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ON A CLASSIFICATION OF ARONSZAJN TREES II

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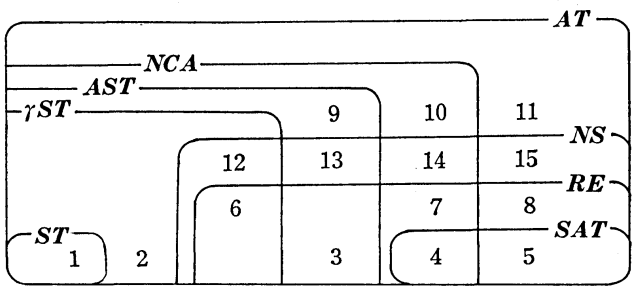
§ 1. Introduction.

In the former paper [3], we considered the classification of Aronszajn trees by the notions of Souslin trees, ω_1-trees with property γ, almost-Souslin trees, ω_1-trees with no club antichain, special Aronszajn trees and R-embeddable trees. As we remarked in its last section, there is another interesting notion. It is the notion of non-Souslin trees which had been introduced by Baumgartner [1]. The classification of Aronszajn trees by this notion together with the previous ones is shown by the following:



where ST=the class of Souslin trees,
γST=the class of ω_1-trees with property γ,
AST=the class of almost-Souslin trees,
NCA=the class of ω_1-trees with no club anti-chain,
SAT=the class of special Aronszajn tree,
RE=the class of R-embeddable ω_1-trees,
NS=the class of non-Souslin trees,
AT=the class of Aronszajn trees.

Under ZFC alone, none of the categories but Category 5 can be proved to be non-void. In the former paper we proved that if $V=L$, Categories 1$\sim$11 are all non-void (note that the trees constructed in Theorems 9, 10 and 11 [3], are the elements of Categories 9, 10 and 11 respectively). In this paper we shall prove that if $V=L$, remaining Categories 12$\sim$15 are also non-void. It is shown as a

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