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While conventional ultrasound is generally considered unsuitable for pulmonary imaging, low frequency (10 – 750 kHz) ultrasound has been shown to penetrate the lung, motivating our work in developing a tomographic pulmonary ultrasound imaging system. In this work, tomographic reconstructions of sound speed from numerically simulated low frequency ultrasound data on a ring array of transducers are computed using the distorted Born iterative method (DBIM) with total variation (TV) regularization with an automatic choice of regularization parameter. (Received August 13, 2020)