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# NMR Spektroskopie

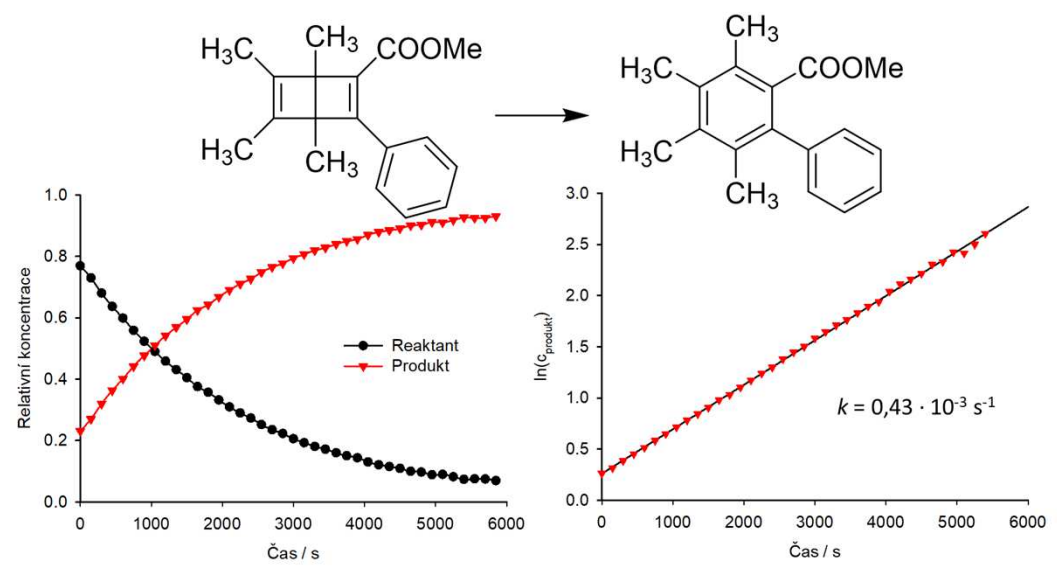
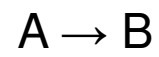
## Lekce 9: Dynamické procesy



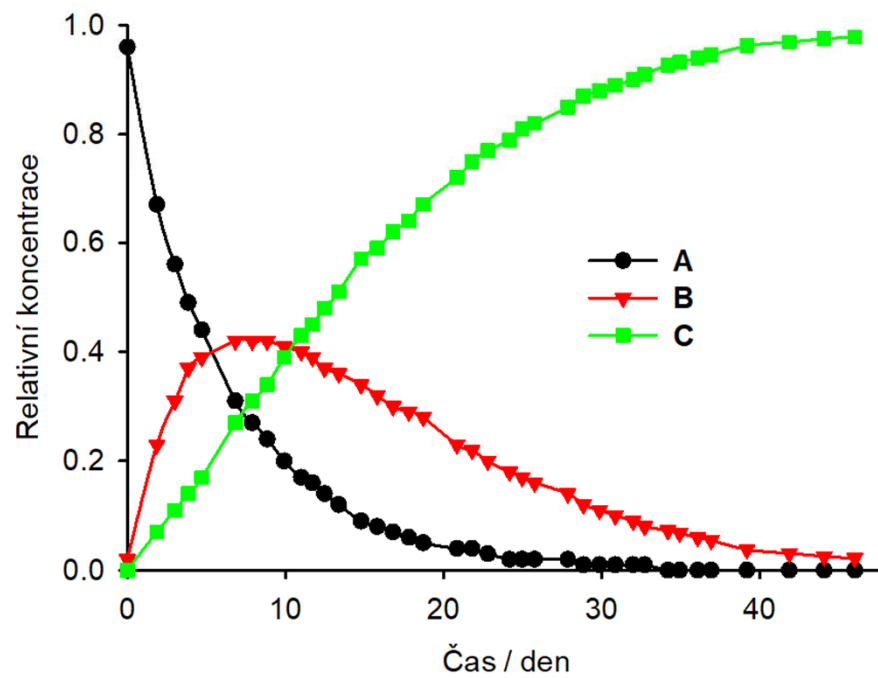
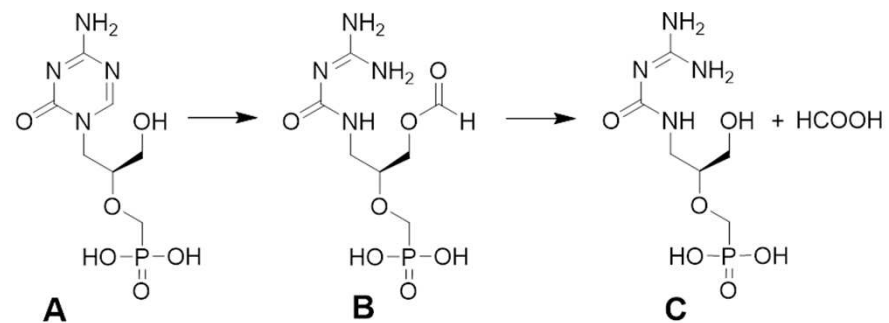
**Martin Dračínský**

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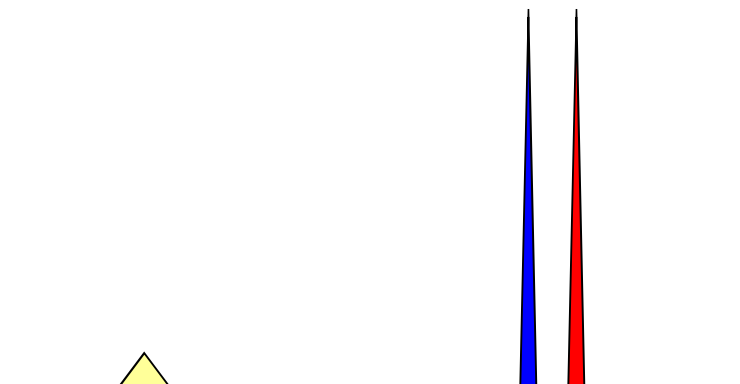
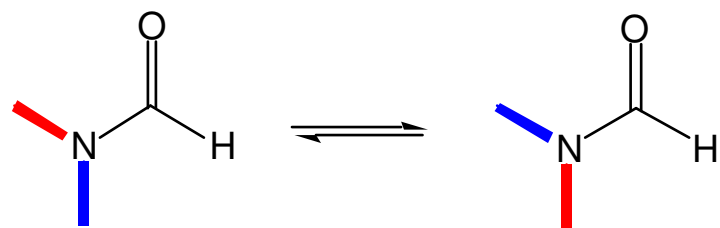
# Chemické reakce

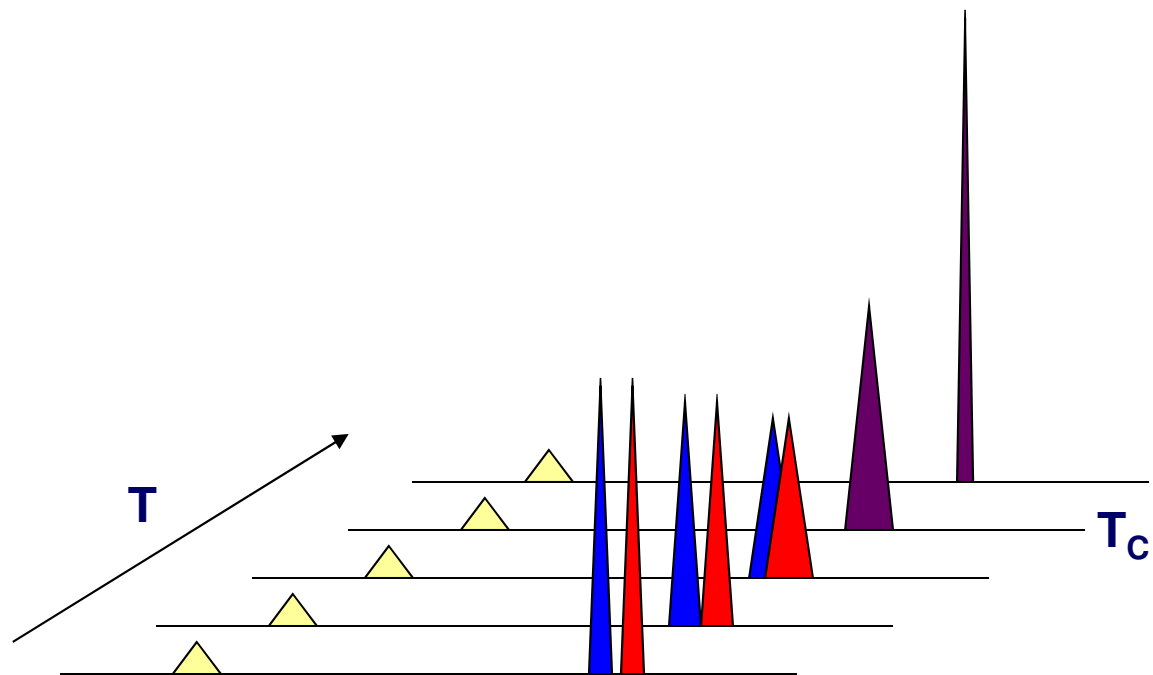


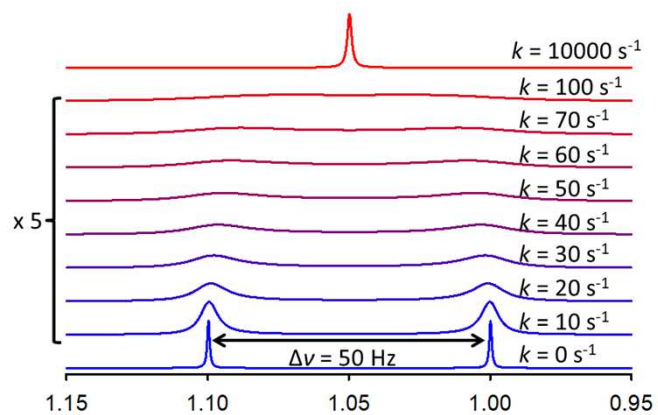
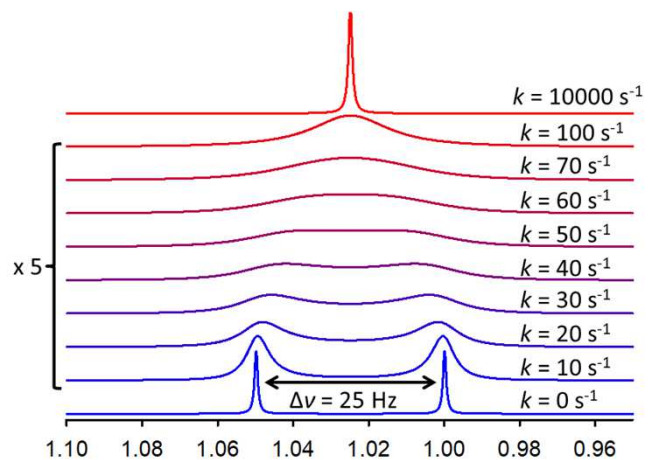
# Chemické reakce



# Chemická výměna







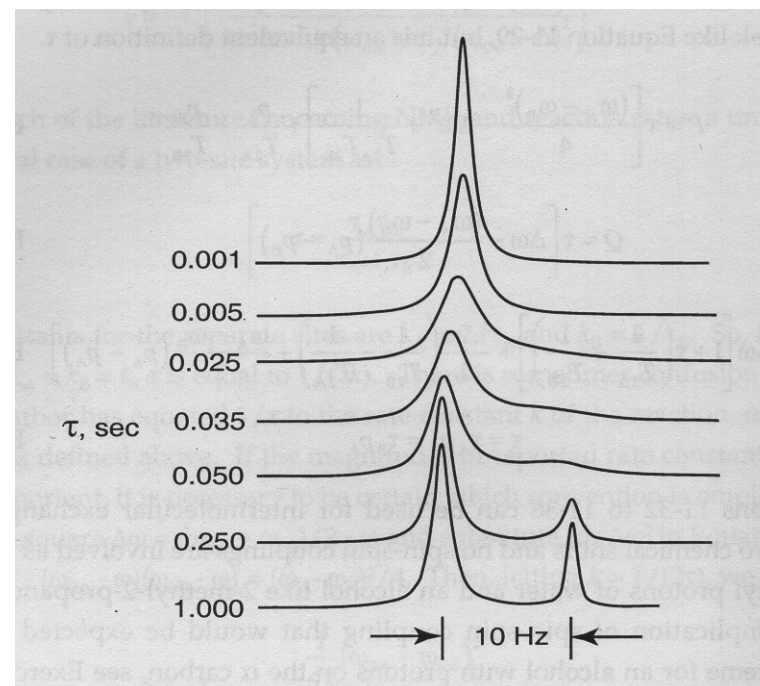
Chemická výměna – pomalá

- střední

- rychlá

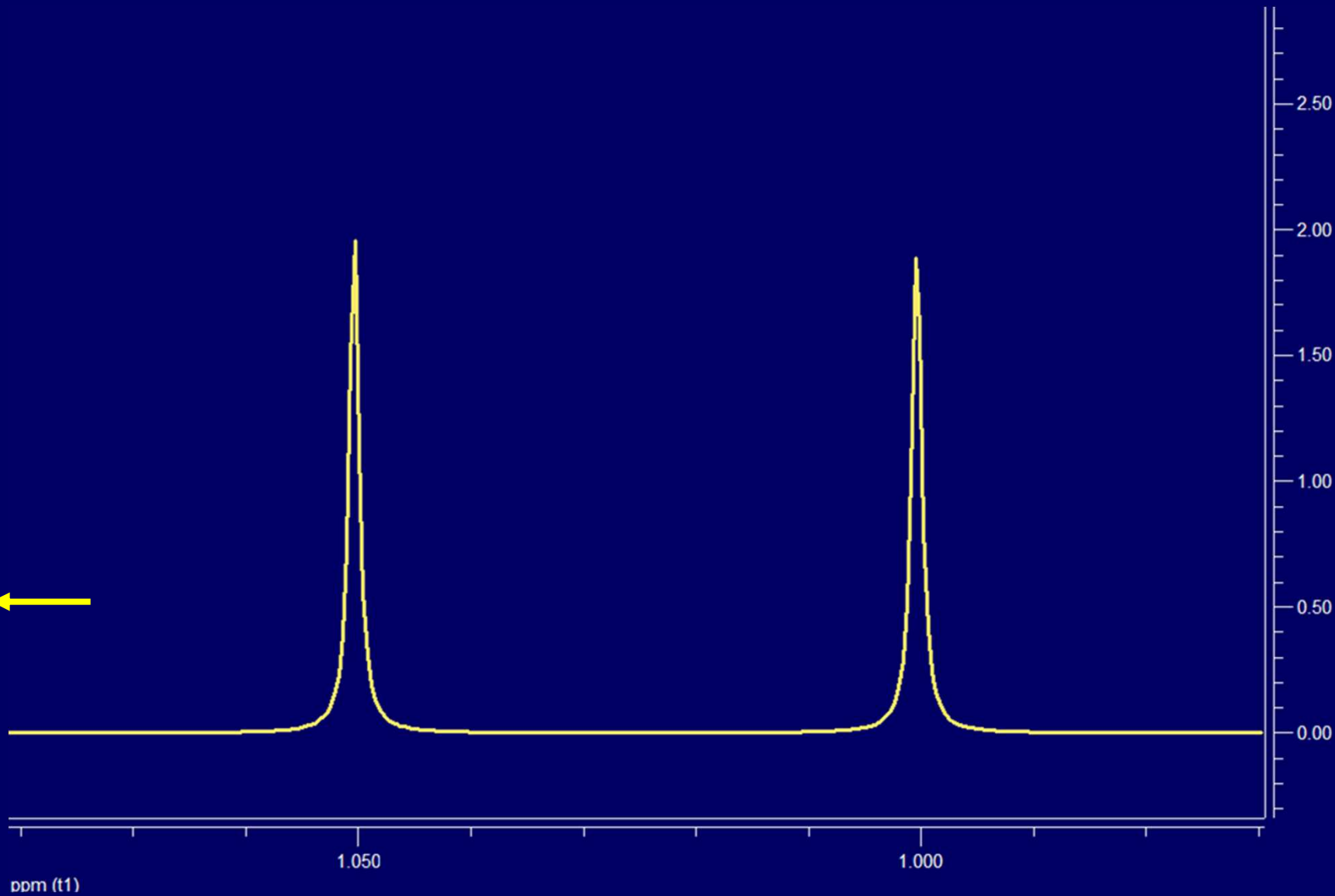
Koalescence:

$$k_c = \pi * \Delta\nu / \sqrt{2} = 2.22 * \Delta\nu$$



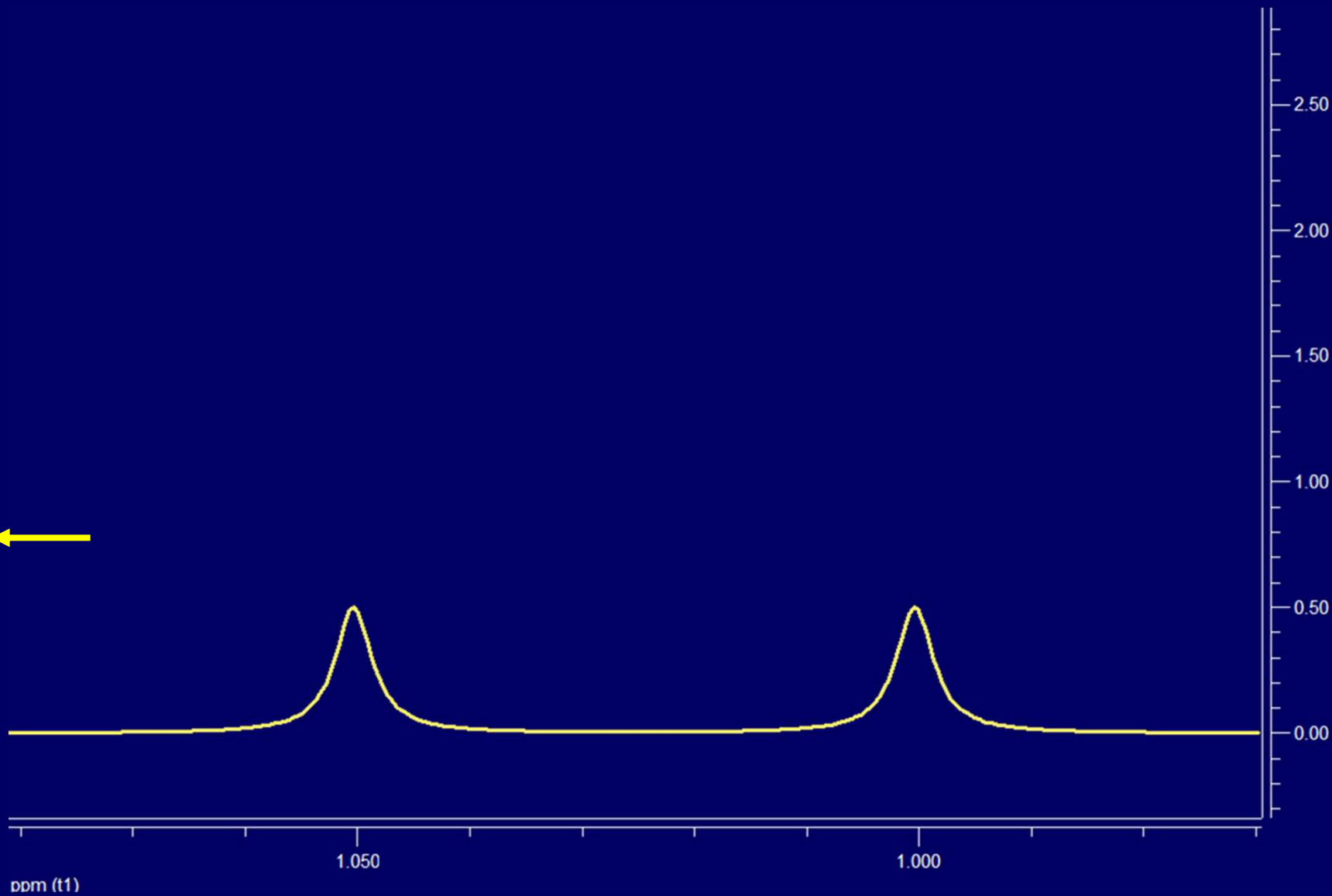
# Tvar signálů

T



# Tvar signálů

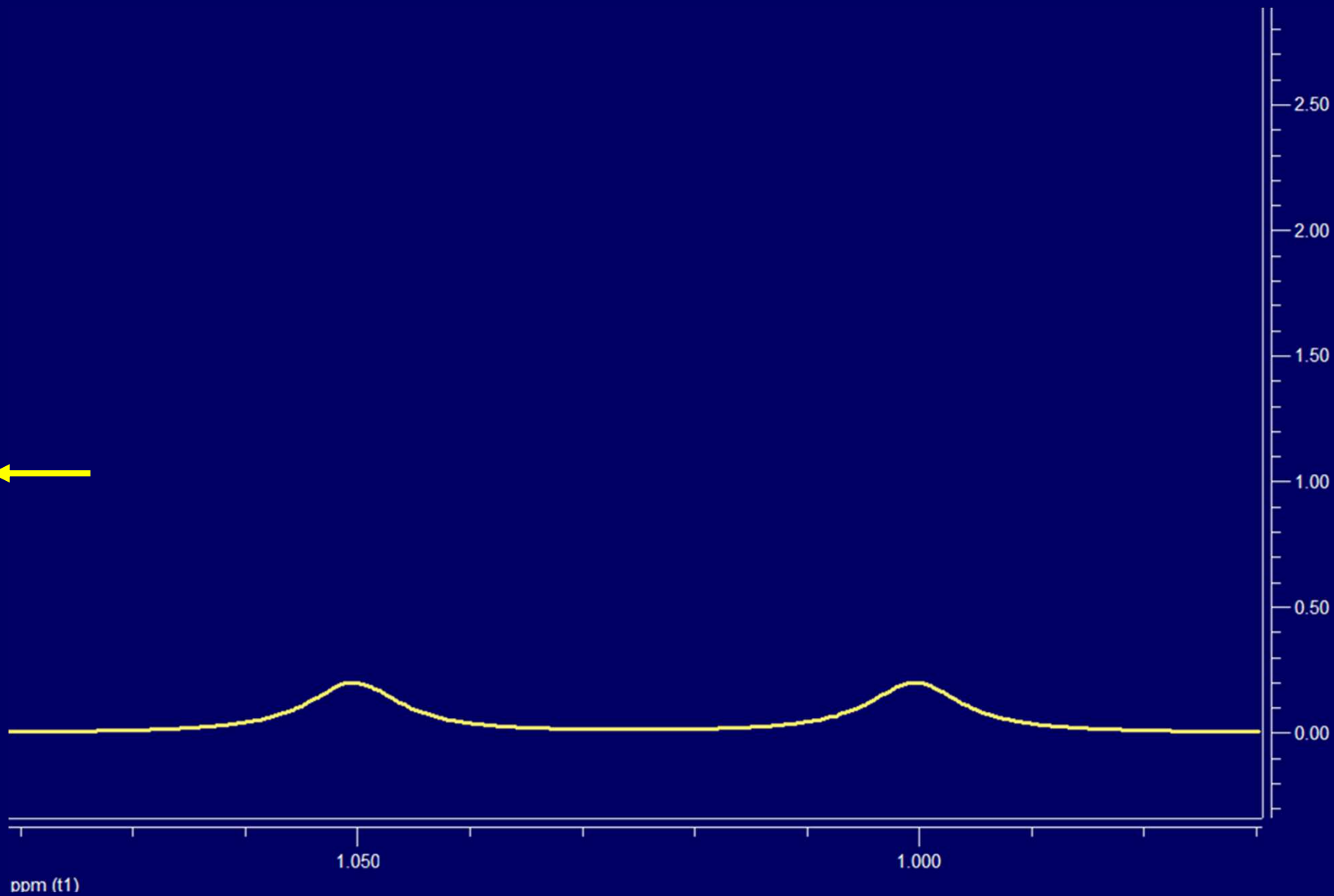
T





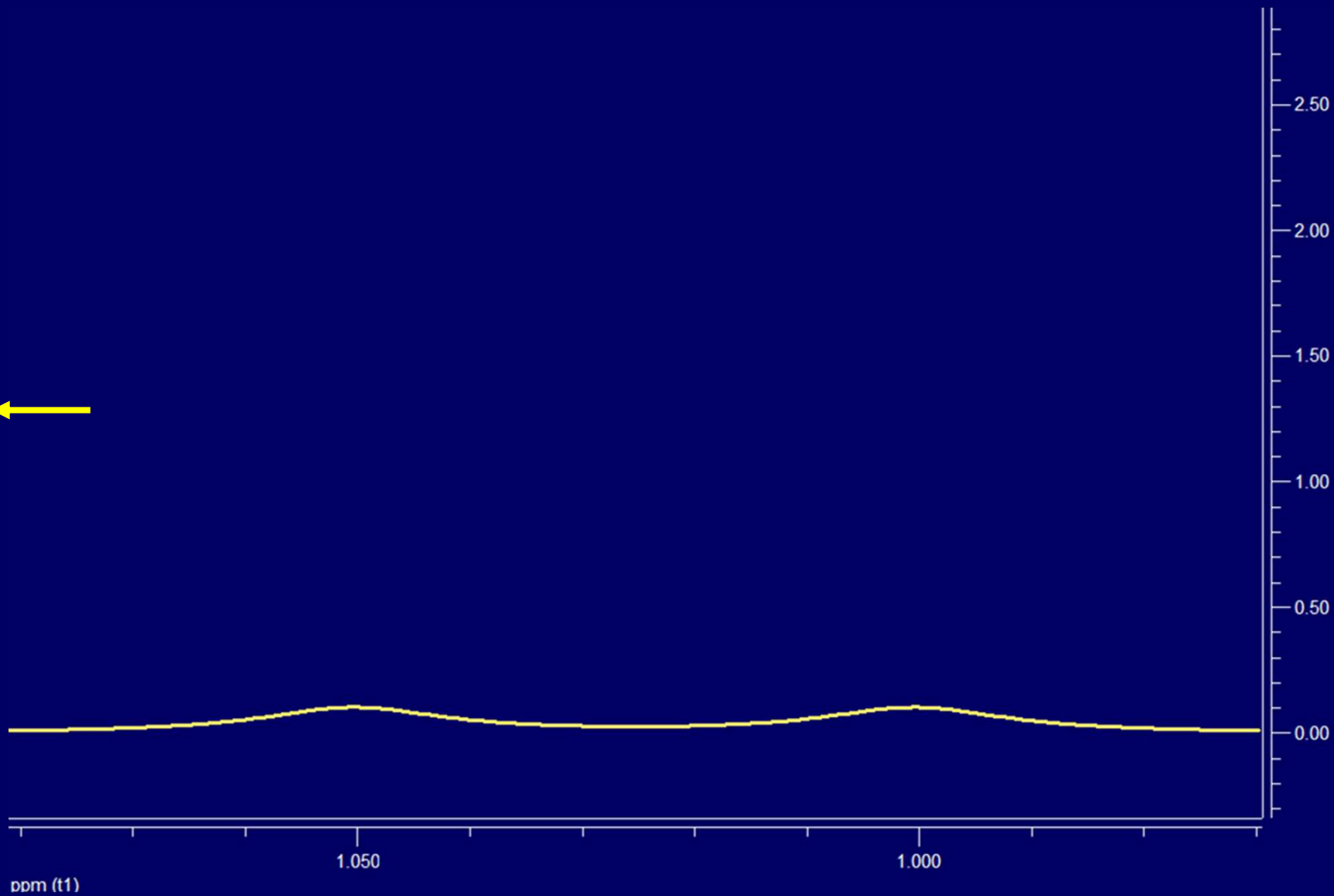
# Tvar signálu

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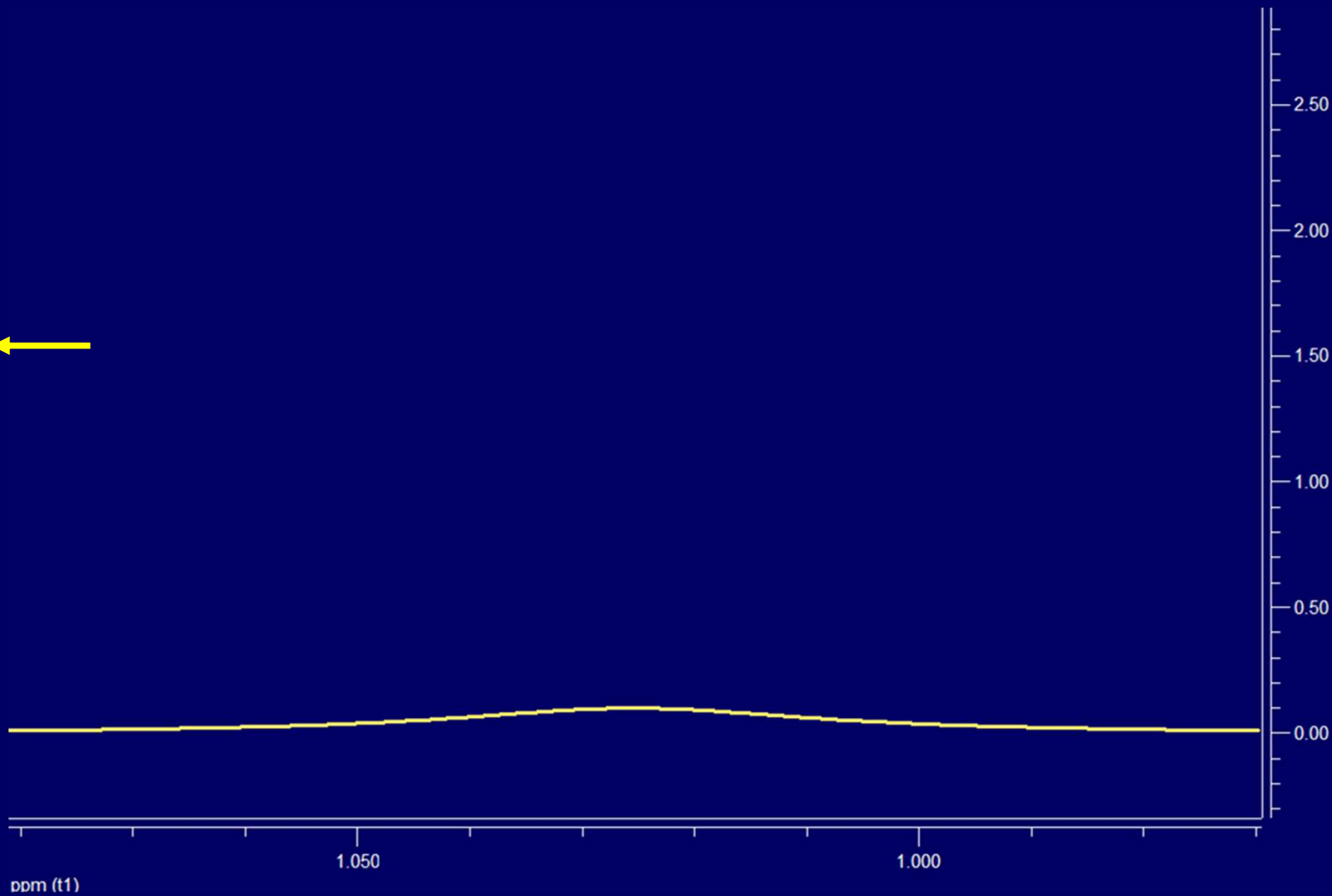
# Tvar signálu

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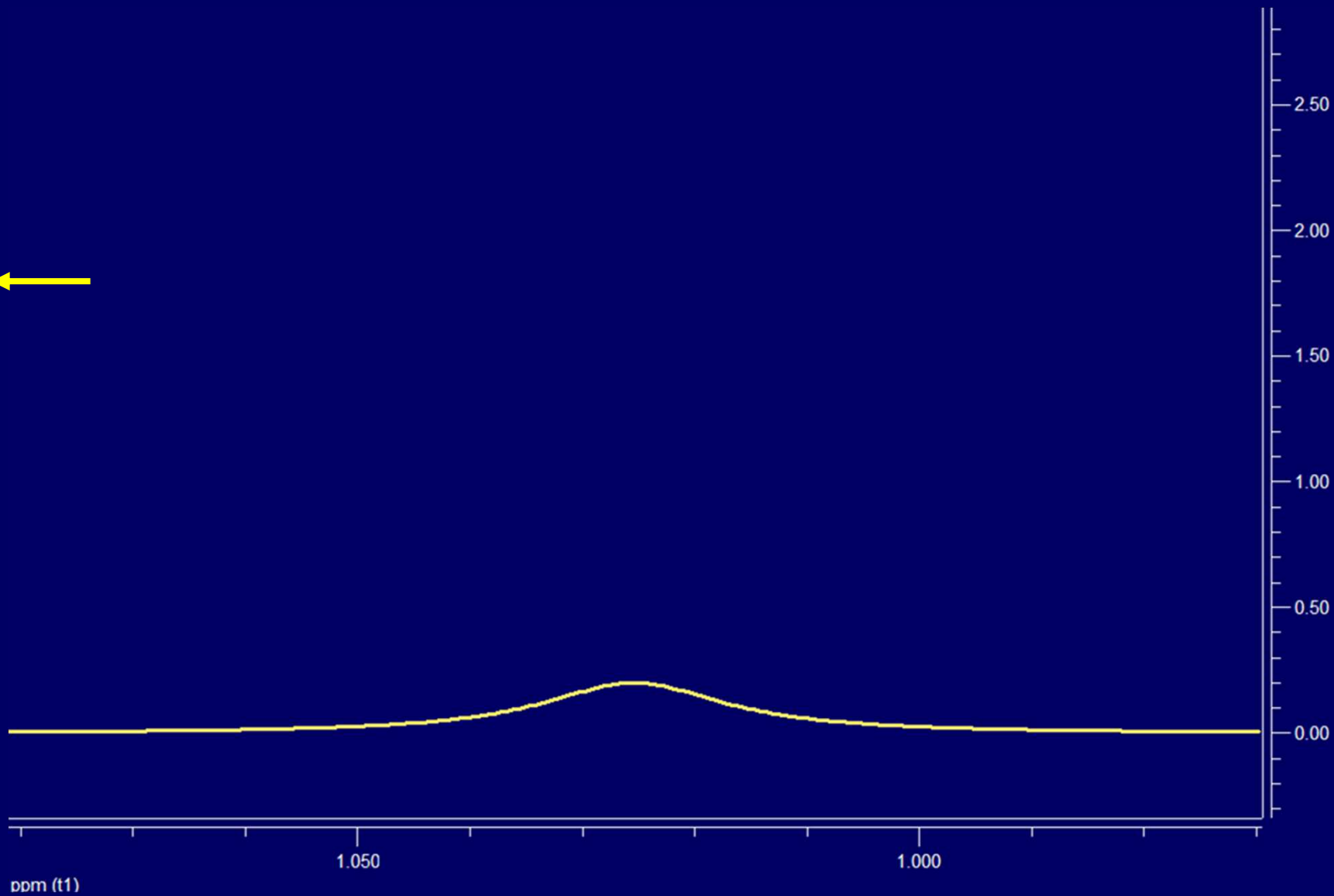
# Tvar signálu

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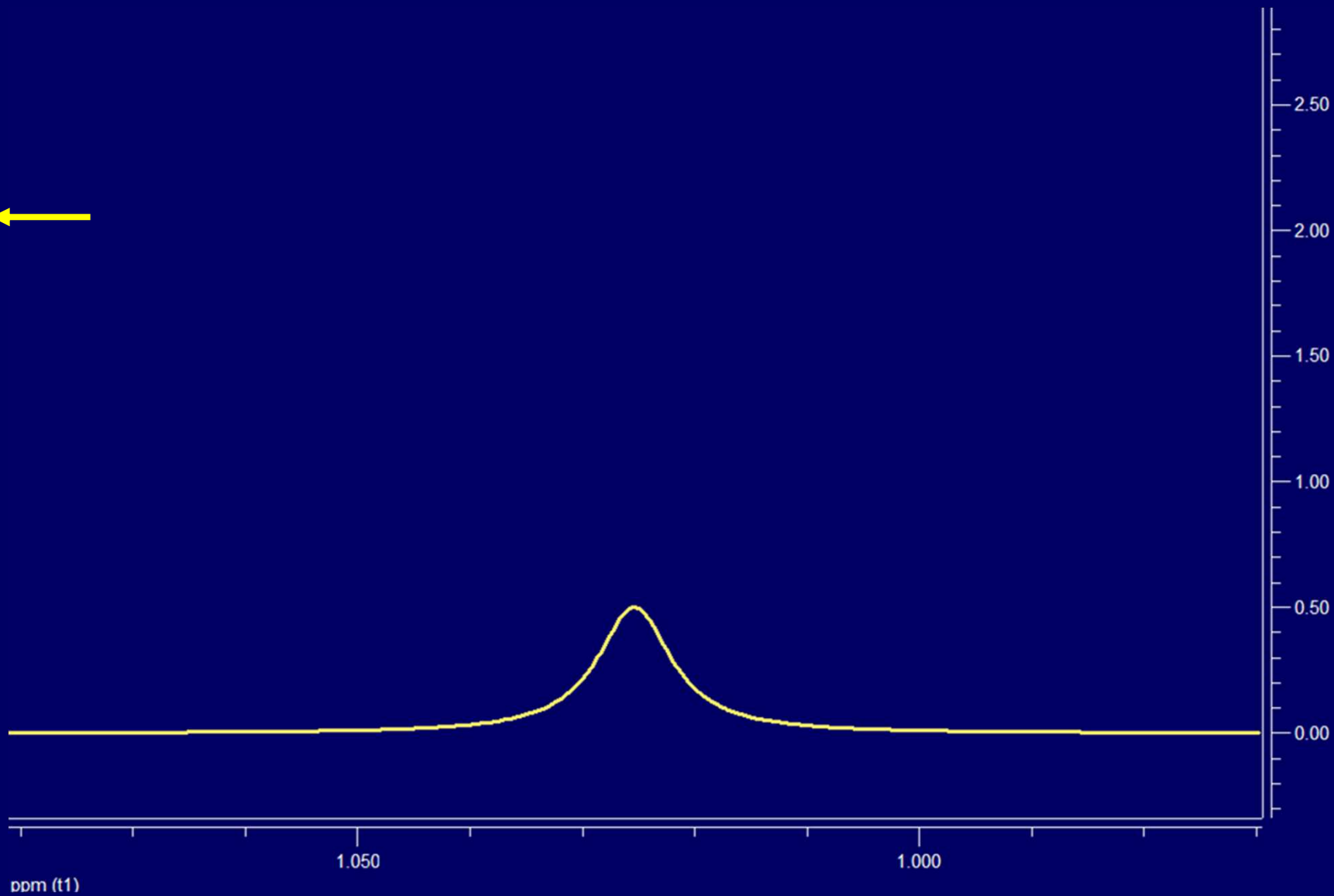
# Tvar signálu

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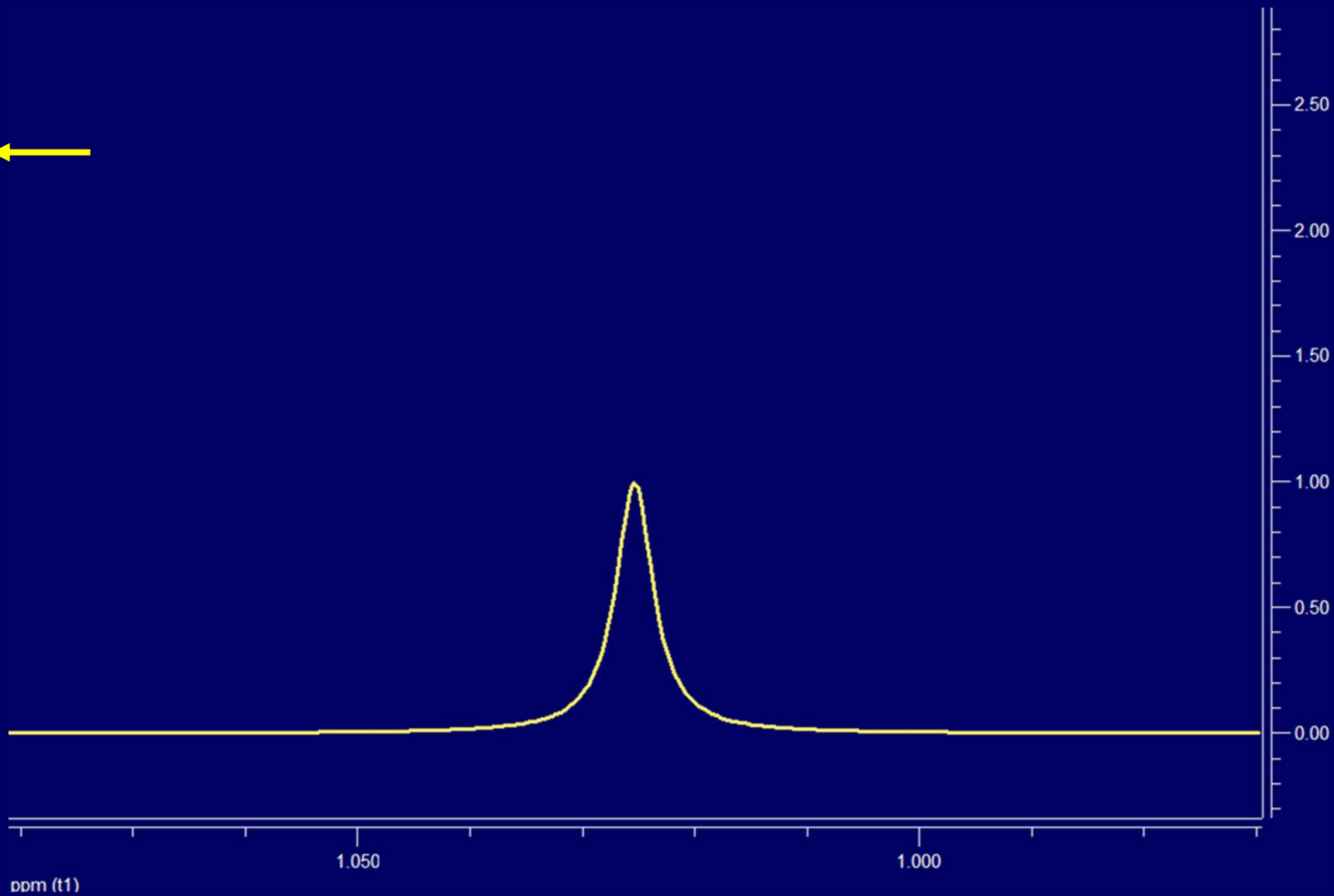
# Tvar signálu

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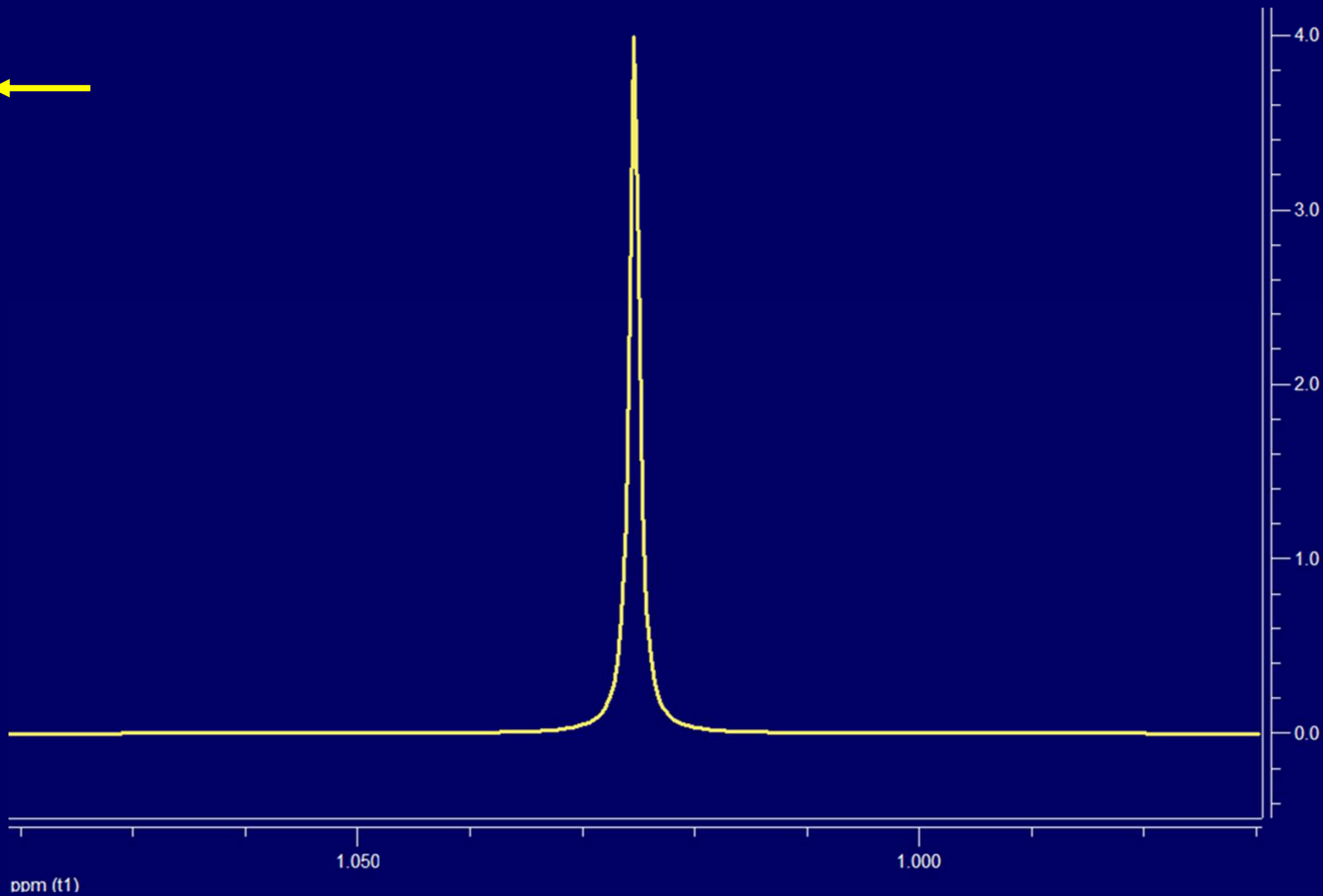
# Tvar signálu

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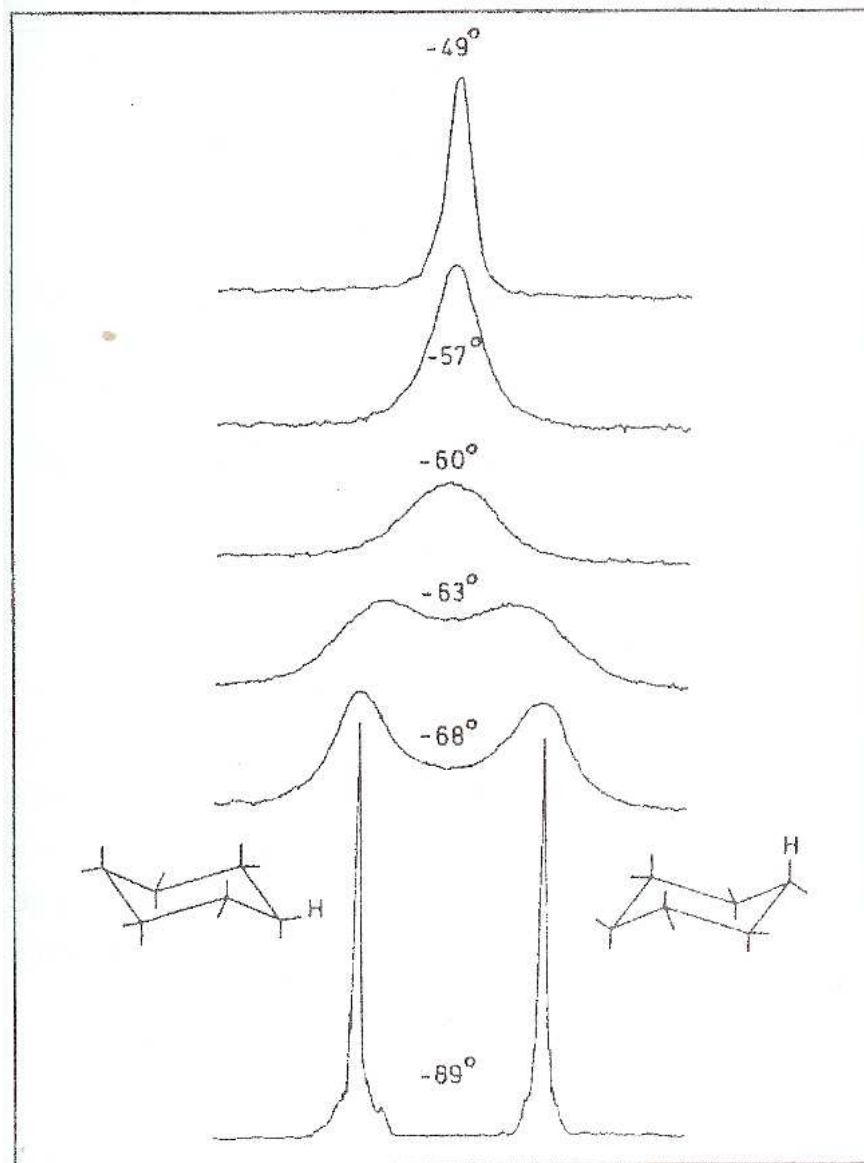


# Tvar signálu

T



# Inverze kruhu



Obr. 31-3  $^1\text{H}$  NMR spektrum (60 MHz) jediného vodíku cyklohexanu- $\text{d}_{11}$  v závislosti na teplote.