



RCM
LONDON

THE APPLICATION OF X-RAY CT SCAN TO THE DOCUMENTATION OF EARLY MUSICAL INSTRUMENTS



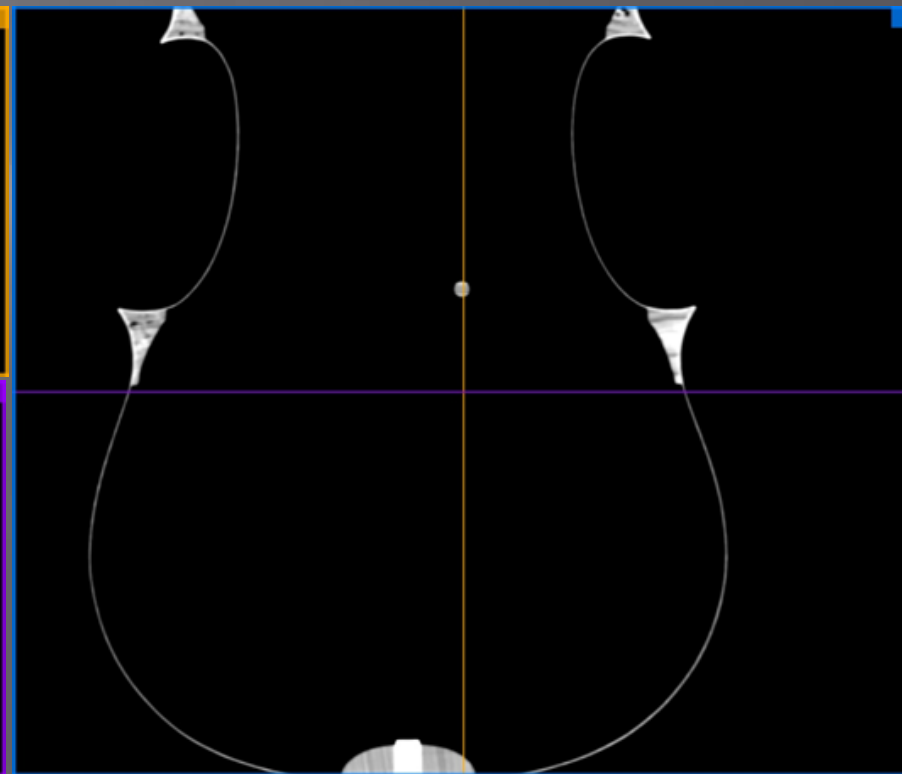
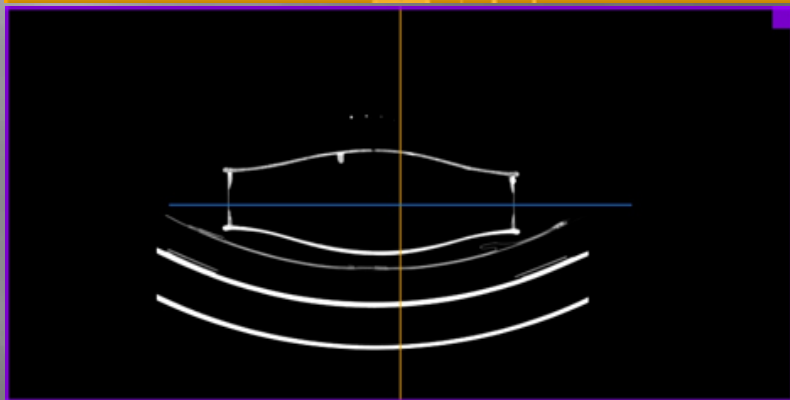
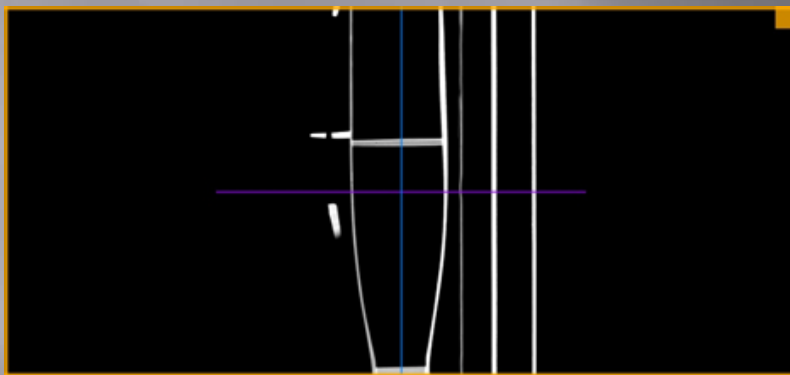
G. Rossi Rognoni,¹ P. Biagiotti,³ P. Gallerini,³ I. Menchi,³ R. Ricci,³ M. Fioravanti²

¹ Royal College of Music – London UK

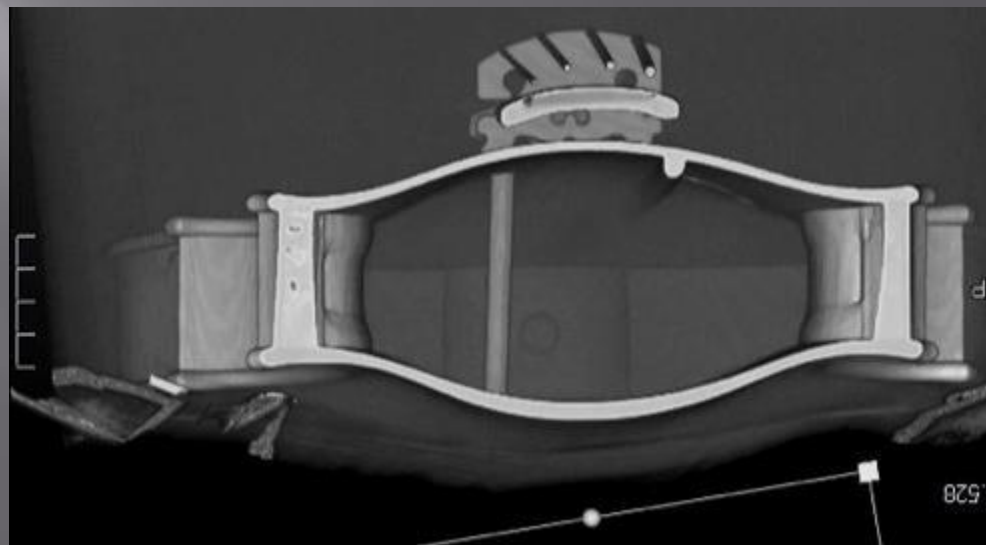
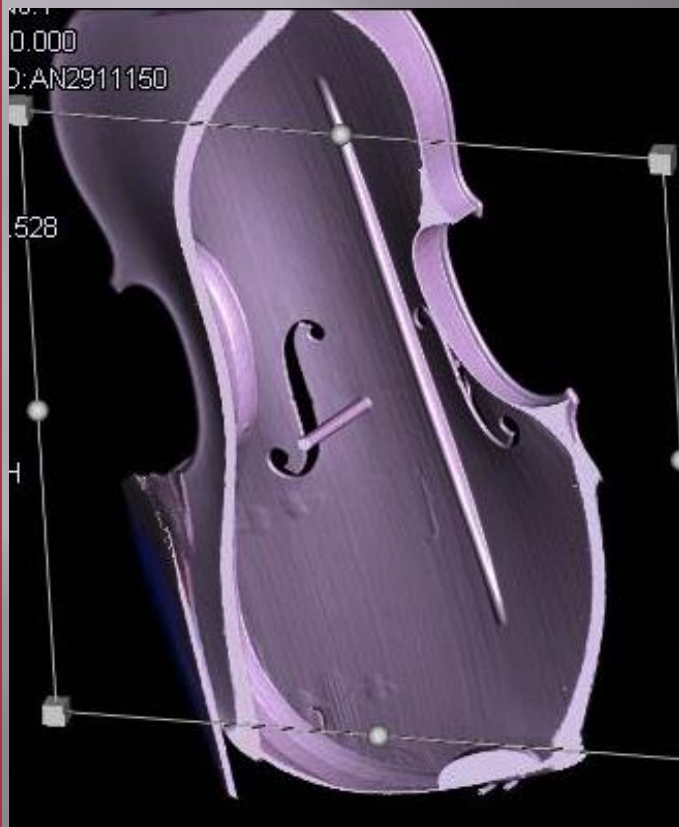
² University of Florence – GESAAF Italy

³ AOUC - Department Imaging diagnostic - Florence Italy

CT scan: 2D



CT scan: 3D



CT scan: 3D

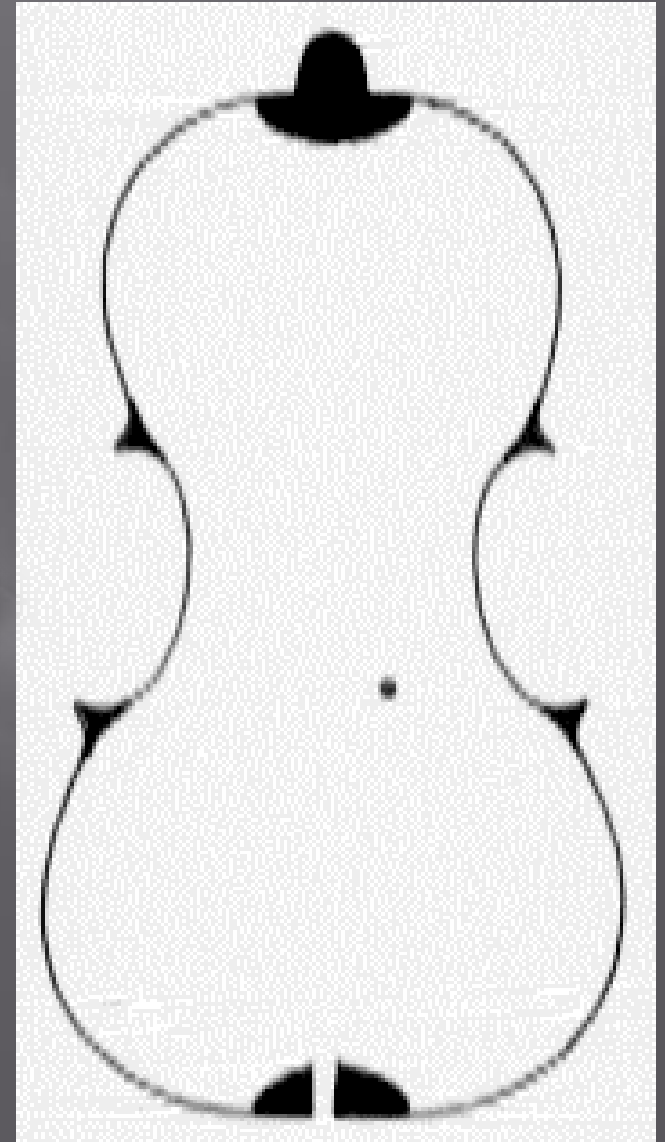


A. Stradivari, Tenor
viola 'Medici',
Cremona 1690

Elements towards identification

1. Variations in shape, thickness and position of parts that were built according to a template that was unique to a certain workshop

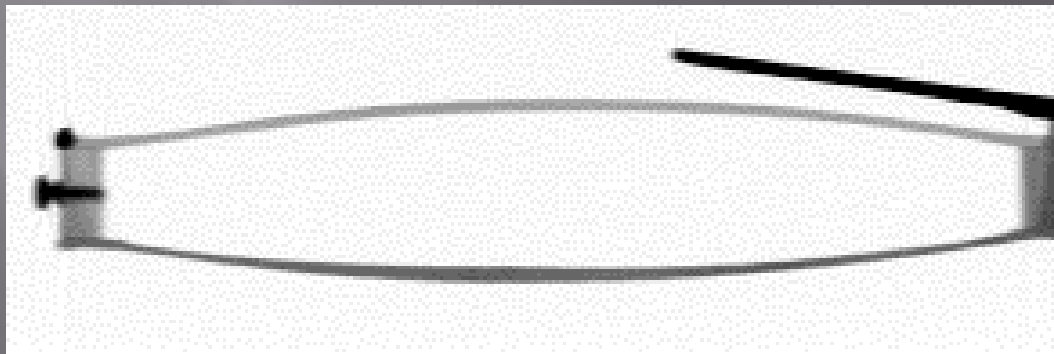
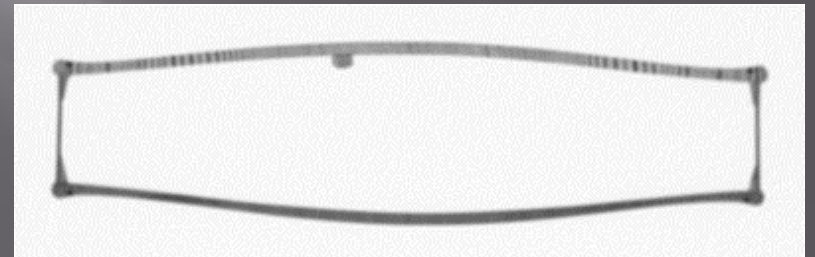
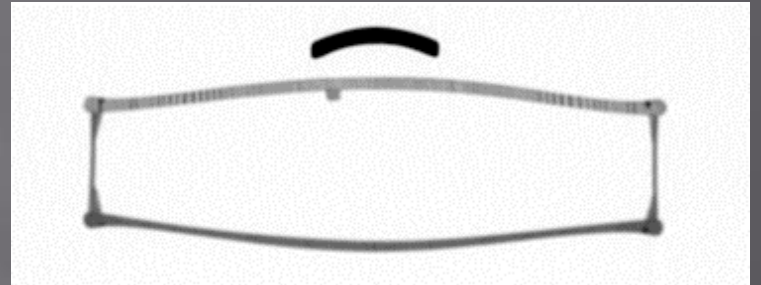
Elements towards identification



Elements towards identification

1. Variations in shape, thickness and position of parts that were built according to a template that was unique to a certain workshop
2. Variations of elements that, although entirely controlled by hand, have a strong impact on the sound quality of the instrument

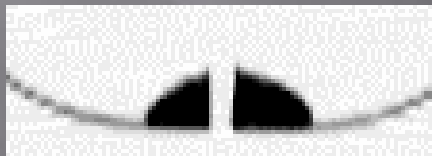
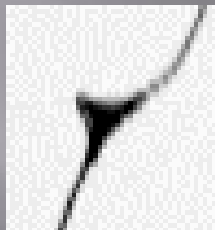
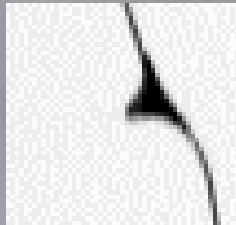
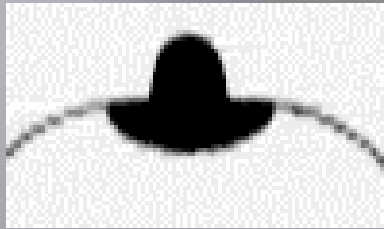
Elements towards identification



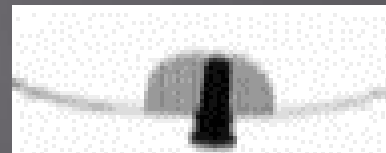
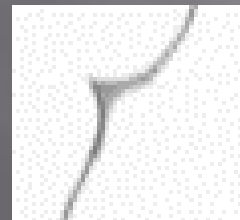
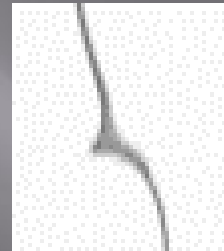
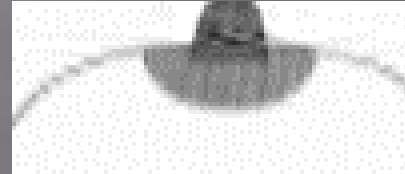
Elements towards identification

1. Variations in shape, thickness and position of parts that were built according to a template that was unique to a certain workshop
2. Variations of elements that, although entirely controlled by hand, have a strong impact on the sound quality of the instrument
3. Variation in shape, size and position of structural and internal parts of the instruments

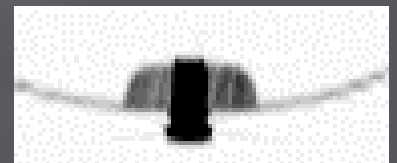
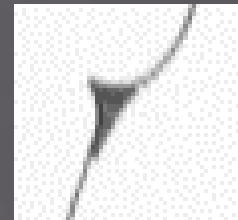
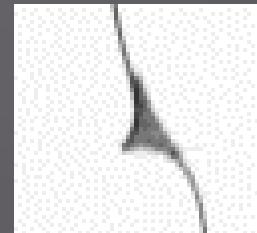
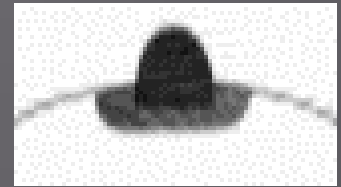
Elements towards identification



G.B. Gabbrielli,
Florence, 1764



A.F. Mayr, Salzburg,
1764 ?



G. Scarpella,
Florence, 1886

Elements towards identification

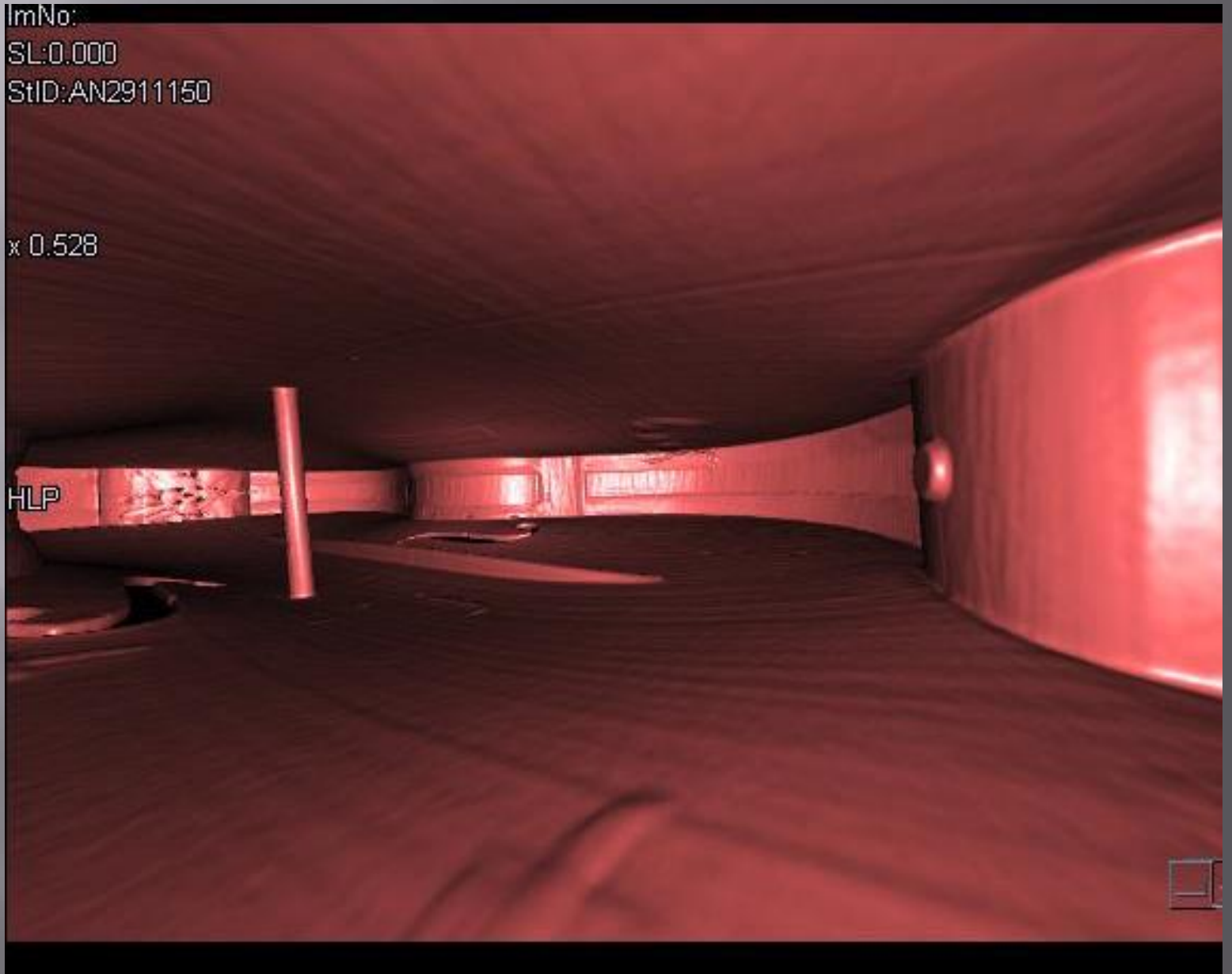
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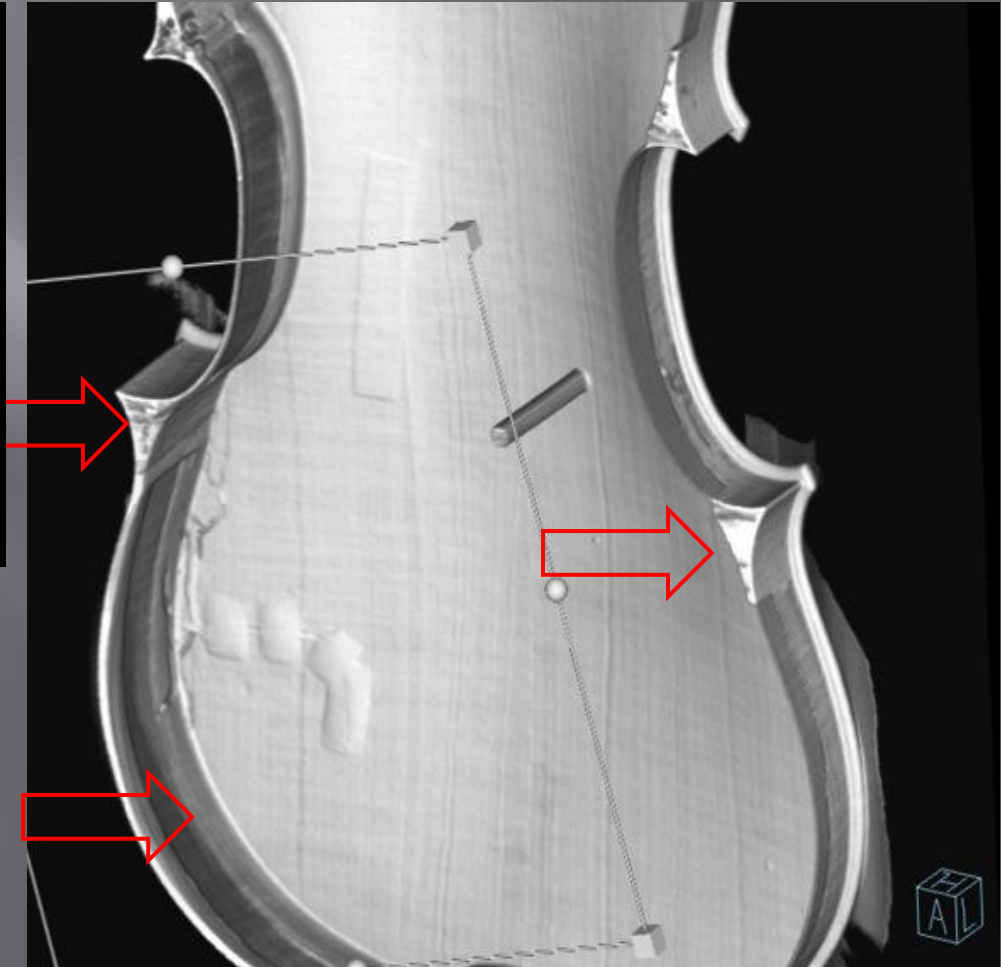
HLP



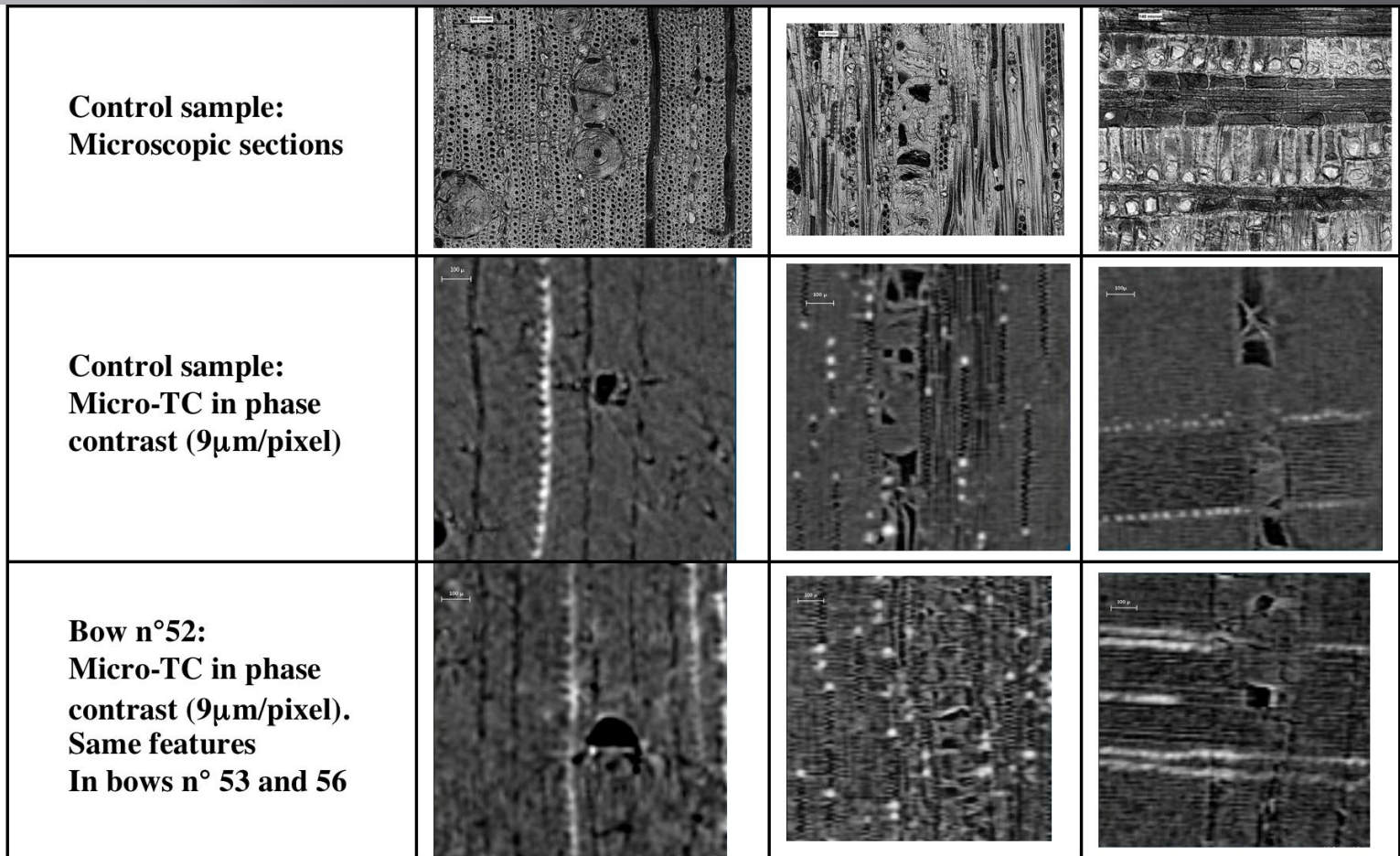
Elements towards identification

1. Variations in shape, thickness and position of parts that were built according to a template that was unique to a certain workshop
2. Variations of elements that, although entirely controlled by hand, have a strong impact on the sound quality of the instrument
3. Variation in shape, size and position of structural and internal parts of the instruments
4. Choice of materials particularly for hidden and structural parts

Elements towards identification



Elements towards identification



SNAKEWOOD

Brosimum guianensis (Aubl.) Huber

Issues

Issues: dimension

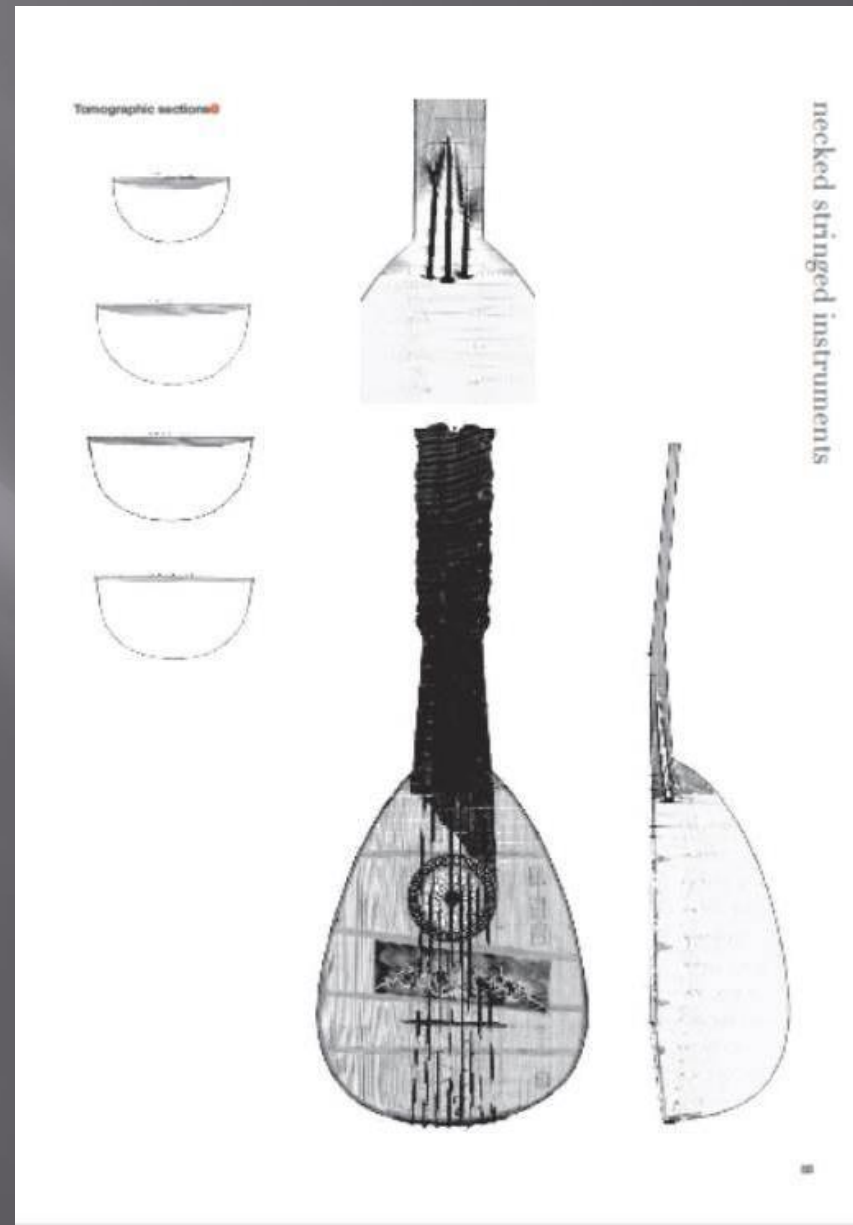


Ø max. 80cm

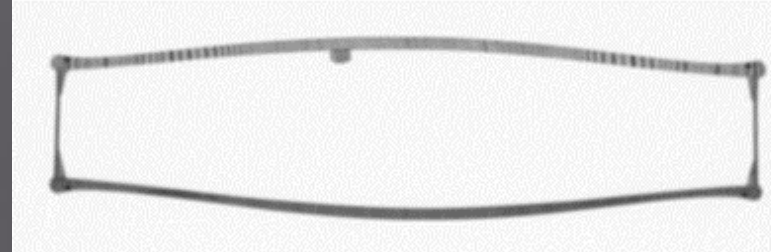
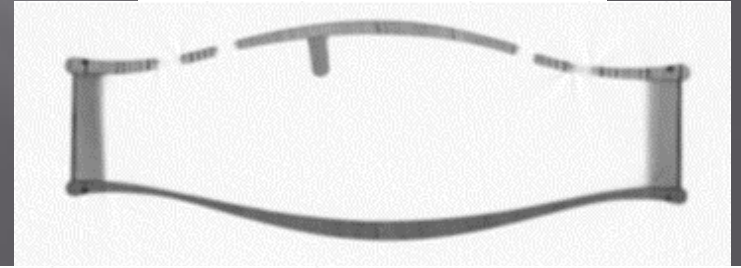
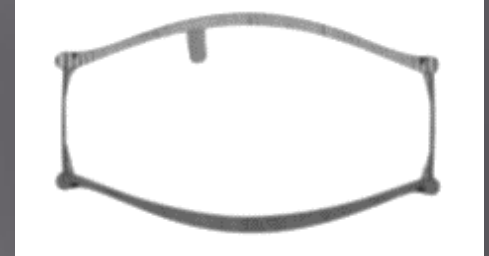
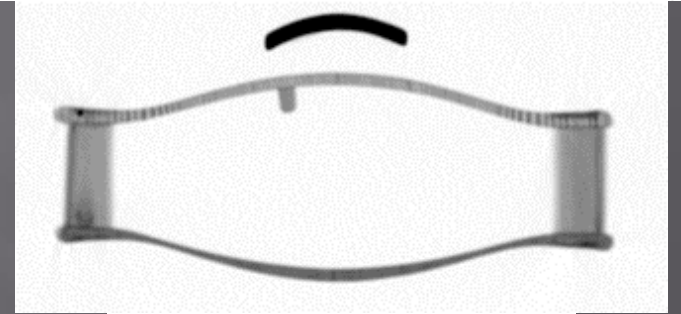
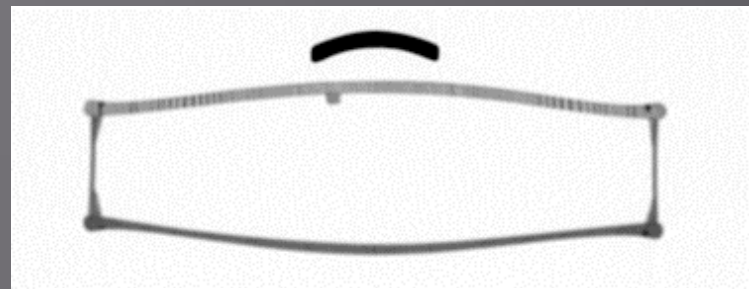
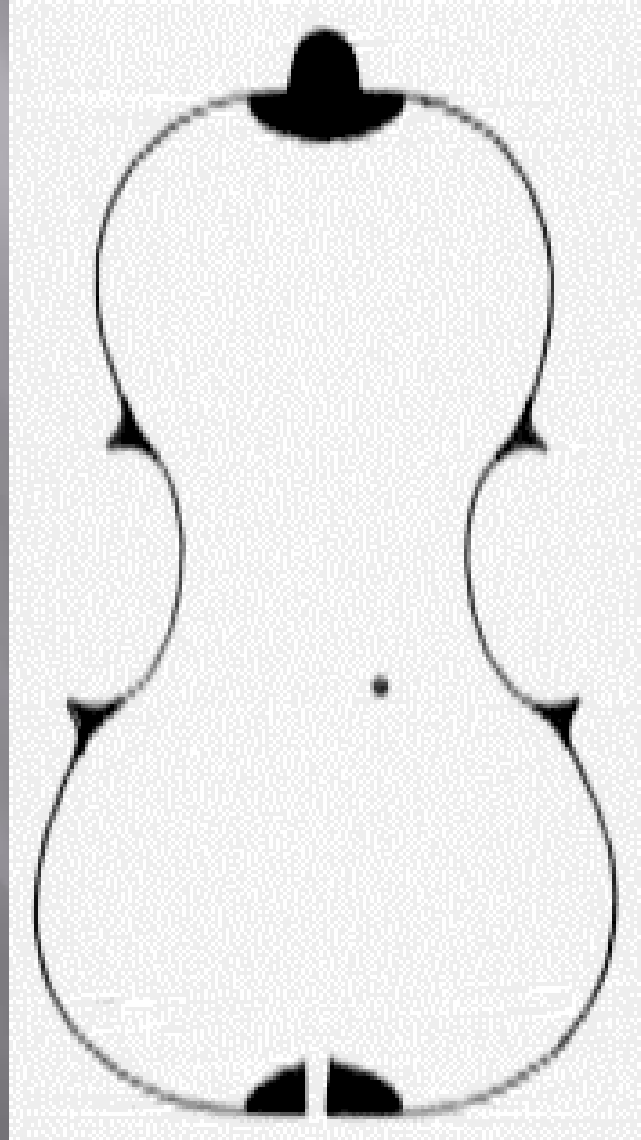
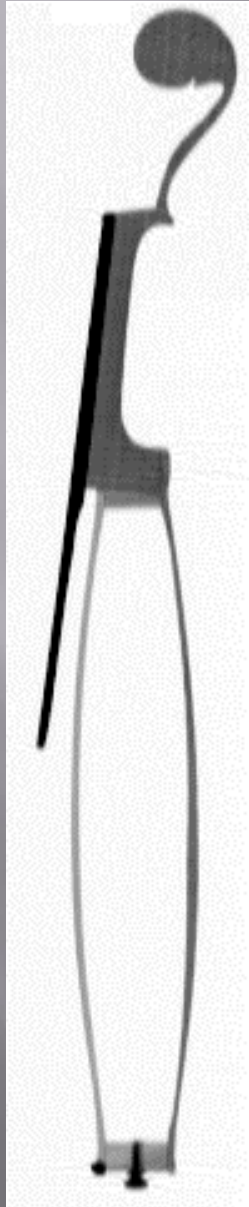
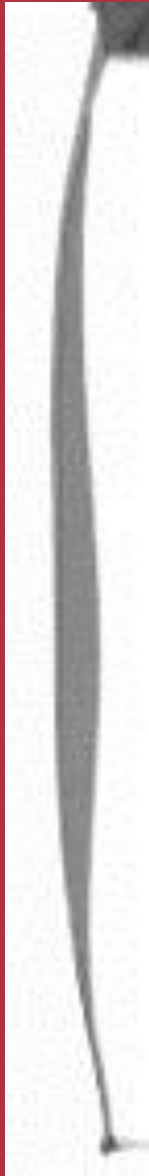
Issues: cost and logistics



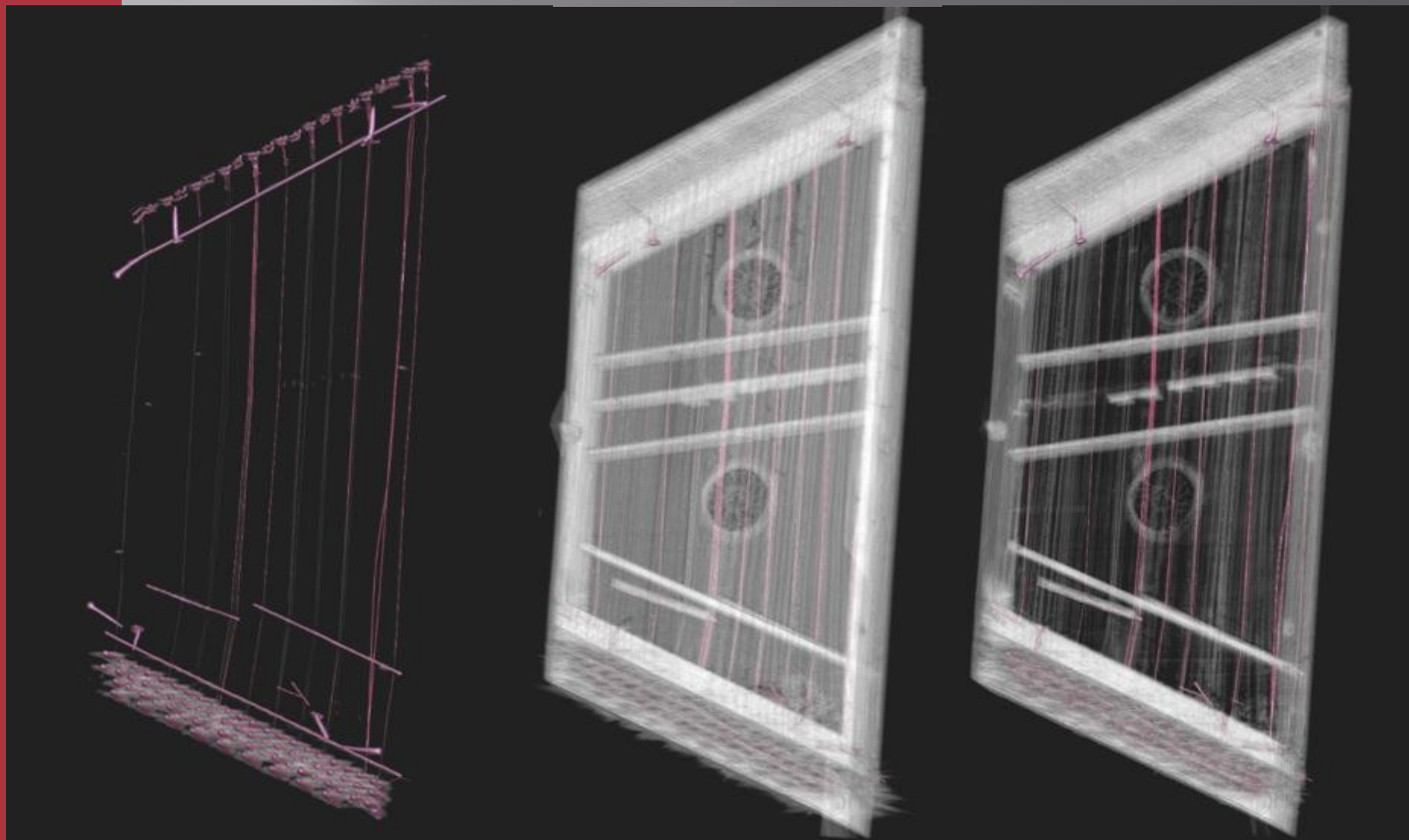
Issues: dissemination of results



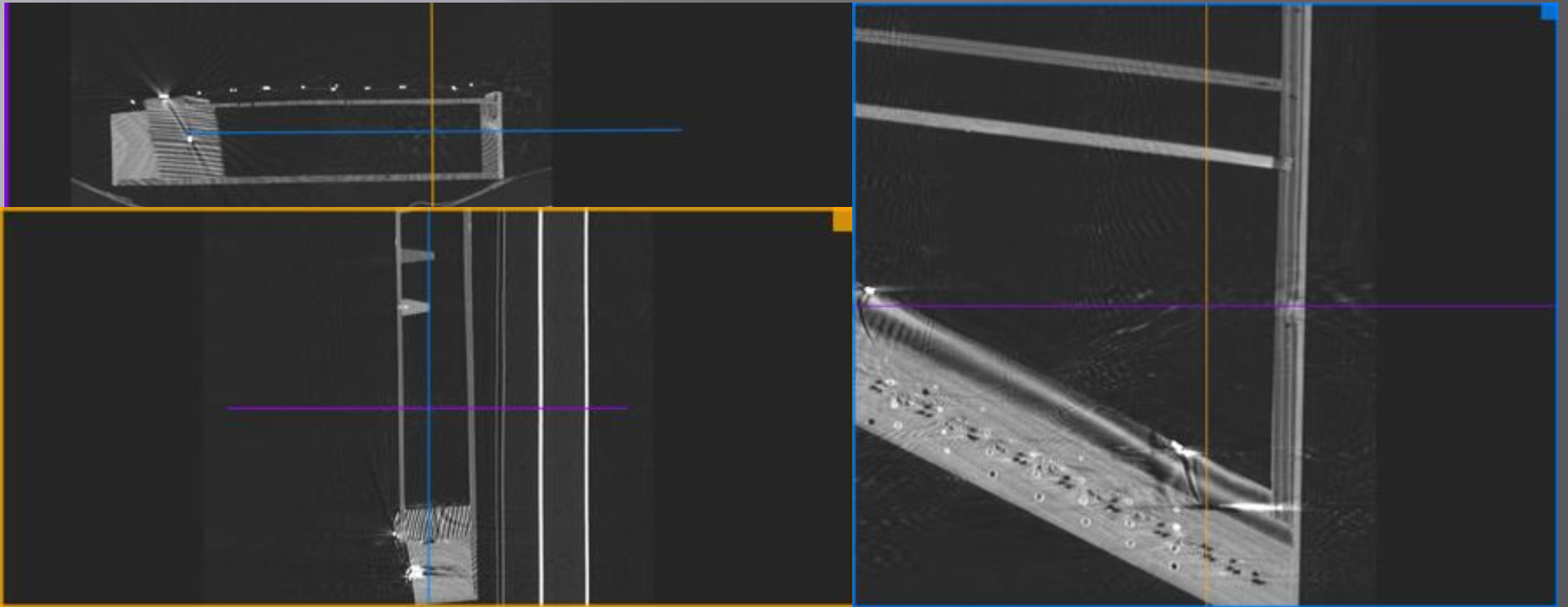
Standard

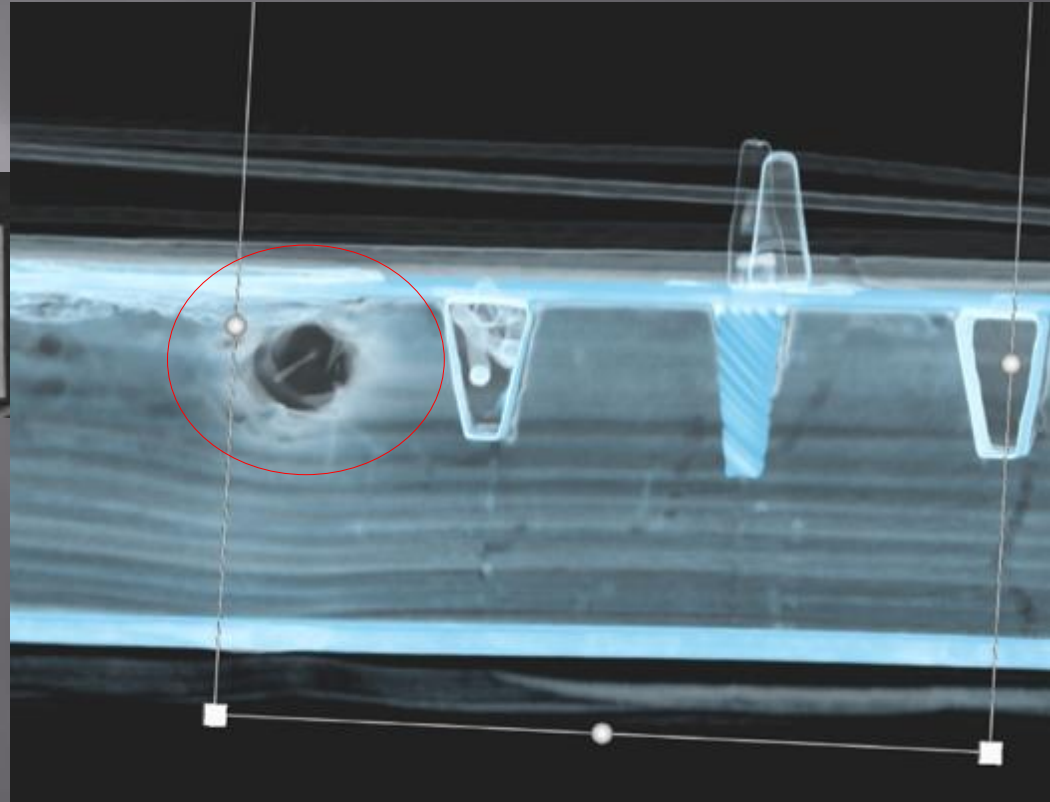
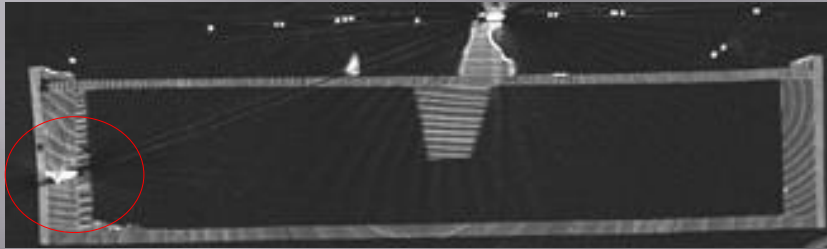


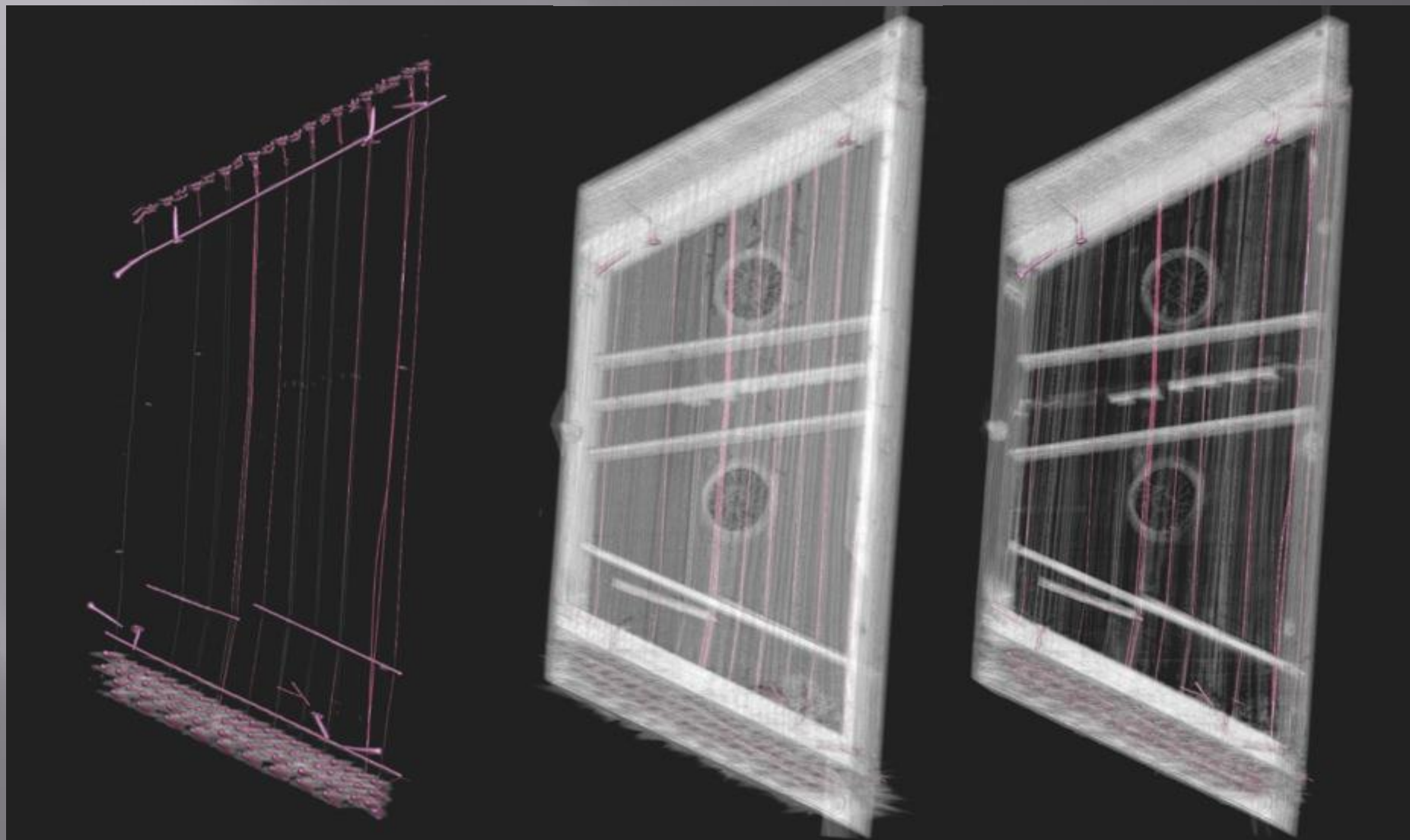
Standard



Virtual cuts







Virtual removing



