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Sungwook Lee* (sunglee@math.uconn.edu), Department of Mathematics, The University of Connecticut, 196 Auditorium Rd, U-3009, Storrs, CT 06268. *Space-like surfaces of constant mean curvature one in the 3 dimensional de Sitter space \mathbb{S}_1^3* . Preliminary report.

We construct an analogue of Weierstraß representation formula for space-like surfaces of constant mean curvature one (*abbr.* CMC-1) in the 3 dimensional de Sitter space \mathbb{S}_1^3 . We use the Weierstraß formula to investigate a duality on space-like CMC-1 surfaces in \mathbb{S}_1^3 and a correspondence between space-like CMC-1 surfaces in \mathbb{S}_1^3 and space-like maximal surfaces in the 3-dimensional Minkowski space \mathbb{L}^3 . We also compute some examples. (Received September 26, 2000)