

TITLE: GCN GRB OBSERVATION REPORT
NUMBER: 974
SUBJECT: GRB010222: Another absorption line system
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J. McDowell, R. Kilgard (Harvard-Smithsonian CfA), and
P. M. Garnavich (Notre Dame) report:

Further reduction and analysis of the FLW0 1.5m spectrum of the GRB 010222 optical afterglow (GCN 965) reveals the presence of two absorption systems along the line of sight to the gamma-ray burst, one at $z = 1.477$ as reported, and another with weaker lines at $z = 1.157$.

The interstellar absorption lines observed from each system are as follows, with identifications based on the ultraviolet spectral atlas of Blades et al. (1988, ApJ, 334, 308):

Observed Wavelength (A)	Line Identification	Rest Wavelength (A)	Redshift
7065.4	Mg I	2852.1	1.477
6941.7	Mg II	2802.7	1.477
6924.0	Mg II	2795.5	1.477
6438.5	Fe II	2599.4	1.477
6422.4	Mn II	2593.7	1.476
6405.4	Fe II	2585.9	1.477
6381.2	Mn II	2576.1	1.477
5900.1	Fe II	2382.0	1.477
5879.6	Fe II	2373.7	1.477
5805.4	Fe II	2343.5	1.477
5108.5	Zn II/Cr II blend	2061.9	1.478
5018.5	Zn II/Mg I blend	2025.6	1.478
4478.9	Si II	1808.0	1.477
4137.8	Al II	1670.8	1.477
3838.0	C IV blend	1549.0	1.478
3781.8	Si II	1526.7	1.477
6045.0	Mg II	2802.7	1.157
6028.2	Mg II	2795.5	1.156
5606.7	Fe II	2599.4	1.157
5574.1	Fe II	2585.9	1.156
5137.2	Fe II	2382.0	1.157

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