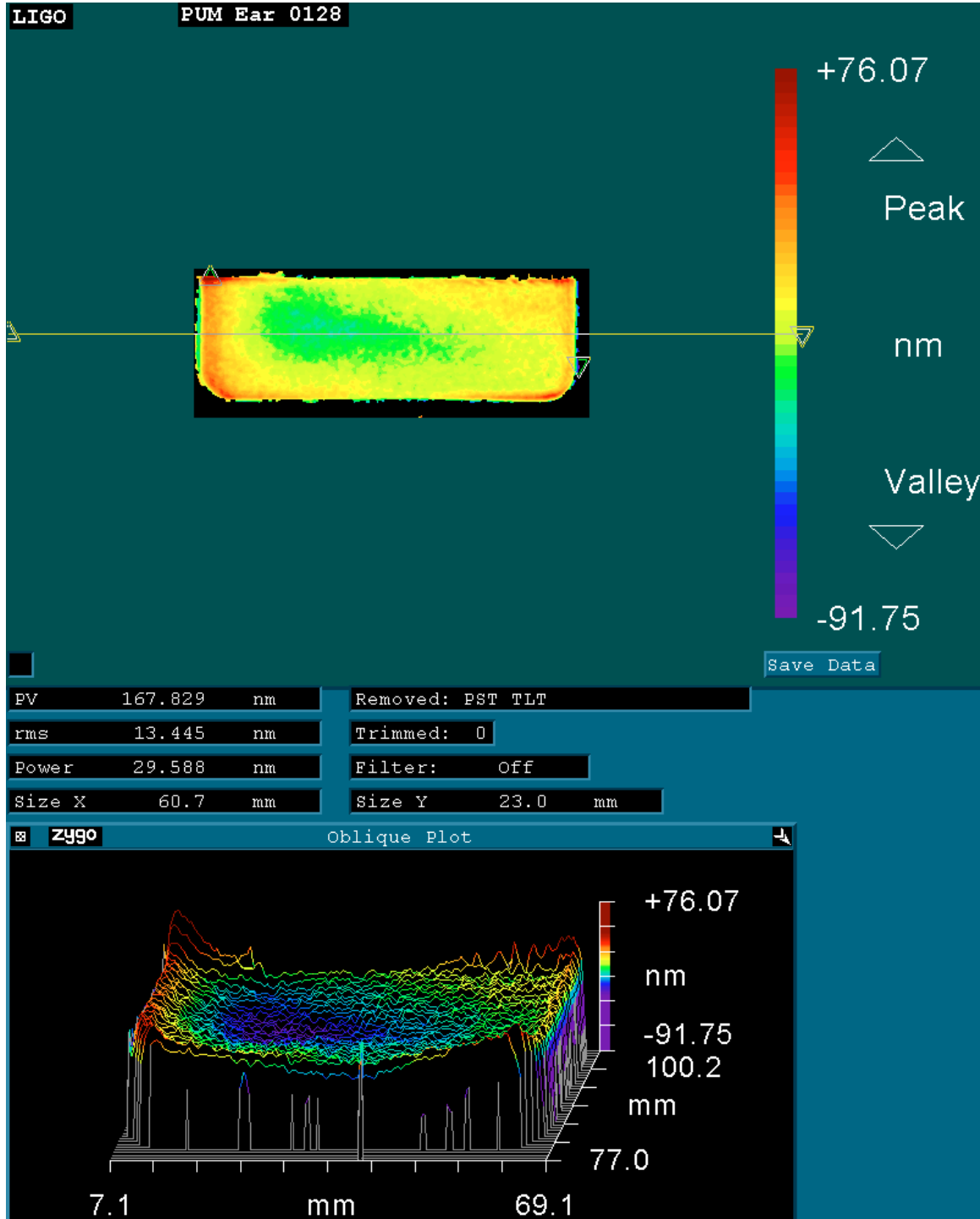


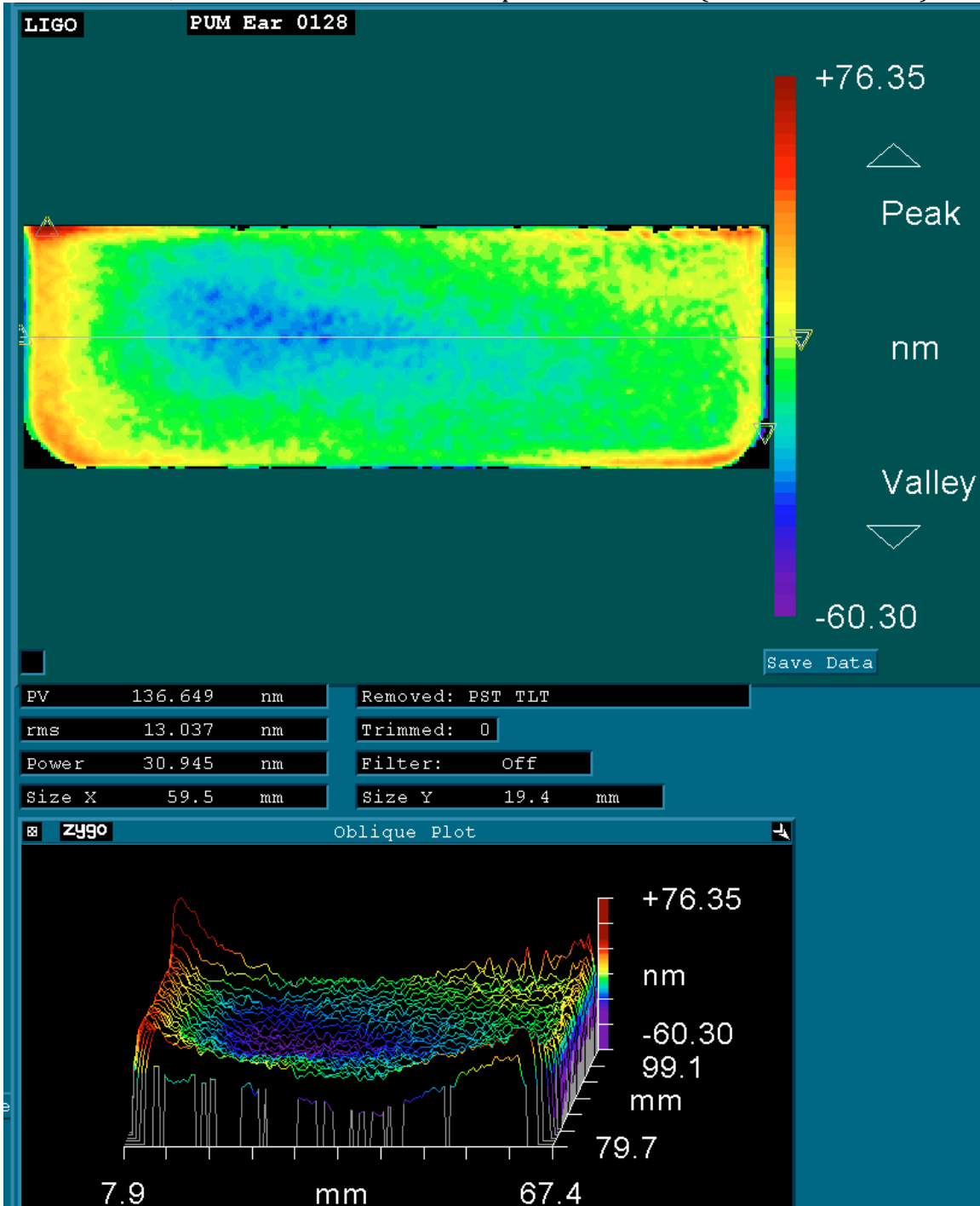
There is a scratch on S1, roughly 2mm from one ear.

SUS ear flats measured on the Zygo interferometer at Caltech. Pixel size 0.192 mm

PUM 0128 Raw Data



Phase unwrapping at the edges is very uncertain. Common practice is to trim a certain number of pixels, or mask the edge. Below is an image using a mask of 59.4 mm x 19.4mm, which is the real size of the polished surface (dimension - bevel)



Mask Calculation for 95% area:
According to D090007

D090007 SN 0128 Ear Flat Figure Measurement
G. Billingsley inspecting April 2015

LIGO-T1500177-v1

Bevel = 0.3 on all sides, so 0.6 on each dimension.
True Length, $L = 60 - 0.6$
True Height, $H = 20 - 0.6$
True area = $L * H = 1,152.36 \text{ mm}^2$

Border Area = 0.5% of true area = $2 * \text{edge}(L+H)$
Edge offset = $0.05 * \text{True Area} / (2L+H)$
Edge = 0.365mm or 0.73 off each dimension

95% Mask Length = True Length - $2 * \text{edge} = 60 - 0.6 - 0.73 = 58.7$
95% Mask Height = True Height - $2 * \text{edge} = 20 - 0.6 - 0.73 = 18.7$

95% of real area

