The problem with the MOON SYMBOLs

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Unicode has a number of MOON emojis. They symbolically represent "significant" phases of the Moon (as seen from Earth). Note: the "Moon with face" emojis are excluded here, as they clearly are fantasy symbols, not intended to actually represent Moon phases. U+1F319 is borderline (fantasy or not), but ambiguous as to phase, so also excluded.

Hemisphere bias

Now, there is a problem. The Moon phases look different from the vantage of the northern hemisphere and the southern hemisphere. But looking at the representative glyphs for these characters, it's apparent that they are for the view from the northern hemisphere. How to represent the view from the southern hemisphere?

Northern hemisphere	Southern hemisphere	"U+" northern?	Unicode name
●	●	1F311	NEW MOON SYMBOL
◐	◑	1F312	WAXING CRESCENT MOON SYMBOL • First quarter Moon.
◑	◐	1F313	FIRST QUARTER MOON SYMBOL • Waxing half Moon.
◔	◕	1F314	WAXING GIBBOUS MOON SYMBOL • Second quarter Moon.
○	○	1F315	FULL MOON SYMBOL
◕	◔	1F316	WANING GIBBOUS MOON SYMBOL • Third quarter Moon.
◑	◐	1F317	LAST QUARTER MOON SYMBOL • Waning half Moon.
◐	◑	1F318	WANING CRESCENT MOON SYMBOL • Fourth quarter Moon.

Dealing with the southern hemisphere view

One way is to simply "reverse" the "meaning" of the Moon phase symbols.

Southern hemisphere	"U+"	Unicode name
●	1F311	NEW MOON SYMBOL
◑	1F318	WANING CRESCENT MOON SYMBOL • Southern hemisphere: First quarter Moon.
◐	1F317	LAST QUARTER MOON SYMBOL • Southern hemisphere: Waxing half Moon.
◔	1F316	WANING GIBBOUS MOON SYMBOL • Southern hemisphere: Second quarter Moon.

◯	1F315	FULL MOON SYMBOL	
◖	1F314	WAXING GIBBOUS MOON SYMBOL • Southern hemisphere: Third quarter Moon.	
◑	1F313	FIRST QUARTER MOON SYMBOL • Southern hemisphere: Waning half Moon.	
◗	1F312	WAXING CRESCENT MOON SYMBOL • Southern hemisphere: Fourth quarter Moon.	

While this can work when the glyphic representation is simplistic (or fantasy), **it does not work well with emoji glyphs that try to semi-accurately include the lighter/darker Moon landscape as seen from Earth** (according to http://unicode.org/emoji/charts/full-emoji-list.html the Apple and Facebook Messenger glyphs attempt that; others show a fantasy landscape). Nit: since the "new Moon" is visible (not..., except for solar eclipses) only during daytime (viewed from "down to Earth"), showing a night sky with stars for the new Moon symbol, as the Samsung emoji does, is just wrong.

So, in order to allow for having a semi-accurate Moon landscape depiction in the glyphs for both northern and southern hemisphere view of the Moon phases, a different approach is needed. Adding more Moon phase characters is a possibility, but seems unneccessary. Another, better, alternative is to use variation selector(s). The default would likely be the northern hemisphere view, but that need not be the case.

Northern hemisphere	Southern hemisphere	"U+" northern	"U+" southern	Unicode name
●	●	<1F311, FE00>	<1F311, FE01>	NEW MOON SYMBOL • With FE00: northern hemisphere view. • With FE01: southern hemisphere view. • Moon view not different, as it is usually invisible (from Earth the actual new Moon is daytime "visible" only). But a glyph for this symbol may show a "shadow landscape".
◐	◑	<1F312, FE00>	<1F312, FE01>	WAXING CRESCENT MOON SYMBOL • First quarter Moon. • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.
◐	◑	<1F313, FE00>	<1F313, FE01>	FIRST QUARTER MOON SYMBOL • Waxing half Moon. • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.

🌔	🌔	<1F314, FE00>	<1F314, FE01>	WAXING GIBBOUS MOON SYMBOL • Second quarter Moon. • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.
🌕	🌕	<1F315, FE00>	<1F315, FE01>	FULL MOON SYMBOL • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.
🌖	🌖	<1F316, FE00>	<1F316, FE01>	WANING GIBBOUS MOON SYMBOL • Third quarter Moon. • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.
🌗	🌗	<1F317, FE00>	<1F317, FE01>	LAST QUARTER MOON SYMBOL • Waning half Moon. • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.
🌘	🌘	<1F318, FE00>	<1F318, FE01>	WANING CRESCENT MOON SYMBOL • Fourth quarter Moon. • With FE00: northern hemisphere view. • With FE01: southern hemisphere view.

Equatorial zone view

What about the view of the Moon phases from a (fuzzy) broad band around the equator (i.e. Earth's equator)?

Well, firstly there is a bit of a snag: the Moon view is U-shaped vs. inverted U-shaped for the same phase during different times of day/night (as long as the Moon is at all visible).

But... There is a twist, getting rid of both the little snag as well as the need to represent a special equatorial view of the Moon phases. Lay down feet to the south and head to the north, for a northern hemisphere view of the Moon, and lay down feet to the north and head to the south to get a southern hemisphere view of the Moon... That little trick deserves a happy Moon face I think! 🌝

It would be a bit too much, however, to require viewers in the southern hemisphere to stand on the heads when looking at the Moon...

Thus, I propose **not** to have any variation sequences for equatorial view of the Moon phases, but still have variation sequences for northern vs. southern hemisphere views.

Leaning (lit part of the) Moon

But when looking at the Moon, the lit part usually "leans" a bit compared to the horizon. And an extreme example of that is the equatorial view. And yes, the (lit part of) the Moon will, of course, "point" towards the Sun. At night time, and the Moon above the horizon, that means the lit part will "point" more or less downwards (as the Sun will be apparently below the horizon). That may be taken into account (to some extent) when drawing the emoji glyphs, if so desired. But this is still "just" emoji, so having encoded variants for different levels of (apparent) "lean" (compared to the horizon) seems pointless. Especially since this "lean" vill vary during the day/night for the same phase and latitude, not only for different latitudes.

Moon phase naming

The Unicode names for the Moon phase symbols use the Anglican approach to the naming. It is slighly illogical, and a more logical naming scheme is sometimes used.

See these Wikipedia pages (which appear to be written without glancing too much at the English Wikipedia page...):

https://de.wikipedia.org/wiki/Mondphase#.C3.9Cberblick
https://lb.wikipedia.org/wiki/Moundphas
https://sv.wikipedia.org/wiki/M%C3%A5nfas#M.C3.A5nens_kvarter
https://is.wikipedia.org/wiki/Kvartil

In the suggested "character comments" above, I've used the more logical scheme, even though they are in English. This in order to lessen the confusion and errors the Anglican naming can cause for translators.

Emoji vs. text

At present, of these MOON phase symbols, only (and that is a bit odd) the full Moon symbol has text/emoji variation sequences:

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1F315 FE0E ; text style;  # (6.0) FULL MOON SYMBOL
1F315 FE0F ; emoji style; # (6.0) FULL MOON SYMBOL
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But this may be extended to all of the MOON phase symbols. The variants for northern/southern hemisphere view suggested above can be used in combination with the text/emoji variation selectors. I would suggest that the hemisphere selector is given first, then the text/emoji variant selector.