

Answer on Question #67347 – Chemistry – General Chemistry

An orbital with the quantum numbers _____
 $n = 87 \quad \ell = 54 \quad m_\ell = -21$

Solution:

$n = 7$ is the highest number of shell used for the atoms known

Fr (Francium) with 87 electrons is located on 7s energy levels

Value of $\ell = 3$ and means sub-level *f*

m_ℓ specifies to which orbital within a subshell the electron is assigned and in our case

$m_\ell = -3$

-3 -2 -1 0 +1 +2 +3

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3

f subshell