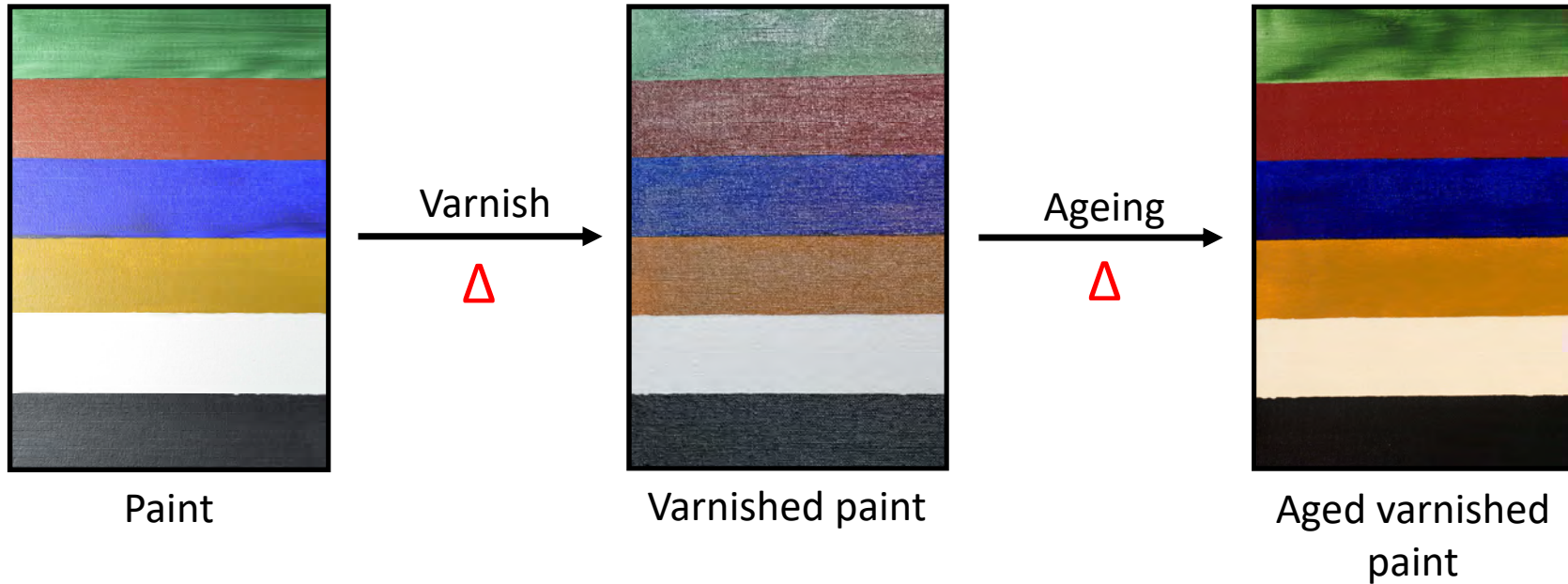


Appamat Material Appearance Workshop – 13/11/2023

How can one detect changes of appearance during the process of conservation ?

Emma GILLET, Vincent Gauthier, Sandie Le Conte, Claudia Fritz, Stéphane Serfaty, Christine Andraud

Different appearances



Δ Appearance modifications

- **Gloss** → Glossmeter
- **Colour** → Hyperspectral imaging
- **Geometry** → 3D microscope Keyence

Measurements of common appearance changes

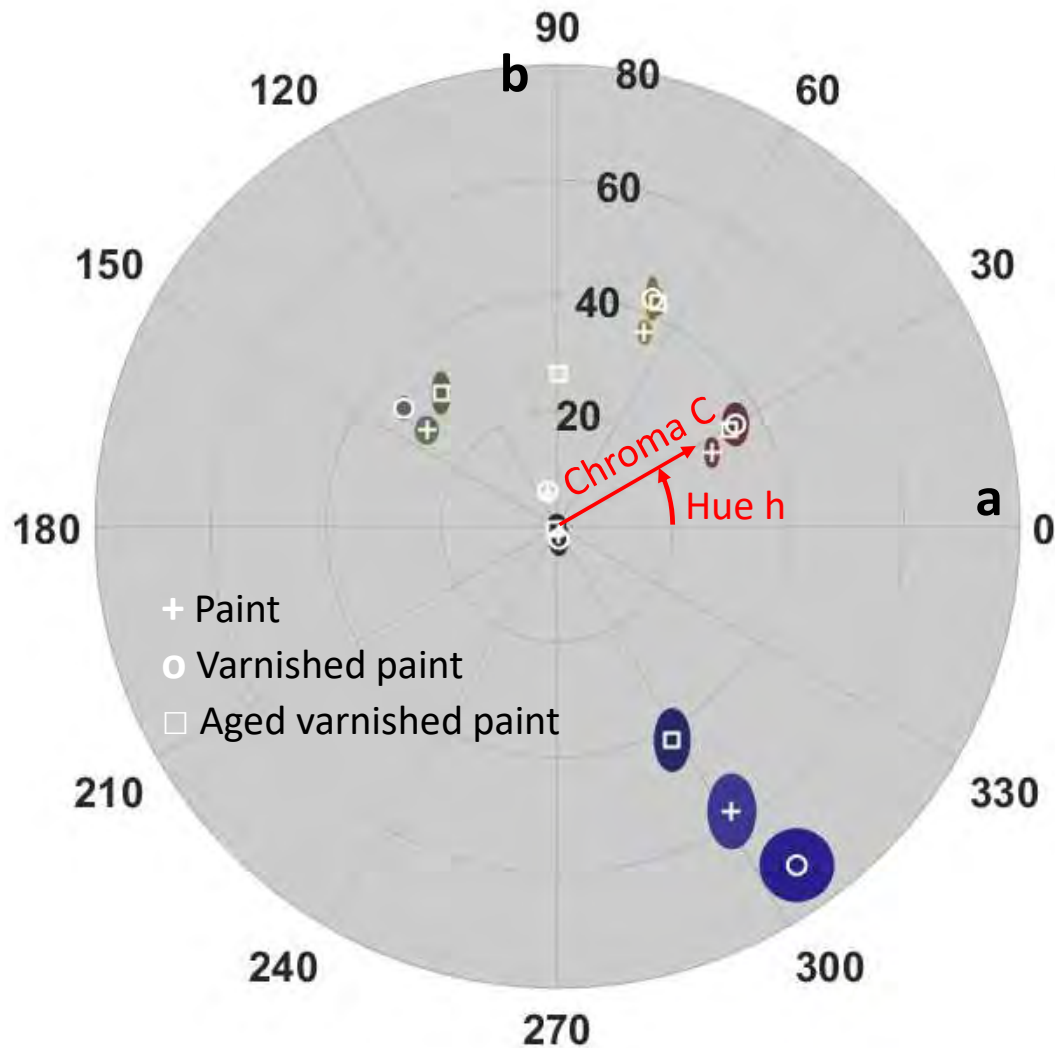


Figure 1 : Variation of chroma and hue in the ab plane (D65, 2° observer)

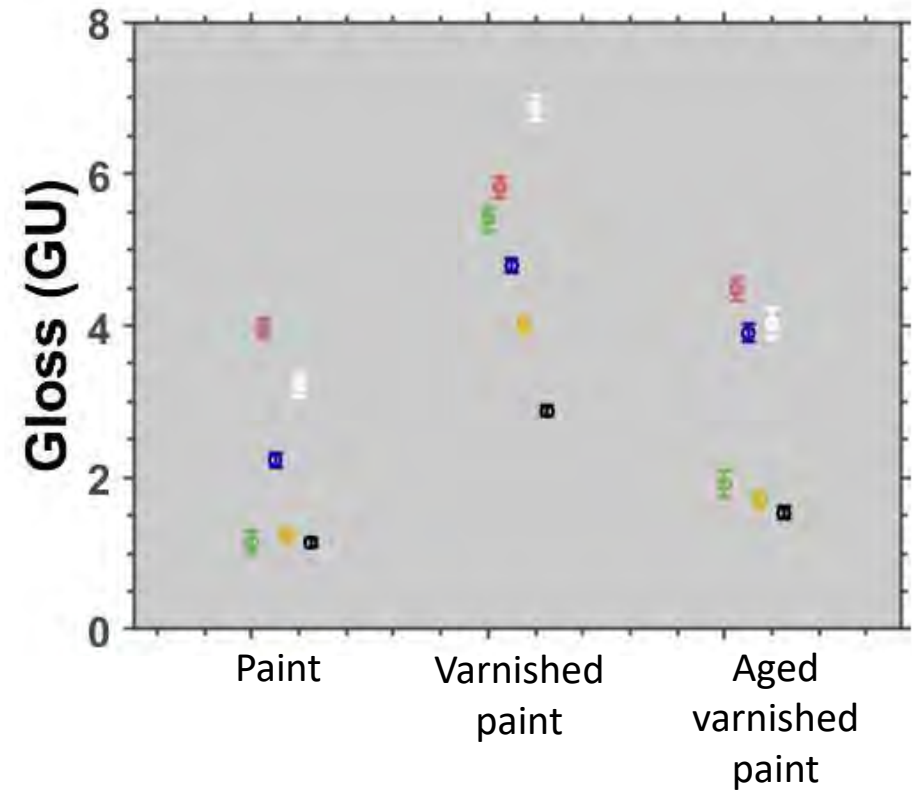


Figure 2 : Variation of gloss 85°

Which attributes to differentiate our 3 groups ?

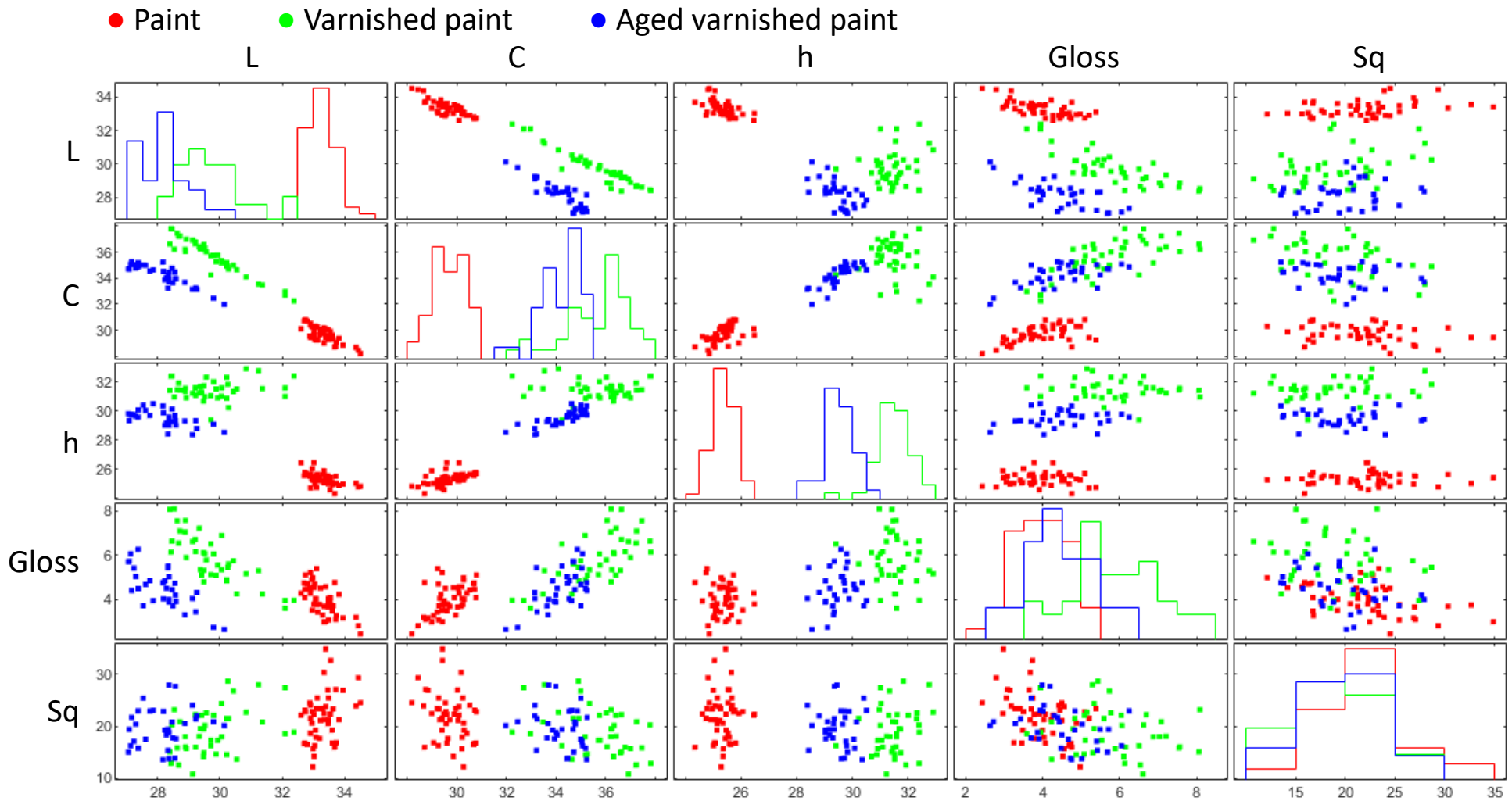
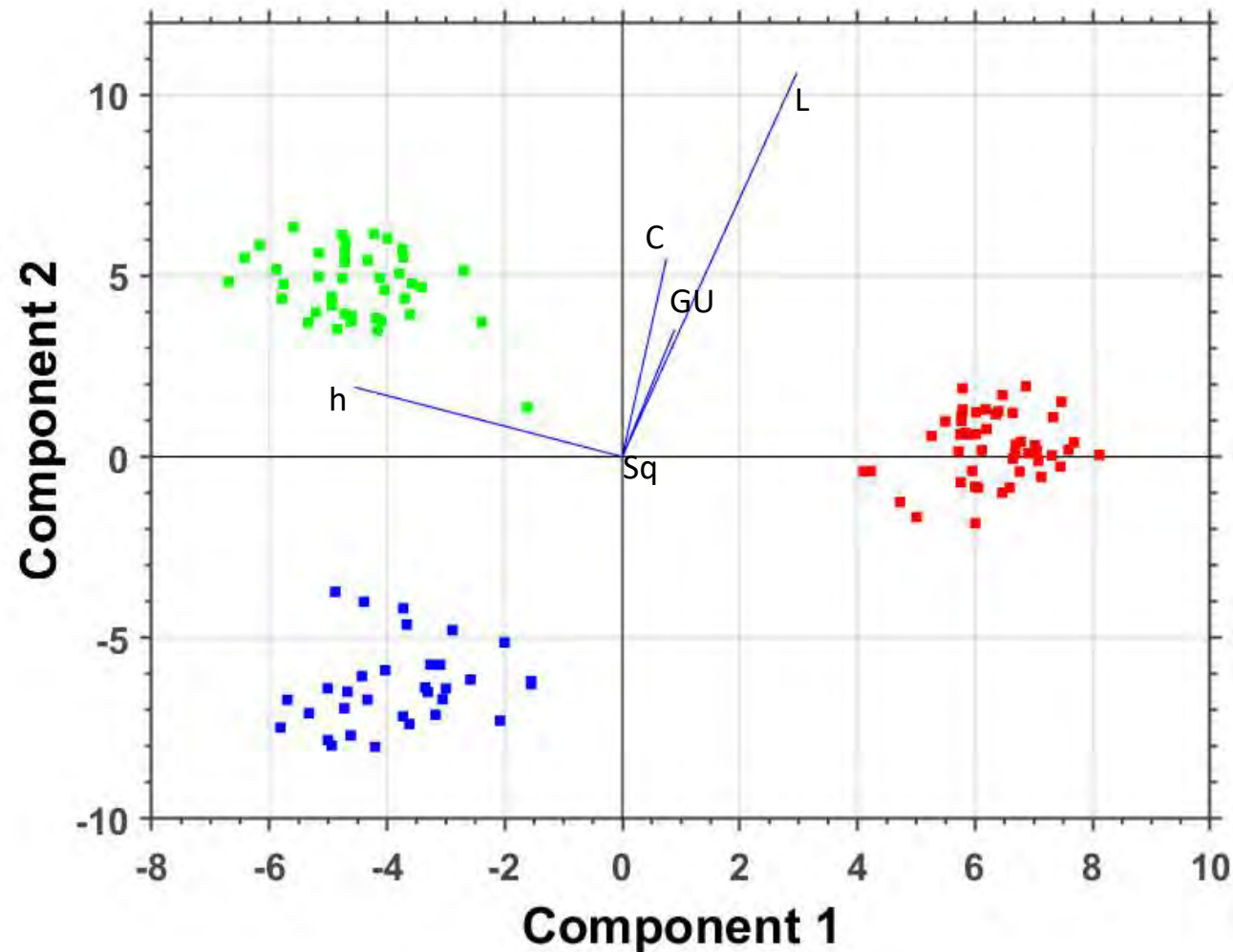


Figure 3 : Histogram for each variable and plot 2 by 2 for the red areas

Which attributes to differentiate our 3 groups ?



- Paint
- Varnished paint
- Aged varnished paint

- h et L differentiate paint group from others
- L, C and Gloss differentiate varnished paint from aged varnished paint

Figure 4 : Linear discriminant analysis for red areas



Prospects

- Apply this method on unvarnished mock-up : Which attribute(s) or combination of attributes best correspond to conservator's perception ?
 - Questionnaire to link perception and measurements
- Characterisation of homogeneity ?
- New tool to help conservators for decision making and traceability

Thank you for your attention