Table 1. Additional AAST*E*X symbols

$\lesssim$	\lesssim, \la	$\gtrsim$	\gtrsim, \ga
μm	\micron	—	\sbond
=	\dbond	≡	\tbond
⊙	\sun	⊕	\earth
⌀	\diameter		
°	\arcdeg, \degr	□	\sq
′	\arcmin	″	\arcsec
$\overset{d}{.}$	\fd	$\overset{h}{.}$	\fh
$\overset{m}{.}$	\fm	$\overset{s}{.}$	\fs
$\overset{\circ}{.}$	\fdg	$\overset{\prime}{.}$	\farcm
$\overset{\prime\prime}{.}$	\farcs	$\overset{p}{.}$	\fp
$\frac{1}{2}$	\onehalf	$UBVR$	\ubvr
$\frac{1}{3}$	\onethird	$U-B$	\ub
$\frac{2}{3}$	\twothirds	$B-V$	\bv
$\frac{1}{4}$	\onequarter	$V-R$	\vr
$\frac{3}{4}$	\threequarters	$U-R$	\ur

Table 2. Text-mode accents

ò	\'{o}	ō	\={o}	o͡o	\t{oo}
ó	\'{o}	ȯ	\.{o}	ǫ	\c{o}
ô	\^{o}	ŏ	\u{o}	ọ	\d{o}
ö	\"{o}	ǒ	\v{o}	o̲	\b{o}
õ	\~{o}	ő	\H{o}		

Table 3. National symbols

œ	\oe	å	\aa	ł	\l
Œ	\OE	Å	\AA	Ł	\L
æ	\ae	ø	\o	ß	\ss
Æ	\AE	Ø	\O		

Table 4. Math-mode accents

$\hat{a}$	\hat{a}	$\dot{a}$	\dot{a}
$\check{a}$	\check{a}	$\ddot{a}$	\ddot{a}
$\tilde{a}$	\tilde{a}	$\breve{a}$	\breve{a}
$\acute{a}$	\acute{a}	$\bar{a}$	\bar{a}
$\grave{a}$	\grave{a}	$\vec{a}$	\vec{a}

Table 5. Greek and Hebrew letters (math mode)

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

Table 6. Binary operators (math mode)

$\pm$	\pm	$\cap$	\cap
$\mp$	\mp	$\cup$	\cup
$\setminus$	\setminus	$\uplus$	\uplus
$\cdot$	\cdot	$\sqcap$	\sqcap
$\times$	\times	$\sqcup$	\sqcup
$\ast$	\ast	$\triangleleft$	\triangleleft
$\star$	\star	$\triangleright$	\triangleright
$\diamond$	\diamond	$\wr$	\wr
$\circ$	\circ	$\bigcirc$	\bigcirc
$\bullet$	\bullet	$\bigtriangleup$	\bigtriangleup
$\div$	\div	$\bigtriangledown$	\bigtriangledown
$\lhd$	\lhd	$\rhd$	\rhd
$\vee$	\vee	$\odot$	\odot
$\wedge$	\wedge	$\dagger$	\dagger
$\oplus$	\oplus	$\ddagger$	\ddagger
$\ominus$	\ominus	$\amalg$	\amalg
$\otimes$	\otimes	$\unlhd$	\unlhd
$\oslash$	\oslash	$\unrhd$	\unrhd

Table 7. AMS binary operators (math mode)

∔	\dotplus	⋉	\ltimes
╲	\smallsetminus	⋊	\rtimes
⋒	\Cap, \doublecap	⋋	\leftthreetimes
⋓	\Cup, \doublecup	⋌	\rightthreetimes
⊼	\barwedge	⋏	\curlywedge
⊻	\veebar	⋎	\curlyvee
⊼̿	\doublebarwedge		
⊟	\boxminus	⊖	\circleddash
⊠	\boxtimes	⊛	\circledast
⊡	\boxdot	⊚	\circledcirc
⊞	\boxplus	·	\centerdot
⁎	\divideontimes	⊤	\intercal

Table 8. Miscellaneous symbols

†	\dag	§	\S
©	\copyright	‡	\ddag
¶	\P	£	\pounds
#	\#	$	\$
%	\%	&	\&
_	_	{	\{
}	\}		

Table 9. Miscellaneous symbols (math mode)

ℵ	\aleph	′	\prime
ℏ	\hbar	∅	\emptyset
ı	\imath	∇	\nabla
ȷ	\jmath	√	\surd
ℓ	\ell	⊤	\top
℘	\wp	⊥	\bot
ℜ	\Re	‖	|
ℑ	\Im	∠	\angle
∂	\partial	△	\triangle
∞	\infty	\	\backslash
□	\Box	◇	\Diamond
∀	\forall	♯	\sharp
∃	\exists	♣	\clubsuit
¬	\neg	♢	\diamondsuit
♭	\flat	♡	\heartsuit
♮	\natural	♠	\spadesuit
℧	\mho		

Table 10. AMS miscellaneous symbols (math mode)

$\hbar$	\hbar	$\backprime$	\backprime
$\hbar$	\hslash	$\varnothing$	\varnothing
$\vartriangle$	\vartriangle	$\blacktriangle$	\blacktriangle
$\triangledown$	\triangledown	$\blacktriangledown$	\blacktriangledown
$\square$	\square	$\blacksquare$	\blacksquare
$\lozenge$	\lozenge	$\blacklozenge$	\blacklozenge
$\circledS$	\circledS	$\bigstar$	\bigstar
$\angle$	\angle	$\sphericalangle$	\sphericalangle
$\measuredangle$	\measuredangle		
$\nexists$	\nexists	$\complement$	\complement
$\mho$	\mho	$\eth$	\eth
$\Finv$	\Finv	$\diagup$	\diagup
$\Game$	\Game	$\diagdown$	\diagdown
$\Bbbk$	\Bbbk	$\restriction$	\restriction

Table 11. Arrows (math mode)

$\leftarrow$	\leftarrow	$\longleftarrow$	\longleftarrow
$\Leftarrow$	\Leftarrow	$\Longleftarrow$	\Longleftarrow
$\rightarrow$	\rightarrow	$\longrightarrow$	\longrightarrow
$\Rightarrow$	\Rightarrow	$\Longrightarrow$	\Longrightarrow
$\leftrightarrow$	\leftrightarrow	$\longleftrightarrow$	\longleftrightarrow
$\Leftrightarrow$	\Leftrightarrow	$\Longleftrightarrow$	\Longleftrightarrow
$\mapsto$	\mapsto	$\longmapsto$	\longmapsto
$\hookleftarrow$	\hookleftarrow	$\hookrightarrow$	\hookrightarrow
$\leftharpoonup$	\leftharpoonup	$\rightharpoonup$	\rightharpoonup
$\leftharpoondown$	\leftharpoondown	$\rightharpoondown$	\rightharpoondown
$\rightleftharpoons$	\rightleftharpoons	$\leadsto$	\leadsto
$\uparrow$	\uparrow	$\Updownarrow$	\Updownarrow
$\Uparrow$	\Uparrow	$\nearrow$	\nearrow
$\downarrow$	\downarrow	$\searrow$	\searrow
$\Downarrow$	\Downarrow	$\swarrow$	\swarrow
$\updownarrow$	\updownarrow	$\nwarrow$	\nwarrow

Table 12. AMS arrows (math mode)

←--	\dashleftarrow	--→	\dashrightarrow
⇇	\leftleftarrows	⇉	\rightrightarrows
⇆	\leftrightarrows	⇄	\rightleftarrows
⇚	\Lleftarrow	⇛	\Rrightarrow
↞	\twoheadleftarrow	↠	\twoheadrightarrow
↢	\leftarrowtail	↣	\rightarrowtail
↫	\looparrowleft	↬	\looparrowright
⇋	\leftrightharpoons	⇌	\rightleftharpoons
↶	\curvearrowleft	↷	\curvearrowright
↺	\circlearrowleft	↻	\circlearrowright
↰	\Lsh	↱	\Rsh
⇈	\upuparrows	⇊	\downdownarrows
↿	\upharpoonleft	↾	\upharpoonright
⇃	\downharpoonleft	⇂	\downharpoonright
⊸	\multimap	⇝	\rightsquigarrow
⇜⇝	\leftrightsquigarrow		
↚	\nleftarrow	↛	\nrightarrow
⇍	\nLeftarrow	⇏	\nRightarrow
↮	\nleftrightarrow	⇎	\nLeftrightarrow

Table 13. Relations (math mode)

≤	\leq	≥	\geq
≺	\prec	≻	\succ
≼	\preceq	≽	\succeq
≪	\ll	≫	\gg
⊂	\subset	⊃	\supset
⊆	\subseteq	⊇	\supseteq
⊏	\sqsubset	⊐	\sqsupset
⊑	\sqsubseteq	⊒	\sqsupseteq
∈	\in	∋	\ni
⊢	\vdash	⊣	\dashv
⌣	\smile			\mid
⌢	\frown	∥	\parallel
≠	\neq	⊥	\perp
≡	\equiv	≅	\cong
∼	\sim	⋈	\bowtie
≃	\simeq	∝	\propto
≍	\asymp	⊨	\models
≈	\approx	≐	\doteq
		⋈	\Join

Table 14. AMS binary relations (math mode)

≦	\leqq	≧	\geqq
⩽	\leqslant	⩾	\geqslant
⪕	\eqslantless	⪖	\eqslantgtr
≲	\lesssim	≳	\gtrsim
⪅	\lessapprox	⪆	\gtrapprox
≊	\approxeq	≂	\eqsim
⋖	\lessdot	⋗	\gtrdot
⋘	\lll, \llless	⋙	\ggg, \gggtr
≶	\lessgtr	≷	\gtrless
⋚	\lesseqgtr	⋛	\gtreqless
⪋	\lesseqqgtr	⪌	\gtreqqless
≑	\doteqdot, \Doteq	≖	\eqcirc
≓	\risingdotseq	≗	\circeq
≒	\fallingdotseq	≜	\triangleq
∽	\backsim	∼	\thicksim
⋍	\backsimeq	≈	\thickapprox
⊆	\subseteqq	⊇	\supseteqq
⋐	\Subset	⋑	\Supset
⊏	\sqsubset	⊐	\sqsupset
≼	\preccurlyeq	≽	\succcurlyeq
⋞	\curlyeqprec	⋟	\curlyeqsucc
≾	\precsim	≿	\succsim
⪷	\precapprox	⪸	\succapprox
◁	\vartriangleleft	▷	\vartriangleright
⊴	\trianglelefteq	⊵	\trianglerighteq
⊨	\vDash	⊩	\Vdash
⊪	\Vvdash		
⌣	\smallsmile	∣	\shortmid
⌢	\smallfrown	∥	\shortparallel
≏	\bumpeq	≬	\between
≎	\Bumpeq	⋔	\pitchfork
∝	\varpropto	϶	\backepsilon
◀	\blacktriangleleft	▶	\blacktriangleright
∴	\therefore	∵	\because

Table 15. AMS negated relations (math mode)

≮	\nless		≯	\ngtr
≰	\nleq		≱	\ngeq
≰	\nleqslant		≱	\ngeqslant
≦̸	\nleqq		≧̸	\ngeqq
⪇	\lneq		⪈	\gneq
≨	\lneqq		≩	\gneqq
≨	\lvertneqq		≩	\gvertneqq
⋦	\lnsim		⋧	\gnsim
⪉	\lnapprox		⪊	\gnapprox
⊀	\nprec		⊁	\nsucc
⪯̸	\npreceq		⪰̸	\nsucceq
⪵	\precneqq		⪶	\succneqq
⋨	\precnsim		⋩	\succnsim
⪹	\precnapprox		⪺	\succnapprox
≁	\nsim		≇	\ncong
∤	\nshortmid		∦	\nshortparallel
∤	\nmid		∦	\nparallel
⊬	\nvdash		⊭	\nvDash
⊮	\nVdash		⊯	\nVDash
⋪	\ntriangleleft		⋫	\ntriangleright
⋬	\ntrianglelefteq		⋭	\ntrianglerighteq
⊄	\nsubseteq		⊅	\nsupseteq
⊈	\nsubseteqq		⊉	\nsupseteqq
⊊	\subsetneq		⊋	\supsetneq
⊊	\varsubsetneq		⊋	\varsupsetneq
⊊	\subsetneqq		⊋	\supsetneqq
⊊	\varsubsetneqq		⊋	\varsupsetneqq

Table 16. Variable-sized symbols (math mode)

Σ	∑	\sum	∩	⋂	\bigcap
Π	∏	\prod	∪	⋃	\bigcup
∐	∐	\coprod	⊔	⨆	\bigsqcup
∫	∫	\int	∨	⋁	\bigvee
∮	∮	\oint	∧	⋀	\bigwedge
⊙	⨀	\bigodot	⊗	⨂	\bigotimes
⊕	⨁	\bigoplus	⊎	⨄	\biguplus

Table 17. Delimiters (math mode)

(	(	)	)
[	[	]	]
{	\{	}	\}
⌊	\lfloor	⌋	\rfloor
⌈	\lceil	⌉	\rceil
⟨	\langle	⟩	\rangle
/	/	\	\backslash
|	\vert	‖	\Vert
↑	\uparrow	⇑	\Uparrow
↓	\downarrow	⇓	\Downarrow
↕	\updownarrow	⇕	\Updownarrow
⌜	\ulcorner	⌝	\urcorner
⌞	\llcorner	⌟	\lrcorner

Table 18. Function names (math mode)

\arccos	\csc	\ker	\min
\arcsin	\deg	\lg	\Pr
\arctan	\det	\lim	\sec
\arg	\dim	\liminf	\sin
\cos	\exp	\limsup	\sinh
\cosh	\gcd	\ln	\sup
\cot	\hom	\log	\tan
\coth	\inf	\max	\tanh