεντήκοντ' ἔτεα ζῶαν βαθύπλουτον τελείς. ὅσια δρῶν εὐφραϊνε θυμόν· τοῦτο γὰρ κερδέων ὑπέρτατον."	
		<====>	
85		φρονέοντι σινετὰ γαρίῳ. βαθὺς μὲν αἰθήρ ἀμίαντος· ὕδωρ δὲ πόντου οὐ κάπεται· εὐφροσύνα δ' ὁ χρυ- σός. ἀνδρὶ δ' οὐ θέμις πολὺν π[ . . ]εντα	str. 7
		<—>	
90		γῆρας θάλ[εια]ν αὐτικ ἀγκομίσ(ς)αι ἦβαν. ἀρετᾶ[ς γε μ]ὲν οὐ μινύθει βροτῶν ἅμα σ[ώμ]ατι φέγγος, ἀλ- λὰ Μοῦκά νιν τρέφει.} Ἰέρων, σὺ δ' ὄλβου	ant. 7
		_____	
		κάλλιστ' ἐπεδ[εῖξ]αο θνατοῖς ἄνθεα. πράξα[ντι] δ' εὐ	ep. 7
95		οὐ φέρει κόσμ[ον σι]ω- πά· σὺν δ' ἀλαθ[εῖαι] †καλῶν† καὶ μελιγλώσσου τις ὑμνήσει χάριν Κηΐας ἀηδόνοσ.	
		====	



## SIGLA

Π <sub>1</sub>	ii	PSI XIV p. xv: vers. init. 139-44 PSI XI 1194: vers. init. 145-56, vers. fin. 237-46, vers. init. 272-88, 594-6, 804-9, et subscriptio
Π <sub>2</sub>	ii/iii	POxy. lvi. 3839: frustula ex 25(?), 742-66, 941-56
Π <sub>3</sub>	iv	POxy. lvi. 3840: vers. fin. 1185-93
R	x	Ravennas 429
S	x	<i>Suda</i> (ed. A. Adler)
M	xv	Monacensis Gr. 492, ex R exscriptus
ed. pr.	xvi	editio princeps Iuntina (ed. E. Boninus: Florentiae, 1516)
Σ		scholium
ac		ante correctionem
pc		post correctionem
γρ.		varia lectio vocabulo γρ(άφεται) notata
(γρ.)		varia lectio vocabulis διχῶς, ἐν ἐνίοις, τινές notata
λ		lemma scholii
mg.		in margine
rec.		manus recens
s		supra lineam
*		vocabulum vel vocabula in eadem sede
†		crux desperationis (= verba corrupta)
/		versus finis
[. . .]		litterae in lacuna deperditae
< . . . >		verba e coniectura suppleta

**ISO/IEC JTC 1/SC 2/WG 2  
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS  
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>1</sup>**

**Please fill all the sections A, B and C below.**

Please read Principles and Procedures Document (P & P) from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://www.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://www.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

**A. Administrative**

1. Title:	<b>Proposal to encode Metrical Symbols in the UCS</b>
2. Requester's name:	<i>Martin Schrage; Karl Pentzlin</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>Expert Contribution</i>
4. Submission date:	<i>2010-09-24</i>
5. Requester's reference (if applicable):	<i>University of Minich, Germany (M. S.)</i>
6. Choose one of the following:	
This is a complete proposal:	<input type="checkbox"/> Yes
(or) More information will be provided later:	<input type="checkbox"/>

**B. Technical – General**

1. Choose one of the following:		
a. This proposal is for a new script (set of characters):	<input type="checkbox"/> No	
Proposed name of script:		
b. The proposal is for addition of character(s) to an existing block:	<input type="checkbox"/> Yes	
Name of the existing block:	<i>Miscellaneous Symbols and Arrows (and other blocks); see text</i>	
2. Number of characters in proposal:	<i>80</i>	
3. Proposed category (select one from below - see section 2.2 of P&P document):		
A-Contemporary <input type="checkbox"/>	B.1-Specialized (small collection) <input checked="" type="checkbox"/>	B.2-Specialized (large collection) <input type="checkbox"/>
C-Major extinct <input type="checkbox"/>	D-Attested extinct <input type="checkbox"/>	E-Minor extinct <input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic <input type="checkbox"/>	G-Obscure or questionable usage symbols <input type="checkbox"/>	
4. Is a repertoire including character names provided?	<input type="checkbox"/> Yes	
a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?	<input type="checkbox"/> Yes	
b. Are the character shapes attached in a legible form suitable for review?	<input type="checkbox"/>	
5. Fonts related:		
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>TBD</i>	
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):		
6. References:		
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<input type="checkbox"/> Yes	
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<input type="checkbox"/> Yes	
7. Special encoding issues:		
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?	<input type="checkbox"/> No	

8. Additional Information:  
Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see <http://www.unicode.org/Public/UNIDATA/UCD.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

<sup>1</sup> Form number: N3702-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11)

**C. Technical - Justification**

1. Has this proposal for addition of character(s) been submitted before? If YES explain		No
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? If YES, with whom? If YES, available relevant documents:	<i>One of the authors (M. S.) is a member of the scientific community himself</i> <i>See text</i>	Yes
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	<i>See text</i>	Yes
4. The context of use for the proposed characters (type of use; common or rare) Reference:	<i>See text</i>	Common scientific
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	<i>See text</i>	Yes
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	<i>To keep them in line with related characters</i>	Yes Yes
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?		Yes
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:		No
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:		No
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	<i>See text</i>	Yes Yes
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:	<i>See text</i> <i>The proposal contains combining characters but no composite sequences</i>	Yes Yes n/a
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)		No
13. Does the proposal contain any Ideographic compatibility character(s)? If YES, is the equivalent corresponding unified ideographic character(s) identified? If YES, reference:		No