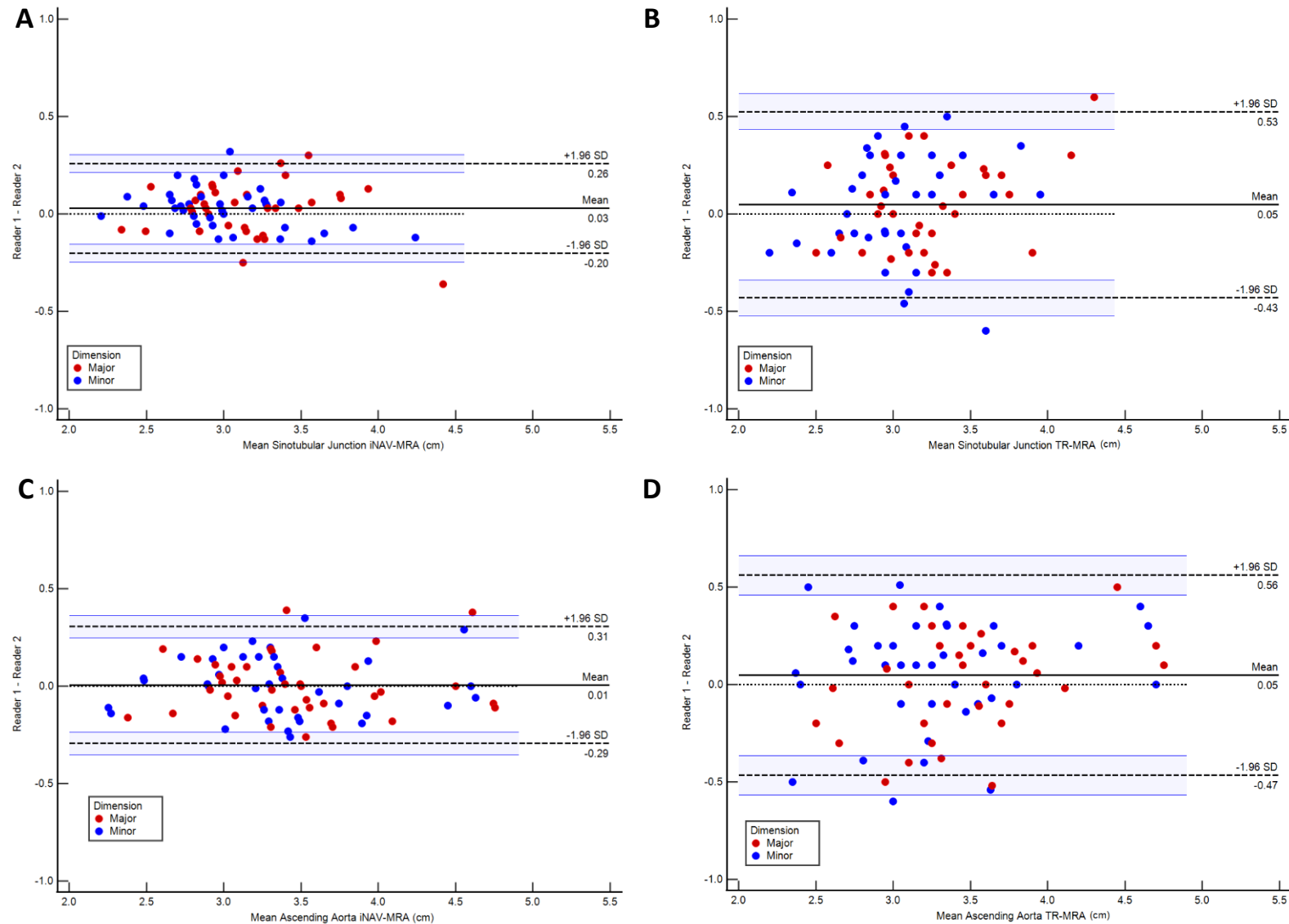
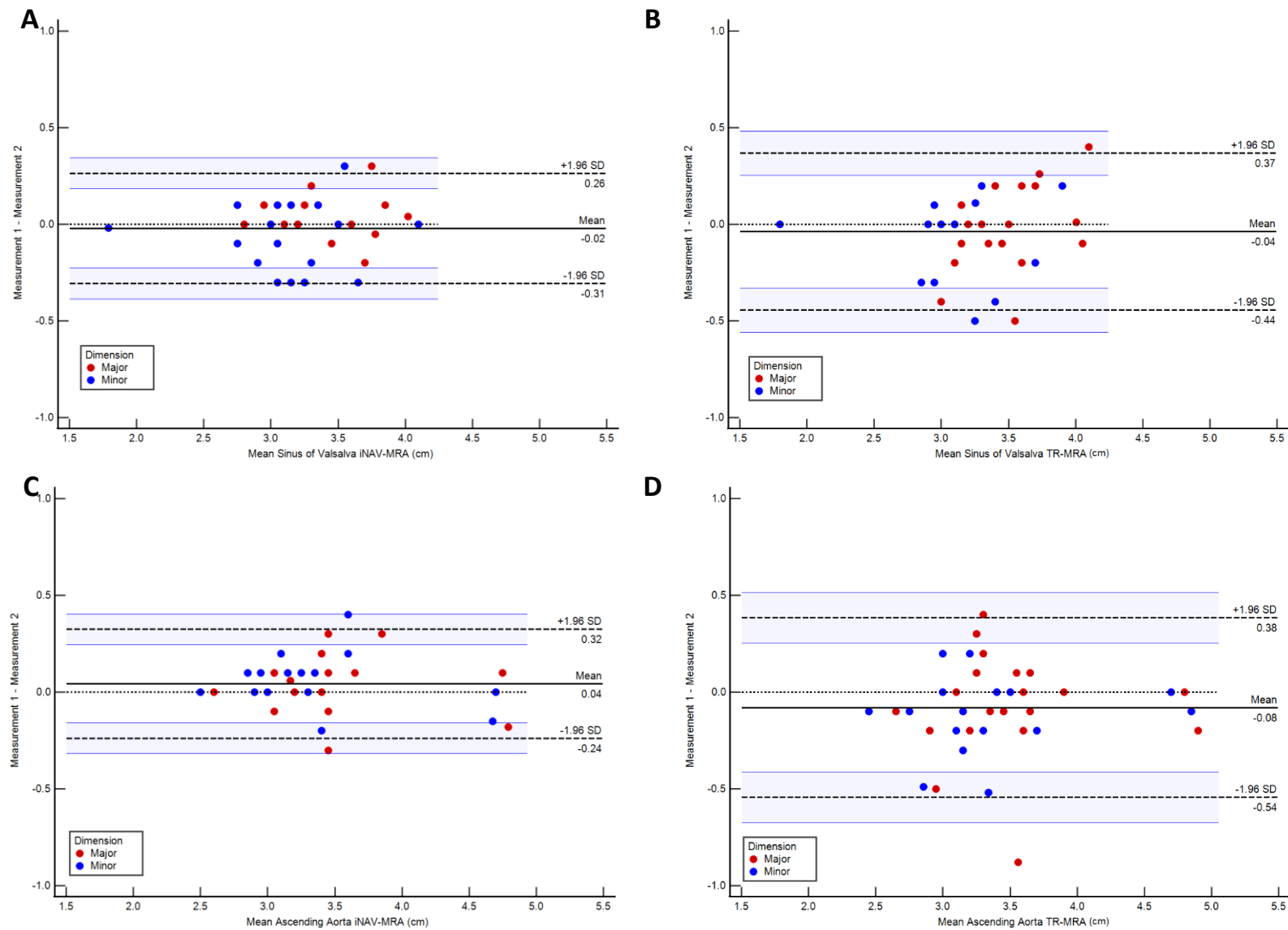


Supplementary figure 1: **(A)** Cinematic VRT and **(B)** Representative MPR images from isotropic 1.2 mm datasets. SOV: sinus of Valsalva; STJ: sinotubular junction; AAO: ascending aorta; AA: aortic arch; DAO: descending aorta; LCA: left coronary artery; RCA: right coronary artery.



Supplementary figure 2: Bland-Altman plot of the sinotubular junction major and minor interobserver diameter measurements for iNAV CE-MRA **(A)**, and TR-MRA **(B)**; Bland-Altman plot of the ascending aorta major and minor interobserver diameter measurement for iNAV CE-MRA **(C)**, and TR-MRA **(D)**.



Supplementary figure 3: Bland-Altman plot of the sinus of Valsalva major and minor intraobserver diameter measurements for iNAV CE-MRA **(A)**, and TR-MRA **(B)**; Bland-Altman plot of the ascending aorta major and minor intraobserver diameter measurement for iNAV CE-MRA **(C)**, and TR-MRA **(D)**.