

Digitizing in the Round



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Turntable built by Kirk Martinez (University of Southampton)



Imaging seals using a turntable



Ashm
Buchanan (1966), No. 502



Provisional set-up
in order to create
HDR rollouts

Stitching of 20-30 images
with commercial software PTGui Pro



Morgan Seal
575

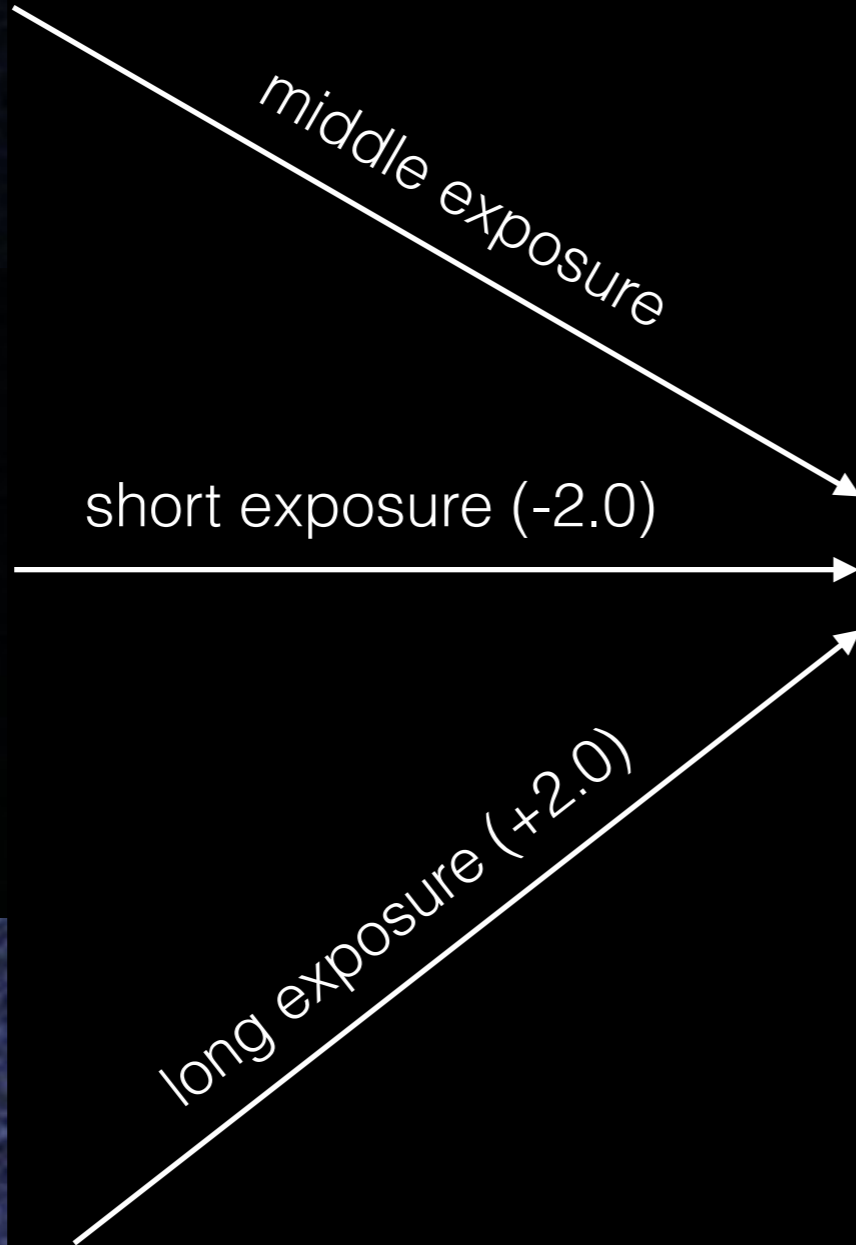
8 conventional images per 360°



Ashm
Buchanan (1966), No. 557

21 High Dimension Range (HDR) images per 360°
(or approx. 40 conventional images per 360° on turntable)

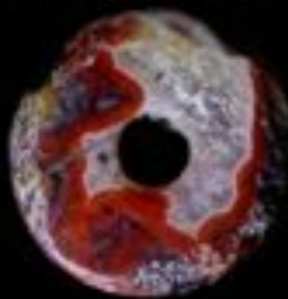
High Dimension Range (HDR) imaging





Ashm
Buchanan (1966), No. 557

21 High Dimension Range (HDR) images per 360°





Morgan Seal
575
(rotating view)



Ashm
Buchanan (1966), No. 557

HDR digital rollout



Desaturated result

Drill holes

- catalogues usually omit any information on the drill holes
 - *Do they show signs of wearing?*
 - *Does the drill hole go completely through the cylinder*
 - *Are there remains or handles in other material?*
 - ...



Problematic seals

- chalcedony



Del 354

32 High Dimension Range (HDR) images per 360°



Del354_01 Panorama * - PTGui Pro registered to Klaus Wagensohnner

Project Assistant | Source Images | Lens Settings | Panorama Settings | Crop | Mask
Image Parameters | **Control Points** | Optimizer | Exposure / HDR | Project Settings | Preview
Create Panorama

Provide control points (matching points on two overlapping pictures). As a rule of thumb, provide at least three control points for each pair of overlapping images. It's easy: simply click on matching points on both images.

0	1	2	3	4	5	6	7		0	1	2	3	4	5	6	7
8	9	10	11	12	13	14	15		8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23		16	17	18	19	20	21	22	23

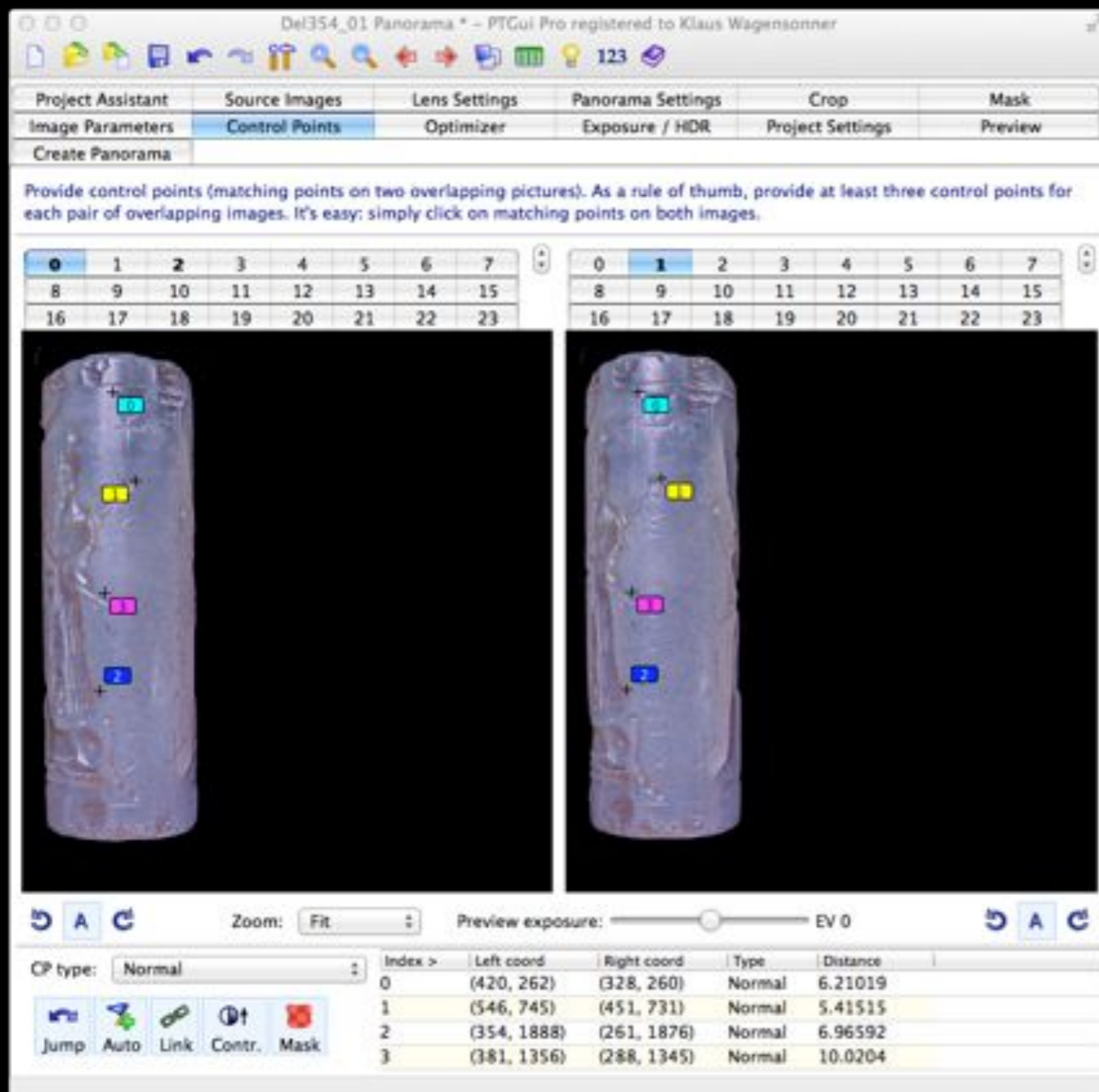
Zoom: Fit | Preview exposure: EV 0

CP type:	Normal	Index >	Left coord	Right coord	Type	Distance
		0	(420, 262)	(328, 260)	Normal	6.21019
		1	(546, 745)	(451, 731)	Normal	5.41515
		2	(354, 1888)	(261, 1876)	Normal	6.96592
		3	(381, 1356)	(288, 1345)	Normal	10.0204

Jump | Auto | Link | Contr. | Mask

Problematic seals

- chalcedony
- comparison of control points between two images



vs.



Del 354 (manually set control points)

Del 89 (automatically set control points)

Problematic seals

- rock crystal
- carving and drill hole shine through



Problematic seals

- rock crystal
- carving and drill hole shine through



Problematic seals

- heavily grained stone (HDR)

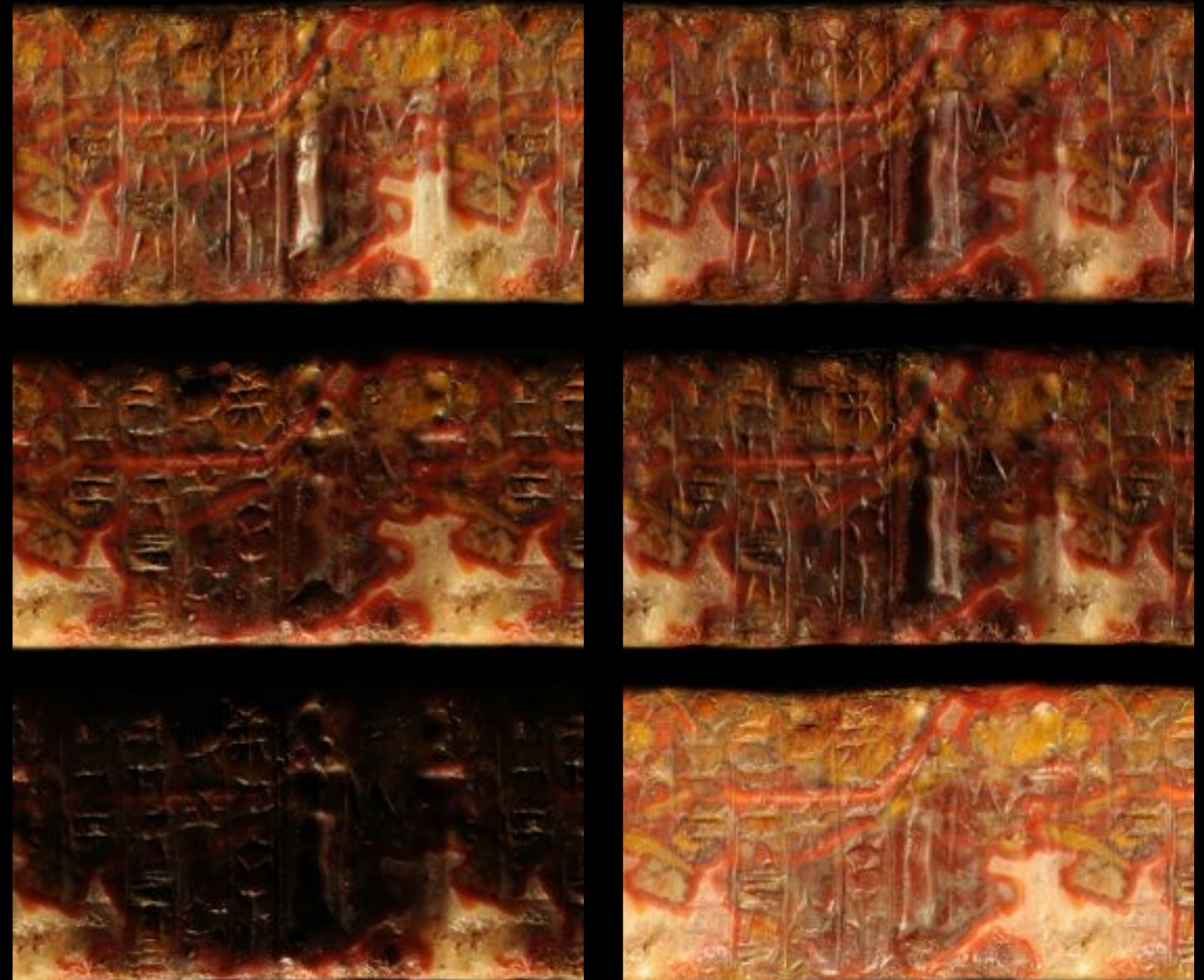
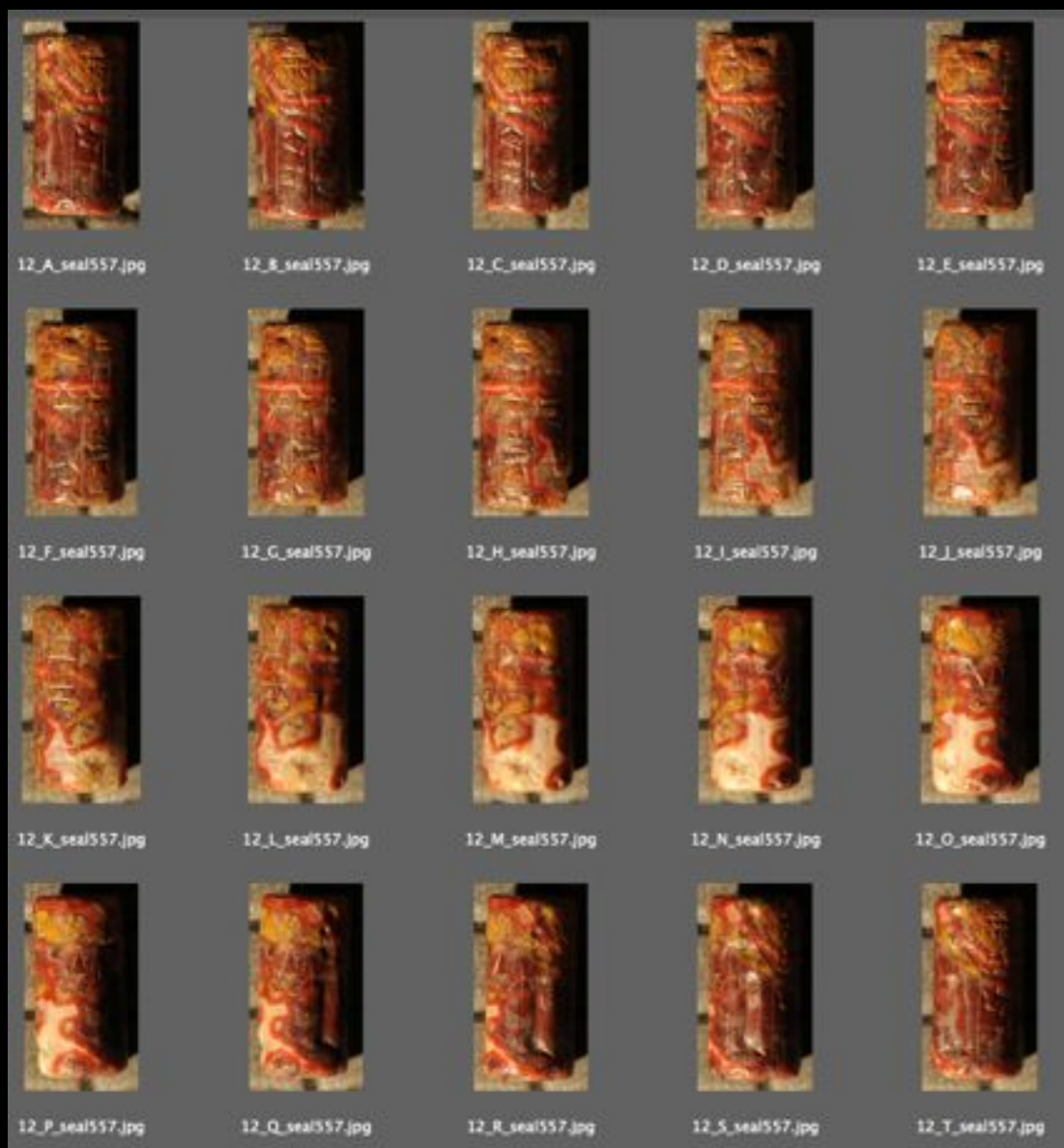


Ashm

Buchanan (1966), No. 675

Reflectance Transformation Imaging ?

- heavily grained stone
- stitching the ptm files: Possible?
- *interim solution*: stitching together one set of raw files and applying a template to create a full set of rollouts for each light angle.



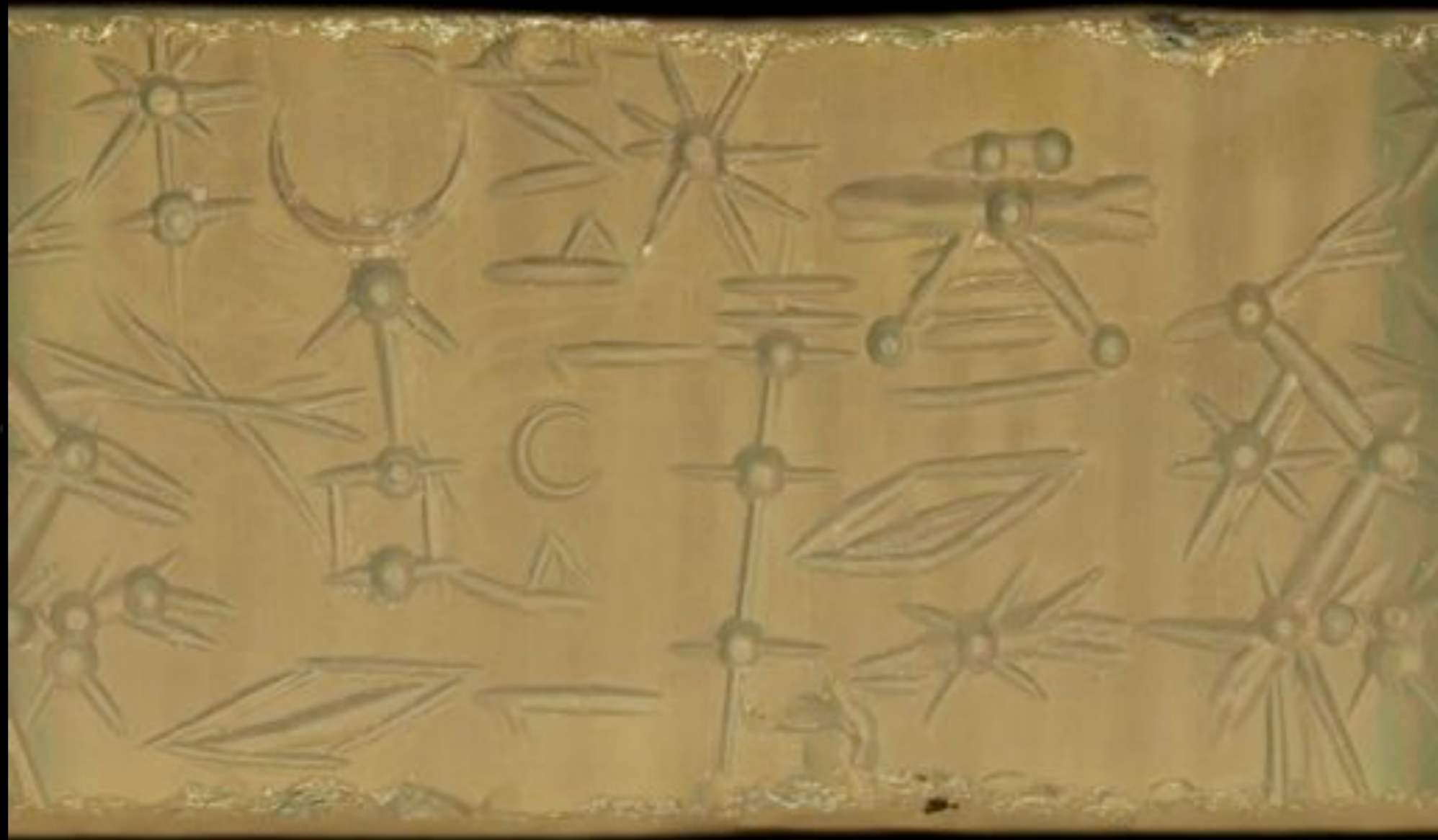


RTI

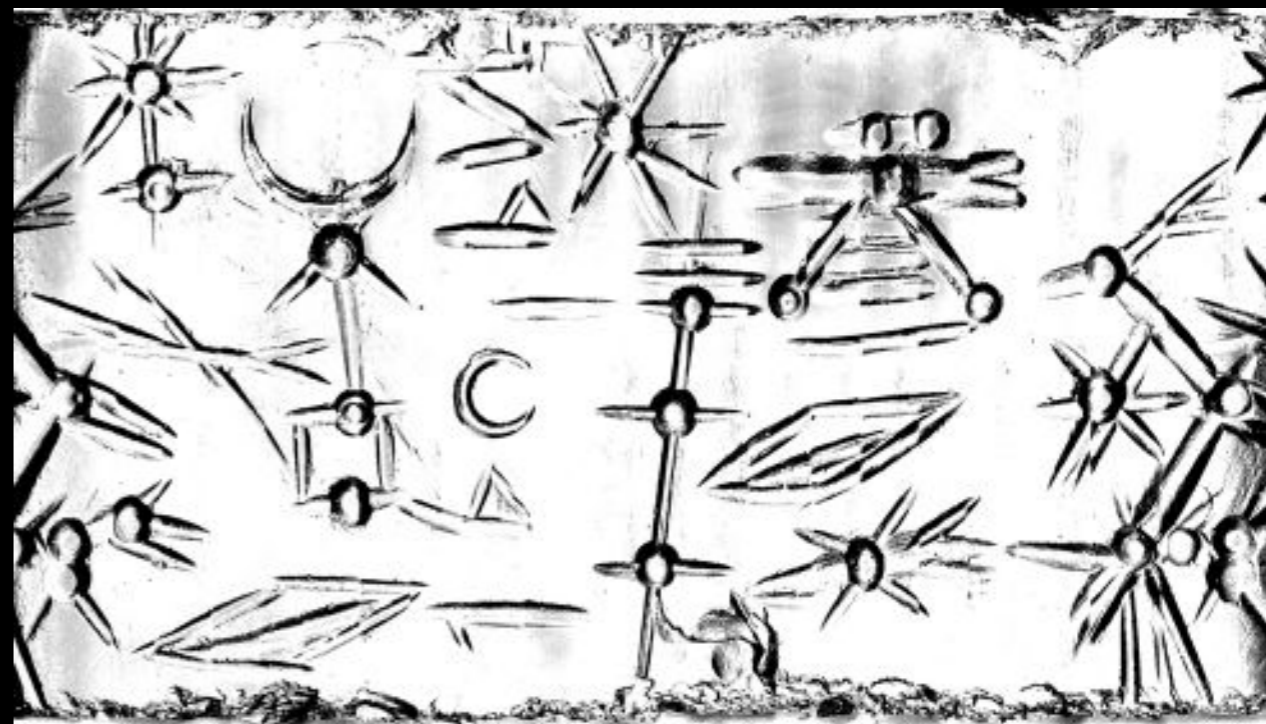


Specular Enhancement

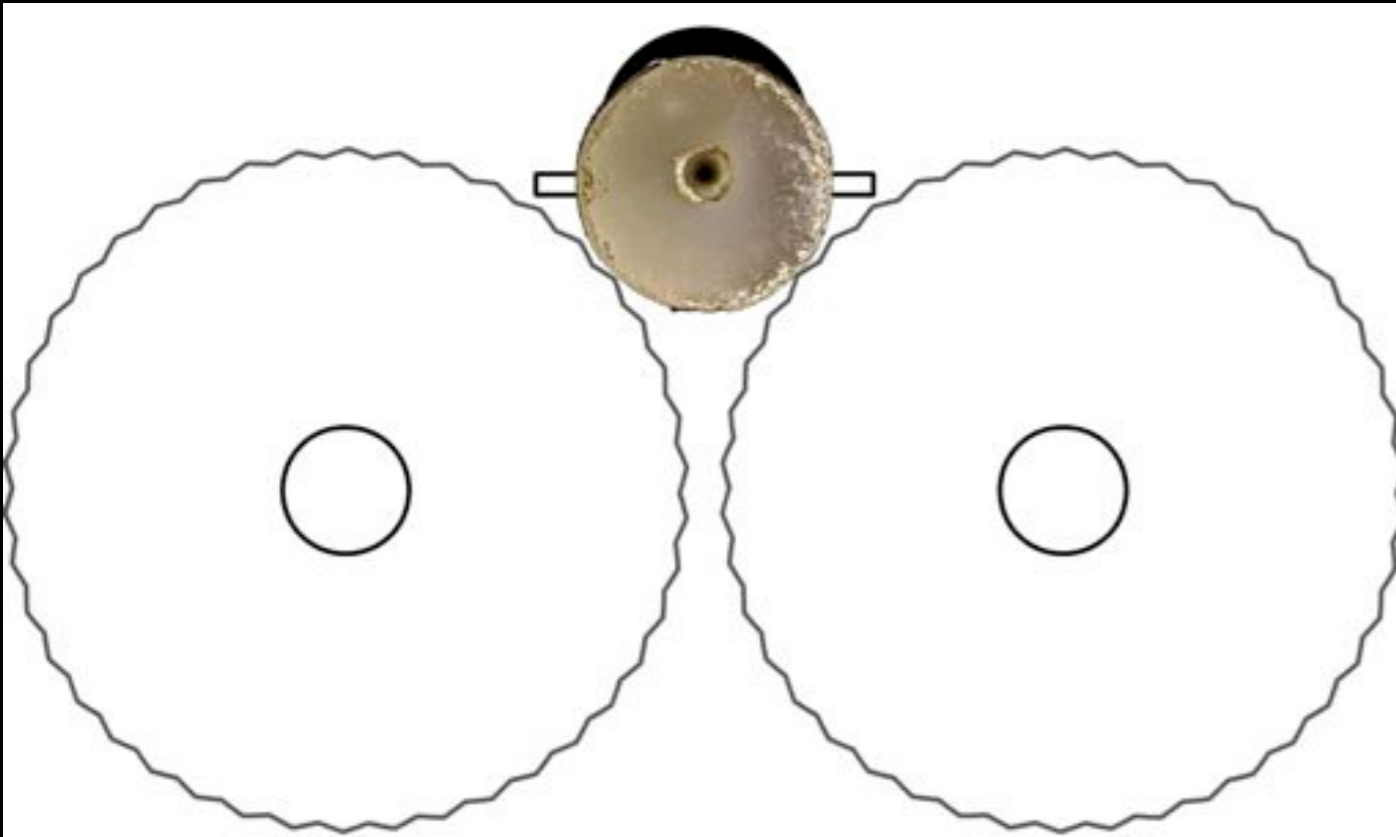




Ashm
Buchanan (1966), No. 644



Purpose-built imaging system



Motorized rotating of the seal in steps of 3-5 %

Integration into RTI system

