THE B $^2\Sigma^- - X^2\Pi_{3/2}$ TRANSITION OF AuO

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The visible spectrum of AuO has been recorded in the 16700 - 18700 cm^{-1} region using Intracavity Laser Spectroscopy (ILS). Numerous bands were observed in the spectrum. We have identified 4 new bands with a similar branch structure and regular spacing as being part of a vibrational progression of a new electronic transition which we have tentatively identified as the B $^2\Sigma^- - X^2\Pi_{3/2}$ transition. Results of the analysis will be presented.