

Erratum to ‘Taishi Kurahashi and Motoki Okuda,
Disjunction and existence properties in modal arithmetic, The
Review of Symbolic Logic, 17(1), 178–205, 2024’

October 18, 2024

1. In Definition 5.35, for each $\Delta(\mathbf{B})$ formula $\varphi(\vec{x})$, the $\Delta(\mathbf{B})$ formula $\varphi^*(\vec{x}, \vec{v})$ with appropriate additional free variables $\vec{v}$ is defined so that Lemmas 5.36 and 5.37 hold. However, the definition of $\varphi^*(\vec{x}, \vec{v})$ in the published version is problematic, especially in the case of $\varphi(\vec{x}) \equiv \forall y < t \psi(\vec{x}, y)$, and Lemma 5.36 cannot be established as is. The definition of $\varphi^*(\vec{x}, v_0, \dots, v_{k-1})$ in this case should be changed as follows:

$$\bigwedge_{i < k} (\text{Seq}(v_i) \wedge |v_i| = t) \wedge \forall y < t \psi^*(\vec{x}, y, (v_0)_y, \dots, (v_{k-1})_y).$$

This error was pointed out by Akihiro Ueshima.

2. In Problem 7.67.(1), $\Delta(\mathbf{B})$ -DP and B-DP should be interchanged.