AOGS 2005

Heliocentric dependence of the sodium emission of comet C/2004 F4 (Bradfield)

Mayumi IUCHI[1], Mitsugu FUJII[2] and Reiko FURUSHO[3]
[1]*Katsushika City Museum*
[2]*Fujii-Bisei Observatory*
[3]*Waseda University*

Comet C/2004 F4 (Bradfield) approached to the Sun in the middle of April 2004 and became very bright,about 2 mag. in visual, near its perihelion passage.
Low-dispersion spectroscopic observations of the comet were carried out for four days from late Aprilto early May, 2004. Heliocentric distance of the comet varied from 0.34 to 0.65 AU during this observational period. The sodium emission was notably observed in our optical spectra.
We will present a heliocentric dependence of the sodium emission in comet C/2004 F4 and derive potential barrier for the release of sodium atom from dust grains. The results will be compared with the previous studies to discuss on the ejection mechanism of sodium atoms in cometary comae.

References

[1] J. Watanabe, et al., *Astrophys. Journal* **585**, L159 (2003).
[2] R. Furusho, et al., *Astrophys. Journal* **618**, 543 (2005).