

Abstract Submitted  
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**Feeding of the  $11/2^-$  isomers in  $^{191,193}\text{Ir}$  and  $^{197}\text{Au}$ .** N. FOTI-  
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YOUNES, LLNL — The  $(n, n'\gamma)$  reaction was used to study excited states and to  
measure absolute partial  $\gamma$ -ray cross sections in  $^{191}\text{Ir}$ ,  $^{193}\text{Ir}$  and  $^{197}\text{Au}$ . The data  
were taken using the GEANIE spectrometer comprised of 26 high-purity Ge detec-  
tors with 20 BGO escape-suppression shields. The broad-spectrum pulsed neutron  
source of the Los Alamos Neutron Science Center's WNR facility provided neutrons  
in the energy range from 0.6 to 250 MeV. The time-of-flight technique was used to  
determine the incident neutron energies. The absolute partial cross sections for hun-  
dreds of  $\gamma$ -rays from several reaction channels were determined. The partial  $\gamma$ -ray  
cross sections of several transitions feeding directly the  $11/2^-$  isomers and ground  
states in  $^{191,193}\text{Ir}$  and  $^{197}\text{Au}$  were obtained. In the case of  $^{197}\text{Au}$ , where the structure  
above the  $11/2^-$  isomer was not known before, the partial  $\gamma$ -ray cross sections and  
the  $\gamma$ - $\gamma$  coincidence data were used to built the level scheme above the isomer up  
to  $\sim 2$  MeV excitation energy. The feeding of the  $11/2^-$  isomers, which originate  
from the odd proton occupying the  $h_{11/2}$  orbital, was found in all three experiments  
to be very similar and it is compared to the feeding determined for the ground  
states of  $^{191}\text{Ir}$ ,  $^{193}\text{Ir}$  and  $^{197}\text{Au}$ . This work was performed under the auspices of the  
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