

## ADAS Subroutine r8qp

FUNCTION R8QP ( N , L )

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C \*\*\*\*\* FORTRAN77 REAL\*8 FUNCTION: R8QP \*\*\*\*\*

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C PURPOSE: EXPECTATION VALUE  $\langle 1/R^6 \rangle$  IN HYDROGEN APPROXIMATION FOR USE  
C IN QUADRUPOLE POLARISABILITY ENERGY SHIFT EVALUATION

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C CALLING PROGRAM: CXLTHE, CXSODE

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C CALLING PROGRAM: GENERAL USE

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C FUNC: (R\*8) R8QP = EXPECTATION VALUE  $\langle 1/R^6 \rangle$

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C INPUT: (I\*4) N = PRINCIPAL QUANTUM NUMBER.

C INPUT: (I\*4) L = ORBITAL QUANTUM NUMBER.

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C (R\*8) XN = REAL VALUE = N.

C (R\*8) XL = REAL VALUE = L.

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C ROUTINES: NONE

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C K1/0/81

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C DATE: 02/11/93

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C VERSION: 1.1 DATE: 02-11-93

C MODIFIED: JONATHAN NASH

C - FIRST RELEASE

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C VERSION: 1.2 DATE: 17-04-07

C MODIFIED: HUGH SUMMERS

C - FIRST FULLY COMMENTED RELEASE

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INTEGER

L,

N