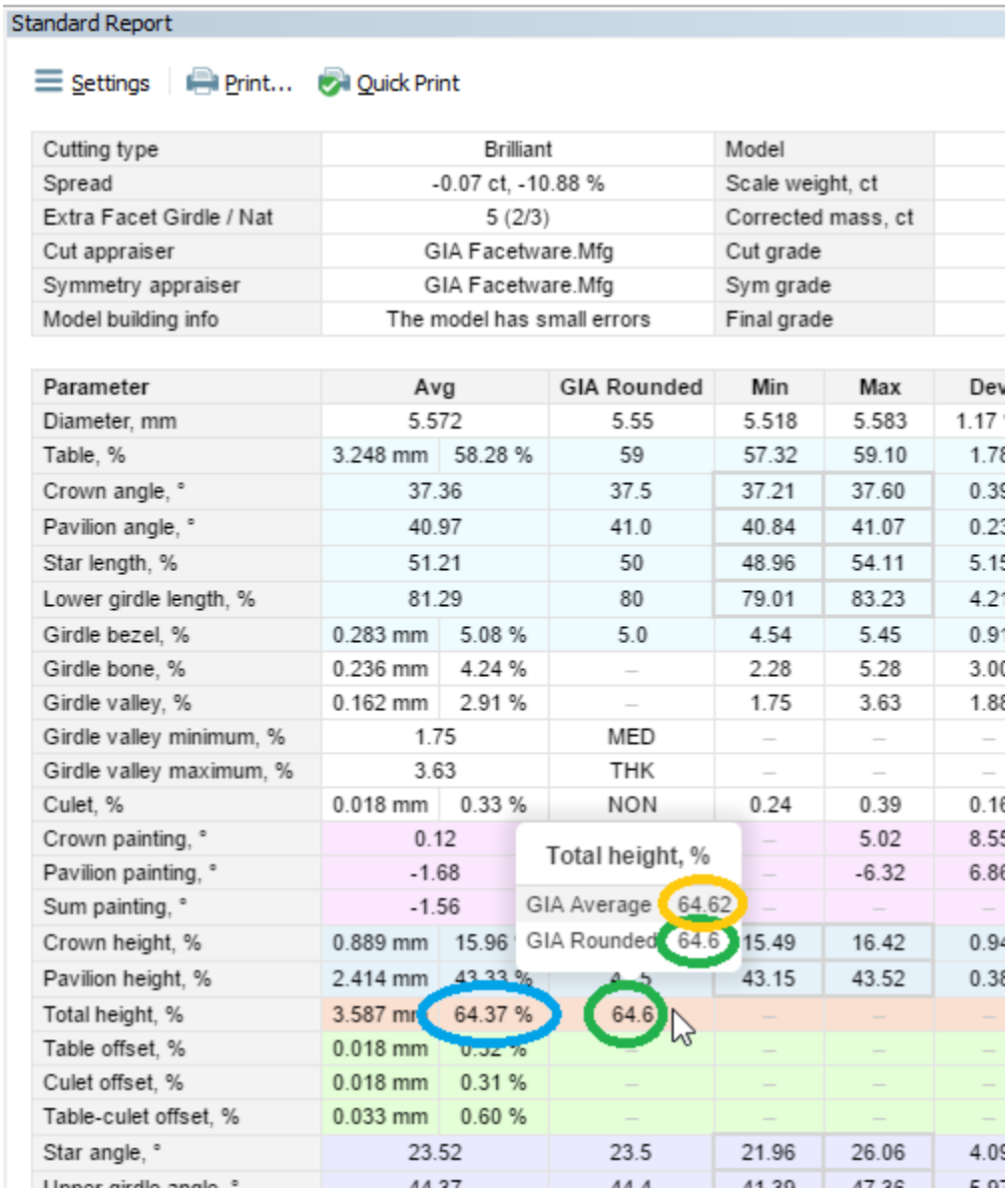
2018-06-14 - HPOxygen Server 4.5.11

Standard report - average GIA values

Now the average values are available for parameters calculated via GIA rules. Previously these parameters were shown only after rounding via GIA rounding rules.The new values are available through tooltips - hover the mouse above a cell in the GIA Rounded column to see the value.



Cutting type	Brilliant	Model	
Spread	-0.07 ct, -10.88 %	Scale weight, ct	
Extra Facet Girdle / Nat	5 (2/3)	Corrected mass, ct	
Cut appraiser	GIA Facetware.Mfg	Cut grade	
Symmetry appraiser	GIA Facetware.Mfg	Sym grade	
Model building info	The model has small errors	Final grade	

Parameter	Avg		GIA Rounded	Min	Max	Dev
Diameter, mm	5.572		5.55	5.518	5.583	1.17
Table, %	3.248 mm	58.28 %	59	57.32	59.10	1.78
Crown angle, °	37.36		37.5	37.21	37.60	0.39
Pavilion angle, °	40.97		41.0	40.84	41.07	0.23
Star length, %	51.21		50	48.96	54.11	5.15
Lower girdle length, %	81.29		80	79.01	83.23	4.21
Girdle bezel, %	0.283 mm	5.08 %	5.0	4.54	5.45	0.91
Girdle bone, %	0.236 mm	4.24 %	–	2.28	5.28	3.00
Girdle valley, %	0.162 mm	2.91 %	–	1.75	3.63	1.88
Girdle valley minimum, %	1.75		MED	–	–	–
Girdle valley maximum, %	3.63		THK	–	–	–
Culet, %	0.018 mm	0.33 %	NON	0.24	0.39	0.16
Crown painting, °	0.12			–	5.02	8.55
Pavilion painting, °	-1.68			–	-6.32	6.86
Sum painting, °	-1.56			–	–	–
Crown height, %	0.889 mm	15.96		15.49	16.42	0.94
Pavilion height, %	2.414 mm	43.33 %		43.15	43.52	0.38
Total height, %	3.587 mm	64.37 %	64.6	–	–	–
Table offset, %	0.018 mm		–	–	–	–
Culet offset, %	0.018 mm	0.31 %	–	–	–	–
Table-culet offset, %	0.033 mm	0.60 %	–	–	–	–
Star angle, °	23.52		23.5	21.96	26.06	4.09

Now Standard report features three calculation types for parameters (values marked with respective colors in the image above):

	Location	Calculation	Rounding
Via Octonus theory	"Avg" column	Calculated via **OctoNus** theory, normalized on **OctoNus** average diameter	**Math** rounding
GIA rules, GIA rounding	"GIA Rounded" column	Calculated via **GIA** theory, normalized on **GIA** diameter	**GIA** rounding

GIA rules, average	Tooltip over the cell in "GIA Rounded" column	Calculated via **GIA** theory, normalized on **GIA** diameter	**Math** rounding

As one can see in the image above, the ***Avg*** and ***GIA Average*** values differ, because they are normalized on OctoNus and GIA diameters respectively. And the ***GIA Rounded*** value is based on the ***GIA Average*** and rounded via GIA rules.

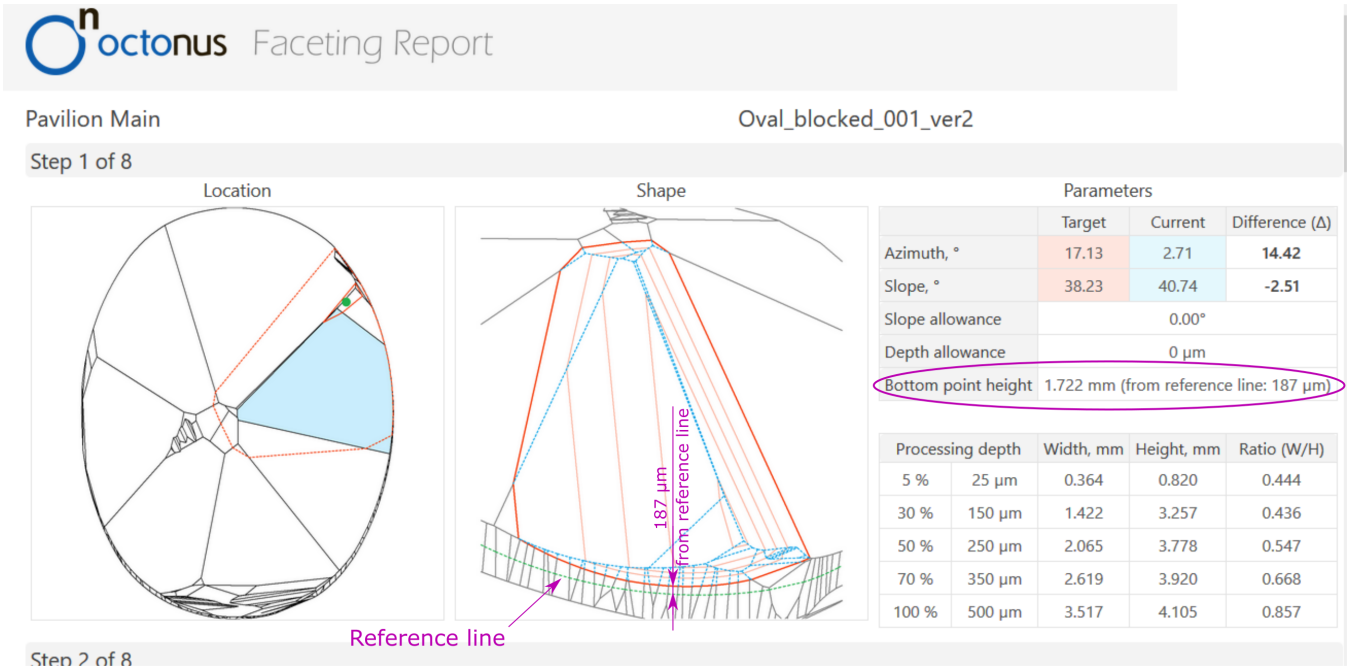
When ***Avg*** and ***GIA Rounded*** values differ in a non obvious way, the new ***GIA Average*** value can help to understand the cause of this difference.

Galahad Faceting report - Reference line is shown for pavilion mains

A useful polishing technique is to mark a line around a semi-polished stone at the height of the lowest point of future pavilion mains. This line gives the polisher a reference where to stop polishing a main facet.

The ***reference line*** height is the lowest ***bottom point height*** among all pavilion main facets.

The reference line and the bottom point height are now shown in the Galahad ***Faceting report*** for Pavilion Main faceting stage. The reference line is shown as a green dashed line on the ***Shape*** image. The bottom point height of the processed facet and the distance from the reference line is shown in the ***Parameters*** table on the right.

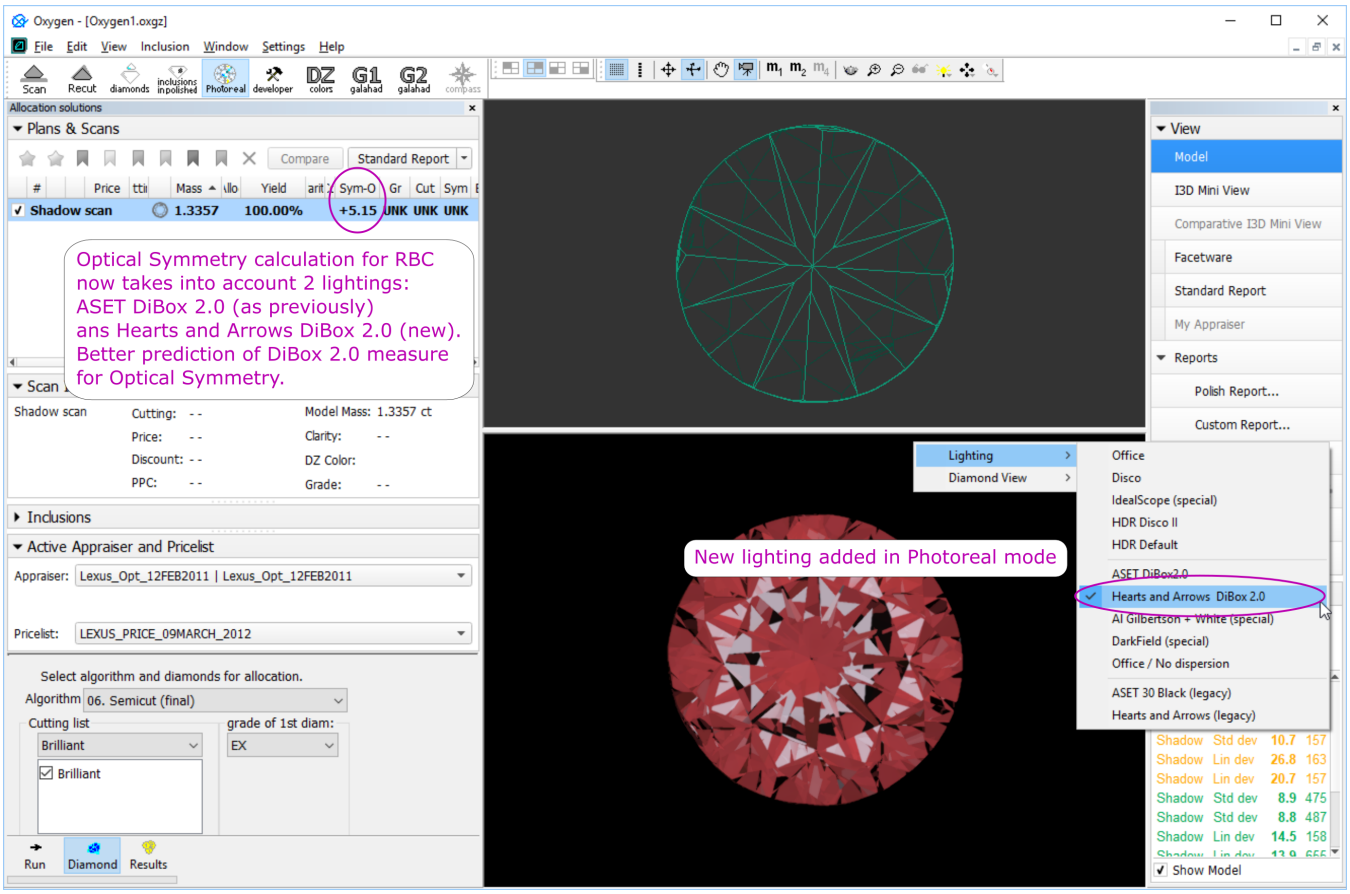


As we can see in the picture above, the bottom point height of the ***Step 1*** is 1.722 mm and the distance from the reference line to the bottom point is 187 m.

Optical Symmetry - Hearts&Arrows lighting takes part in calculation

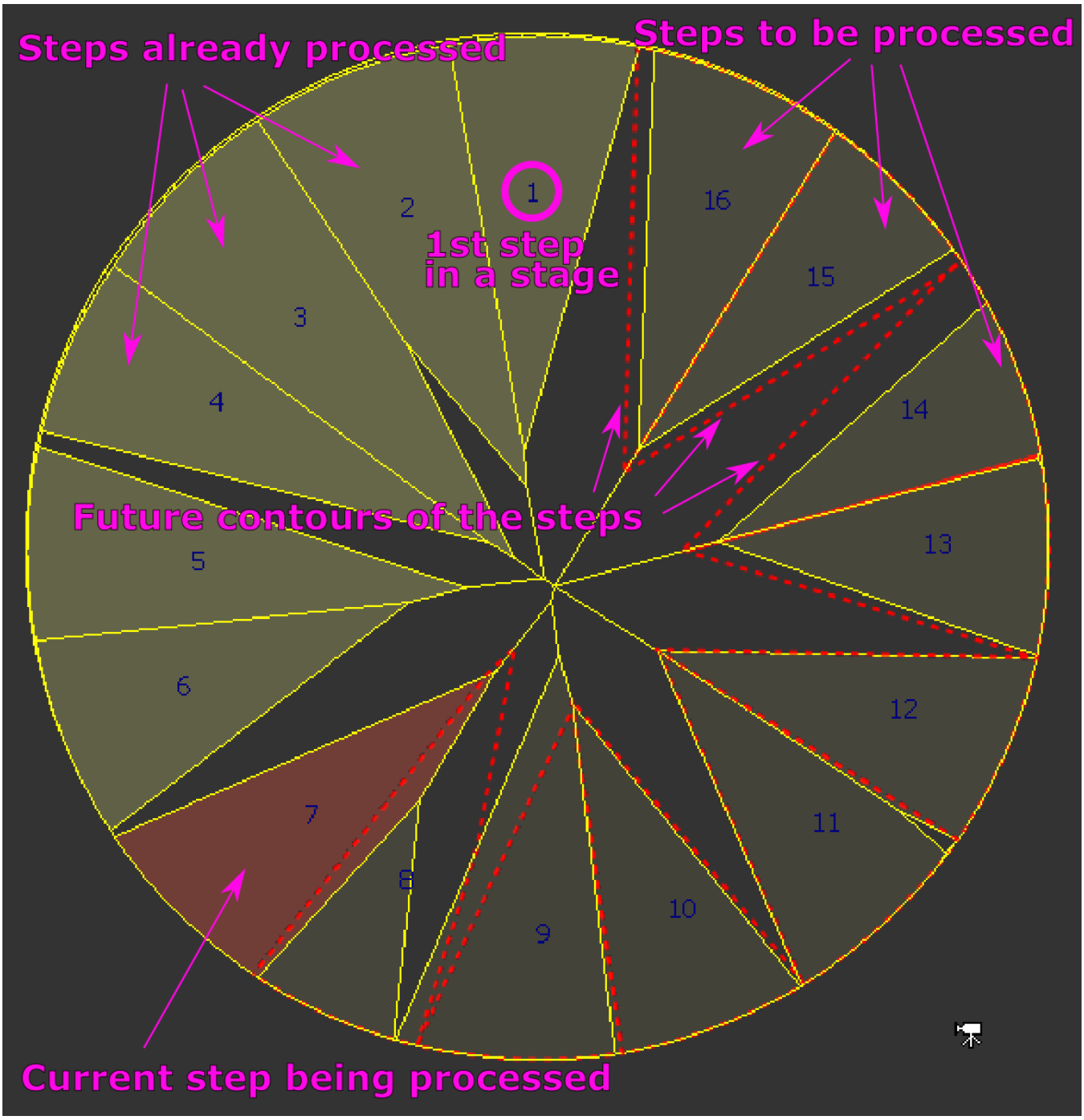
Optical Symmetry calculation for RBC stones now takes into account the ***Hearts&Arrows*** lighting in addition to ***ASET*** lighting. With this change, the optical symmetry values in HPO better correspond to the values calculated by DIBox 2.0, which are provided at Cutwise.com.

The values in ***Sym-O*** column in the solution list will change for RBC stones.



Galahad 1 mode - visualization improved

Visualization of the faceting steps in ***G1*** mode was improved:



SmartRecut

SmartRecut solutions improved in some cases, e.g. when a semi-polished stone has a fracture in the table.