



F. Evolution of LST1 camera uniformity

F.1 Introduction

During the commissioning phase of the Large Size Telescope (LST) 1, one of the objectives is to test the uniformity of the camera and perform the necessary adjustments of ensure it. The non-uniformity along all the pixels of the camera translate in some pixels or modules to be more probable to trigger than others, biasing the results of the data analysis shown in chapter 4. In orther to have an idea of the uniformity of the camera during the three Crab campaigns, and spot possible problems in the data, the distribution of the centroids of the Hillas ellipses in the camera has been plotted for each day of observation. This way, anisotropies can be observed, pointing to pixels which for some reason which has to be studied, are triggered with a different frequency than the mean.

F.2 Distribution of centroid of Hillas ellipses for standard analysis

In this setion, the centroids calculated using the standard LST1 analysis, as described in section 4.2, are shown in pictures F.1, F.2 and F.3.

F.3 Distribution of centroid of Hillas ellipses for Expectation-Maximization analysis

In this setion, the centroids calculated using the Expectation-Maximization (EM) method for Hillas parameterization, as described in section 4.4.1, are shown in pictures F.4, F.5 and F.6.

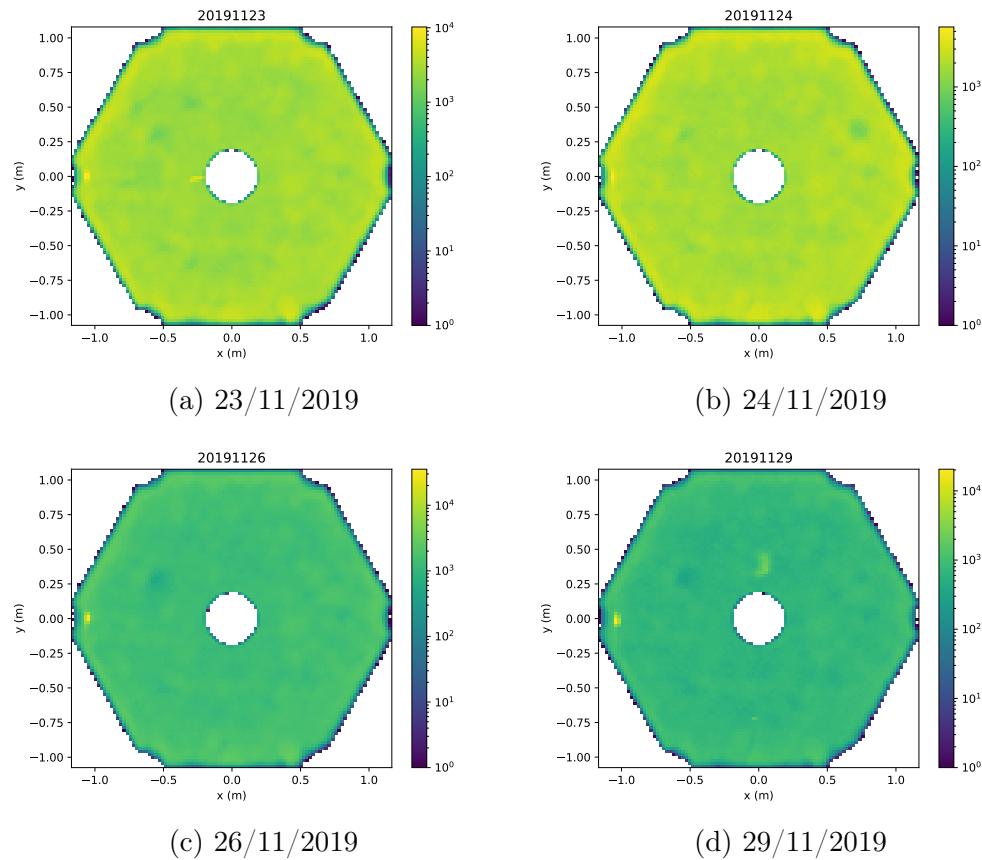


Figure F.1: Distribution of the positions in the camera of the center of gravity of Hillas ellipses for the data taken during the different days of the First Crab Campaign.

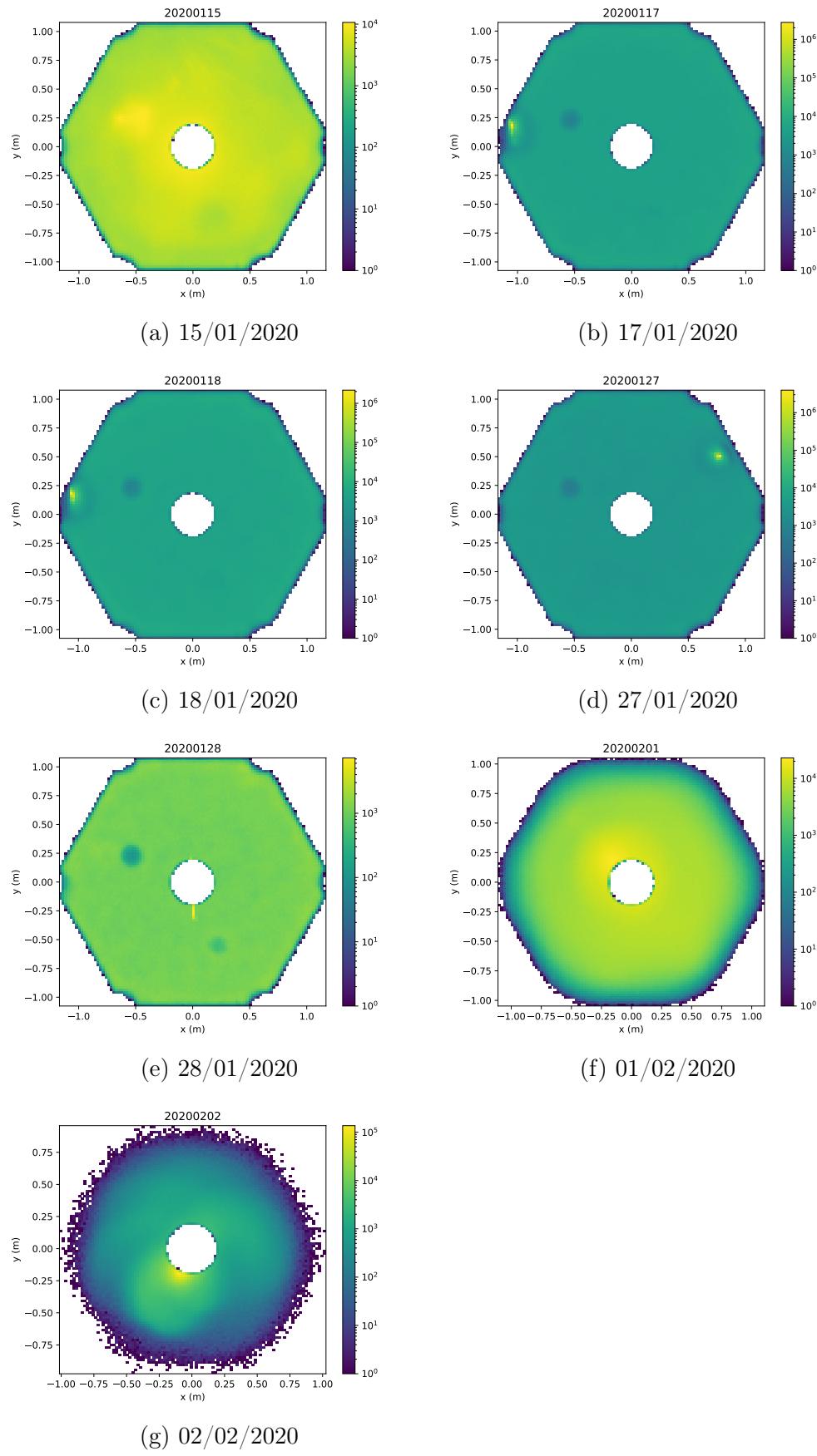


Figure F.2: Distribution of the positions in the camera of the center of gravity of Hillas ellipses for the detector analysis in the different days of the $S_{\mu 1}C_{\mu 1}C_{\mu 1}$ configuration.

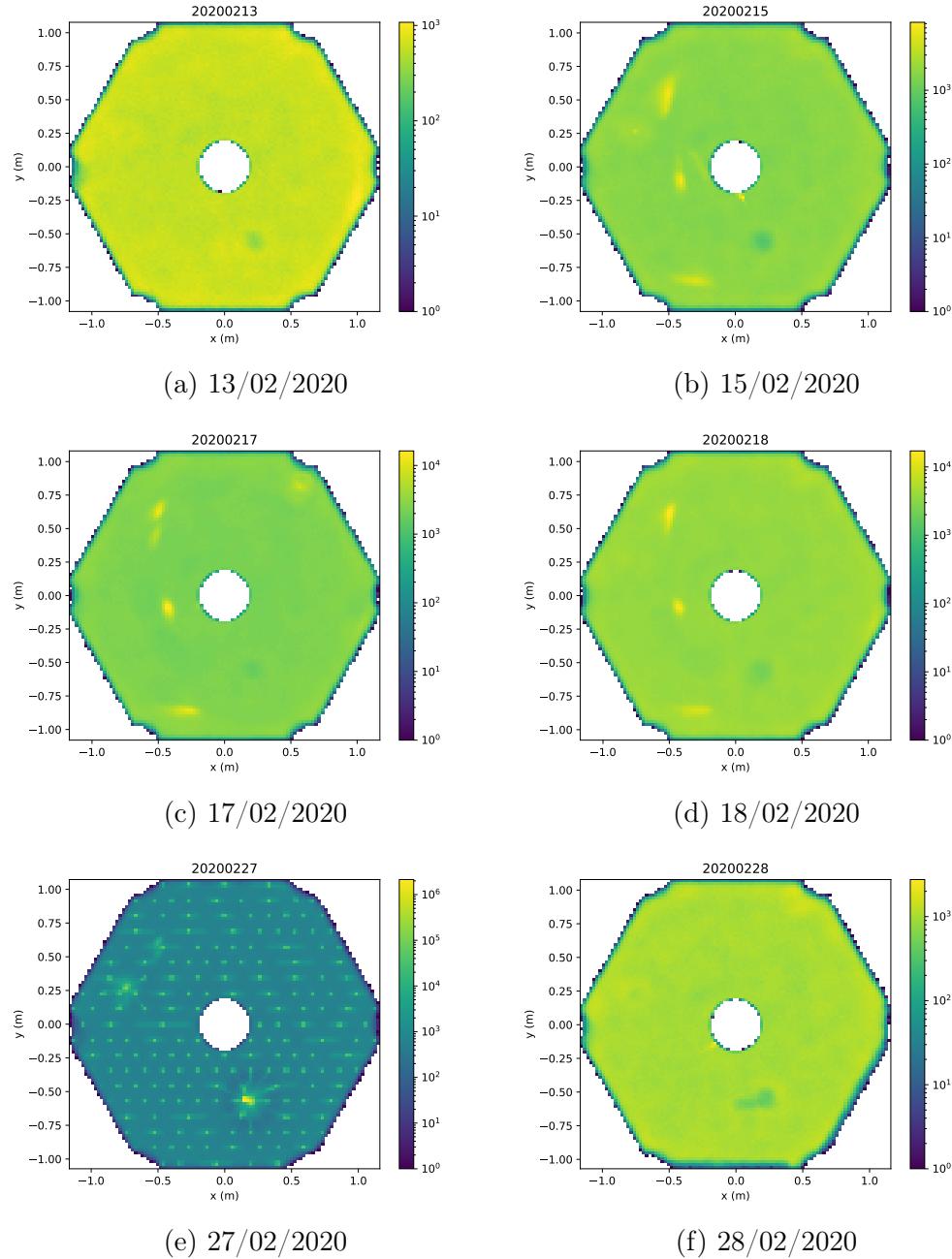


Figure F.3: Distribution of the positions in the camera of the center of gravity of Hillas ellipses for the data taken during the different days of the Third Crab Campaign..

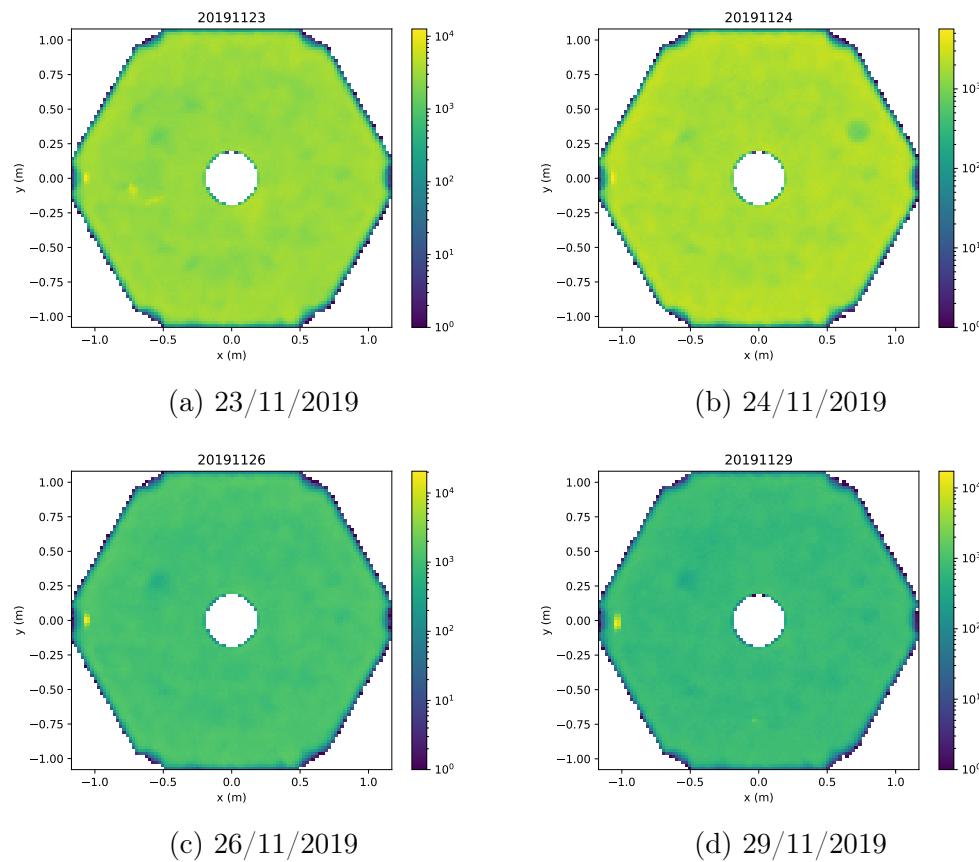


Figure F.4: Distribution of the positions in the camera of the center of gravity of Hillas ellipses for the data taken during the different days of the First Crab Campaign.

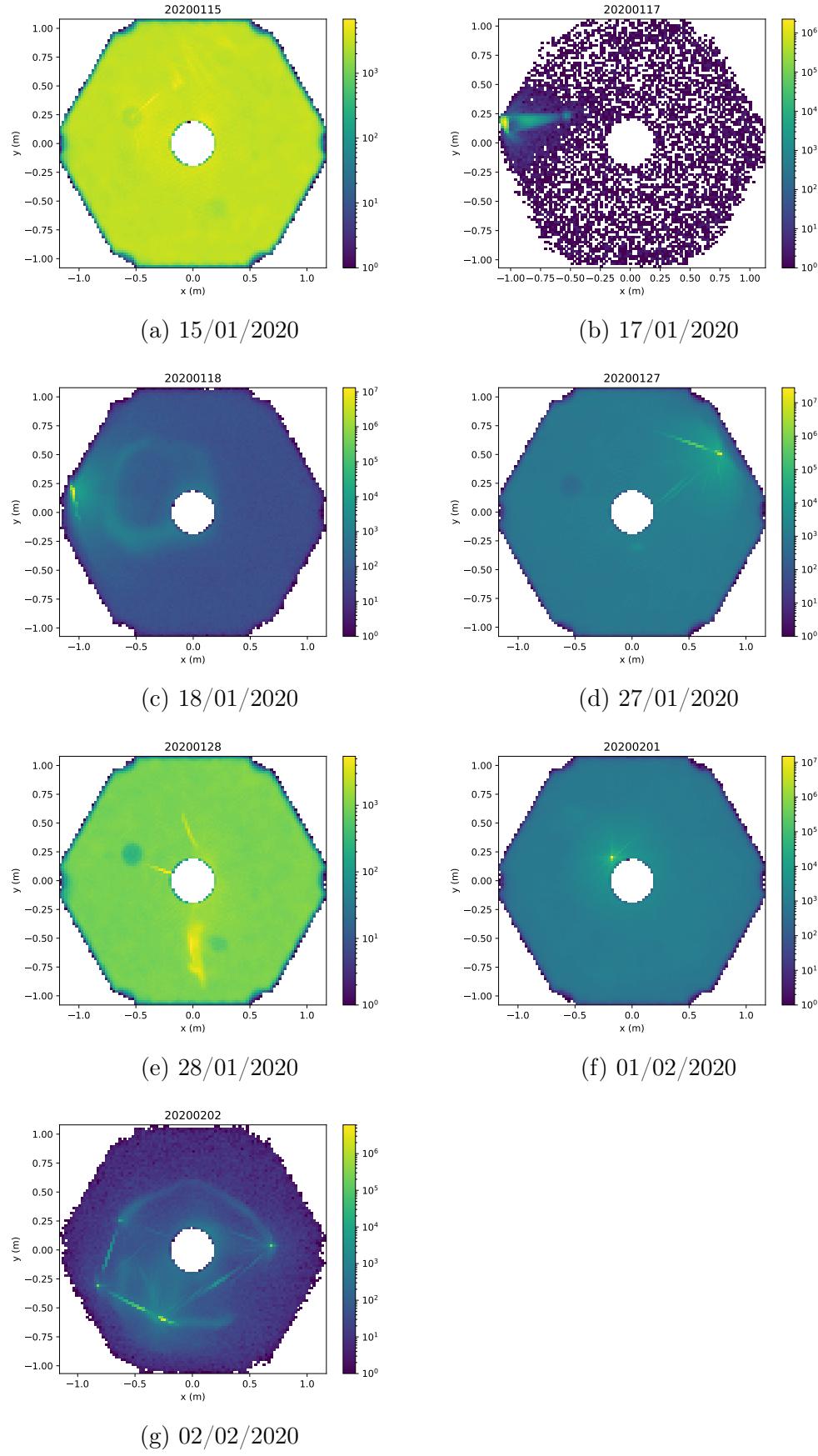


Figure F.5: Distribution of the positions in the camera of the center of gravity of Hillas Wires for the detector during the different days of the Second Cycle campaign.

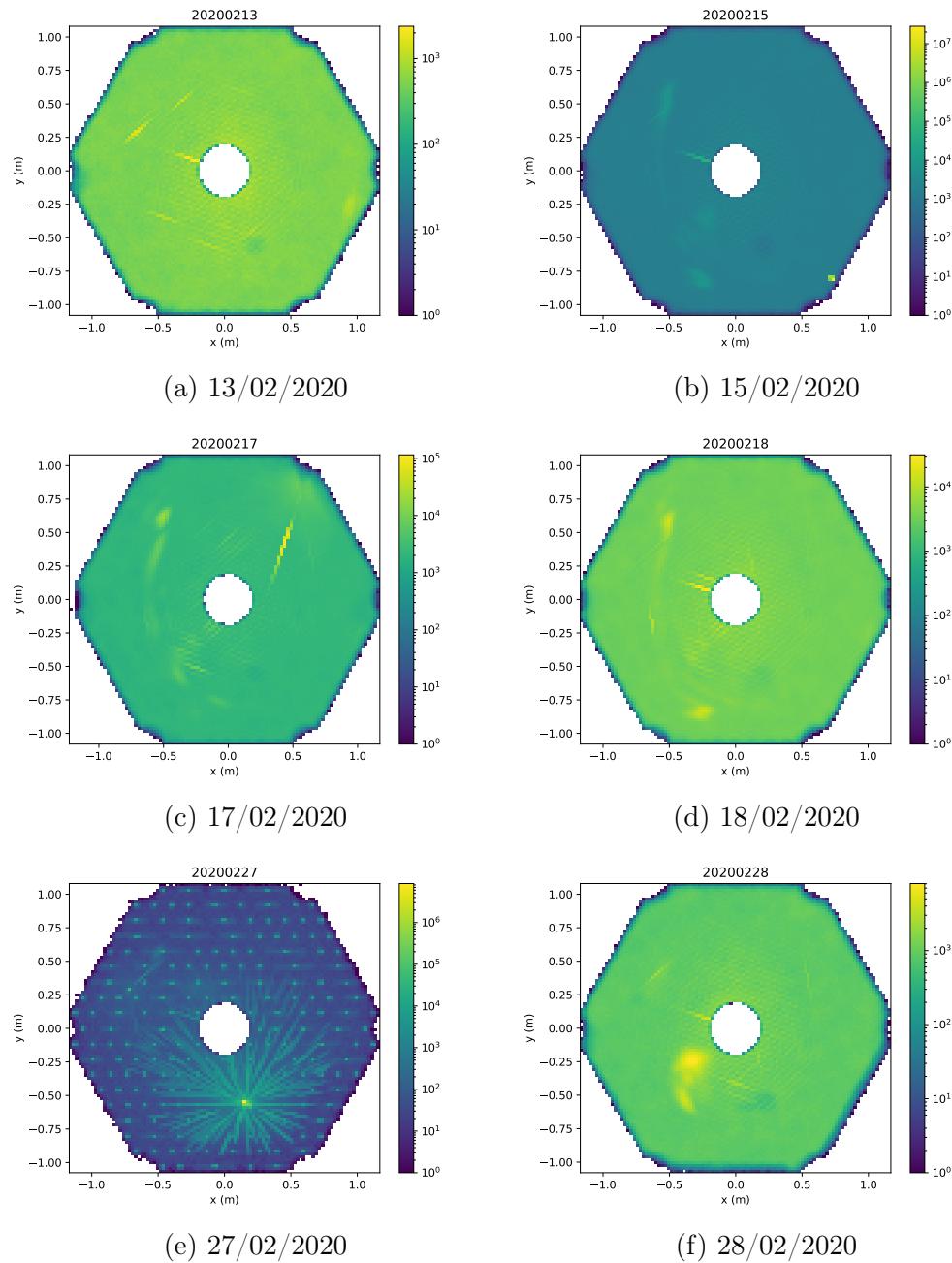


Figure F.6: Distribution of the positions in the camera of the center of gravity of Hillas ellipses for the data taken during the different days of the Third Crab Campaign..