

Flat Refractive Geometry- Errata

Tali Treibitz , Yoav Y. Schechner

ttali@tx.technion.ac.il, yoav@ee.technion.ac.il

Hanumant Singh

hsingh@whoi.edu

This is an errata to the paper "Flat Refractive Geometry", CVPR'08.
We fix a mistake in Sec. 4, Eq. (18) and Fig. (5) regarding the caustics surface.

Caustics

The caustic coordinates (Eq. 18 in the original paper) are (fix for R_{caustic})

$$R_{\text{caustic}} = d \left(1 - \frac{1}{n^2}\right) \left(\frac{r_i}{f}\right)^3$$
$$Z_{\text{caustic}} = -dn \left[1 + \left(1 - \frac{1}{n^2}\right) \left(\frac{r_i}{f}\right)^2\right]^{1.5}.$$

Fig. 1 replaces Fig. 5 in the original paper and depicts the caustic in a field of view (FOV) for which $\max(\theta_{\text{air}}) = 50^\circ$.

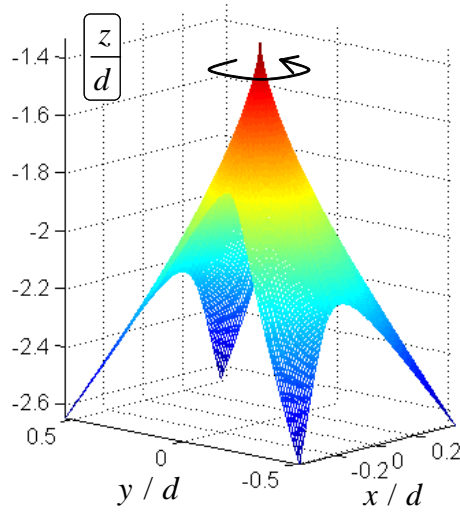


Figure 1. Caustic of a system having a flat interface with water. The camera has an FOV of $\max(\theta_{\text{air}}) = 50^\circ$. The caustic has radial symmetry which is violated towards the boundaries of the FOV due to the rectangular shape of the sensor. The extent of the caustics is $\mathcal{O}(d)$, and can often reach centimeters or decimeters.