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Chiral bands in ^{82}Br

High spin states of ^{82}Br were studied by using the fusion-evaporation reaction $^{82}\text{Se} (^4\text{He}, 1p4n)$ at beam energies of 65 and 68 MeV. 26 new transitions and 13 new levels were added into the previous level scheme, including a positive-parity band. With the earlier configuration assignment $\pi 9/2 \otimes \nu 9/2$ to band 1 and the similar experimental features to the chiral doublet bands observed in ^{78}Br and ^{80}Br , the positive-parity doublet bands 1 and 2 in ^{82}Br are therefore suggested as chiral doublet bands with the $\pi 9/2 \otimes \nu 9/2$ configuration. The interpretation was supported by the relativistic mean field theory and triaxial particle rotor model calculations.

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