

# Theoretical Interpretation of the UV Observations of Elliptical Galaxies from NASA Space Mission

Young-Wook Lee  
Dept. of Astronomy and Atmospheric Science, Yonsei University

## Abstract

During the past two decades, ultraviolet(UV) observations of elliptical galaxies and spiral bulges from the OAO-2 and IUE satellites have established that the upturn in the spectrum below  $2000\text{\AA}$  is a common feature of these early-type system. Because of its important implications for the formation of galaxies, astronomical literature is replete with numerous discussions about the origin of the UV flux, yet the situation remains controversial. New light on the problem is shed by the recent observations from the Astro-1 space shuttle mission, which suggest that the metal-poor horizontal-branch(HB) stars merit more detailed consideration for the origin of the UV flux. It is shown here that such stars in these systems can indeed explain the UV flux. It is suggested that the observed correlation between the UV upturn and total mass is due to the possibility that the more massive galaxies tend to form earlier than the less massive galaxies as a result of more efficient star formation in denser environments. It remains a task of more detailed population synthesis models, now in progress, to put these results on a firmer quantitative basis.