

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 for encoding additional Bamum characters in the SMP of the UCS**

**Source: Bamum Scripts and Archives Project in the Palace of Bamum Kings,  
& the UC Berkeley Script Encoding Initiative (Universal Scripts Project)**

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**Status: Individual Contribution**

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

**Date: 2009-03-28**

**Replaces: N3472, N3564**

**0. Introduction.** Bamum is spoken in Cameroon, chiefly in West Province, most of Noun Division around Foumban, as well as in the extreme north of Mifi Division and in the southeast of Bamboutos Division. It is a Benue-Congo language of the Grassfields branch. The Bamum script was devised around 1896 by Sultan Njoya and his scribes. The traditional Bamum corpus consists of many hundreds of manuscripts, chiefly of history texts, treatises on traditional medicine, local cartography, personal correspondence, and illustrated folktales. A comprehensive encoding of Bamum will ensure that manuscripts can be more accurately traced and identified. Many manuscripts—it is not known how many—have made their way into individual and institutional collections, often with scant traces of metadata in accompanying records to identify them. The most reliable records include references to accession numbers assigned to the manuscripts by Henri Labouret, but even so, current museum records often include only fragments of the original accession numbers, and little or no indication of the content of the actual text of the manuscript. A standardized encoding for the script will enable eventual inclusion of access points in Bamum for the catalog records, and full-text searching of any of the digital content. It would also facilitate the identification and processing of uncataloged materials, both in Foumban and in museums of African art worldwide. Note that the particular characters used in a manuscript can be an aid to dating a manuscript, because of the phases of script development mentioned below.

The characters proposed in this document are no longer used in modern Bamum orthography. Modern Bamum uses the characters currently balloting in FPDAM 6 in the BMP. The Bamum extensions in this proposal are archaic characters, whose encoding is essential for accurate representation of older Bamum documents. They are analogous in some ways to the medievalist characters encoded for the Latin script; most Bamum writers will not use them, but specialist linguists and historians will.

**1. Development of the script.** The history of the Bamum script ranges from its genesis as an ideographic/syllabic script, through a number of phases, toward its completion as a syllabic script. The modern Bamum script (currently balloting in FPDAM 6) represents the final phase, Phase G, of the development of the script. Phase A comprised the largest set of characters, many ideographic. Through successive amendments, the script developed through five more phases (B, C, D, E, F), gradually simplifying, both by removing characters and by re-assigning the values of some characters to positions in the evolving syllabary.

The transition from an ideographic script to a syllabary happens through a gradual net reduction in the number of characters between Phases A and E, which are largely ideographic, culminating in a marked shift between Phases E and F, where F is almost entirely syllabic. Most of the rotations and reflections of characters happen between Phases A and E.

The sudden reduction of the set between Phase E and Phase F means that many glyphs became available for re-use between those phases. For example, Ꞥ U+1696E BAMUM LETTER PHASE-E RAQ, is used for *ra*<sup>2</sup> ‘reconciled’ in Phases A through E, but becomes the phonetic syllable *ɲa* ‘here’ in Phase F. There is no relationship in semantics between the two—only a re-use of a glyph between phases.

Phase F texts make some use of the characters which are encoded in the BMP for modern Bamum orthography. In particular Phase F texts use U+A6F0 BAMUM COMBINING MARK KOQNDON rather widely.

Like the specialized medievalist characters, the archaic Bamum extension contains characters which are polyvalent. The extension is intended for representation of historic material only; no automatic conversion between old and new orthographies is intended by their encoding; there is no implementation expectation for spellcheckers to support anything but the modern Phase G Bamum orthography.

**2. Sources and unification.** The main source for the repertoire of Bamum extensions is the analysis made in Dugast and Jeffreys 1950. The names and glyphs have been based on that source, though the glyphs in Schmitt 1963 were used to check certain ambiguities in the Dugast and Jeffreys edition. Michael Everson made the first analysis of the repertoire, including its division into phases A, B, C, D, E, and F. This analysis was presented, character by character, individually, to Charles Riley and to Konrad Tuchscherer, and a consensus on the repertoire (and its unifications and disunifications) was reached. Finally, in June 2008 Konrad took the whole repertoire to the Bamum Scripts and Archives Project in the Palace of the Bamum Kings, where he and local experts spent several weeks going over the entire set, its glyphs and character names.

Significant glyph differences—significant enough to disunify—are easy to identify when the different phases are examined together. In general, flipping and rotation are not considered “significant”, though there are a few exceptions where a rotated glyph becomes used with a different value; in these cases a disunification has been made.

The glyphs in the chart reflect the earliest example of the Bamum characters; mostly, therefore, the glyphs are taken from Phase A. The encoding model proposed here is conservative, relative to the known use of the characters from the analyses of Dugast and Jeffreys, and of Schmitt. It provides a comprehensive way of accounting for all the characters they observed in the texts they had available to them, without disunifying beyond what is necessary to represent unique characters. Many of the texts remain in storage in Foumban and at the Quai Branly Museum; analysis of them is ongoing.

At the end of this proposal, a database is shown which contains relevant information about the association of the characters to the pages on which they appear in Dugast & Jeffreys 1950. The first column gives the proposed UCS code position; the second the phase number assigned for the purposes of character naming. The original IPA transcription is given, then the conventional English and French character names as derived from the transcription. (Some text in lower case follows some of those; this is used to generate comments in the names list.) The final column gives the page number and phase or phases to which the character belongs. Figures 1a and 1b show two of the pages from Dugast & Jeffreys and can be compared to the database. In the first four lines of Figure 1a the following is shown for the syllables *ʃɔ* and *ʃɔ*<sup>2</sup> respectively:

Phases A–E are covered by Ꞥ U+169F3 BAMUM LETTER PHASE-E SHO  
Phase F is covered by ꞥ U+16A29 BAMUM LETTER PHASE-F SHO  
Phase G is covered by Ꞧ U+A6D6 BAMUM LETTER SHO

Phases A–D are covered by ꞧ U+1695C BAMUM LETTER PHASE-D SHOQ  
Phase E is covered by Ꞩ U+169F4 BAMUM LETTER PHASE-E SHOQ  
Phase F is covered by ꞩ U+16A29 BAMUM LETTER PHASE-F SHO and U+A6F0 BAMUM COMBINING MARK KOQNDON  
Phase G is covered by Ɦ U+A6D6 BAMUM LETTER SHO and U+A6F0 BAMUM COMBINING MARK KOQNDON

**3. Structure.** The modern Bamum script is a left-to-right script containing 80 base characters, two combining diacritics, and six punctuation marks. Bamum characters have left-to-right directionality. Traditional Bamum texts (the older ones which use the characters proposed here) do not use punctuation or digits—the latter are written out as words—though of course modern editors may add them for clarity.

**4. Character names.** Characters are ranged according to the last Phase in which they appear, and the element PHASE-X is inserted; this insures that PHASE-B KET and PHASE-C KET have unique names. In part because many of the syllabic characters of Phase F also carry a pre-existing ideographic value (for monosyllabic words) obtained in an earlier phase, there is no absolute distinction which can be made between ideographic and syllabic characters; accordingly, the term LETTER is used for all of these characters, in preference to IDEOGRAPH or SYLLABLE. (The characters in the modern Bamum syllabary are also called LETTER.) The transcription used in the character names follows the IPA forms given in Dugast and Jeffreys 1950. The following conventions are used:

|         |          |          |          |          |           |           |          |           |          |          |          |          |          |          |           |          |
|---------|----------|----------|----------|----------|-----------|-----------|----------|-----------|----------|----------|----------|----------|----------|----------|-----------|----------|
| Dugast  | a        | b        | d        | ɛ        | e         | ə         | f        | ɣ         | g        | i        | k        | l        | m        | n        | ŋ         | ɔ        |
| English | <i>a</i> | <i>b</i> | <i>d</i> | <i>e</i> | <i>ee</i> | <i>ae</i> | <i>f</i> | <i>gh</i> | <i>g</i> | <i>i</i> | <i>k</i> | <i>l</i> | <i>m</i> | <i>n</i> | <i>ng</i> | <i>o</i> |
| French  | <i>a</i> | <i>b</i> | <i>d</i> | <i>è</i> | <i>é</i>  | <i>e</i>  | <i>f</i> | <i>gh</i> | <i>g</i> | <i>i</i> | <i>k</i> | <i>l</i> | <i>m</i> | <i>n</i> | <i>ng</i> | <i>o</i> |

|         |          |          |          |           |          |          |           |           |          |          |          |          |          |          |          |
|---------|----------|----------|----------|-----------|----------|----------|-----------|-----------|----------|----------|----------|----------|----------|----------|----------|
| Dugast  | p        | r        | s        | ʃ         | t        | u        | ü         | ɯ         | v        | w        | x        | y        | z        | ʒ        | ʔ        |
| English | <i>p</i> | <i>r</i> | <i>s</i> | <i>sh</i> | <i>t</i> | <i>u</i> | <i>ue</i> | <i>eu</i> | <i>v</i> | <i>w</i> | <i>x</i> | <i>y</i> | <i>z</i> | <i>j</i> | <i>q</i> |
| French  | <i>p</i> | <i>r</i> | <i>s</i> | <i>sh</i> | <i>t</i> | <i>u</i> | <i>ü</i>  | <i>ù</i>  | <i>v</i> | <i>w</i> | <i>x</i> | <i>y</i> | <i>z</i> | <i>j</i> | '        |

**5. Linebreaking.** Letters and digits behave as in Modern Bamum, Canadian Syllabics, Latin, and so on.

**6. Collating order.** In this proposal, the characters are ordered as they are in Dugast & Jeffreys 1950 (though divided amongst the six Phases A through F). Since the names of all of these characters can be represented now in the modern syllabary, experts in the user community have written out the names on that basis and it may be the case that an eventual collation table could reflect that ordering (still within the six Phases).

**7. Unicode Character Properties.**

16800;BAMUM LETTER PHASE-A NGKUE MFON;Lo;0;L;;;;N;;;;;  
..  
16A38;BAMUM LETTER PHASE-F VUEQ;Lo;0;L;;;;N;;;;;

## **8. Bibliography.**

Dugast, J. & M. D. W. Jeffreys. 1950. *L'écriture des bamum: sa naissance, son evolution, sa valeur phonétique, son utilisation*. Mémoires de l'Institut Français d'Afrique Noire, Centre du Cameroun.

Schmitt, Alfred. 1963. *Die Bamum-Schrift*. Band I: Text. Wiesbaden: Otto Harrassowitz.

## **9. Acknowledgements**

This project was made possible in part by invaluable support from the Bamum Scripts and Archives Project in the Palace of Bamum Kings, Foumban, Cameroon, as well as by support from HRAF, the Human Relations Area Files, Inc. at Yale University, New Haven. This project was made possible in part by a grant from the U.S. National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at UC Berkeley). Any views, findings, conclusions or recommendations expressed in this publication do not necessarily reflect those of the National Endowment of the Humanities.

# Figures

|    | A      | B | C | D | E | F | G |   | Observations  |  |
|----|--------|---|---|---|---|---|---|---|---|--|
| 55 | (<br>) | ⌘ | ⌘ |   | ⌘ | ⌘ | ⌘ | ⌘ | [a (phon.syll.)<br>[a' ['], prête                         |  |
| 56 | (<br>) | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | puə ['], la main<br>pu' ['], le paquet                    | A à D signifient aussi "case de réception"; en E, le signe est commun avec "beauté". Chacun de ces mots se différencie de F à H. |
| 57 | (<br>) | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | fu[.], le remède<br>fu' ['], cavité dans un tronc d'arbre |  |
| 58 | (<br>) |   |   |   | ⌘ | ⌘ | ⌘ |   | fom[.], les ruines<br>mvop['], poussière, poudre          |  |
| 59 | (<br>) | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | wa[.], (une fleur)<br>wa' (phon.syll.)                    |  |
| 60 | (<br>) | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | na['], "mais" et "cuis"<br>na' ['], le boeuf              | A à E sont communs aux 2 mots. A partir de F, "cuis" comporte 2 signes.  |
| 61 | (<br>) | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | li['], le nom, l'oeil<br>li' ['], le poison               |  |
| 62 | (<br>) | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | ⌘ | pi['], enlève<br>pin['], la danse                         |  |

**Figure 1a.** Table showing the development of Bamum characters from Phase A through Phase G, from Dugast and Jeffreys 1950. The characters to be encoded are:

|   |         |                                |                              |
|---|---------|--------------------------------|------------------------------|
| ⌘ | U+169F3 | BAMUM LETTER PHASE-E SHO       |                              |
| ⌘ | U+16A29 | BAMUM LETTER PHASE-F SHO       |                              |
| ⌘ | U+1695C | BAMUM LETTER PHASE-D SHOQ      |                              |
| ⌘ | U+169F4 | BAMUM LETTER PHASE-E SHOQ      |                              |
| ⌘ | U+16A2A | BAMUM LETTER PHASE-F PUAE      |                              |
| ⌘ | U+1695D | BAMUM LETTER PHASE-D PUQ       |                              |
| ⌘ | U+169A0 | BAMUM LETTER PHASE-E PU        |                              |
| ⌘ | U+169F5 | BAMUM LETTER PHASE-E FU REMEDY |                              |
| ⌘ | U+169D2 | BAMUM LETTER PHASE-E FU CALL   |                              |
| ⌘ | U+16A2B | BAMUM LETTER PHASE-F FOM       |                              |
| ⌘ | U+1695E | BAMUM LETTER PHASE-D MVOP      |                              |
| ⌘ | U+16A2C | BAMUM LETTER PHASE-F WA        |                              |
| ⌘ | U+169F6 | BAMUM LETTER PHASE-E NA        |                              |
| ⌘ | U+A6DB  | BAMUM LETTER NA                | (used in modern orthography) |
| ⌘ | U+16855 | BAMUM LETTER PHASE-A NAQ       |                              |
| ⌘ | U+168EC | BAMUM LETTER PHASE-C NAQ       |                              |
| ⌘ | U+16A2D | BAMUM LETTER PHASE-F LI        |                              |
| ⌘ | U+168ED | BAMUM LETTER PHASE-C LIQ       |                              |
| ⌘ | U+169F7 | BAMUM LETTER PHASE-E PI        |                              |
| ⌘ | U+169E1 | BAMUM LETTER PHASE-E YUAEN     |                              |
| ⌘ | U+168EE | BAMUM LETTER PHASE-C PIN       |                              |

|    | A | B | C | D | E | F | G |                                       | Observations   |
|----|---|---|---|---|---|---|---|---------------------------------------|--|
| 63 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | lɔ̃[ʔ], va-t-en                       |  |
|    | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | lɔ̃[ʔ], désobéissance                 |  |
| 64 | . | . | . | . | ∨ | ∨ | ∨ | kɔ̃ (phon.syll.)                      |  |
|    |   |   |   |   | ∨ | ∨ | ∨ | kɔ̃' ( " " )                          |  |
| 65 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | mɛn[ʔ], le camp                       |  |
|    | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | pɛn[ʔ], le gateau de maïs             | D avait désigné le gros tambour ndam en A à C. De D à G, ndam comporte plusieurs signes. |
| 66 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | rɛn[ʔ], beaucoup                      |  |
|    |   |   |   |   | ⊕ | ⊕ | ⊕ | rɛn[ʔ], propre                        |  |
| 67 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | mɛn[ʔ](phon.syll.)                    |  |
|    |   |   |   |   | ⊕ | ⊕ | ⊕ | mɛn[ʔ]( " " )                         |  |
| 68 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | mɛ[ʔ], tais-toi, et "a" (vers le bas) |  |
|    | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | mɛ[ʔ], jette                          |  |
| 69 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ti (phon.syll.)                       |  |
|    | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | tu ( " " )                            |  |
| 70 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ki[ʔ], regarde                        |  |
|    | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | kiʔ[ʔ], la tortue                     |  |
| 71 | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | mɔ̃[ʔ], un                            |  |
|    | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | ⊕ | mɔ̃n[ʔ], l'enfant                     |  |

Figure 1b. The same table continued.

|   |         |                               |                              |
|---|---------|-------------------------------|------------------------------|
| ⊕ | U+1695F | BAMUM LETTER PHASE-D LOQ      |                              |
| ⊕ | U+16A2E | BAMUM LETTER PHASE-F LOQ      |                              |
| ⊕ | U+169F8 | BAMUM LETTER PHASE-E LOQ      |                              |
| • | U+169F9 | BAMUM LETTER PHASE-E KO       |                              |
| ∨ | U+16A2F | BAMUM LETTER PHASE-F KO       |                              |
| ⊕ | U+16A30 | BAMUM LETTER PHASE-F MBEN     |                              |
| ⊕ | U+168EF | BAMUM LETTER PHASE-C PEN      |                              |
| ⊕ | U+168D7 | BAMUM LETTER PHASE-C NDAM     |                              |
| ⊕ | U+16960 | BAMUM LETTER PHASE-D REN MUCH |                              |
| ⊕ | U+16A31 | BAMUM LETTER PHASE-F REN      |                              |
| ⊕ | U+169FA | BAMUM LETTER PHASE-E MEN      |                              |
| ⊕ | U+16969 | BAMUM LETTER PHASE-E LAP      |                              |
| ⊕ | U+1688C | BAMUM LETTER PHASE-B MA       |                              |
| ⊕ | U+169FB | BAMUM LETTER PHASE-E MA       |                              |
| ⊕ | U+16A32 | BAMUM LETTER PHASE-F MA       |                              |
| ⊕ | U+169FC | BAMUM LETTER PHASE-E MAQ      |                              |
| ⊕ | U+16961 | BAMUM LETTER PHASE-D TI       |                              |
| ⊕ | U+168FB | BAMUM LETTER PHASE-D WUAEN    |                              |
| ⊕ | U+169FD | BAMUM LETTER PHASE-E TEU      |                              |
| ⊕ | U+169FE | BAMUM LETTER PHASE-E KI       |                              |
| ⊕ | U+A6E5  | BAMUM LETTER KOGHOM           | (used in modern orthography) |
| ⊕ | U+1688D | BAMUM LETTER PHASE-B KIQ      |                              |
| ⊕ | U+16A33 | BAMUM LETTER PHASE-F MO       |                              |
| ⊕ | U+169FF | BAMUM LETTER PHASE-E MON      |                              |



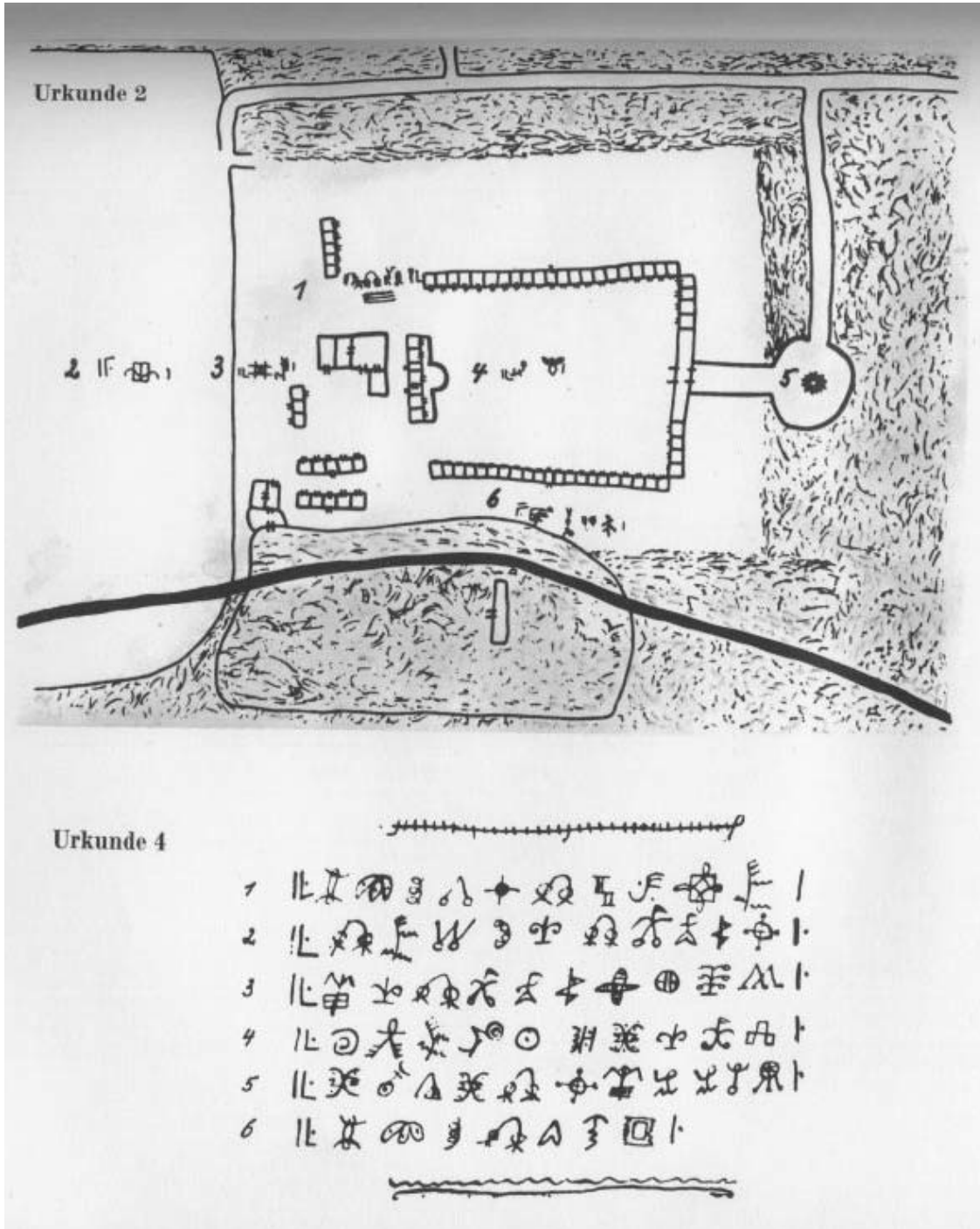


Figure 4. Traditional Bamum text from Schmitt 1963



Urkunde 3

- 1 ta ŋkus' ka rie na mfon mi yun mombie mo' puo  
 (nom propre) (ind. passé) dit au roi que: achète femme autre de
- 2 ta ŋgu fi fe fa n'i Mfon yun na  
 (nom propre) (nom propre) donne à lui (point). Roi achète avec
- 3 puon pi pa na pet n'ũ' mbuon . ngi ma mē  
 personnes deux et deux mille cauris. (titre no- (nom propre)  
 biliaire)
- 4 wuon fa ŋkap n'i ŋgu h'kafut mon kwu'  
 partit donner richesse à lui jour (nom propre), enfant petit
- 5 ŋa kpara' man na kus' mombie. mfon fa na taŋkus'  
 et âge homme et jeune femme. roi donne à (nom propre)

Urkunde 5

- 1
- 2
- 3
- 4
- 5

Figure 5. Traditional Bamum text from Schmitt 1963

## A. Administrative

1. Title

**Proposal for encoding additional Bamum characters in the SMP of the UCS**

2. Requester's name

**Michael Everson, Charles Riley, Konrad Tuchscherer**

3. Requester type (Member body/Liaison/Individual contribution)

**Individual contribution.**

4. Submission date

**2009-03-28**

5. Requester's reference (if applicable)

6. Choose one of the following:

6a. This is a complete proposal

**Yes.**

6b. More information will be provided later

**No.**

## B. Technical – General

1. Choose one of the following:

1a. This proposal is for a new script (set of characters)

**Yes.**

1b. Proposed name of script

**Bamum.**

1c. The proposal is for addition of character(s) to an existing block

**No.**

1d. Name of the existing block

2. Number of characters in proposal

**596.**

3. Proposed category (A-Contemporary; B.1-Specialized (small collection); B.2-Specialized (large collection); C-Major extinct; D-Attested extinct; E-Minor extinct; F-Archaic Hieroglyphic or Ideographic; G-Obscure or questionable usage symbols)

**Category B.2.**

4a. Is a repertoire including character names provided?

**Yes.**

4b. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document?

**Yes.**

4c. Are the character shapes attached in a legible form suitable for review?

**Yes.**

5a. Who will provide the appropriate computerized font (ordered preference: True Type, or PostScript format) for publishing the standard?

**Jason Glavy and Michael Everson.**

5b. If available now, identify source(s) for the font (include address, e-mail, ftp-site, etc.) and indicate the tools used:

**Michael Everson, Fontographer.**

6a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?

**Yes.**

6b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?

**Yes.**

7. 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)?

**Yes.**

8. 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 Unicode Character Database <http://www.unicode.org/Public/UNIDATA/UnicodeCharacterDatabase.html> and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

**See above.**

## C. Technical – Justification

1. Has this proposal for addition of character(s) been submitted before? If YES, explain.

**No.**

2a. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)?

**Yes.**

2b. If YES, with whom?

**Experts in Fouban, Cameroon.**

2c. If YES, available relevant documents

3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included?

**People living in and near Foumban, Cameroon.**

4a. The context of use for the proposed characters (type of use; common or rare)

**Rare.**

4b. Reference

5a. Are the proposed characters in current use by the user community?

**Yes.**

5b. If YES, where?

**In historical documents.**

6a. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP?

**No.**

6b. If YES, is a rationale provided?

6c. If YES, reference

7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?

**Yes.**

8a. Can any of the proposed characters be considered a presentation form of an existing character or character sequence?

**No.**

8b. If YES, is a rationale for its inclusion provided?

8c. If YES, reference

9a. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters?

**No.**

9b. If YES, is a rationale for its inclusion provided?

9c. If YES, reference

10a. Can any of the proposed character(s) be considered to be similar (in appearance or function) to an existing character?

**Only superficially.**

10b. If YES, is a rationale for its inclusion provided?

10c. If YES, reference

11a. Does the proposal include use of combining characters and/or use of composite sequences (see clauses 4.12 and 4.14 in ISO/IEC 10646-1: 2000)?

**No.**

11b. If YES, is a rationale for such use provided?

11c. If YES, reference

11d. Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided?

**No.**

11e. If YES, reference

12a. Does the proposal contain characters with any special properties such as control function or similar semantics?

**No.**

































































































































































































12b. If YES, describe in detail (include attachment if necessary)

13a. Does the proposal contain any Ideographic compatibility character(s)?

**No.**

13b. If YES, is the equivalent corresponding unified ideographic character(s) identified?

|   | 1680  | 1681  | 1682  | 1683  | 1684  | 1685  | 1686  | 1687  | 1688  | 1689  | 168A  | 168B  |
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| 2 | 16802 | 16812 | 16822 | 16832 | 16842 | 16852 | 16862 | 16872 | 16882 | 16892 | 168A2 | 168B2 |
| 3 | 16803 | 16813 | 16823 | 16833 | 16843 | 16853 | 16863 | 16873 | 16883 | 16893 | 168A3 | 168B3 |
| 4 | 16804 | 16814 | 16824 | 16834 | 16844 | 16854 | 16864 | 16874 | 16884 | 16894 | 168A4 | 168B4 |
| 5 | 16805 | 16815 | 16825 | 16835 | 16845 | 16855 | 16865 | 16875 | 16885 | 16895 | 168A5 | 168B5 |
| 6 | 16806 | 16816 | 16826 | 16836 | 16846 | 16856 | 16866 | 16876 | 16886 | 16896 | 168A6 | 168B6 |
| 7 | 16807 | 16817 | 16827 | 16837 | 16847 | 16857 | 16867 | 16877 | 16887 | 16897 | 168A7 | 168B7 |
| 8 | 16808 | 16818 | 16828 | 16838 | 16848 | 16858 | 16868 | 16878 | 16888 | 16898 | 168A8 | 168B8 |
| 9 | 16809 | 16819 | 16829 | 16839 | 16849 | 16859 | 16869 | 16879 | 16889 | 16899 | 168A9 | 168B9 |
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| B | 1680B | 1681B | 1682B | 1683B | 1684B | 1685B | 1686B | 1687B | 1688B | 1689B | 168AB | 168BB |
| C | 1680C | 1681C | 1682C | 1683C | 1684C | 1685C | 1686C | 1687C | 1688C | 1689C | 168AC | 168BC |
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| F | 1680F | 1681F | 1682F | 1683F | 1684F | 1685F | 1686F | 1687F | 1688F | 1689F | 168AF | 168BF |

|   | 168C   | 168D   | 168E   | 168F   | 1690   | 1691   | 1692   | 1693  | 1694   | 1695   | 1696   | 1697   |
|---|--|--|--|--|--|--|--|---|--|--|--|--|
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| 1 | <br>168C1   | <br>168D1   | <br>168E1   | <br>168F1   | <br>16901   | <br>16911   | <br>16921   | <br>16931   | <br>16941   | <br>16951   | <br>16961   | <br>16971   |
| 2 | <br>168C2   | <br>168D2   | <br>168E2   | <br>168F2   | <br>16902   | <br>16912   | <br>16922   | <br>16932   | <br>16942   | <br>16952   | <br>16962   | <br>16972   |
| 3 | <br>168C3   | <br>168D3   | <br>168E3   | <br>168F3   | <br>16903   | <br>16913   | <br>16923   | <br>16933   | <br>16943   | <br>16953   | <br>16963   | <br>16973   |
| 4 | <br>168C4   | <br>168D4   | <br>168E4   | <br>168F4   | <br>16904   | <br>16914   | <br>16924   | <br>16934   | <br>16944   | <br>16954   | <br>16964   | <br>16974   |
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| 7 | <br>168C7   | <br>168D7   | <br>168E7   | <br>168F7   | <br>16907   | <br>16917   | <br>16927   | <br>16937   | <br>16947   | <br>16957   | <br>16967   | <br>16977   |
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| A | <br>168CA | <br>168DA | <br>168EA | <br>168FA | <br>1690A | <br>1691A | <br>1692A | <br>1693A | <br>1694A | <br>1695A | <br>1696A | <br>1697A |
| B | <br>168CB | <br>168DB | <br>168EB | <br>168FB | <br>1690B | <br>1691B | <br>1692B | <br>1693B | <br>1694B | <br>1695B | <br>1696B | <br>1697B |
| C | <br>168CC | <br>168DC | <br>168EC | <br>168FC | <br>1690C | <br>1691C | <br>1692C | <br>1693C | <br>1694C | <br>1695C | <br>1696C | <br>1697C |
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|   | 1698  | 1699  | 169A  | 169B  | 169C  | 169D  | 169E  | 169F  | 16A0  | 16A1  | 16A2  | 16A3  |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
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| 2 | 16982 | 16992 | 169A2 | 169B2 | 169C2 | 169D2 | 169E2 | 169F2 | 16A02 | 16A12 | 16A22 | 16A32 |
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| 4 | 16984 | 16994 | 169A4 | 169B4 | 169C4 | 169D4 | 169E4 | 169F4 | 16A04 | 16A14 | 16A24 | 16A34 |
| 5 | 16985 | 16995 | 169A5 | 169B5 | 169C5 | 169D5 | 169E5 | 169F5 | 16A05 | 16A15 | 16A25 | 16A35 |
| 6 | 16986 | 16996 | 169A6 | 169B6 | 169C6 | 169D6 | 169E6 | 169F6 | 16A06 | 16A16 | 16A26 | 16A36 |
| 7 | 16987 | 16997 | 169A7 | 169B7 | 169C7 | 169D7 | 169E7 | 169F7 | 16A07 | 16A17 | 16A27 | 16A37 |
| 8 | 16988 | 16998 | 169A8 | 169B8 | 169C8 | 169D8 | 169E8 | 169F8 | 16A08 | 16A18 | 16A28 | 16A38 |
| 9 | 16989 | 16999 | 169A9 | 169B9 | 169C9 | 169D9 | 169E9 | 169F9 | 16A09 | 16A19 | 16A29 | 16A39 |
| A | 1698A | 1699A | 169AA | 169BA | 169CA | 169DA | 169EA | 169FA | 16A0A | 16A1A | 16A2A | 16A3A |
| B | 1698B | 1699B | 169AB | 169BB | 169CB | 169DB | 169EB | 169FB | 16A0B | 16A1B | 16A2B | 16A3B |
| C | 1698C | 1699C | 169AC | 169BC | 169CC | 169DC | 169EC | 169FC | 16A0C | 16A1C | 16A2C | 16A3C |
| D | 1698D | 1699D | 169AD | 169BD | 169CD | 169DD | 169ED | 169FD | 16A0D | 16A1D | 16A2D | 16A3D |
| E | 1698E | 1699E | 169AE | 169BE | 169CE | 169DE | 169EE | 169FE | 16A0E | 16A1E | 16A2E | 16A3E |
| F | 1698F | 1699F | 169AF | 169BF | 169CF | 169DF | 169EF | 169FF | 16A0F | 16A1F | 16A2F | 16A3F |

**Characters found through Phase A**

|       |   |  |
|-------|---|--|
| 16800 | 𐞀 | BAMUM LETTER PHASE-A NGKUE MFON                |
| 16801 | 𐞁 | BAMUM LETTER PHASE-A GBIEE FON                 |
| 16802 | 𐞂 | BAMUM LETTER PHASE-A PON MFON<br>PIPAEMGBIEE   |
| 16803 | 𐞃 | BAMUM LETTER PHASE-A PON MFON<br>PIPAEMBA      |
| 16804 | 𐞄 | BAMUM LETTER PHASE-A NAA MFON                  |
| 16805 | 𐞅 | BAMUM LETTER PHASE-A SHUENSHUET                |
| 16806 | 𐞆 | BAMUM LETTER PHASE-A TITA MFON                 |
| 16807 | 𐞇 | BAMUM LETTER PHASE-A NZA MFON                  |
| 16808 | 𐞈 | BAMUM LETTER PHASE-A SHINDA PA NJI             |
| 16809 | 𐞉 | BAMUM LETTER PHASE-A PON PA NJI<br>PIPAEMGBIEE |
| 1680A | 𐞊 | BAMUM LETTER PHASE-A PON PA NJI<br>PIPAEMBA    |
| 1680B | 𐞋 | BAMUM LETTER PHASE-A MAEMGBIEE                 |
| 1680C | 𐞌 | BAMUM LETTER PHASE-A TU MAEMBA                 |
| 1680D | 𐞍 | BAMUM LETTER PHASE-A NGANGU                    |
| 1680E | 𐞎 | BAMUM LETTER PHASE-A MAEMVEUX                  |
| 1680F | 𐞏 | BAMUM LETTER PHASE-A MANSUAE                   |
| 16810 | 𐞐 | BAMUM LETTER PHASE-A<br>MVEUAENGAM             |
| 16811 | 𐞑 | BAMUM LETTER PHASE-A SEUNYAM                   |
| 16812 | 𐞒 | BAMUM LETTER PHASE-A NTOQPEN                   |
| 16813 | 𐞓 | BAMUM LETTER PHASE-A KEUKEUTNDA                |
| 16814 | 𐞔 | BAMUM LETTER PHASE-A NKINDI                    |
| 16815 | 𐞕 | BAMUM LETTER PHASE-A SUU                       |
| 16816 | 𐞖 | BAMUM LETTER PHASE-A NGKUENZEUM                |
| 16817 | 𐞗 | BAMUM LETTER PHASE-A LAPAQ                     |
| 16818 | 𐞘 | BAMUM LETTER PHASE-A LET KUT                   |
| 16819 | 𐞙 | BAMUM LETTER PHASE-A NTAP MFAA                 |
| 1681A | 𐞚 | BAMUM LETTER PHASE-A MAEKEUP                   |
| 1681B | 𐞛 | BAMUM LETTER PHASE-A PASHAE                    |
| 1681C | 𐞜 | BAMUM LETTER PHASE-A GHEUAERAE                 |
| 1681D | 𐞝 | BAMUM LETTER PHASE-A PAMSHAE                   |
| 1681E | 𐞞 | BAMUM LETTER PHASE-A MON<br>NGGEUAET           |
| 1681F | 𐞟 | BAMUM LETTER PHASE-A NZUN MEUT                 |
| 16820 | 𐞠 | BAMUM LETTER PHASE-A U YUQ NAE                 |
| 16821 | 𐞡 | BAMUM LETTER PHASE-A<br>GHEUAEGHEUAE           |
| 16822 | 𐞢 | BAMUM LETTER PHASE-A NTAP NTAA                 |
| 16823 | 𐞣 | BAMUM LETTER PHASE-A SISA                      |
| 16824 | 𐞤 | BAMUM LETTER PHASE-A MGBASA                    |
| 16825 | 𐞥 | BAMUM LETTER PHASE-A<br>MEUNJOMNDEUQ           |
| 16826 | 𐞦 | BAMUM LETTER PHASE-A MOOMPUQ                   |
| 16827 | 𐞧 | BAMUM LETTER PHASE-A KAFA                      |
| 16828 | 𐞨 | BAMUM LETTER PHASE-A PA LEERAEWA               |
| 16829 | 𐞩 | BAMUM LETTER PHASE-A NDA<br>LEERAEWA           |
| 1682A | 𐞪 | BAMUM LETTER PHASE-A PET                       |
| 1682B | 𐞫 | BAMUM LETTER PHASE-A MAEMKPEN                  |
| 1682C | 𐞬 | BAMUM LETTER PHASE-A NIKA                      |
| 1682D | 𐞭 | BAMUM LETTER PHASE-A PUP                       |
| 1682E | 𐞮 | BAMUM LETTER PHASE-A TUAEP                     |
| 1682F | 𐞯 | BAMUM LETTER PHASE-A LUAEP                     |
| 16830 | 𐞰 | BAMUM LETTER PHASE-A SONJAM                    |
| 16831 | 𐞱 | BAMUM LETTER PHASE-A TEUTEUWEN                 |
| 16832 | 𐞲 | BAMUM LETTER PHASE-A MAENYI                    |

|       |   |   |
|-------|---|---|
| 16833 | 𐞳 | BAMUM LETTER PHASE-A KET                |
| 16834 | 𐞴 | BAMUM LETTER PHASE-A<br>NDAANGGEUAET    |
| 16835 | 𐞵 | BAMUM LETTER PHASE-A KUOQ               |
| 16836 | 𐞶 | BAMUM LETTER PHASE-A MOOMEUT            |
| 16837 | 𐞷 | BAMUM LETTER PHASE-A SHUM               |
| 16838 | 𐞸 | BAMUM LETTER PHASE-A LOMMAE             |
| 16839 | 𐞹 | BAMUM LETTER PHASE-A FIRI               |
| 1683A | 𐞺 | BAMUM LETTER PHASE-A ROM                |
| 1683B | 𐞻 | BAMUM LETTER PHASE-A KPOQ               |
| 1683C | 𐞼 | BAMUM LETTER PHASE-A SOQ                |
| 1683D | 𐞽 | BAMUM LETTER PHASE-A MAP PIEET          |
| 1683E | 𐞾 | BAMUM LETTER PHASE-A SHIRAE             |
| 1683F | 𐞿 | BAMUM LETTER PHASE-A NTAP               |
| 16840 | 𐟀 | BAMUM LETTER PHASE-A SHOQ NSHUT<br>YUM  |
| 16841 | 𐟁 | BAMUM LETTER PHASE-A NYIT<br>MONGKEUAEQ |
| 16842 | 𐟂 | BAMUM LETTER PHASE-A PAARAE             |
| 16843 | 𐟃 | BAMUM LETTER PHASE-A NKAARAE            |
| 16844 | 𐟄 | BAMUM LETTER PHASE-A UNKNOWN            |
| 16845 | 𐟅 | BAMUM LETTER PHASE-A NGGEN              |
| 16846 | 𐟆 | BAMUM LETTER PHASE-A MAESI              |
| 16847 | 𐟇 | BAMUM LETTER PHASE-A NJAM               |
| 16848 | 𐟈 | BAMUM LETTER PHASE-A MBANYI             |
| 16849 | 𐟉 | BAMUM LETTER PHASE-A NYET               |
| 1684A | 𐟊 | BAMUM LETTER PHASE-A TEUAEN             |
| 1684B | 𐟋 | BAMUM LETTER PHASE-A SOT                |
| 1684C | 𐟌 | BAMUM LETTER PHASE-A PAAM               |
| 1684D | 𐟍 | BAMUM LETTER PHASE-A NSHIEE             |
| 1684E | 𐟎 | BAMUM LETTER PHASE-A MAEM               |
| 1684F | 𐟏 | BAMUM LETTER PHASE-A NYI                |
| 16850 | 𐟐 | BAMUM LETTER PHASE-A KAQ                |
| 16851 | 𐟑 | BAMUM LETTER PHASE-A NSHA               |
| 16852 | 𐟒 | BAMUM LETTER PHASE-A VEE                |
| 16853 | 𐟓 | BAMUM LETTER PHASE-A LU                 |
| 16854 | 𐟔 | BAMUM LETTER PHASE-A NEN                |
| 16855 | 𐟕 | BAMUM LETTER PHASE-A NAQ                |
| 16856 | 𐟖 | BAMUM LETTER PHASE-A MBAQ               |

**Characters found through Phase B**

|       |   |  |
|-------|---|--|
| 16857 | 𐟗 | BAMUM LETTER PHASE-B NSHUET            |
| 16858 | 𐟘 | BAMUM LETTER PHASE-B TU<br>MAEMGBIEE   |
| 16859 | 𐟙 | BAMUM LETTER PHASE-B SIEE              |
| 1685A | 𐟚 | BAMUM LETTER PHASE-B SET TU            |
| 1685B | 𐟛 | BAMUM LETTER PHASE-B LOM NTEUM         |
| 1685C | 𐟜 | BAMUM LETTER PHASE-B MBA MAELEE        |
| 1685D | 𐟝 | BAMUM LETTER PHASE-B KIEEM             |
| 1685E | 𐟞 | BAMUM LETTER PHASE-B YEURAE            |
| 1685F | 𐟟 | BAMUM LETTER PHASE-B MBAARAE           |
| 16860 | 𐟠 | BAMUM LETTER PHASE-B KAM               |
| 16861 | 𐟡 | BAMUM LETTER PHASE-B PEESHI            |
| 16862 | 𐟢 | BAMUM LETTER PHASE-B YAFU<br>LEERAEWA  |
| 16863 | 𐟣 | BAMUM LETTER PHASE-B LAM NSHUT<br>NYAM |
| 16864 | 𐟤 | BAMUM LETTER PHASE-B NTIEE SHEUOQ      |
| 16865 | 𐟥 | BAMUM LETTER PHASE-B NDU NJAA          |
| 16866 | 𐟦 | BAMUM LETTER PHASE-B<br>GHEUGHEUAEM    |
| 16867 | 𐟧 | BAMUM LETTER PHASE-B PIT               |

|   |   |  |       |   |   |
|---|---|--|-------|---|---|
| 16868                                   | 𐞈 | BAMUM LETTER PHASE-B TU NSIEE                      | 1689D | 𐞈 | BAMUM LETTER PHASE-C NDOMBU               |
| 16869                                   | + | BAMUM LETTER PHASE-B SHET NJAQ                     | 1689E | 𐞈 | BAMUM LETTER PHASE-C MBAA<br>CABBAGE-TREE |
| 1686A                                   | Δ | BAMUM LETTER PHASE-B SHEUAEQTU                     | 1689F | 𐞈 | BAMUM LETTER PHASE-C KEUSHEUAEP           |
| 1686B                                   | 𐞈 | BAMUM LETTER PHASE-B MFON TEUAEQ                   | 168A0 | 𐞈 | BAMUM LETTER PHASE-C GHAP                 |
| 1686C                                   | √ | BAMUM LETTER PHASE-B MBIT<br>MBAAKET               | 168A1 | 𐞈 | BAMUM LETTER PHASE-C KEUKAQ               |
| 1686D                                   | 𐞈 | BAMUM LETTER PHASE-B NYI NTEUM                     | 168A2 | 𐞈 | BAMUM LETTER PHASE-C YU MUOMAE            |
| 1686E                                   | 𐞈 | BAMUM LETTER PHASE-B KEUQUQ                        | 168A3 | 𐞈 | BAMUM LETTER PHASE-C NZEUM                |
| 1686F                                   | 𐞈 | BAMUM LETTER PHASE-B GHEUGHEN                      | 168A4 | 𐞈 | BAMUM LETTER PHASE-C MBUE                 |
| 16870                                   | 𐞈 | BAMUM LETTER PHASE-B KEUYEUX                       | 168A5 | 𐞈 | BAMUM LETTER PHASE-C NSEUAEN              |
| 16871                                   | 𐞈 | BAMUM LETTER PHASE-B LAANAE                        | 168A6 | 𐞈 | BAMUM LETTER PHASE-C MBIT                 |
| 16872                                   | 𐞈 | BAMUM LETTER PHASE-B PARUM<br>• nsen in Phases C-E | 168A7 | 𐞈 | BAMUM LETTER PHASE-C YEUQ                 |
| 16873                                   | 𐞈 | BAMUM LETTER PHASE-B VEUM                          | 168A8 | 𐞈 | BAMUM LETTER PHASE-C KPARAQ               |
| 16874                                   | 𐞈 | BAMUM LETTER PHASE-B NGKINDI<br>MVOP               | 168A9 | 𐞈 | BAMUM LETTER PHASE-C KAA                  |
| 16875                                   | 𐞈 | BAMUM LETTER PHASE-B NGGEU MBU                     | 168AA | 𐞈 | BAMUM LETTER PHASE-C SEUX                 |
| 16876                                   | Δ | BAMUM LETTER PHASE-B WUAET                         | 168AB | 𐞈 | BAMUM LETTER PHASE-C NDIDA                |
| 16877                                   | 𐞈 | BAMUM LETTER PHASE-B SAKEUAE                       | 168AC | 𐞈 | BAMUM LETTER PHASE-C TAASHAE              |
| 16878                                   | 𐞈 | BAMUM LETTER PHASE-B TAAM                          | 168AD | 𐞈 | BAMUM LETTER PHASE-C NJUEQ                |
| 16879                                   | 𐞈 | BAMUM LETTER PHASE-B MEUQ                          | 168AE | 𐞈 | BAMUM LETTER PHASE-C TITA YUE             |
| 1687A                                   | ∴ | BAMUM LETTER PHASE-B NGGUOQ                        | 168AF | 𐞈 | BAMUM LETTER PHASE-C SUAET                |
| 1687B                                   | ∴ | BAMUM LETTER PHASE-B NGGUOQ<br>LARGE               | 168B0 | 𐞈 | BAMUM LETTER PHASE-C NGGUAEN<br>NYAM      |
| 1687C                                   | ∴ | BAMUM LETTER PHASE-B MFIY AQ                       | 168B1 | 𐞈 | BAMUM LETTER PHASE-C VEUX                 |
| 1687D                                   | 𐞈 | BAMUM LETTER PHASE-B SUE                           | 168B2 | 𐞈 | BAMUM LETTER PHASE-C NANSANAQ             |
| 1687E                                   | 𐞈 | BAMUM LETTER PHASE-B MBEURI                        | 168B3 | 𐞈 | BAMUM LETTER PHASE-C MA KEUAERI           |
| 1687F                                   | Δ | BAMUM LETTER PHASE-B MONTIEEN                      | 168B4 | 𐞈 | BAMUM LETTER PHASE-C NTA A                |
| 16880                                   | 𐞈 | BAMUM LETTER PHASE-B NYAEMAE                       | 168B5 | 𐞈 | BAMUM LETTER PHASE-C NGGUON               |
| 16881                                   | 𐞈 | BAMUM LETTER PHASE-B PUNGAAM                       | 168B6 | 𐞈 | BAMUM LETTER PHASE-C LAP                  |
| 16882                                   | 𐞈 | BAMUM LETTER PHASE-B MEUT NGGEET                   | 168B7 | 𐞈 | BAMUM LETTER PHASE-C MBIRIEEN             |
| 16883                                   | 𐞈 | BAMUM LETTER PHASE-B FEUX                          | 168B8 | 𐞈 | BAMUM LETTER PHASE-C MGBASAQ              |
| 16884                                   | 𐞈 | BAMUM LETTER PHASE-B MBUOQ                         | 168B9 | 𐞈 | BAMUM LETTER PHASE-C NTEUNGBA             |
| 16885                                   | 𐞈 | BAMUM LETTER PHASE-B FEE                           | 168BA | 𐞈 | BAMUM LETTER PHASE-C TEUTEUX              |
| 16886                                   | 𐞈 | BAMUM LETTER PHASE-B KEUAEM                        | 168BB | 𐞈 | BAMUM LETTER PHASE-C NGGUM                |
| 16887                                   | 𐞈 | BAMUM LETTER PHASE-B MA NJEU AENA                  | 168BC | 𐞈 | BAMUM LETTER PHASE-C FUE                  |
| 16888                                   | 𐞈 | BAMUM LETTER PHASE-B MA NJUQA                      | 168BD | 𐞈 | BAMUM LETTER PHASE-C NDEUT                |
| 16889                                   | 𐞈 | BAMUM LETTER PHASE-B LET                           | 168BE | 𐞈 | BAMUM LETTER PHASE-C NSA                  |
| 1688A                                   | ∞ | BAMUM LETTER PHASE-B NGGAAM                        | 168BF | 𐞈 | BAMUM LETTER PHASE-C NSHAQ                |
| 1688B                                   | 𐞈 | BAMUM LETTER PHASE-B NSEN                          | 168C0 | 𐞈 | BAMUM LETTER PHASE-C BUNG                 |
| 1688C                                   | 𐞈 | BAMUM LETTER PHASE-B MA                            | 168C1 | 𐞈 | BAMUM LETTER PHASE-C VEUAEPEN             |
| 1688D                                   | 𐞈 | BAMUM LETTER PHASE-B KIQ                           | 168C2 | 𐞈 | BAMUM LETTER PHASE-C MBERAE               |
| 1688E                                   | 𐞈 | BAMUM LETTER PHASE-B NGOM                          | 168C3 |   | BAMUM LETTER PHASE-C RU                   |
| <b>Characters found through Phase C</b> |   |  |       |   |   |
| 1688F                                   | 𐞈 | BAMUM LETTER PHASE-C NGKUE<br>MAEMBA               | 168C4 | 𐞈 | BAMUM LETTER PHASE-C NJAEM                |
| 16890                                   | 𐞈 | BAMUM LETTER PHASE-C NZA                           | 168C5 | 𐞈 | BAMUM LETTER PHASE-C LAM                  |
| 16891                                   | 𐞈 | BAMUM LETTER PHASE-C YUM                           | 168C6 | 𐞈 | BAMUM LETTER PHASE-C TITUAEP              |
| 16892                                   | 𐞈 | BAMUM LETTER PHASE-C WANGKUOQ                      | 168C7 | 𐞈 | BAMUM LETTER PHASE-C NSUOT NGOM           |
| 16893                                   | 𐞈 | BAMUM LETTER PHASE-C NGGEN                         | 168C8 | 𐞈 | BAMUM LETTER PHASE-C NJEEEE               |
| 16894                                   | 𐞈 | BAMUM LETTER PHASE-C NDEUAEREE                     | 168C9 | 𐞈 | BAMUM LETTER PHASE-C KET                  |
| 16895                                   | 𐞈 | BAMUM LETTER PHASE-C NGKAQ                         | 168CA | 𐞈 | BAMUM LETTER PHASE-C NGGU                 |
| 16896                                   | 𐞈 | BAMUM LETTER PHASE-C GHARAE                        | 168CB | 𐞈 | BAMUM LETTER PHASE-C MAESI                |
| 16897                                   | 𐞈 | BAMUM LETTER PHASE-C MBEEKEET                      | 168CC | 𐞈 | BAMUM LETTER PHASE-C MBUAEM               |
| 16898                                   | 𐞈 | BAMUM LETTER PHASE-C GBAYI                         | 168CD | 𐞈 | BAMUM LETTER PHASE-C LU                   |
| 16899                                   | 𐞈 | BAMUM LETTER PHASE-C NYIR<br>MKPARAQ MEUN          | 168CE | 𐞈 | BAMUM LETTER PHASE-C KUT                  |
| 1689A                                   | 𐞈 | BAMUM LETTER PHASE-C NTU MBIT                      | 168CF | 𐞈 | BAMUM LETTER PHASE-C NJAM                 |
| 1689B                                   | 𐞈 | BAMUM LETTER PHASE-C MBEUM                         | 168D0 | 𐞈 | BAMUM LETTER PHASE-C NGOM                 |
| 1689C                                   | 𐞈 | BAMUM LETTER PHASE-C PIRIEEN                       | 168D1 | 𐞈 | BAMUM LETTER PHASE-C WUP                  |
|   |   |  | 168D2 | 𐞈 | BAMUM LETTER PHASE-C NGGUEET              |
|   |   |  | 168D3 | 𐞈 | BAMUM LETTER PHASE-C NSOM                 |
|   |   |  | 168D4 | 𐞈 | BAMUM LETTER PHASE-C NTEN                 |
|   |   |  | 168D5 | 𐞈 | BAMUM LETTER PHASE-C KUOP<br>NKAARAE      |
|   |   |  | 168D6 | 𐞈 | BAMUM LETTER PHASE-C NSUN                 |



|       |   |   |       |   |  |
|-------|---|---|-------|---|--|
| 168D7 | 𐞀 | BAMUM LETTER PHASE-C NDAM<br>• pen in Phase D | 1690F | 𐞏 | BAMUM LETTER PHASE-D KEUOT MBUAE                         |
| 168D8 | 𐞁 | BAMUM LETTER PHASE-C MA NSIEE                 | 16910 | 𐞐 | BAMUM LETTER PHASE-D NGKEURI                             |
| 168D9 | 𐞂 | BAMUM LETTER PHASE-C YAA                      | 16911 | 𐞑 | BAMUM LETTER PHASE-D TU                                  |
| 168DA | 𐞃 | BAMUM LETTER PHASE-C NDAP                     | 16912 | 𐞒 | BAMUM LETTER PHASE-D GHAA                                |
| 168DB | 𐞄 | BAMUM LETTER PHASE-C SHUEQ                    | 16913 | 𐞓 | BAMUM LETTER PHASE-D NGKYEE                              |
| 168DC | 𐞅 | BAMUM LETTER PHASE-C SETFON                   | 16914 | 𐞔 | BAMUM LETTER PHASE-D FEUFEUAET                           |
| 168DD | 𐞆 | BAMUM LETTER PHASE-C MBI                      | 16915 | 𐞕 | BAMUM LETTER PHASE-D NDEE                                |
| 168DE | 𐞇 | BAMUM LETTER PHASE-C MAEMBA                   | 16916 | 𐞖 | BAMUM LETTER PHASE-D MGBOFUM                             |
| 168DF | 𐞈 | BAMUM LETTER PHASE-C MBANYI                   | 16917 | 𐞗 | BAMUM LETTER PHASE-D LEUAEP                              |
| 168E0 | 𐞉 | BAMUM LETTER PHASE-C KEUSEUX                  | 16918 | 𐞘 | BAMUM LETTER PHASE-D NDON                                |
| 168E1 | 𐞊 | BAMUM LETTER PHASE-C MBEUX                    | 16919 | 𐞙 | BAMUM LETTER PHASE-D MONI                                |
| 168E2 | 𐞋 | BAMUM LETTER PHASE-C KEUM                     | 1691A | 𐞚 | BAMUM LETTER PHASE-D MGBEUN                              |
| 168E3 | 𐞌 | BAMUM LETTER PHASE-C MBAA PICKET              | 1691B | 𐞛 | BAMUM LETTER PHASE-D PUUT                                |
| 168E4 | 𐞍 | BAMUM LETTER PHASE-C YUWOQ                    | 1691C | 𐞜 | BAMUM LETTER PHASE-D MGBIEE                              |
| 168E5 | 𐞎 | BAMUM LETTER PHASE-C NJEUX                    | 1691D | 𐞝 | BAMUM LETTER PHASE-D MFO                                 |
| 168E6 | 𐞏 | BAMUM LETTER PHASE-C MIEE                     | 1691E | 𐞞 | BAMUM LETTER PHASE-D LUM                                 |
| 168E7 | 𐞐 | BAMUM LETTER PHASE-C MUAE                     | 1691F | 𐞟 | BAMUM LETTER PHASE-D NSIEEP                              |
| 168E8 | 𐞑 | BAMUM LETTER PHASE-C SHIQ                     | 16920 | 𐞠 | BAMUM LETTER PHASE-D MBAA                                |
| 168E9 | 𐞒 | BAMUM LETTER PHASE-C KEN LAW                  | 16921 | 𐞡 | BAMUM LETTER PHASE-D KWAET                               |
| 168EA | 𐞓 | BAMUM LETTER PHASE-C KEN FATIGUE              | 16922 | 𐞢 | BAMUM LETTER PHASE-D NYET                                |
| 168EB | 𐞔 | BAMUM LETTER PHASE-C NGAQ                     | 16923 | 𐞣 | BAMUM LETTER PHASE-D TEUAEN                              |
| 168EC | 𐞕 | BAMUM LETTER PHASE-C NAQ                      | 16924 | 𐞤 | BAMUM LETTER PHASE-D SOT                                 |
| 168ED | 𐞖 | BAMUM LETTER PHASE-C LIQ                      | 16925 | 𐞥 | BAMUM LETTER PHASE-D YUWOQ                               |
| 168EE | 𐞗 | BAMUM LETTER PHASE-C PIN                      | 16926 | 𐞦 | BAMUM LETTER PHASE-D KEUM                                |
| 168EF | 𐞘 | BAMUM LETTER PHASE-C PEN                      | 16927 | 𐞧 | BAMUM LETTER PHASE-D RAEM                                |
| 168F0 | 𐞙 | BAMUM LETTER PHASE-C TET                      | 16928 | 𐞨 | BAMUM LETTER PHASE-D TEEEE                               |
|       |   |   | 16929 | 𐞩 | BAMUM LETTER PHASE-D NGKEUAEQ<br>• faamae '8' in Phase F |

### Characters found through Phase D

|       |   |  |       |   |   |
|-------|---|--|-------|---|---|
| 168F1 | 𐞚 | BAMUM LETTER PHASE-D MBUO                        | 1692A | 𐞪 | BAMUM LETTER PHASE-D MFEUAE                       |
| 168F2 | 𐞛 | BAMUM LETTER PHASE-D WAP                         | 1692B | 𐞫 | BAMUM LETTER PHASE-D NSIEET                       |
| 168F3 | 𐞜 | BAMUM LETTER PHASE-D NJI                         | 1692C | 𐞬 | BAMUM LETTER PHASE-D KEUP                         |
| 168F4 | 𐞝 | BAMUM LETTER PHASE-D MFON                        | 1692D | 𐞭 | BAMUM LETTER PHASE-D PIP                          |
| 168F5 | 𐞞 | BAMUM LETTER PHASE-D NJIEE                       | 1692E | 𐞮 | BAMUM LETTER PHASE-D PEUTAE                       |
| 168F6 | 𐞟 | BAMUM LETTER PHASE-D LIEE                        | 1692F | 𐞯 | BAMUM LETTER PHASE-D NYUE                         |
| 168F7 | 𐞠 | BAMUM LETTER PHASE-D NJEUT                       | 16930 | 𐞰 | BAMUM LETTER PHASE-D LET<br>• lee in Phases E-F   |
| 168F8 | 𐞡 | BAMUM LETTER PHASE-D NSHEE                       | 16931 | 𐞱 | BAMUM LETTER PHASE-D NGGAAM<br>• mu in Phases E-F |
| 168F9 | 𐞢 | BAMUM LETTER PHASE-D NGGAAMAE                    | 16932 | 𐞲 | BAMUM LETTER PHASE-D MFIEE                        |
| 168FA | 𐞣 | BAMUM LETTER PHASE-D NYAM                        | 16933 | 𐞳 | BAMUM LETTER PHASE-D NGGWAEN                      |
| 168FB | 𐞤 | BAMUM LETTER PHASE-D WUAEN<br>• ti in Phases E-F | 16934 | 𐞴 | BAMUM LETTER PHASE-D YUOM                         |
| 168FC | 𐞥 | BAMUM LETTER PHASE-D NGKUN                       | 16935 | 𐞵 | BAMUM LETTER PHASE-D PAP                          |
| 168FD | 𐞦 | BAMUM LETTER PHASE-D SHEE                        | 16936 | 𐞶 | BAMUM LETTER PHASE-D YUOP                         |
| 168FE | 𐞧 | BAMUM LETTER PHASE-D NGKAP                       | 16937 | 𐞷 | BAMUM LETTER PHASE-D NDAM                         |
| 168FF | 𐞨 | BAMUM LETTER PHASE-D KEUAETMEUN                  | 16938 | 𐞸 | BAMUM LETTER PHASE-D NTEUM                        |
| 16900 | 𐞩 | BAMUM LETTER PHASE-D TEUT                        | 16939 | 𐞹 | BAMUM LETTER PHASE-D SUAE                         |
| 16901 | 𐞪 | BAMUM LETTER PHASE-D SHEUAE                      | 1693A | 𐞺 | BAMUM LETTER PHASE-D KUN                          |
| 16902 | 𐞫 | BAMUM LETTER PHASE-D NJAP                        | 1693B | 𐞻 | BAMUM LETTER PHASE-D NGGEUX                       |
| 16903 | 𐞬 | BAMUM LETTER PHASE-D SUE                         | 1693C | 𐞼 | BAMUM LETTER PHASE-D NGKIEE                       |
| 16904 | 𐞭 | BAMUM LETTER PHASE-D KET                         | 1693D | 𐞽 | BAMUM LETTER PHASE-D TUOT                         |
| 16905 | 𐞮 | BAMUM LETTER PHASE-D YAEMMAE                     | 1693E | 𐞾 | BAMUM LETTER PHASE-D MEUN                         |
| 16906 | 𐞯 | BAMUM LETTER PHASE-D KUOM                        | 1693F | 𐞿 | BAMUM LETTER PHASE-D KUQ                          |
| 16907 | 𐞰 | BAMUM LETTER PHASE-D SAP                         | 16940 | 𐟀 | BAMUM LETTER PHASE-D NSUM                         |
| 16908 | 𐞱 | BAMUM LETTER PHASE-D MFEUT                       | 16941 | 𐟁 | BAMUM LETTER PHASE-D TEUN                         |
| 16909 | 𐞲 | BAMUM LETTER PHASE-D NDEUX                       | 16942 | 𐟂 | BAMUM LETTER PHASE-D MAENJET                      |
| 1690A | 𐞳 | BAMUM LETTER PHASE-D MALEERI                     | 16943 | 𐟃 | BAMUM LETTER PHASE-D NGGAP                        |
| 1690B | 𐞴 | BAMUM LETTER PHASE-D MEUT                        | 16944 | 𐟄 | BAMUM LETTER PHASE-D LEUM                         |
| 1690C | 𐞵 | BAMUM LETTER PHASE-D SEUAEQ                      | 16945 | 𐟅 | BAMUM LETTER PHASE-D NGGUOM                       |
| 1690D | 𐞶 | BAMUM LETTER PHASE-D YEN                         | 16946 | 𐟆 | BAMUM LETTER PHASE-D NSHUT                        |
| 1690E | 𐞷 | BAMUM LETTER PHASE-D NJEUAE                      | 16947 | 𐟇 | BAMUM LETTER PHASE-D NJUEQ                        |

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| 16948                                   | € | BAMUM LETTER PHASE-D GHEUAE   | 16979 | 𐌵 | BAMUM LETTER PHASE-E TOO  |
| 16949                                   | ⌘ | BAMUM LETTER PHASE-D KU   | 1697A | 𐌶 | BAMUM LETTER PHASE-E KUOP   |
| 1694A                                   | 𐌸 | BAMUM LETTER PHASE-D REN OLD  | 1697B | # | BAMUM LETTER PHASE-E LOM  |
| 1694B                                   | 𐌹 | BAMUM LETTER PHASE-D TAE  | 1697C | 𐌺 | BAMUM LETTER PHASE-E NSHIEE   |
| 1694C                                   | 𐌻 | BAMUM LETTER PHASE-D TOQ  | 1697D | 𐌻 | BAMUM LETTER PHASE-E NGOP   |
| 1694D                                   | 𐌼 | BAMUM LETTER PHASE-D NYI  | 1697E | 𐌽 | BAMUM LETTER PHASE-E MAEM   |
| 1694E                                   | 𐌾 | BAMUM LETTER PHASE-D RII  | 1697F | 𐌿 | BAMUM LETTER PHASE-E NGKEUX   |
| 1694F                                   | 𐌿 | BAMUM LETTER PHASE-D LEEEE  | 16980 | 𐍀 | BAMUM LETTER PHASE-E NGOQ   |
| 16950                                   | 𐍁 | BAMUM LETTER PHASE-D MEEEE<br>• meq in Phase E                                      | 16981 | 𐍂 | BAMUM LETTER PHASE-E NSHUE  |
| 16951                                   | 𐍃 | BAMUM LETTER PHASE-D M  | 16982 | 𐍄 | BAMUM LETTER PHASE-E RIMGBA   |
| 16952                                   | 𐍅 | BAMUM LETTER PHASE-D SUU  | 16983 | 𐍆 | BAMUM LETTER PHASE-E NJEUX  |
| 16953                                   | 𐍇 | BAMUM LETTER PHASE-D MU   | 16984 | 𐍈 | BAMUM LETTER PHASE-E PEEM   |
| 16954                                   | + | BAMUM LETTER PHASE-D SHII   | 16985 | 𐍊 | BAMUM LETTER PHASE-E SAA<br>• used before 16963 𐍋 for samba '7' in Phases A-D |
| 16955                                   | ⊕ | BAMUM LETTER PHASE-D SHEUX  | 16986 | 𐍌 | BAMUM LETTER PHASE-E NGGURAE  |
| 16956                                   | 𐍎 | BAMUM LETTER PHASE-D KYEE   | 16987 | 𐍍 | BAMUM LETTER PHASE-E MGBA   |
| 16957                                   | 𐍏 | BAMUM LETTER PHASE-D NU   | 16988 | 𐍎 | BAMUM LETTER PHASE-E GHEUX  |
| 16958                                   | 𐍐 | BAMUM LETTER PHASE-D SHU  | 16989 | 𐍏 | BAMUM LETTER PHASE-E NGKEUAEM   |
| 16959                                   | ⊖ | BAMUM LETTER PHASE-D NTEE   | 1698A | 𐍑 | BAMUM LETTER PHASE-E NJAEMLI  |
| 1695A                                   | ⊗ | BAMUM LETTER PHASE-D PEE  | 1698B | 𐍒 | BAMUM LETTER PHASE-E MAP  |
| 1695B                                   | † | BAMUM LETTER PHASE-D NI   | 1698C | 𐍓 | BAMUM LETTER PHASE-E LOOT   |
| 1695C                                   | ⊘ | BAMUM LETTER PHASE-D SHOQ   | 1698D | 𐍔 | BAMUM LETTER PHASE-E NGGEEEE  |
| 1695D                                   | 𐍕 | BAMUM LETTER PHASE-D PUQ  | 1698E | 𐍕 | BAMUM LETTER PHASE-E NDIQ   |
| 1695E                                   | ⊙ | BAMUM LETTER PHASE-D MVOP   | 1698F | 𐍖 | BAMUM LETTER PHASE-E TAEN NTEUM   |
| 1695F                                   | ‡ | BAMUM LETTER PHASE-D LOQ  | 16990 | 𐍗 | BAMUM LETTER PHASE-E SET  |
| 16960                                   | ⊚ | BAMUM LETTER PHASE-D REN MUCH   | 16991 | 𐍘 | BAMUM LETTER PHASE-E PUM<br>• o in Phase F                                    |
| 16961                                   | 𐍙 | BAMUM LETTER PHASE-D TI   | 16992 | 𐍚 | BAMUM LETTER PHASE-E NDA<br>SOFTNESS  |
| 16962                                   | 𐍛 | BAMUM LETTER PHASE-D NTUU   | 16993 | 𐍜 | BAMUM LETTER PHASE-E NGGUAESHAE<br>NYAM<br>• fee in Phase F                   |
| 16963                                   | 𐍝 | BAMUM LETTER PHASE-D MBAA SEVEN<br>• used after 16985 𐍞 for samba '7' in Phases A-D | 16994 | 𐍞 | BAMUM LETTER PHASE-E YIEE   |
| 16964                                   | 𐍟 | BAMUM LETTER PHASE-D SAQ  | 16995 | 𐍟 | BAMUM LETTER PHASE-E GHEUN  |
| 16965                                   | 𐍡 | BAMUM LETTER PHASE-D FAA<br>• used before 16988 𐍢 for faamae '8' in Phases A-D      | 16996 | 𐍠 | BAMUM LETTER PHASE-E TUAE   |
| <b>Characters found through Phase E</b> |   |   |       |   |   |
| 16966                                   | ~ | BAMUM LETTER PHASE-E NDAP<br>• i in Phase F   | 16997 | 𐍡 | BAMUM LETTER PHASE-E YEUAE  |
| 16967                                   | 𐍣 | BAMUM LETTER PHASE-E TOON   | 16998 | 𐍢 | BAMUM LETTER PHASE-E PO   |
| 16968                                   | 𐍤 | BAMUM LETTER PHASE-E MBEUM  | 16999 | 𐍣 | BAMUM LETTER PHASE-E TUMAE  |
| 16969                                   | 𐍥 | BAMUM LETTER PHASE-E LAP<br>• men in Phase F  | 1699A | 𐍤 | BAMUM LETTER PHASE-E KEUAE  |
| 1696A                                   | 𐍦 | BAMUM LETTER PHASE-E VOM  | 1699B | ⊖ | BAMUM LETTER PHASE-E SUAEN  |
| 1696B                                   | 𐍧 | BAMUM LETTER PHASE-E LOON   | 1699C | 𐍦 | BAMUM LETTER PHASE-E TEUAEQ   |
| 1696C                                   | 𐍨 | BAMUM LETTER PHASE-E PAA  | 1699D | ↓ | BAMUM LETTER PHASE-E VEUAE  |
| 1696D                                   | 𐍩 | BAMUM LETTER PHASE-E SOM  | 1699E | 𐍧 | BAMUM LETTER PHASE-E WEUX   |
| 1696E                                   | 𐍪 | BAMUM LETTER PHASE-E RAQ<br>• nga in Phase F  | 1699F | 𐍨 | BAMUM LETTER PHASE-E LAAM   |
| 1696F                                   | 𐍫 | BAMUM LETTER PHASE-E NSHUOP<br>• pa in Phase F                                      | 169A0 | 𐍩 | BAMUM LETTER PHASE-E PU<br>• also puq in Phase E                              |
| 16970                                   | 𐍬 | BAMUM LETTER PHASE-E NDUN<br>• pue in Phase F                                       | 169A1 | ↕ | BAMUM LETTER PHASE-E TAAQ   |
| 16971                                   | 𐍭 | BAMUM LETTER PHASE-E PUAE<br>• fae in Phase F                                       | 169A2 | 𐍫 | BAMUM LETTER PHASE-E GHAAMAE  |
| 16972                                   | 𐍮 | BAMUM LETTER PHASE-E TAM  | 169A3 | 𐍬 | BAMUM LETTER PHASE-E NGEUREUT   |
| 16973                                   | 𐍯 | BAMUM LETTER PHASE-E NGKA   | 169A4 | 𐍭 | BAMUM LETTER PHASE-E SHEUAEQ  |
| 16974                                   | 𐍰 | BAMUM LETTER PHASE-E KPEUX  | 169A5 | 𐍮 | BAMUM LETTER PHASE-E MGBEN  |
| 16975                                   | ∩ | BAMUM LETTER PHASE-E WUO  | 169A6 | 𐍯 | BAMUM LETTER PHASE-E MBEE   |
| 16976                                   | ∞ | BAMUM LETTER PHASE-E SEE  | 169A7 | 𐍰 | BAMUM LETTER PHASE-E NZAQ   |
| 16977                                   | 𐍱 | BAMUM LETTER PHASE-E NGGEUAET   | 169A8 | 𐍱 | BAMUM LETTER PHASE-E NKOM<br>• ten in Phase F                                 |
| 16978                                   | 𐍲 | BAMUM LETTER PHASE-E PAAM   | 169A9 | 𐍲 | BAMUM LETTER PHASE-E GBET   |
|   |   |   | 169AA | 𐍳 | BAMUM LETTER PHASE-E TUM  |
|   |   |   | 169AB | 𐍴 | BAMUM LETTER PHASE-E KUET   |
|   |   |   | 169AC | 𐍵 | BAMUM LETTER PHASE-E YAP  |
|   |   |   | 169AD | 𐍶 | BAMUM LETTER PHASE-E NYI CLEAVER  |

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| 169AE | 𐞀 | BAMUM LETTER PHASE-E YIT  | 169E6                                   | 𐞖 | BAMUM LETTER PHASE-E KEUX   |
| 169AF | 𐞁 | BAMUM LETTER PHASE-E MFEUQ  | 169E7                                   | 𐞗 | BAMUM LETTER PHASE-E PEUX   |
| 169B0 | 𐞂 | BAMUM LETTER PHASE-E NDIAQ  | 169E8                                   | 𐞘 | BAMUM LETTER PHASE-E NJEE EPOCH   |
| 169B1 | 𐞃 | BAMUM LETTER PHASE-E PIEEQ  | 169E9                                   | 𐞙 | BAMUM LETTER PHASE-E PUE  |
| 169B2 | 𐞄 | BAMUM LETTER PHASE-E YUEQ   | 169EA                                   | 𐞚 | BAMUM LETTER PHASE-E WUE  |
| 169B3 | 𐞅 | BAMUM LETTER PHASE-E LEUAEM   | 169EB                                   | 𐞛 | BAMUM LETTER PHASE-E FEE  |
| 169B4 | 𐞆 | BAMUM LETTER PHASE-E FUE  | 169EC                                   | 𐞜 | BAMUM LETTER PHASE-E VEE  |
| 169B5 | 𐞇 | BAMUM LETTER PHASE-E GBEUX  | 169ED                                   | 𐞝 | BAMUM LETTER PHASE-E LU   |
| 169B6 | 𐞈 | BAMUM LETTER PHASE-E NGKUP  | 169EE                                   | 𐞞 | BAMUM LETTER PHASE-E MI   |
| 169B7 | 𐞉 | BAMUM LETTER PHASE-E KET  | 169EF                                   | 𐞟 | BAMUM LETTER PHASE-E REUX   |
| 169B8 | ◦ | BAMUM LETTER PHASE-E MAE<br>• used after 16965 𐞊 for faamae '8' in Phases A-D | 169F0                                   | 𐞠 | BAMUM LETTER PHASE-E RAE  |
| 169B9 | ⊙ | BAMUM LETTER PHASE-E NGKAAMI  | 169F1                                   | 𐞡 | BAMUM LETTER PHASE-E NGUAET   |
| 169BA | 𐞋 | BAMUM LETTER PHASE-E GHET   | 169F2                                   | 𐞢 | BAMUM LETTER PHASE-E NGA  |
| 169BB | 𐞌 | BAMUM LETTER PHASE-E FA   | 169F3                                   | 𐞣 | BAMUM LETTER PHASE-E SHO  |
| 169BC | 𐞍 | BAMUM LETTER PHASE-E NTUM   | 169F4                                   | 𐞤 | BAMUM LETTER PHASE-E SHOQ   |
| 169BD | 𐞎 | BAMUM LETTER PHASE-E PEUT   | 169F5                                   | 𐞥 | BAMUM LETTER PHASE-E FU REMEDY  |
| 169BE | 𐞏 | BAMUM LETTER PHASE-E YEUM   | 169F6                                   | 𐞦 | BAMUM LETTER PHASE-E NA   |
| 169BF | 𐞐 | BAMUM LETTER PHASE-E NGGEUAE  | 169F7                                   | 𐞧 | BAMUM LETTER PHASE-E PI   |
| 169C0 | 𐞑 | BAMUM LETTER PHASE-E NYI BETWEEN  | 169F8                                   | 𐞨 | BAMUM LETTER PHASE-E LOQ  |
| 169C1 | 𐞒 | BAMUM LETTER PHASE-E NZUQ   | 169F9                                   | • | BAMUM LETTER PHASE-E KO<br>• used before 16A02 𐞩 for koghom '10' in Phases A-D<br>• used before 16A38 𐞪 for kovue '9' in Phases A-D |
| 169C2 | 𐞓 | BAMUM LETTER PHASE-E POON   | 169FA                                   | 𐞬 | BAMUM LETTER PHASE-E MEN  |
| 169C3 | 𐞔 | BAMUM LETTER PHASE-E MIEE   | 169FB                                   | 𐞭 | BAMUM LETTER PHASE-E MA   |
| 169C4 | 𐞕 | BAMUM LETTER PHASE-E FUET   | 169FC                                   | 𐞮 | BAMUM LETTER PHASE-E MAQ  |
| 169C5 | 𐞖 | BAMUM LETTER PHASE-E NAE  | 169FD                                   | 𐞯 | BAMUM LETTER PHASE-E TEU  |
| 169C6 | 𐞗 | BAMUM LETTER PHASE-E MUAE   | 169FE                                   | 𐞰 | BAMUM LETTER PHASE-E KI<br>• koghom in Phase F  |
| 169C7 | 𐞘 | BAMUM LETTER PHASE-E GHEUAE   | 169FF                                   | ∞ | BAMUM LETTER PHASE-E MON  |
| 169C8 | 𐞙 | BAMUM LETTER PHASE-E FU I   | 16A00                                   | 𐞱 | BAMUM LETTER PHASE-E TEN  |
| 169C9 | 𐞚 | BAMUM LETTER PHASE-E MVI  | 16A01                                   | 𐞲 | BAMUM LETTER PHASE-E FAQ  |
| 169CA | 𐞛 | BAMUM LETTER PHASE-E PUAQ   | 16A02                                   | 𐞳 | BAMUM LETTER PHASE-E GHOM<br>• used after 169F9 • for koghom '10' in Phases A-D   |
| 169CB | ○ | BAMUM LETTER PHASE-E NGKUM  | <b>Characters found through Phase F</b> |   |   |
| 169CC | 𐞜 | BAMUM LETTER PHASE-E KUT  | 16A03                                   | 𐞴 | BAMUM LETTER PHASE-F KA   |
| 169CD | 𐞝 | BAMUM LETTER PHASE-E PIET   | 16A04                                   | 𐞵 | BAMUM LETTER PHASE-F U  |
| 169CE | 𐞞 | BAMUM LETTER PHASE-E NTAQ   | 16A05                                   | 𐞶 | BAMUM LETTER PHASE-F KU   |
| 169CF | 𐞟 | BAMUM LETTER PHASE-E YEUAET   | 16A06                                   | 𐞷 | BAMUM LETTER PHASE-F EE   |
| 169D0 | 𐞠 | BAMUM LETTER PHASE-E NGGUP  | 16A07                                   | 𐞸 | BAMUM LETTER PHASE-F REE  |
| 169D1 | 𐞡 | BAMUM LETTER PHASE-E PA PEOPLE  | 16A08                                   | 𐞹 | BAMUM LETTER PHASE-F TAE  |
| 169D2 | 𐞢 | BAMUM LETTER PHASE-E FU CALL  | 16A09                                   | 𐞺 | BAMUM LETTER PHASE-F NYI  |
| 169D3 | 𐞣 | BAMUM LETTER PHASE-E FOM  | 16A0A                                   | 𐞻 | BAMUM LETTER PHASE-F LA   |
| 169D4 | 𐞤 | BAMUM LETTER PHASE-E NJEE   | 16A0B                                   | 𐞼 | BAMUM LETTER PHASE-F RII  |
| 169D5 | 𐞥 | BAMUM LETTER PHASE-E A  | 16A0C                                   | 𐞽 | BAMUM LETTER PHASE-F RIEE   |
| 169D6 | 𐞦 | BAMUM LETTER PHASE-E TOQ  | 16A0D                                   | 𐞾 | BAMUM LETTER PHASE-F MEEEE  |
| 169D7 | 𐞧 | BAMUM LETTER PHASE-E O  | 16A0E                                   | 𐞿 | BAMUM LETTER PHASE-F TAA  |
| 169D8 | 𐞨 | BAMUM LETTER PHASE-E I  | 16A0F                                   | 𐟀 | BAMUM LETTER PHASE-F NDAA   |
| 169D9 | 𐞩 | BAMUM LETTER PHASE-E LAQ  | 16A10                                   | 𐟁 | BAMUM LETTER PHASE-F NJAEM  |
| 169DA | 𐞪 | BAMUM LETTER PHASE-E PA PLURAL  | 16A11                                   | 𐟂 | BAMUM LETTER PHASE-F M  |
| 169DB | 𐞫 | BAMUM LETTER PHASE-E TAA  | 16A12                                   | 𐟃 | BAMUM LETTER PHASE-F SUU  |
| 169DC | 𐞬 | BAMUM LETTER PHASE-E TAQ  | 16A13                                   | 𐟄 | BAMUM LETTER PHASE-F SHII   |
| 169DD | 𐞭 | BAMUM LETTER PHASE-E NDAA MY HOUSE  | 16A14                                   | 𐟅 | BAMUM LETTER PHASE-F SI   |
| 169DE | 𐞮 | BAMUM LETTER PHASE-E SHIQ   | 16A15                                   | 𐟆 | BAMUM LETTER PHASE-F SEUX   |
| 169DF | 𐞯 | BAMUM LETTER PHASE-E YEUX   | 16A16                                   | 𐟇 | BAMUM LETTER PHASE-F KYEE   |
| 169E0 | 𐞰 | BAMUM LETTER PHASE-E NGUAE  | 16A17                                   | 𐟈 | BAMUM LETTER PHASE-F KET  |
| 169E1 | 𐞱 | BAMUM LETTER PHASE-E YUAEN<br>• pi in Phase F                                 | 16A18                                   | 𐟉 | BAMUM LETTER PHASE-F NUAE   |
| 169E2 | 𐞲 | BAMUM LETTER PHASE-E YOQ SWIMMING   | 16A19                                   | 𐟊 | BAMUM LETTER PHASE-F NU   |
| 169E3 | 𐞳 | BAMUM LETTER PHASE-E YOQ COVER  |   |   |   |
| 169E4 | 𐞴 | BAMUM LETTER PHASE-E YUQ  |   |   |   |
| 169E5 | A | BAMUM LETTER PHASE-E YUN  |   |   |   |

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| 16A1A | 𐞀 | BAMUM LETTER PHASE-F NJUAE   |
| 16A1B | 𐞁 | BAMUM LETTER PHASE-F YOQ     |
| 16A1C | 𐞂 | BAMUM LETTER PHASE-F SHU     |
| 16A1D | 𐞃 | BAMUM LETTER PHASE-F YA      |
| 16A1E | 𐞄 | BAMUM LETTER PHASE-F NSHA    |
| 16A1F | 𐞅 | BAMUM LETTER PHASE-F PEUX    |
| 16A20 | 𐞆 | BAMUM LETTER PHASE-F NTEE    |
| 16A21 | 𐞇 | BAMUM LETTER PHASE-F WUE     |
| 16A22 | 𐞈 | BAMUM LETTER PHASE-F PEE     |
| 16A23 | 𐞉 | BAMUM LETTER PHASE-F RU      |
| 16A24 | 𐞊 | BAMUM LETTER PHASE-F NI      |
| 16A25 | 𐞋 | BAMUM LETTER PHASE-F REUX    |
| 16A26 | 𐞌 | BAMUM LETTER PHASE-F KEN     |
| 16A27 | 𐞍 | BAMUM LETTER PHASE-F NGKWAEN |
| 16A28 | 𐞎 | BAMUM LETTER PHASE-F NGGA    |
| 16A29 | 𐞏 | BAMUM LETTER PHASE-F SHO     |
| 16A2A | 𐞐 | BAMUM LETTER PHASE-F PUAE    |
| 16A2B | 𐞑 | BAMUM LETTER PHASE-F FOM     |
| 16A2C | 𐞒 | BAMUM LETTER PHASE-F WA      |
| 16A2D | 𐞓 | BAMUM LETTER PHASE-F LI      |
| 16A2E | 𐞔 | BAMUM LETTER PHASE-F LOQ     |
| 16A2F | 𐞕 | BAMUM LETTER PHASE-F KO      |
| 16A30 | 𐞖 | BAMUM LETTER PHASE-F MBEN    |
| 16A31 | 𐞗 | BAMUM LETTER PHASE-F REN     |
| 16A32 | 𐞘 | BAMUM LETTER PHASE-F MA      |
| 16A33 | 𐞙 | BAMUM LETTER PHASE-F MO      |
| 16A34 | 𐞚 | BAMUM LETTER PHASE-F MBAA    |
| 16A35 | 𐞛 | BAMUM LETTER PHASE-F TET     |
| 16A36 | 𐞜 | BAMUM LETTER PHASE-F KPA     |
| 16A37 | 𐞝 | BAMUM LETTER PHASE-F SAMBA   |
| 16A38 | 𐞞 | BAMUM LETTER PHASE-F VUEQ    |

• used after 169F9 • for kovue '9' in Phases A-D