

IEEE TRANSACTIONS ON ULTRASONICS, FERROELECTRICS, AND FREQUENCY CONTROL

A PUBLICATION OF THE IEEE ULTRASONICS, FERROELECTRICS, AND FREQUENCY CONTROL SOCIETY



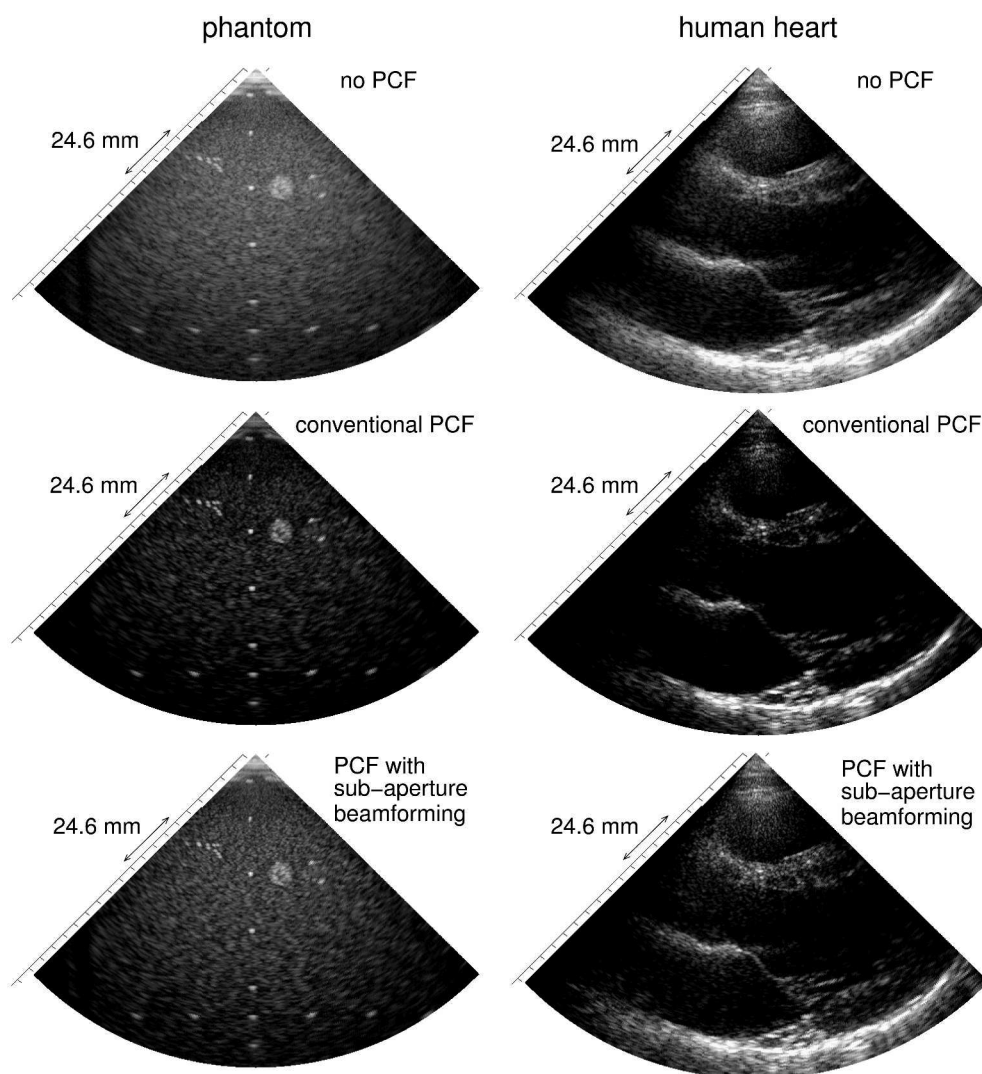
NOVEMBER 2014

VOLUME 61

NUMBER 11

ITUCER

(ISSN 0885-3010)



Access the journal with its multimedia contents online

at: <http://www.ieee-uffc.org/tr/>   

DOI <http://dx.doi.org/10.1109/TUFFC.2014.611101>



Effect of Sub-Aperture Beamforming on Phase Coherence Imaging

The front cover shows high-frame-rate B-mode images (316 Hz) of phantom and human heart obtained by transmitting steered diverging beams and parallel receive beamforming (PBF) without phase coherence factor (PCF), with conventional PCF, and with PCF with sub-aperture beamforming. Although conventional PCF realizes better spatial resolution (0.78 mm at a range distance of 42 mm) than PBF only (1.06 mm), speckle echoes from diffuse scattering medium are suppressed significantly. PCF with sub-aperture beamforming realizes better spatial resolution (0.75 mm) with less suppression of speckle echoes. For further reading, please see the article on page 1779 of this issue.

Images courtesy of Hideyuki Hasegawa and Hiroshi Kanai, with the Graduate School of Biomedical Engineering/
Graduate School of Engineering, Tohoku University, Sendai, Japan.