Bar-like/Oval Shape of sBzK galaxies at $z\sim 2$ in Rest-frame UV and Optical Wavelengths

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Last year, we presented the intrinsic shape of star-forming BzK galaxies at $z\sim 2$ in GOODS-North and GOODS-South fields. The intrinsic shape was studied in both rest-frame UV and optical wavelengths by using high-resolution images taken with HST. However, the number of sample in GOODS-S where the rest-frame optical image is available is so small that we could not make strong conclusion on the shape. This time we extend our study to the SXDS field in order to increase the statistic significance of the results. Combining GOODS-N/S and SXDS fields, we finally have 2050 and 3135 sBzK galaxies in rest-frame UV (ACS/F850LP) and optical (WFC3/F160W) images, respectively. A majority of them show a single component and Sérsic index of $n\sim 1$ in both wavelength ranges. They also show the effective radii in agreement with those of the local disk galaxies. Furthermore, their stellar surface mass density is comparable to that of the local disk galaxies, suggesting that they are disk-like. However, their intrinsic shapes derived from the apparent axial ratio distribution are different. Although the sBzK galaxies seem to be slightly rounder in the rest-frame optical wavelength, they are statistically in bar-like or oval shape instead of round disk seen in the local disk galaxies. This indicates that some transformation should occur at later time, if these galaxies are indeed the progenitors of disk galaxies in local universe.