

[S7-3] **High Resolution Spectroscopic Observations of Metal-Poor Field Stars**

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We report chemical abundance measurements of 10 metal-poor halo giants and subgiants stars with the metallicity range $-0.5 < [\text{Fe}/\text{H}] < -3.0$. Target stars include BD+06 0648, BD+54 1323, HD6755, HD6833, HD8724, HD25532, HD63791, HD74462, HD110184 and HD12256. The high resolution spectra of the program stars were obtained using the Bohyunsan Optical Echell Spectrograph with the #4-fiber at $R=32000$ and $S/N>100$ and the EEV CCD model 44-82 of 2048 x 4096 pixel format as the detector. The standard spectral data reduction technique employing a number of IRAF routines and the MOOG-Kurucz model atmosphere was used to estimate the mean elemental abundances. The abundance analysis was mainly concerned with the [O I] doublet(λ 6300, 6363) and the light metallic lines (e.g. Na Through Ti, except for Sc). The analysis results are used to examine the role of type II supernovae, in relation with O and α -element production, in early formation phase of the Milky Way Galaxy.

[S7-4] **Expected Far-IR Extragalactic Background from Source Counts**

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Galaxy source counts provide important constraints on the background light. The cumulative brightness of the galaxies is a strict lower limit on the background. Since there has been the rapid progress in the infrared space telescopes, we can resolve a significant fraction of this background with the deep galaxy counts. We investigate the far-IR extragalactic background for the present and future infrared space missions such as Spitzer, ASTRO-F, Herschel and SPICA. For this purpose, we use the distribution of faint point source distributions based on the full range of source distribution models that include galaxy evolution.

We estimate the detection limits for various cases considering both the sky confusion and the source confusion. From the detection limits, we estimate the expected Cosmic Far-Infrared Background (CFIRB) and compare the fluctuation created by the flux levels of extragalactic sources below the detection limits with the fluctuation by Galactic cirrus.

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