

**THE BLOCK STRUCTURE OF THE IMAGES  
OF REGULAR UNIPOTENT ELEMENTS  
FROM SUBSYSTEM SYMPLECTIC  
SUBGROUPS OF RANK 2  
IN IRREDUCIBLE REPRESENTATIONS  
OF SYMPLECTIC GROUPS. I**

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The dimensions of the Jordan blocks in the images of regular unipotent elements from subsystem subgroups of type  $C_2$  in  $p$ -restricted irreducible representations of groups of type  $C_n$  in characteristic  $p \geq 11$  with locally small highest weights are found. These results can be applied for investigating the behavior of unipotent elements in modular representations of simple algebraic groups and recognizing representations and linear groups.

The article consists of 3 parts. In the first one, preliminary lemmas that are necessary for proving the principal results, are contained and the case where all weights of the restriction of a representation considered to a subgroup of type  $A_1$  containing a relevant unipotent element are less than  $p$ , is investigated.

*Key words and phrases:* unipotent elements, Jordan block sizes, representations of symplectic groups.

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