Subaru Telescope High Dispersion Spectrograph
An Atlas of Th-Ar Spectra:

ver. 1.1

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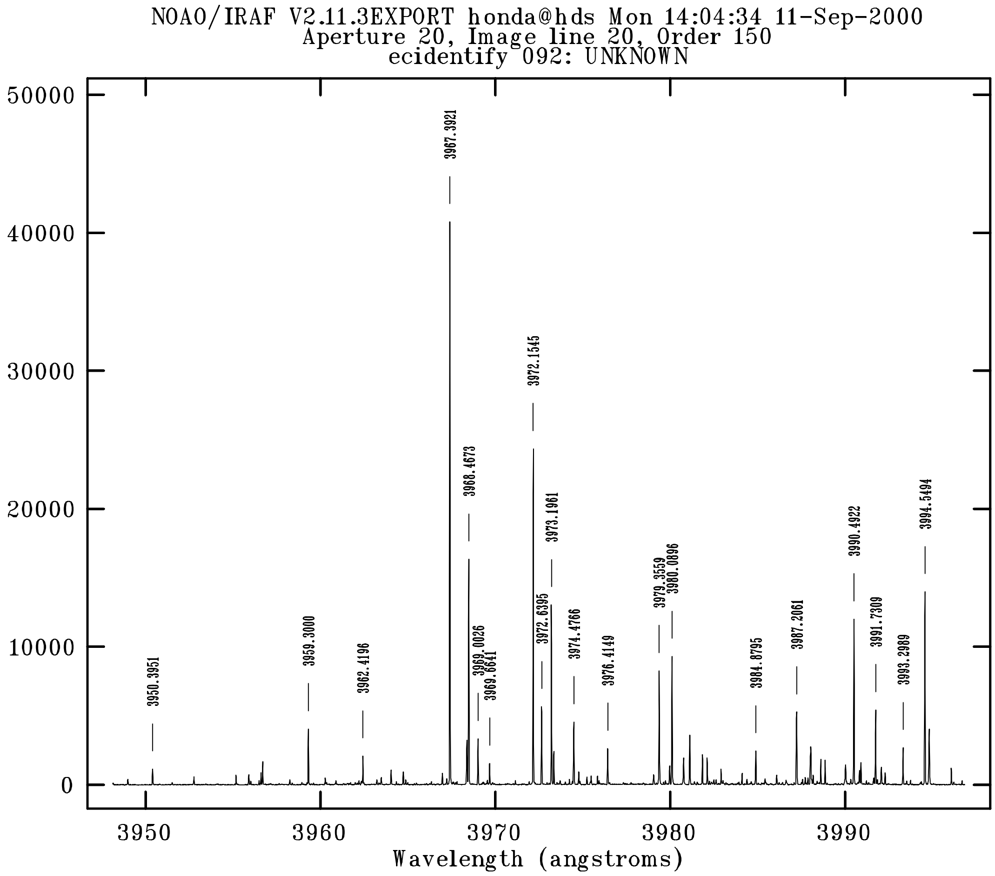

S. Honda & W. Aoki
National Astronomical Observatory of Japan
Feb., 2002

Subaru Telescope High Dispersion Spectrograph
An Atlas of Th-Ar Spectra:

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Feb., 2001 (Revision in Feb., 2002)

1. HDS Th-Ar Spectra

The Th-Ar spectra were obtained with the Subaru/HDS (High Dispersion Spectrograph, Noguchi et al. 1998) for 3000-9700Å. The RGL 31.6 grooves/mm grating is used as the echelle, and the EEV 42-80 CCDs are used as the detector in the HDS.

The data reduction was done with the IRAF[1] 'echelle' package. The echelle blaze profile is not corrected for the Th-Ar spectra, so that the line intensity generally looks decreasing from the center to the both edges in each spectrum. The lines were identified with the IRAF 'ecidentify' routine. The rms fit is typically better than 0.01Å.

2. Line Data

For the line identification, the KPNO Th-Ar Atlas (Willmarth, D. W. 1987) was used for 3200-9500Å. For the wavelength ranges which were not covered by the KPNO Th-Ar Atlas, the Th line data in the atomic line list (Hirata & Horaguchi 1994) are adopted.

3. References

Hirata R. & Horaguchi T., 1995, *Atomic spectral line list*, ftp://dbc.nao.ac.jp/pub/CDS/cats/VI/69

Noguchi K., et al., 1999, High Dispersion Spectrograph (HDS) for Subaru Telescope, SPIE, 3355, 354

Willmarth, D. W. 1987, A CCD Atlas of Comparison Spectra, Thorium-Argon Hollow Cathode 3180Å-9540Å, Kitt Peak National Observatory, National Optical Astronomy Observatories

4. Change Redord

1st release Feb. 2001
2nd release Feb. 2002: change the figure of 90th order (p. 108)

[1]IRAF is distributed by the National Optical Astronomy Observatories, which are operated by the Association of Universities for Research in Astronomy, Inc., under cooperative agreement with the National Science Foundation

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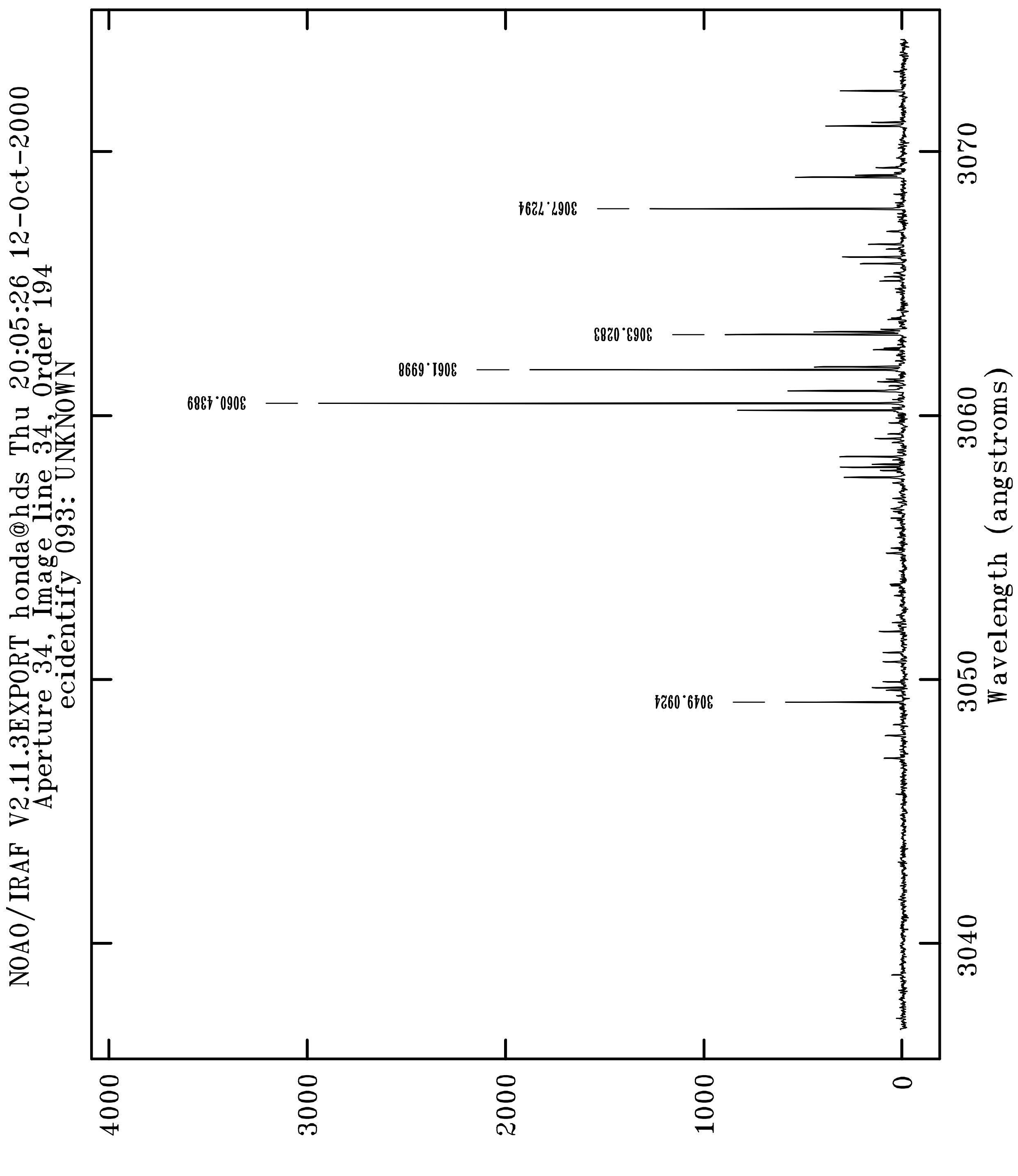

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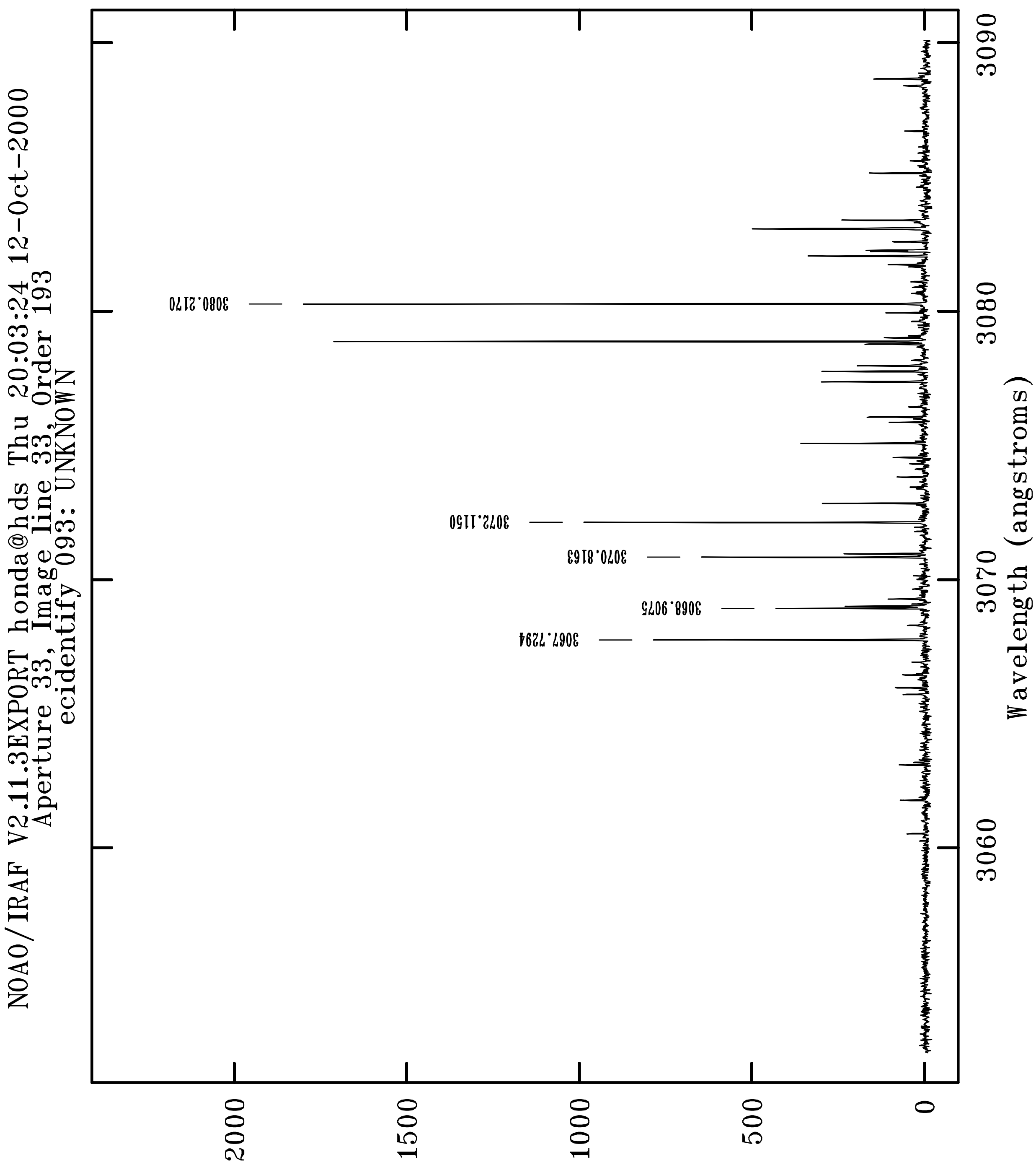

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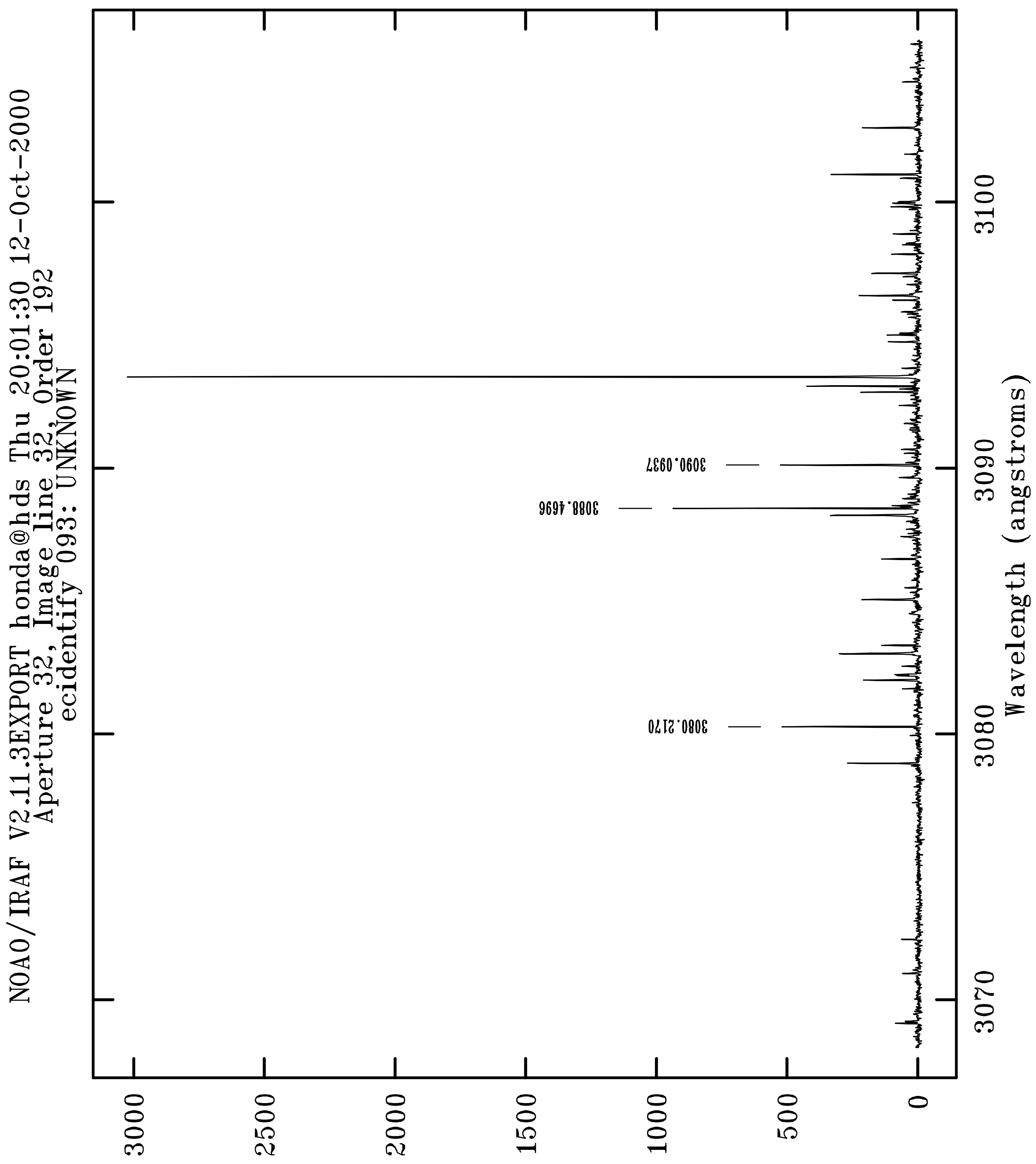

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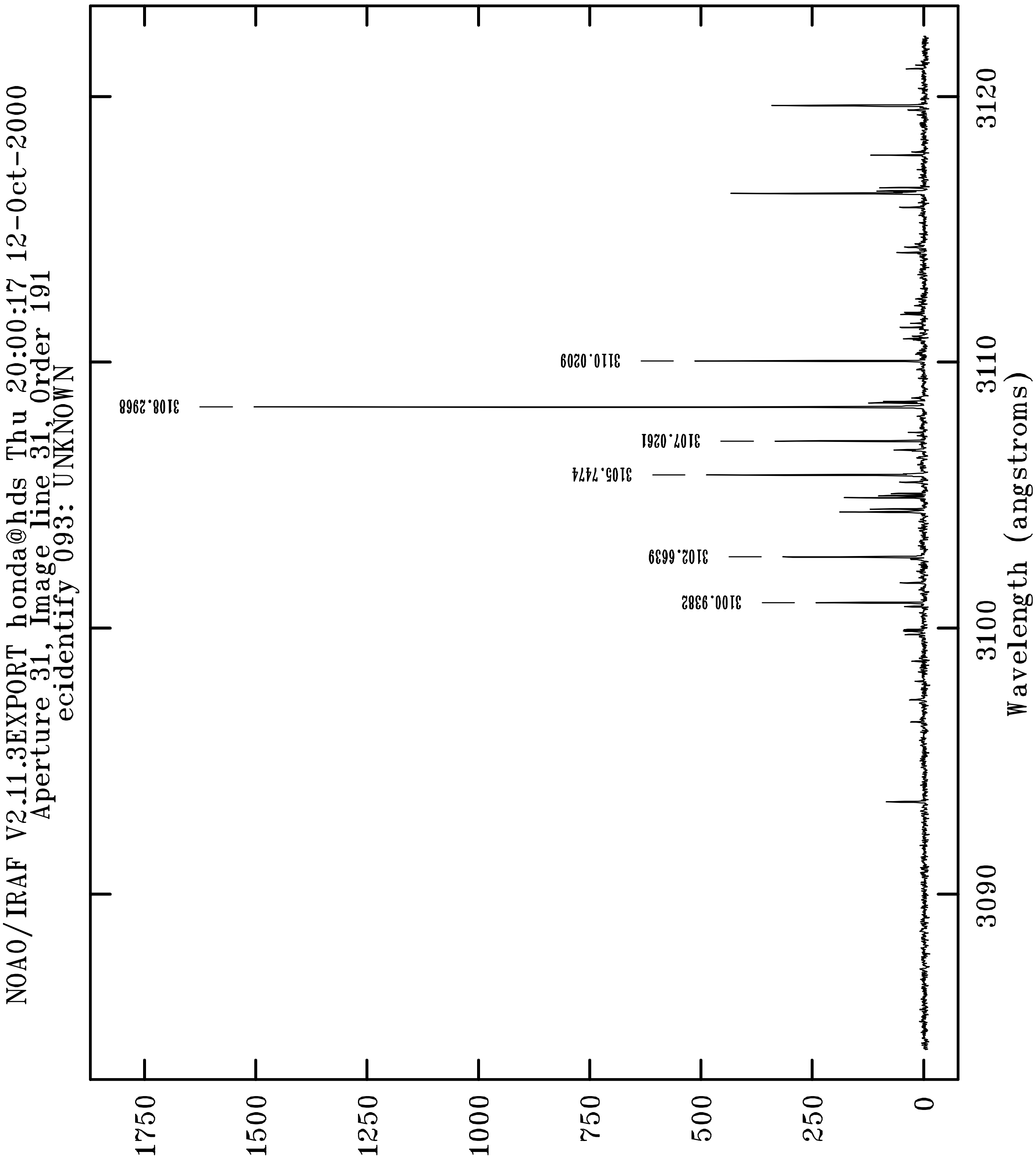

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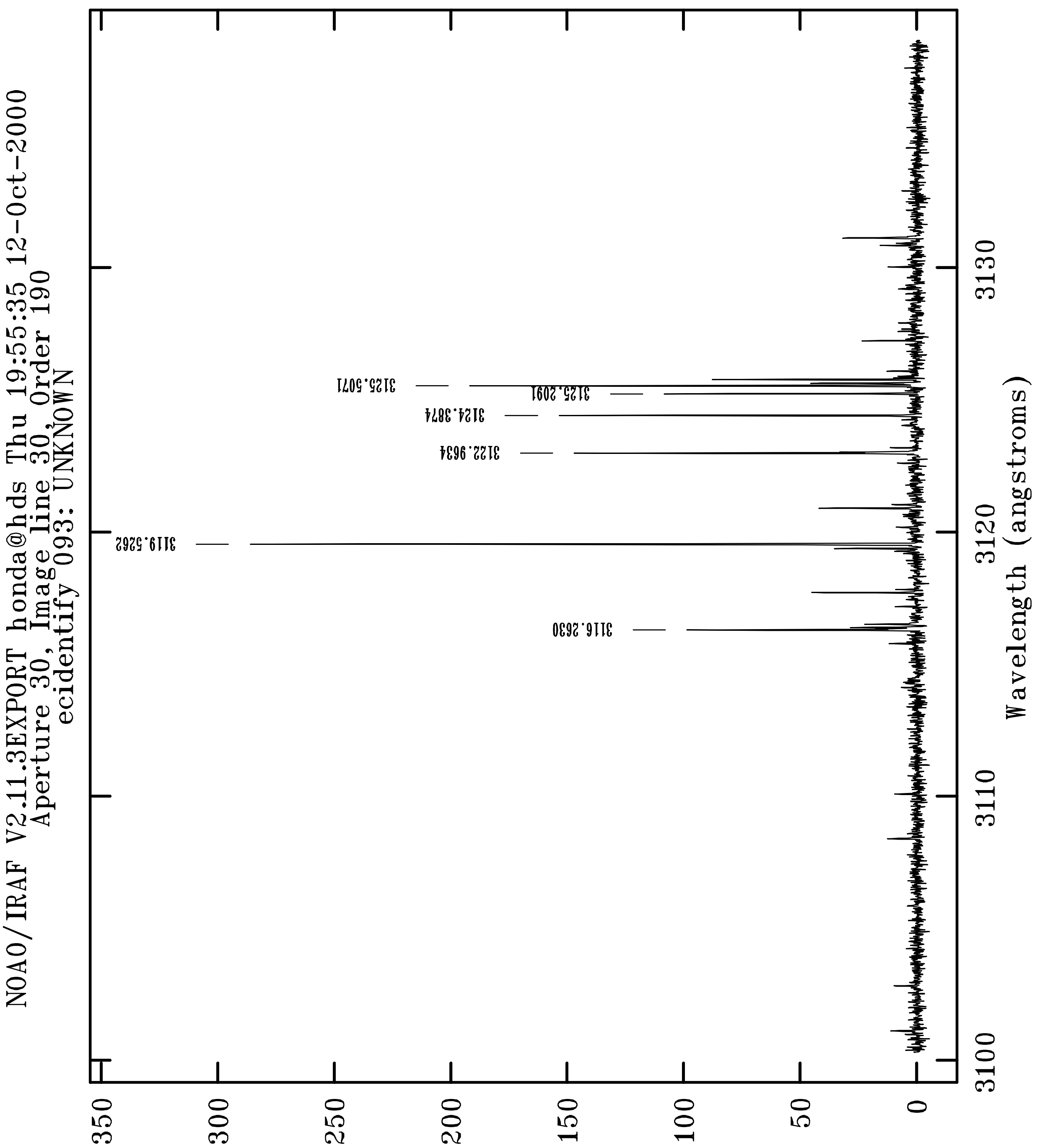

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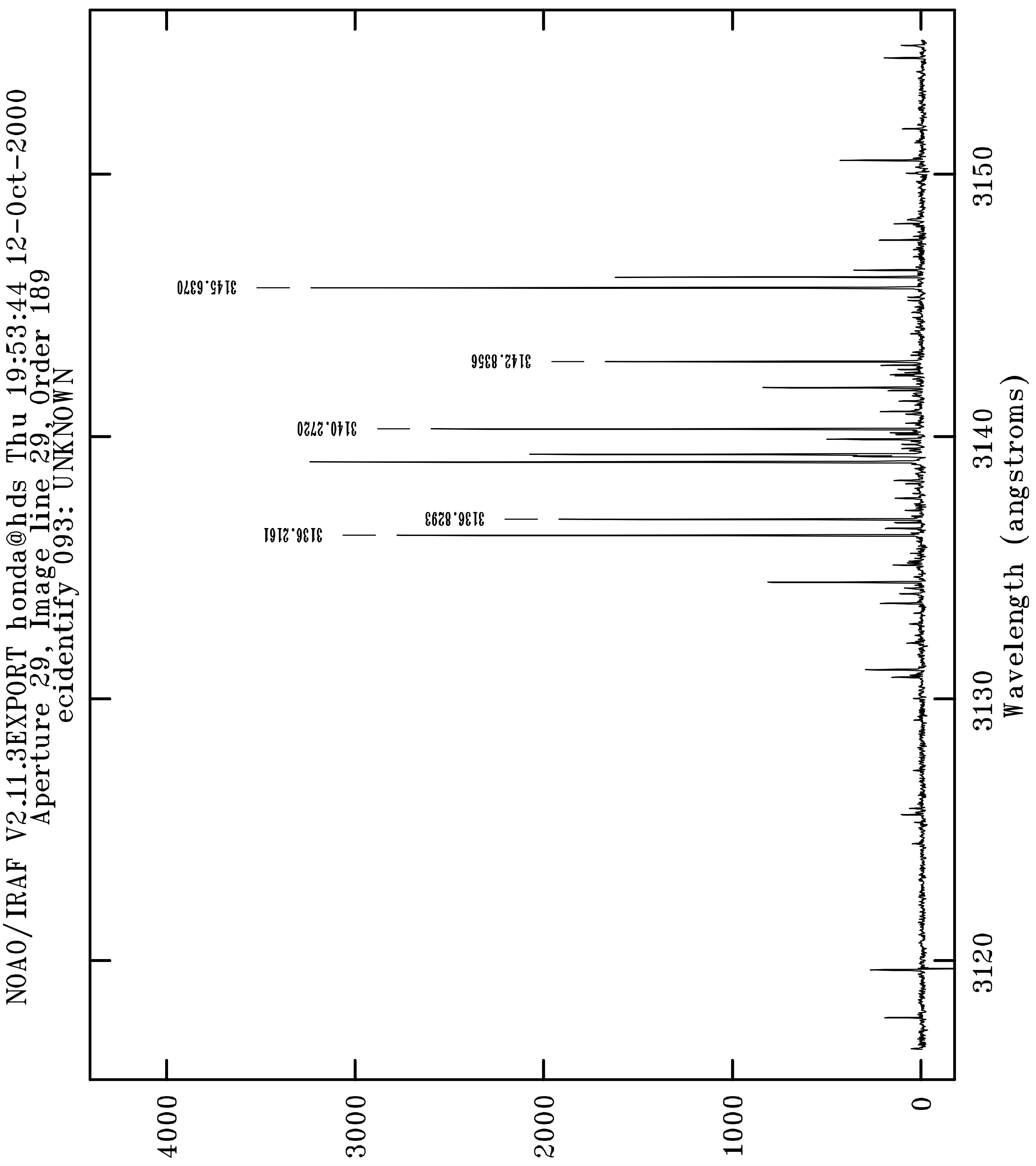

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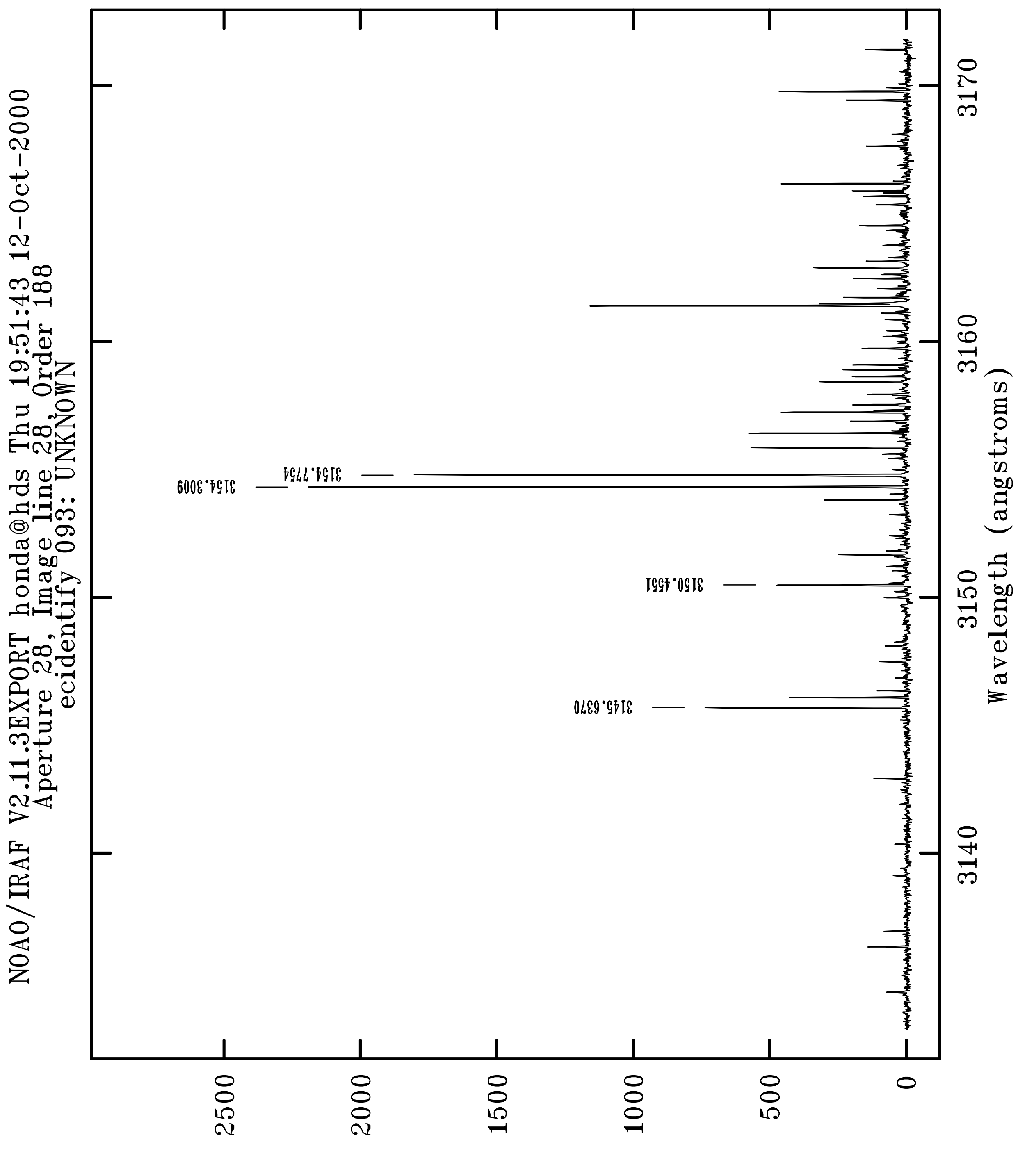

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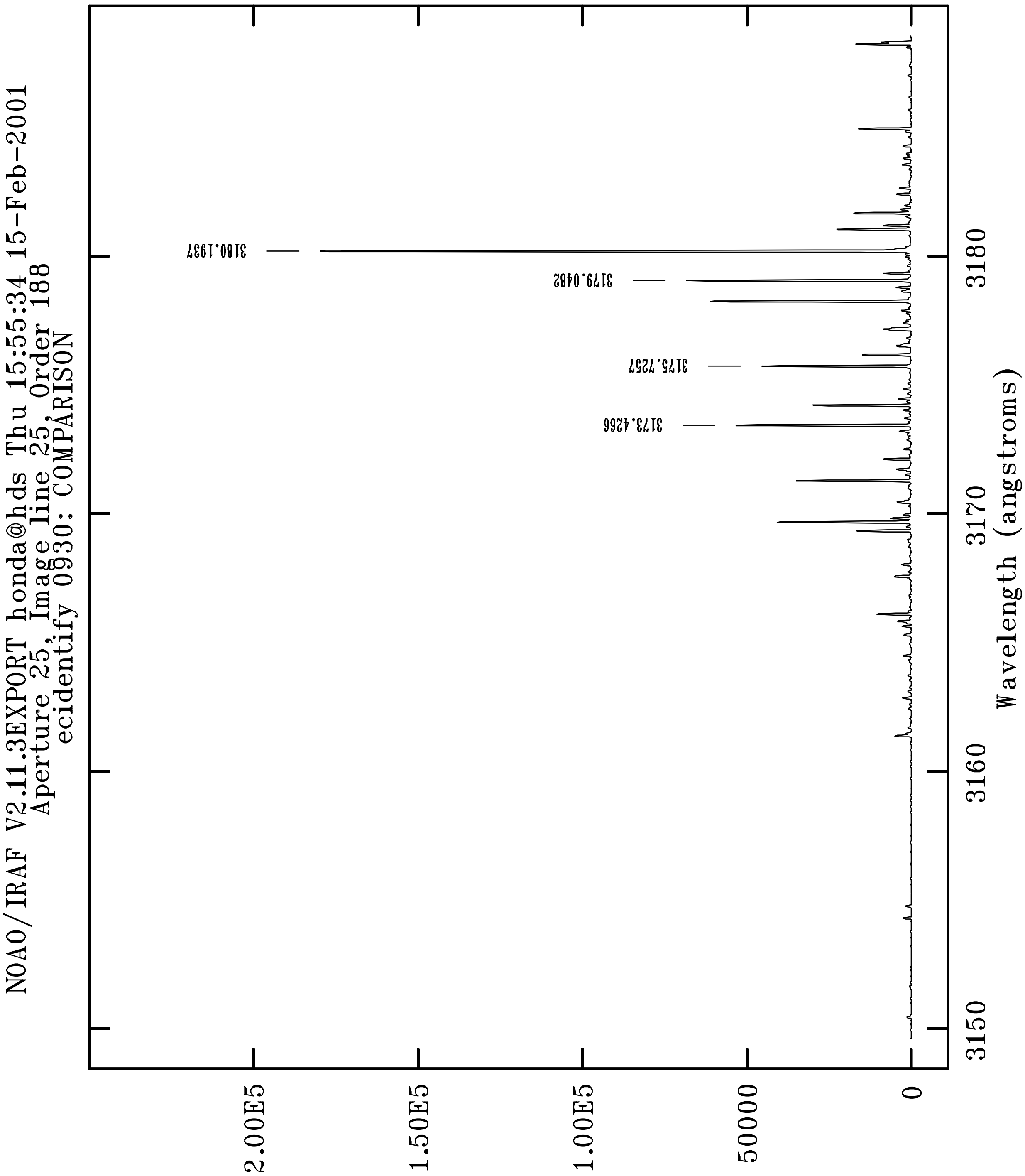

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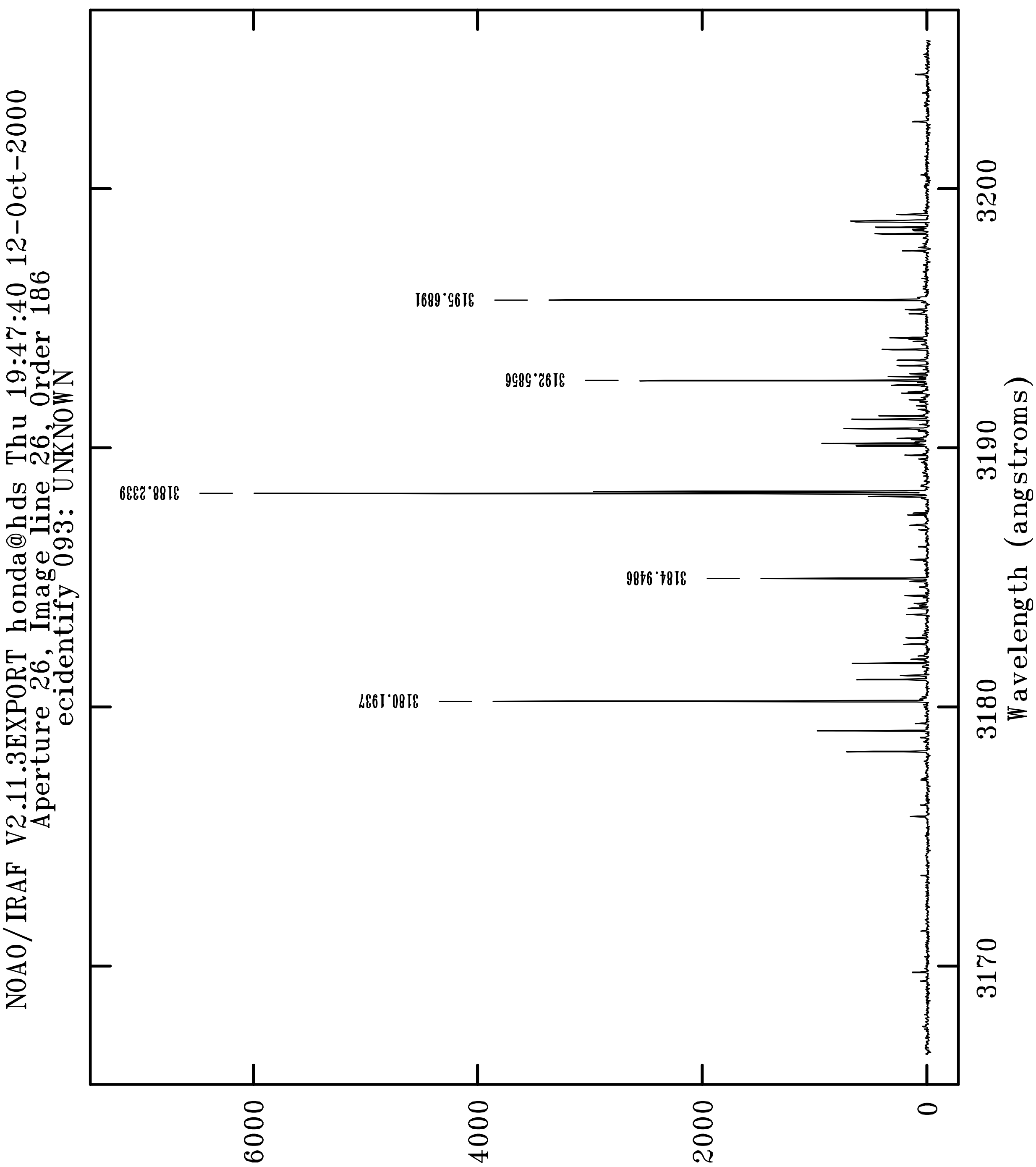

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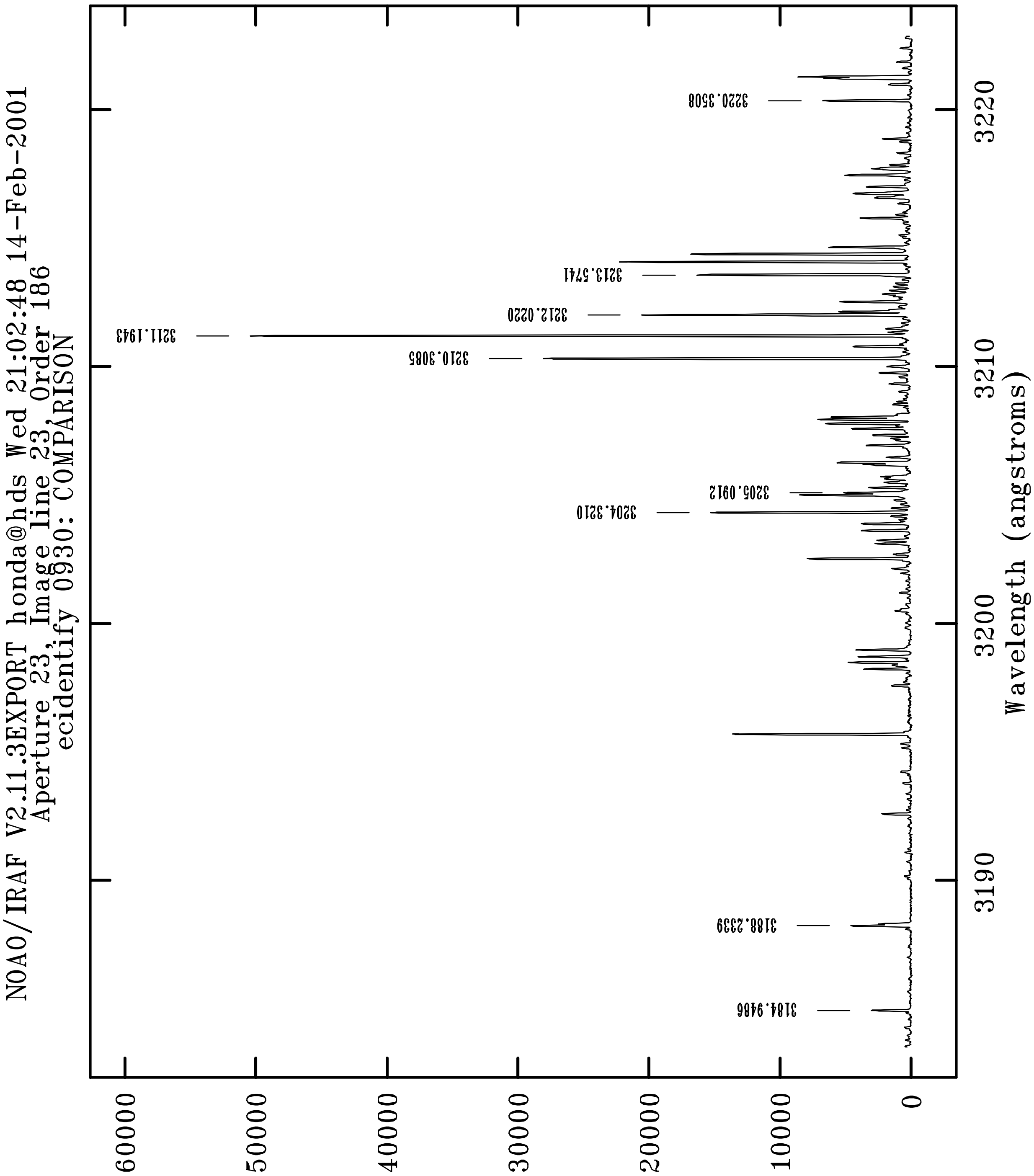

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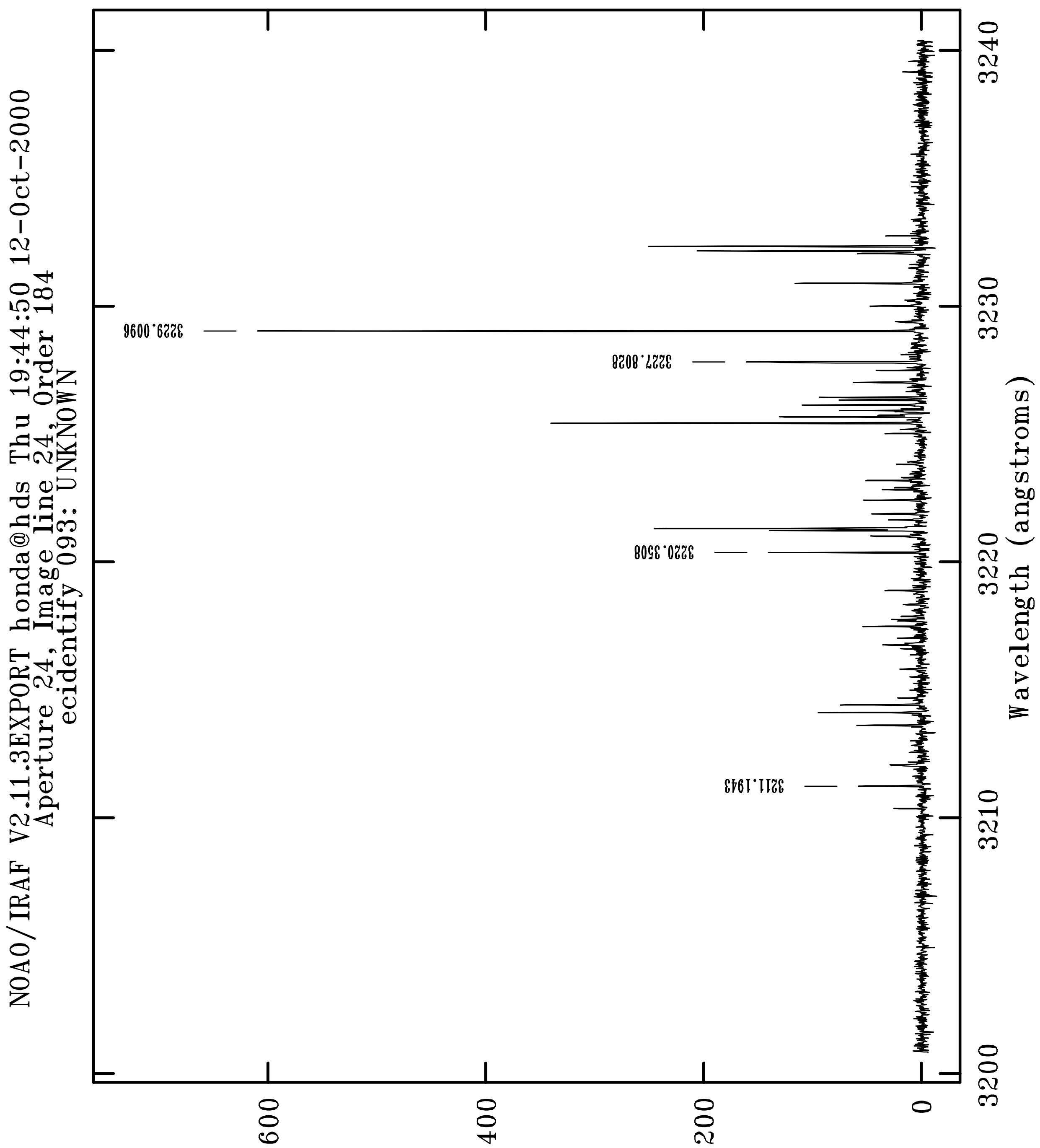

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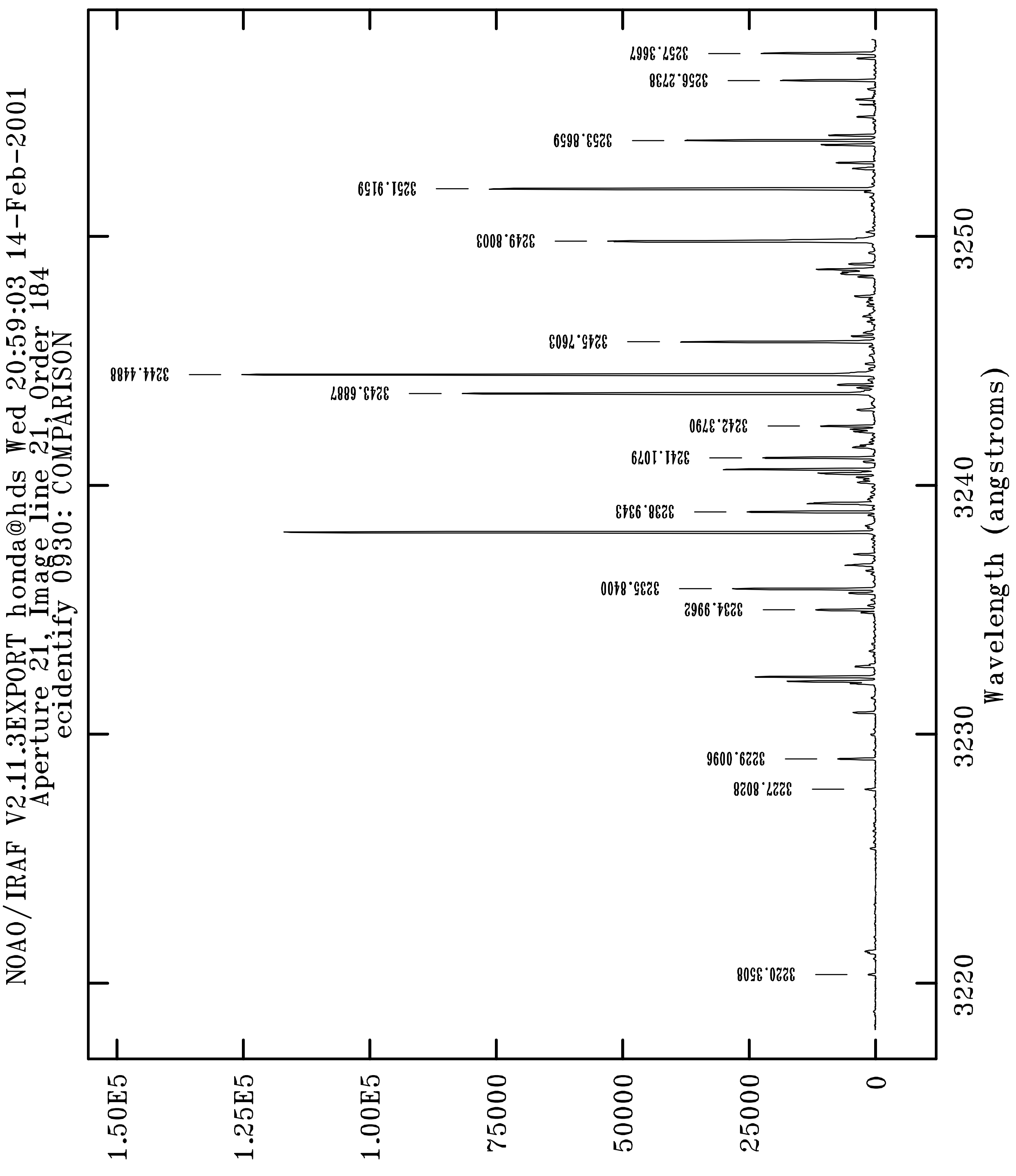

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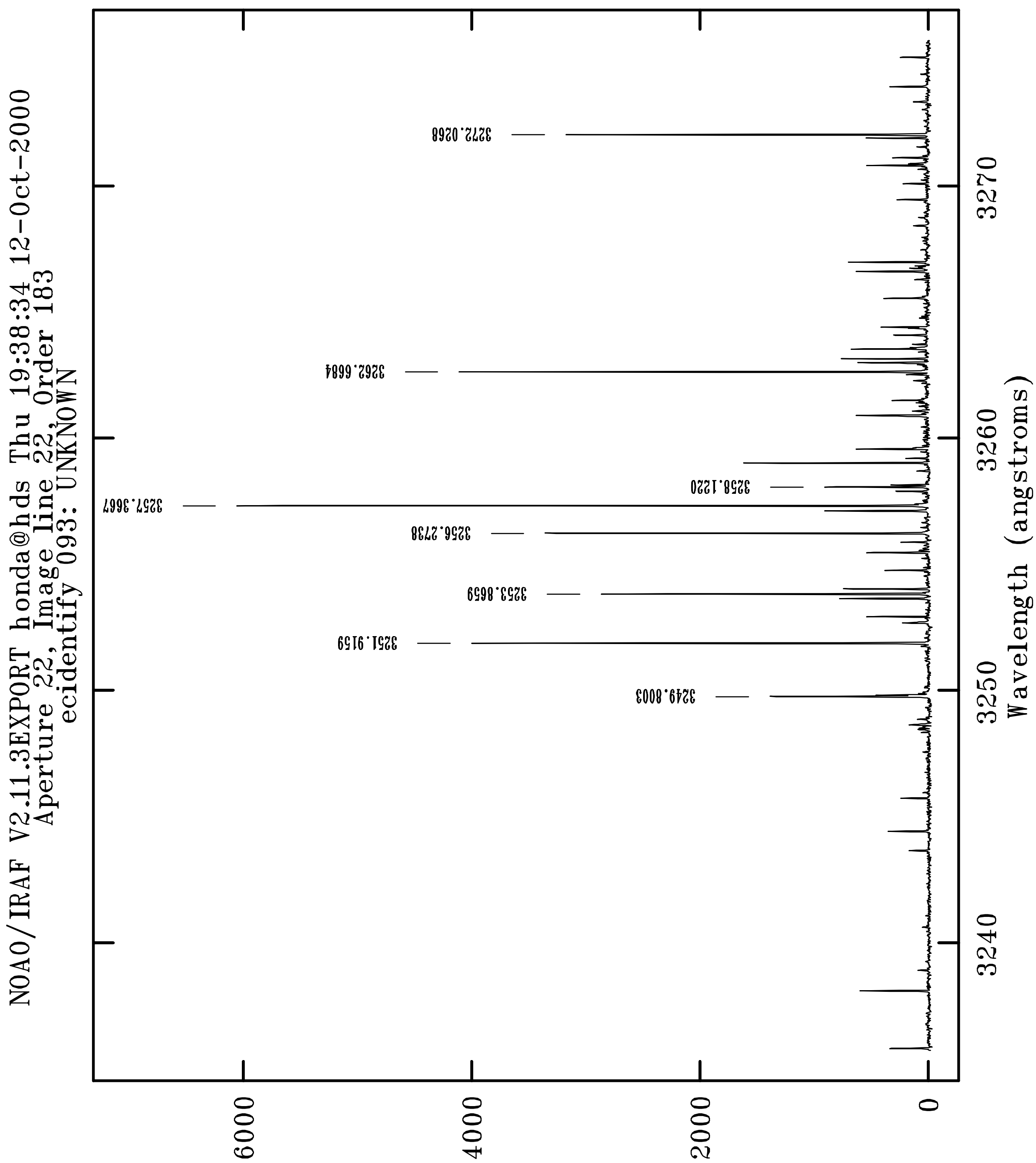

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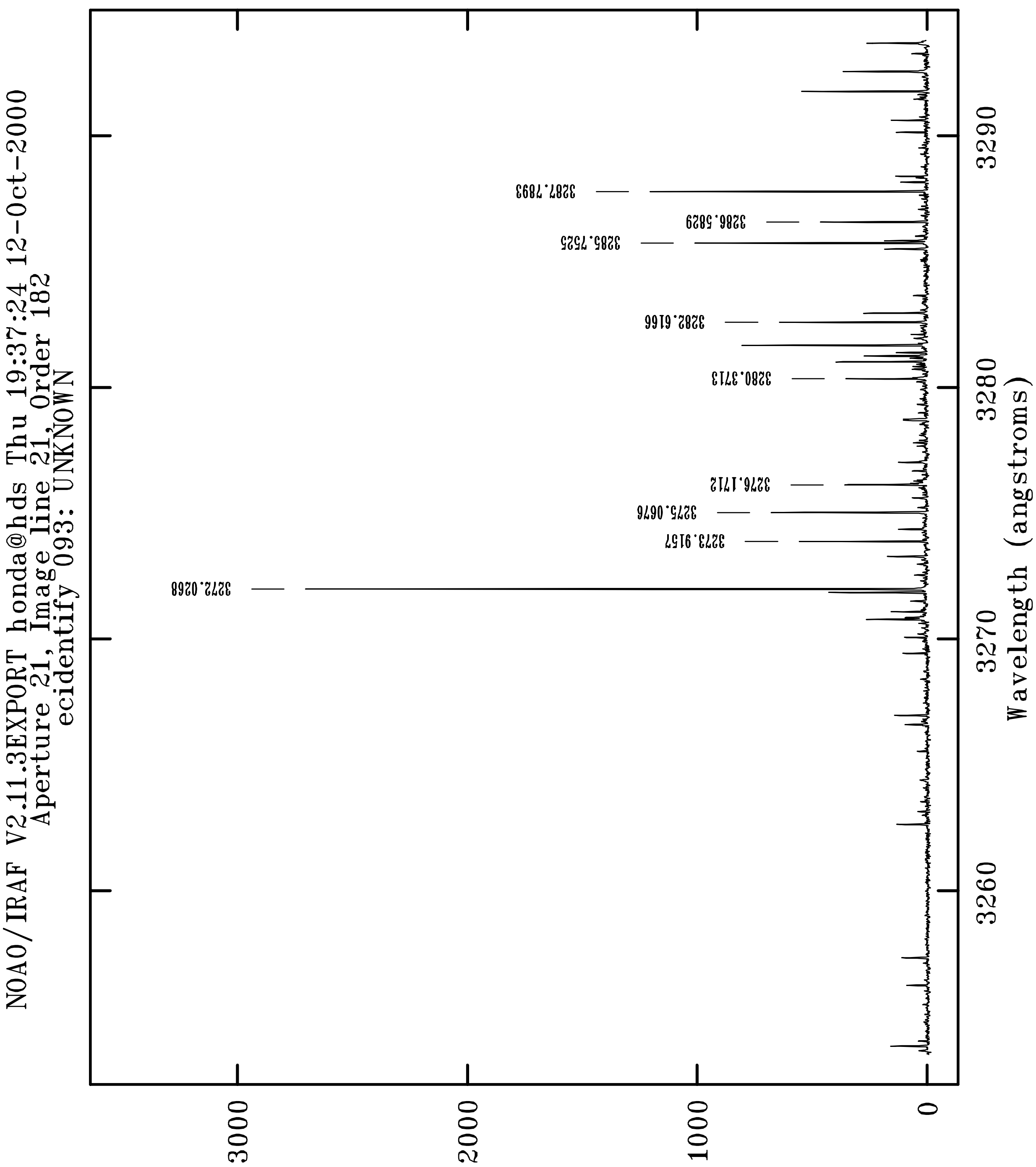

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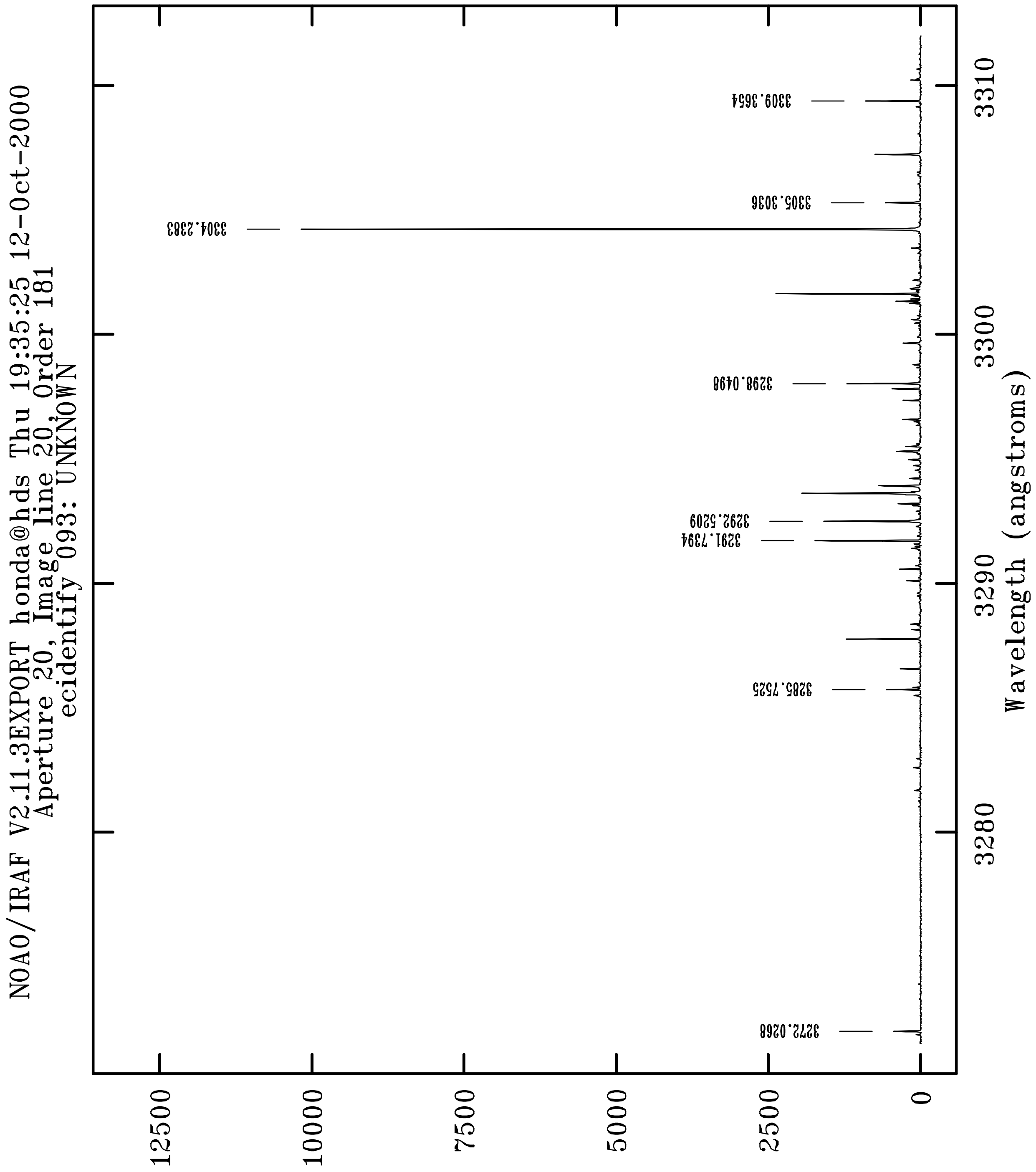

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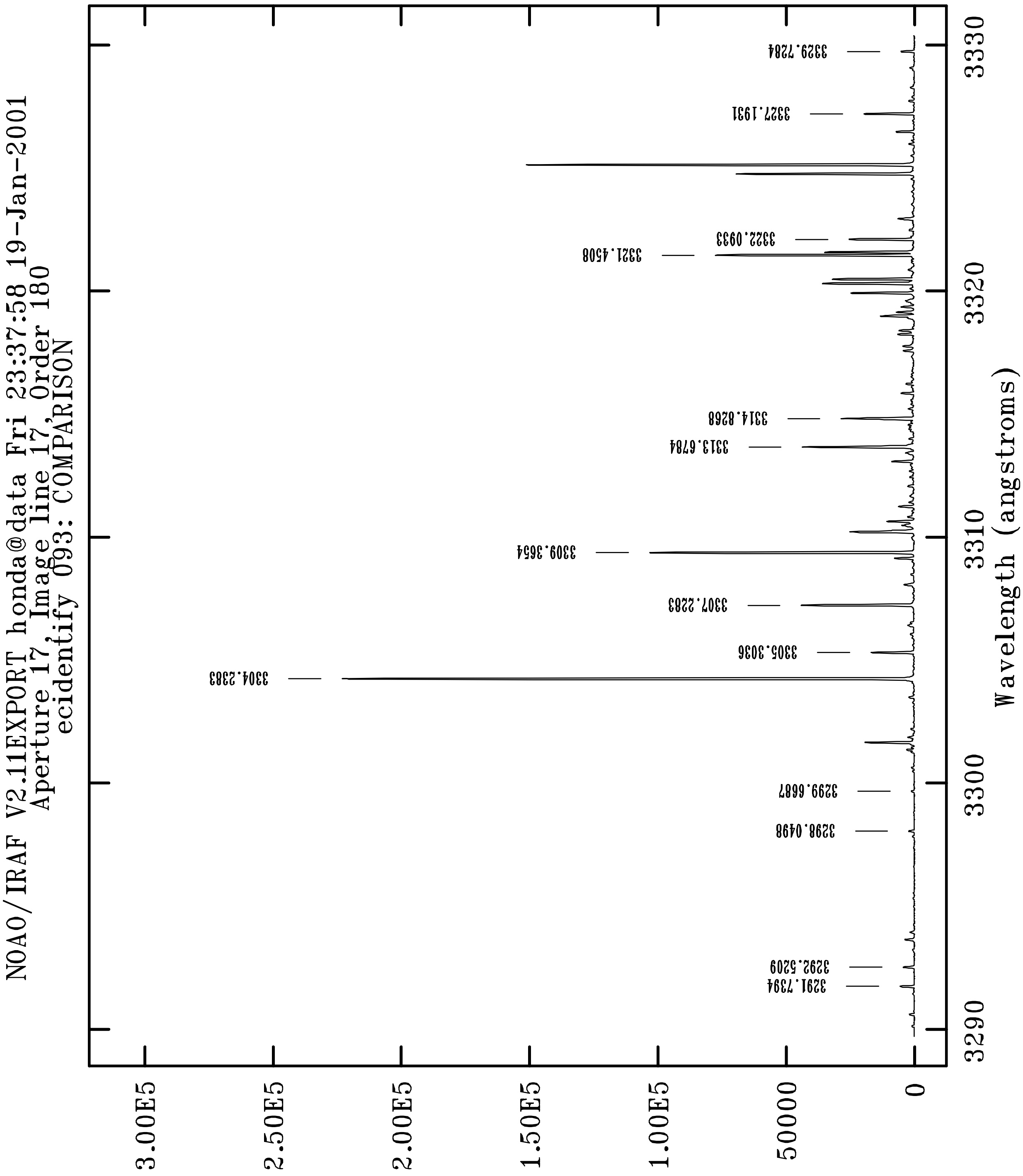

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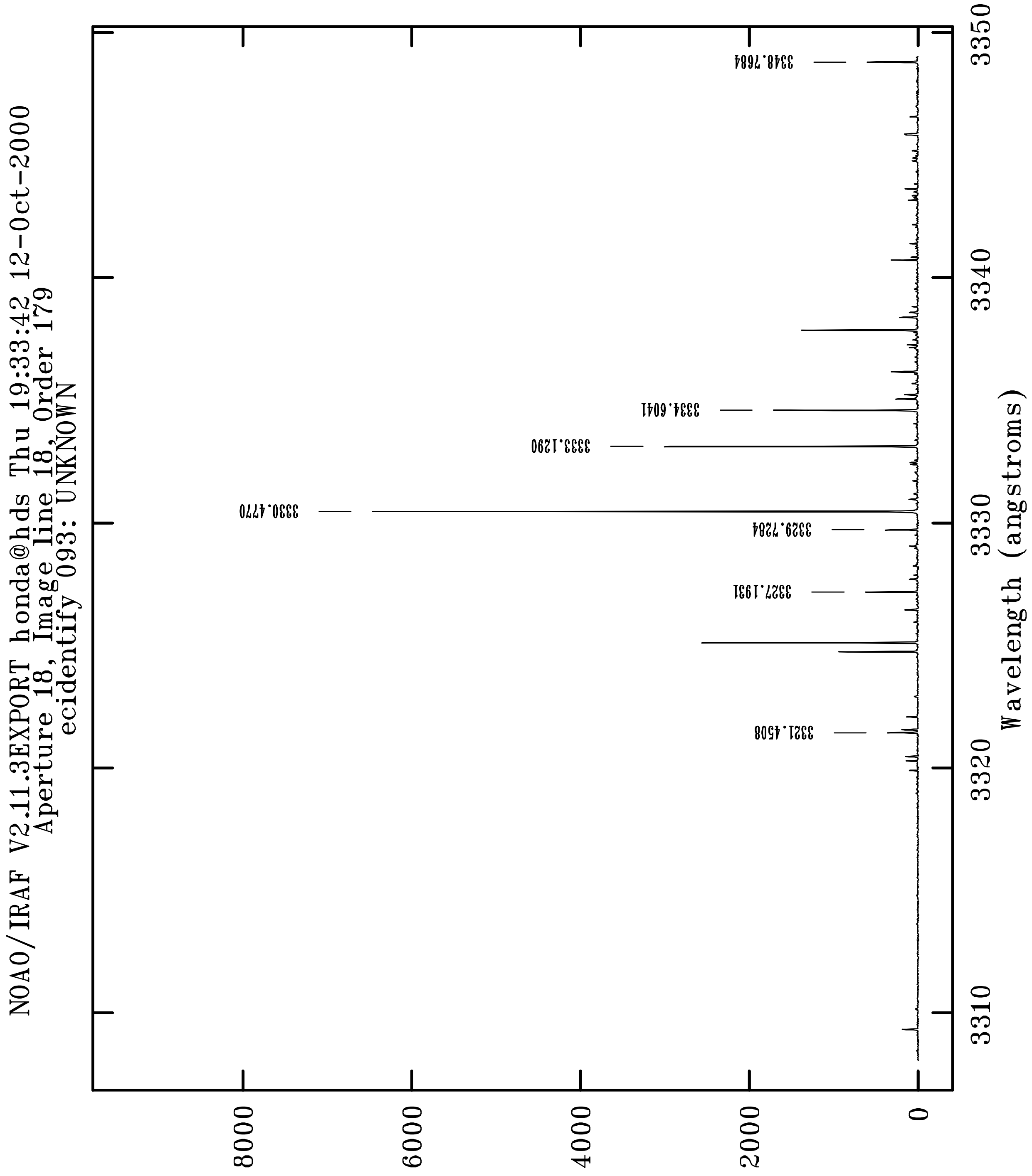

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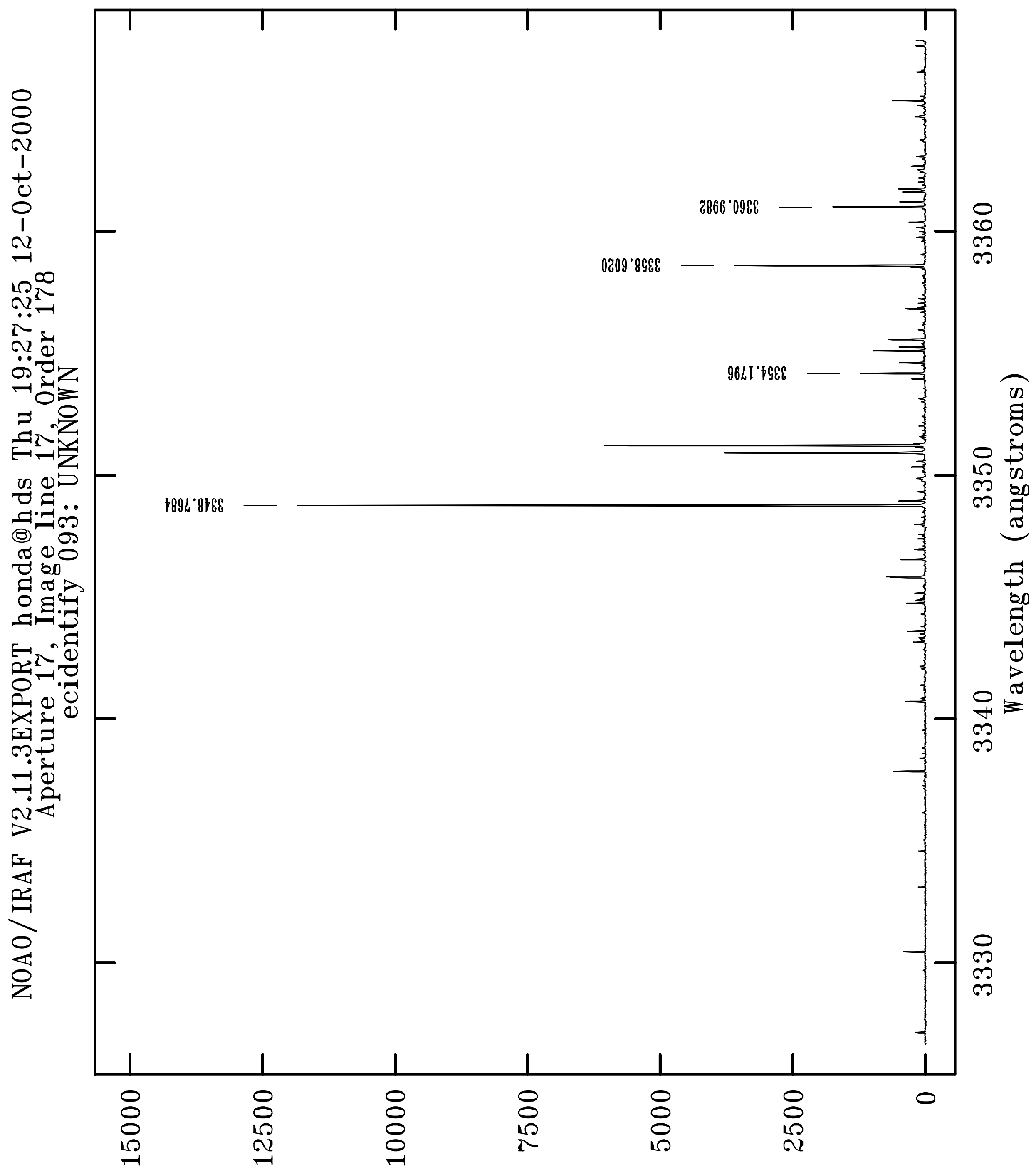

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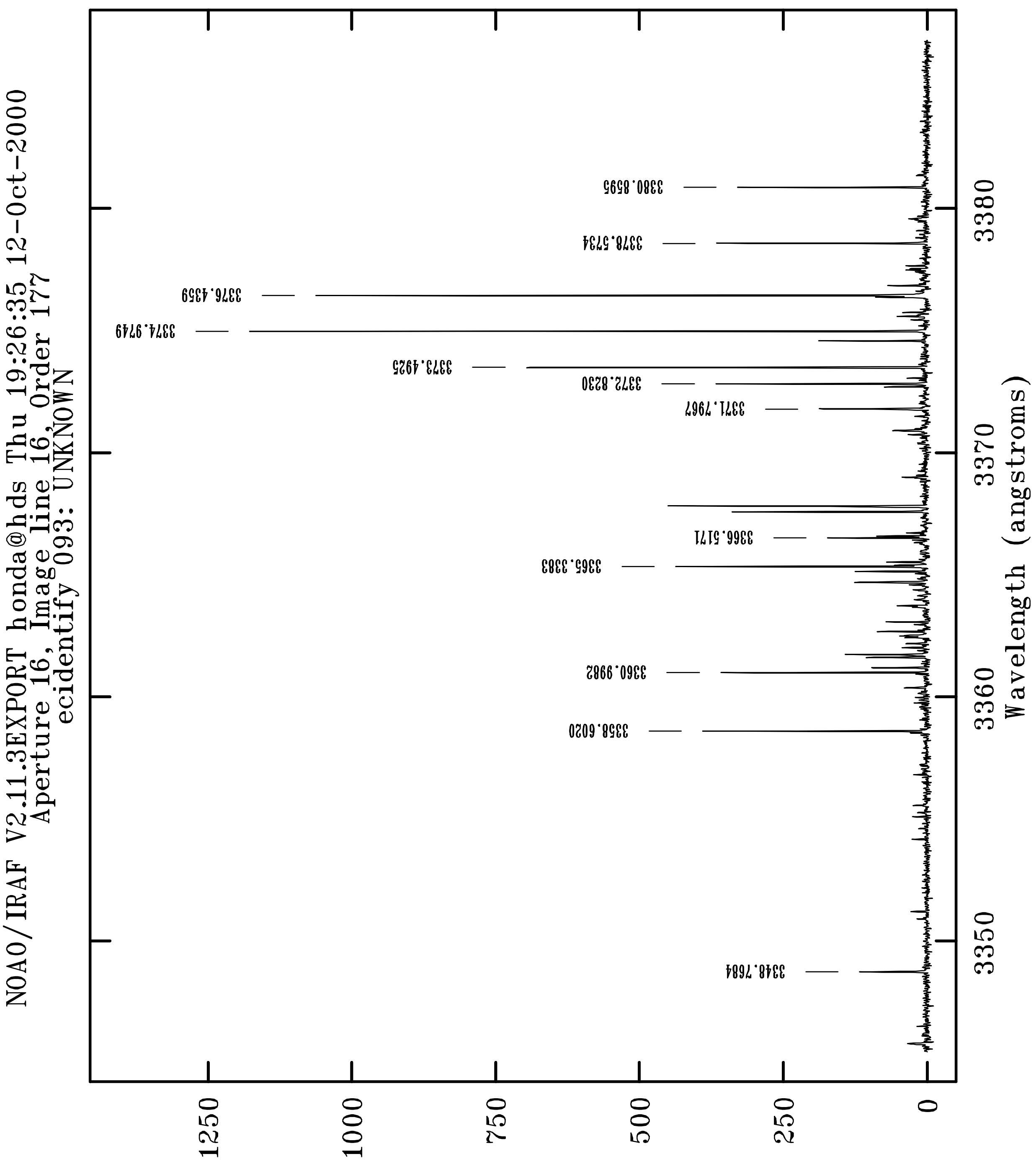

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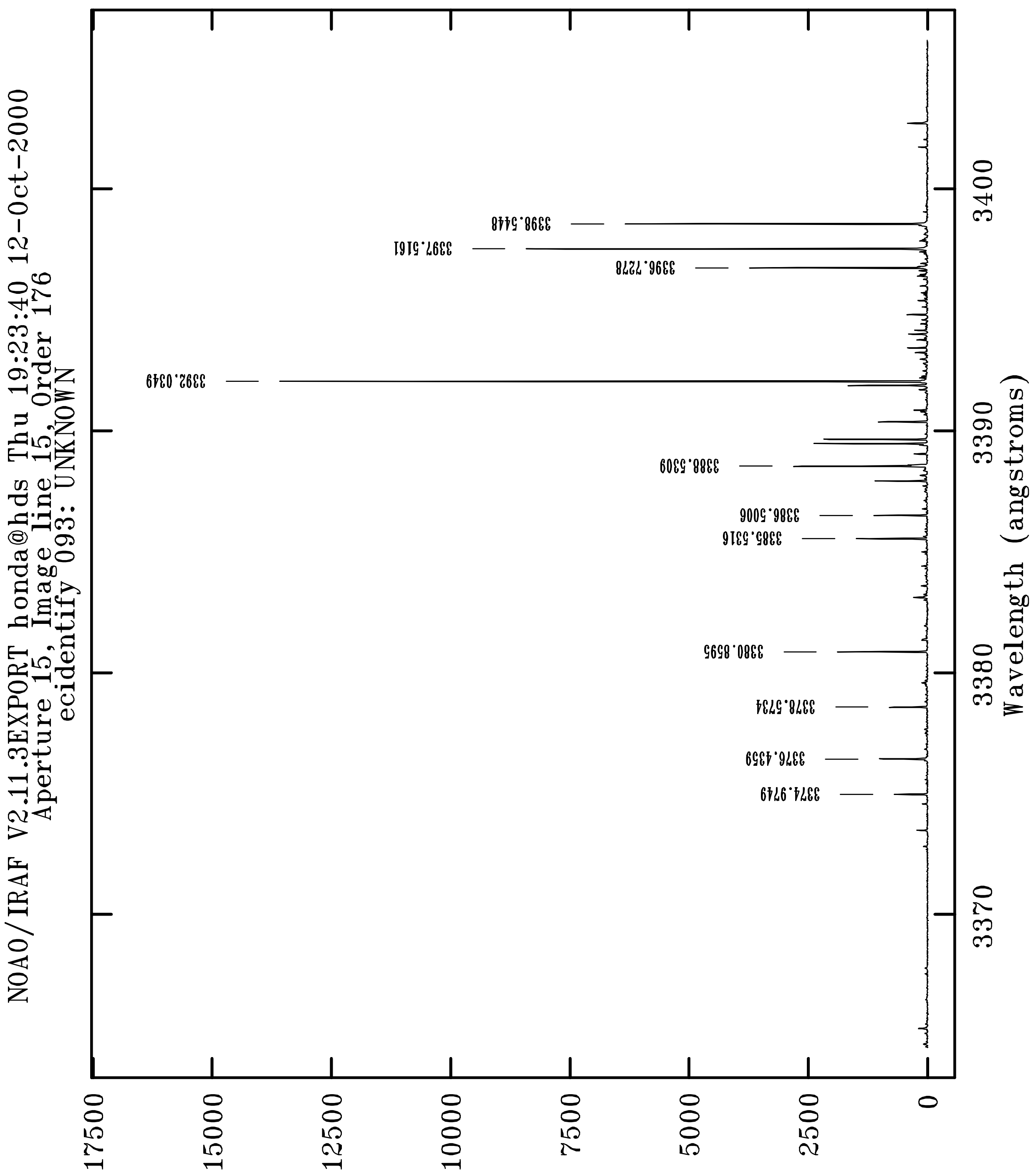

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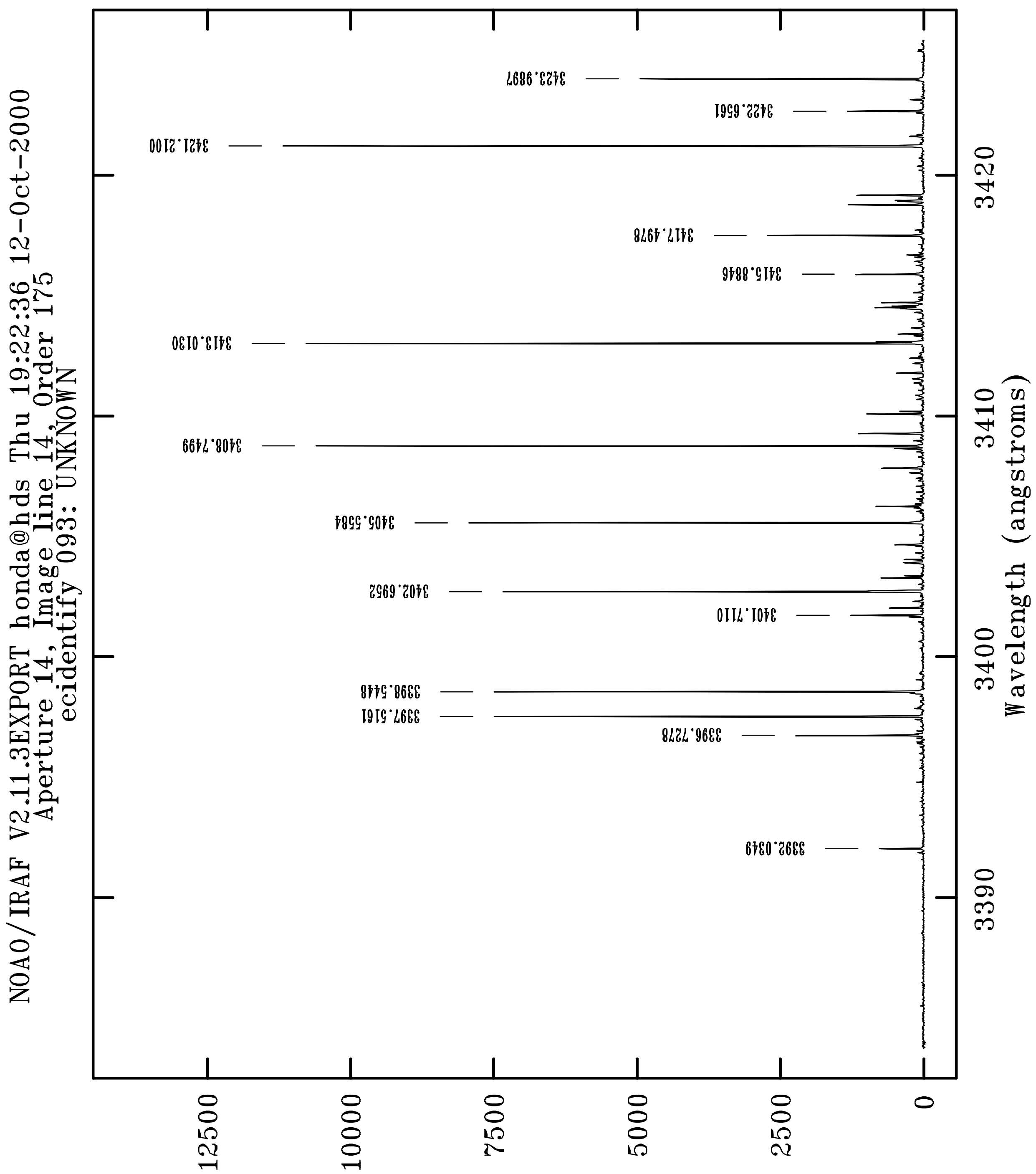

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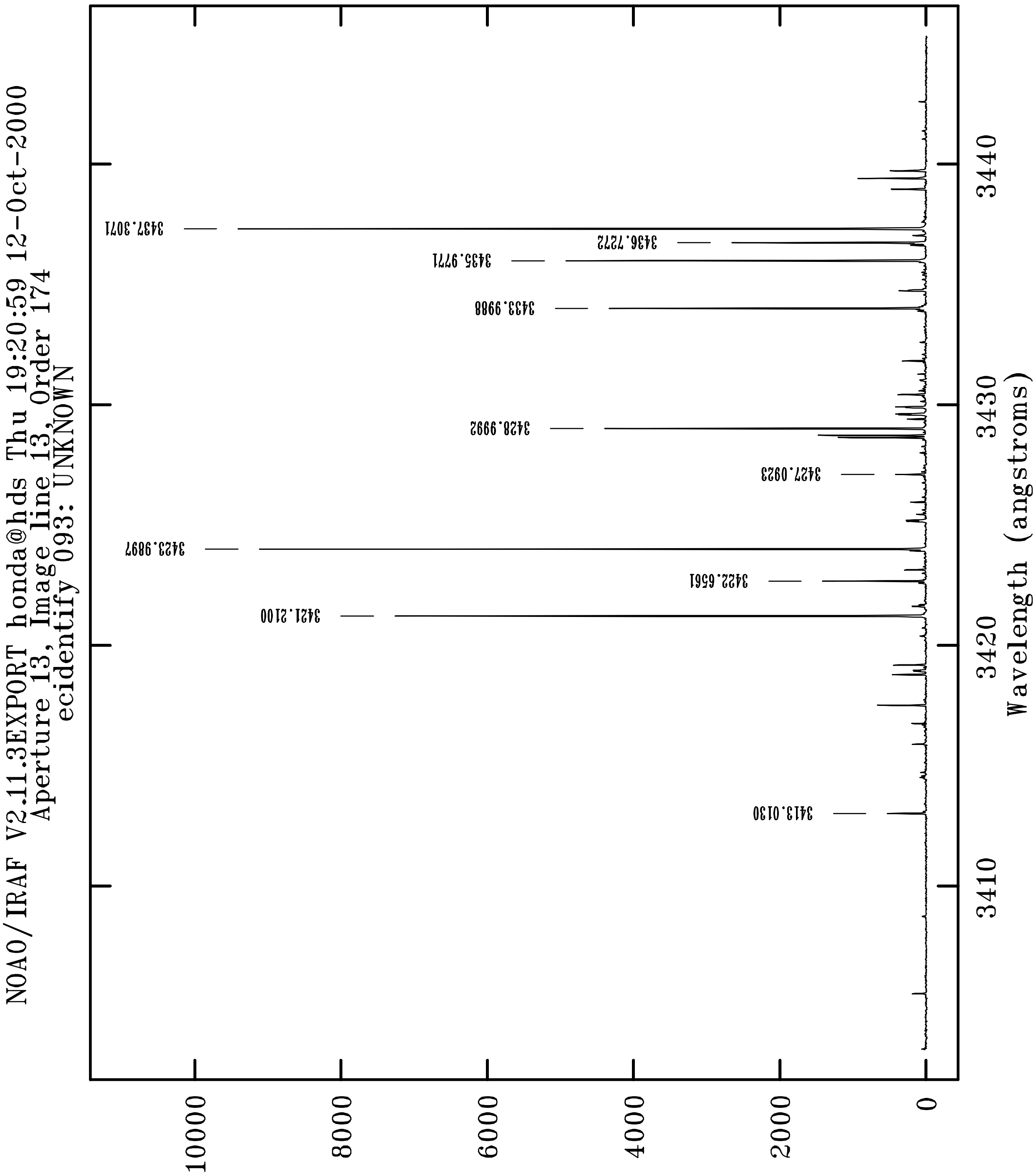

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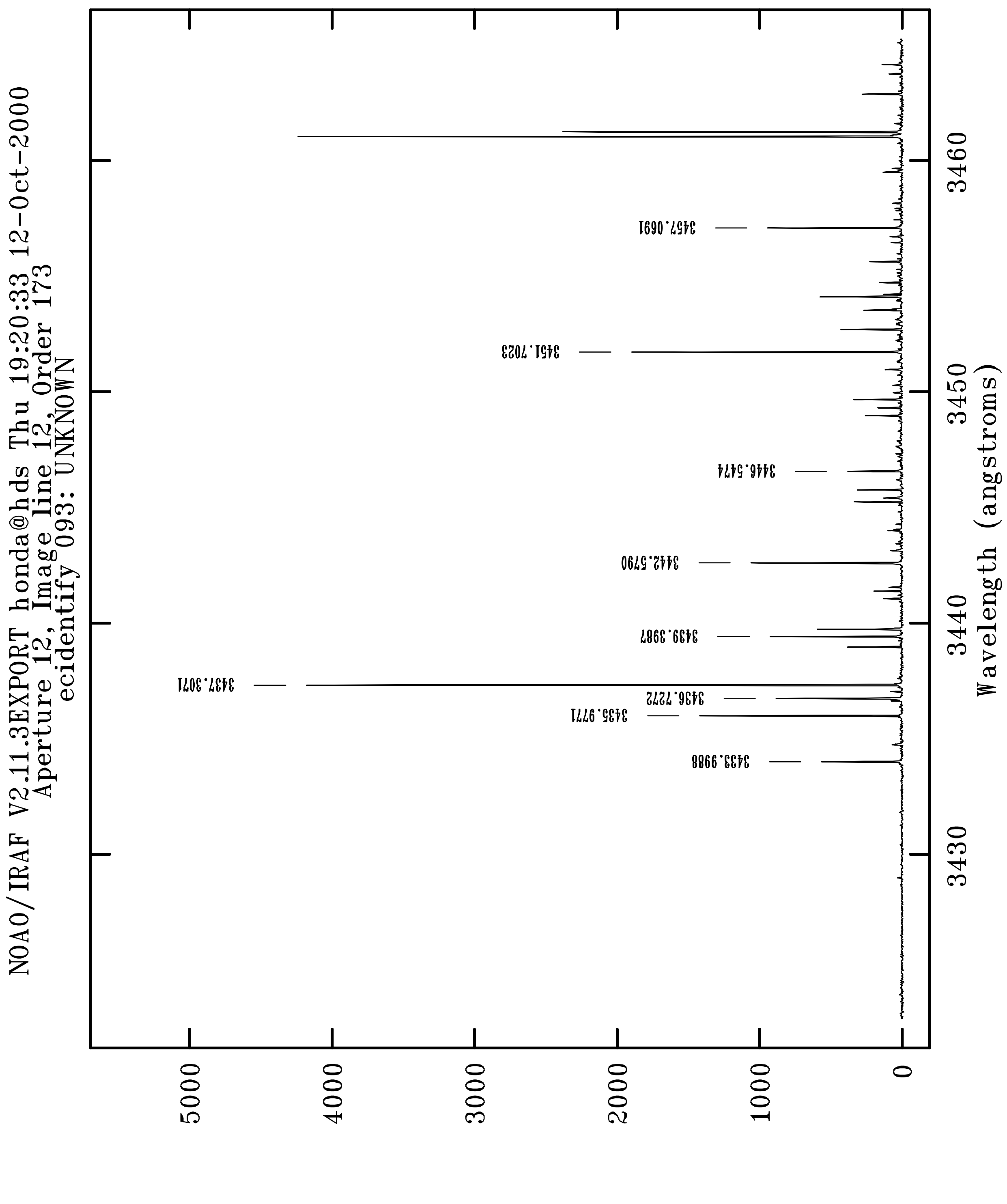

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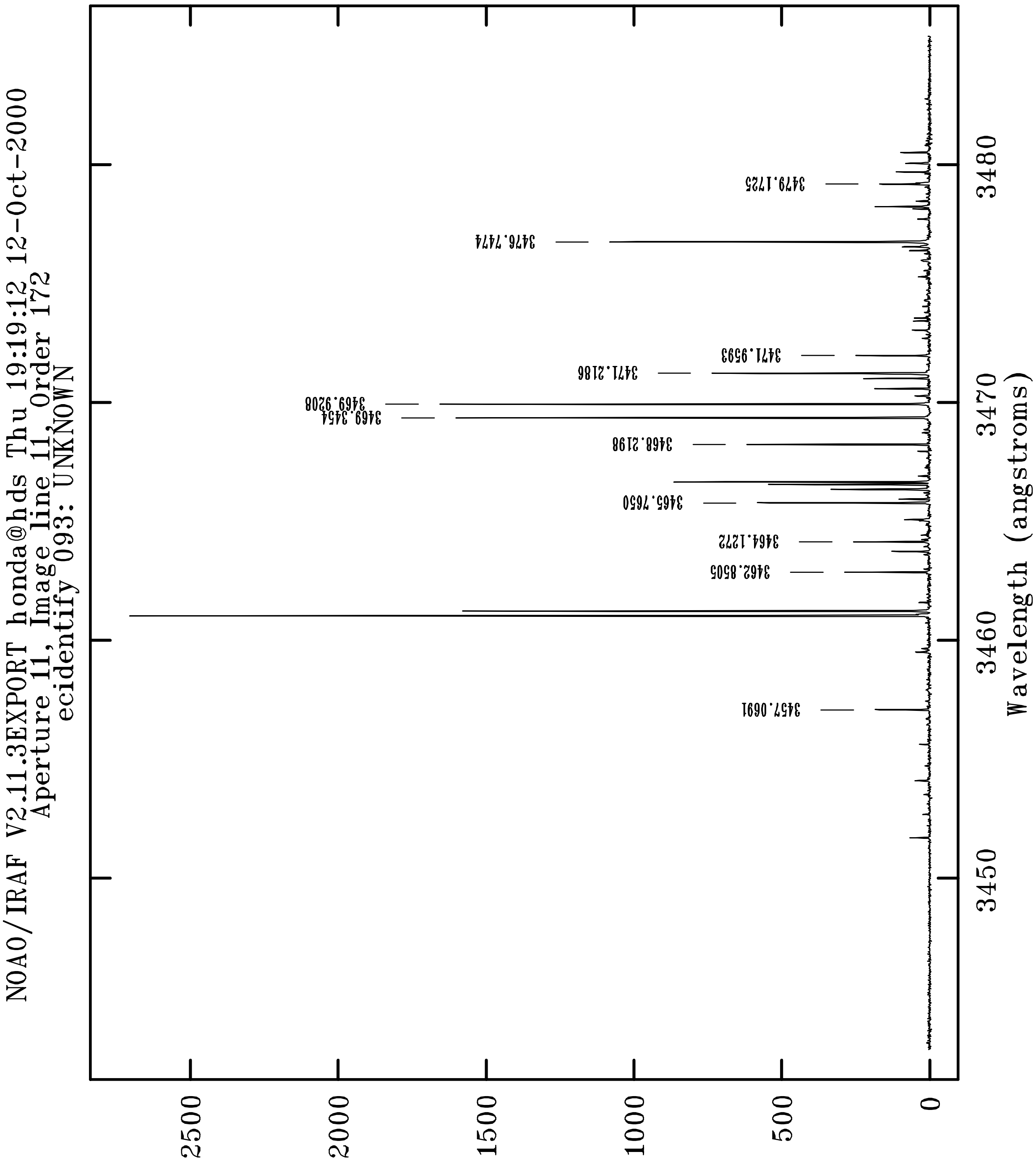

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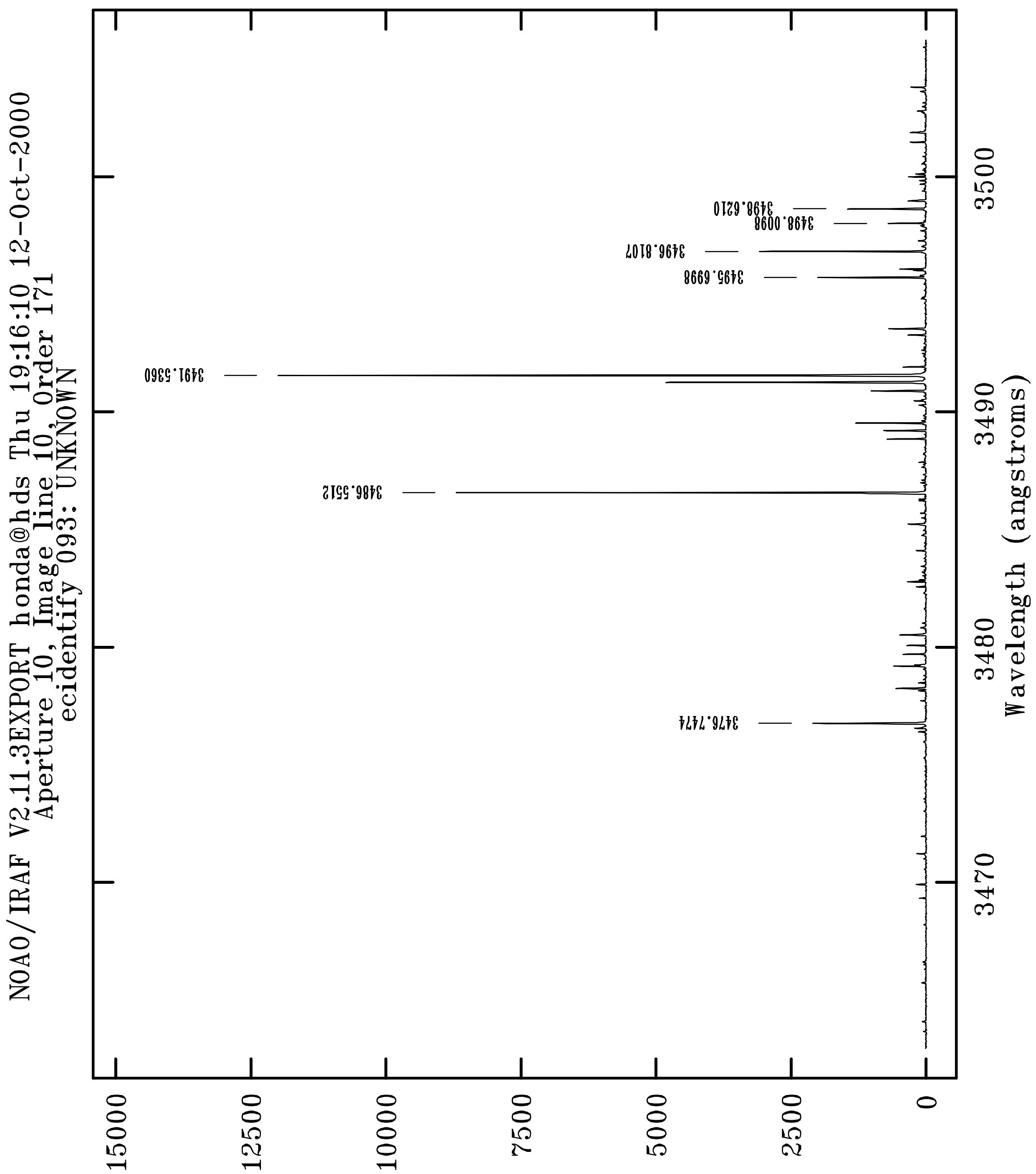

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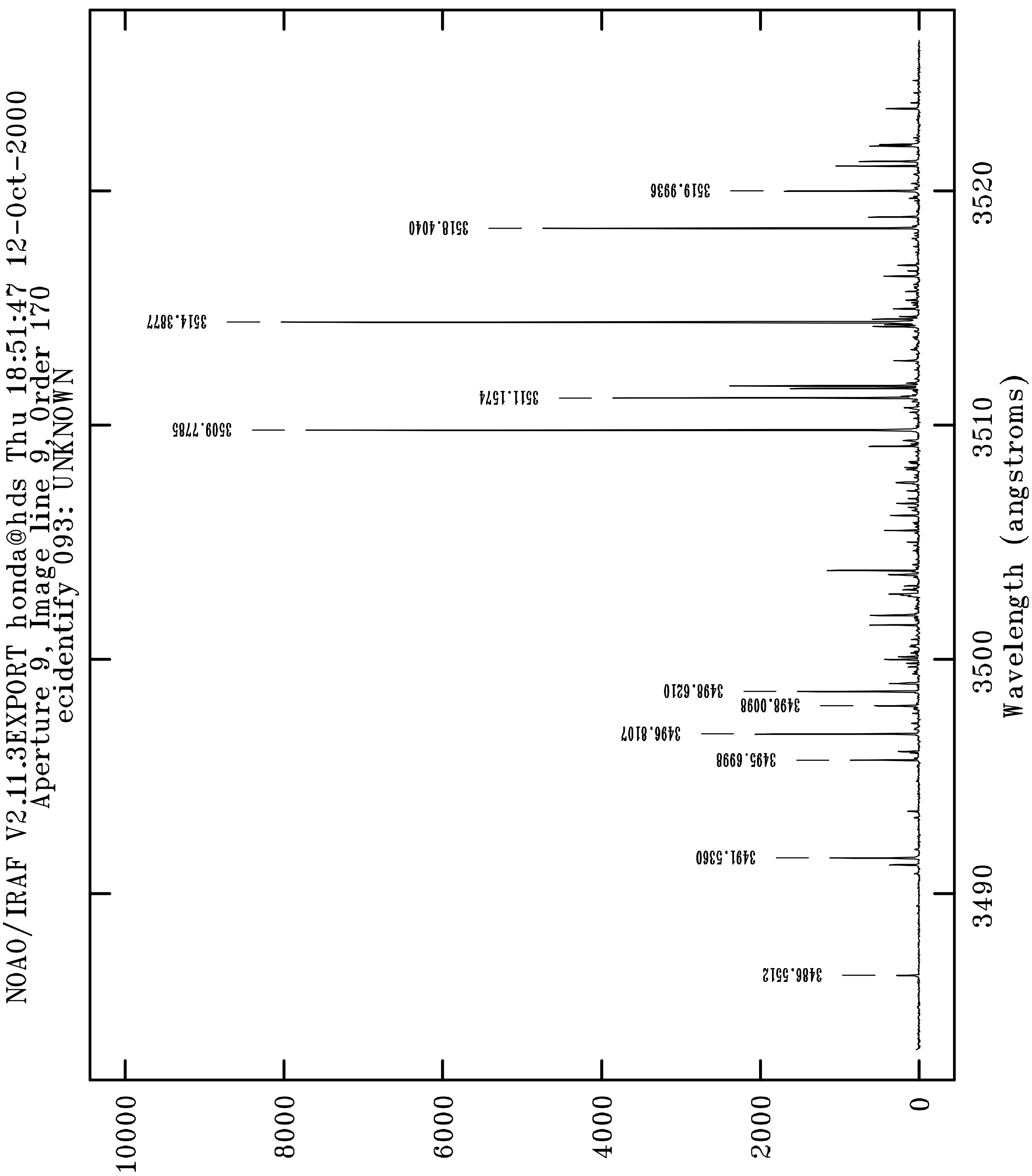

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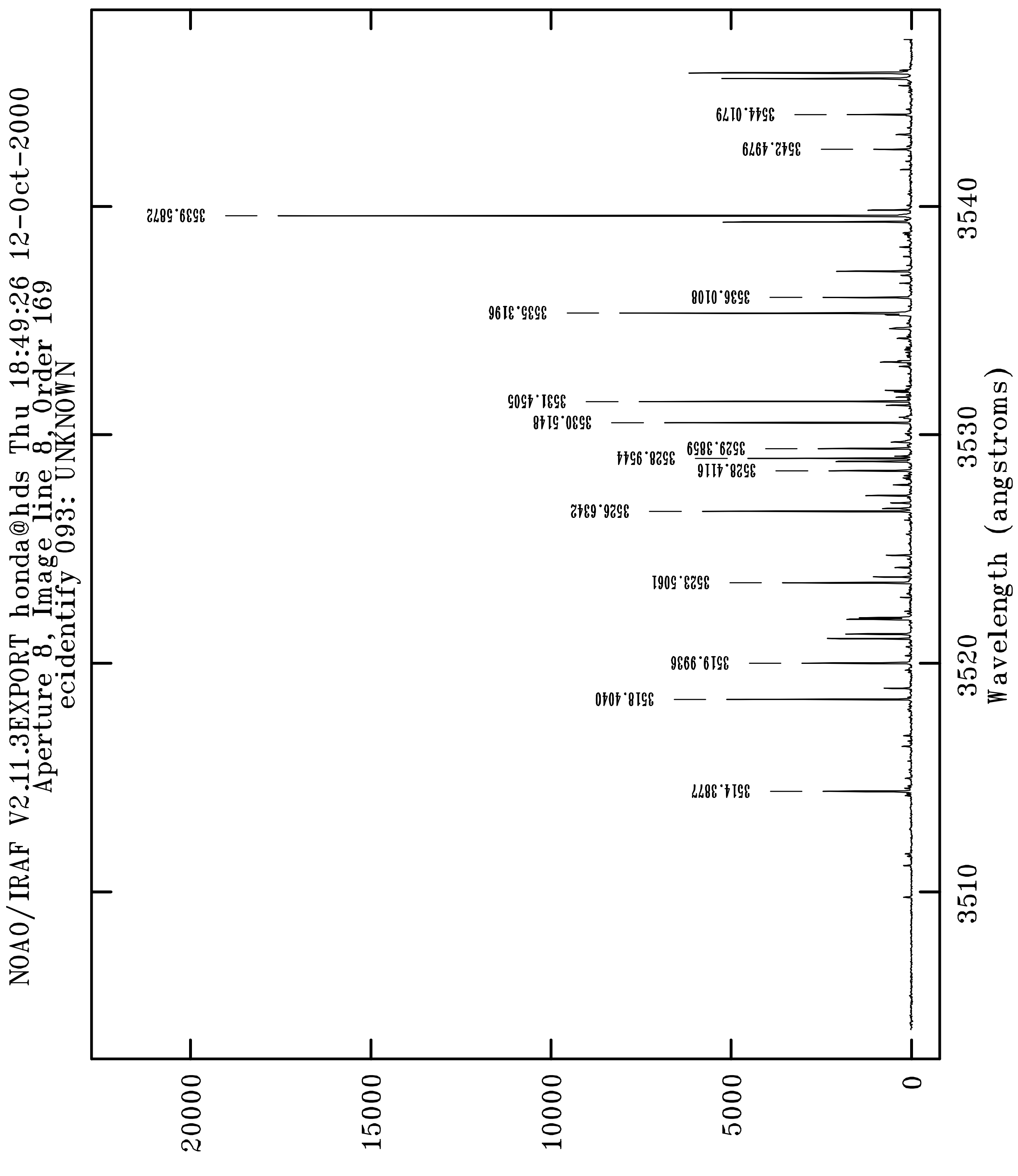

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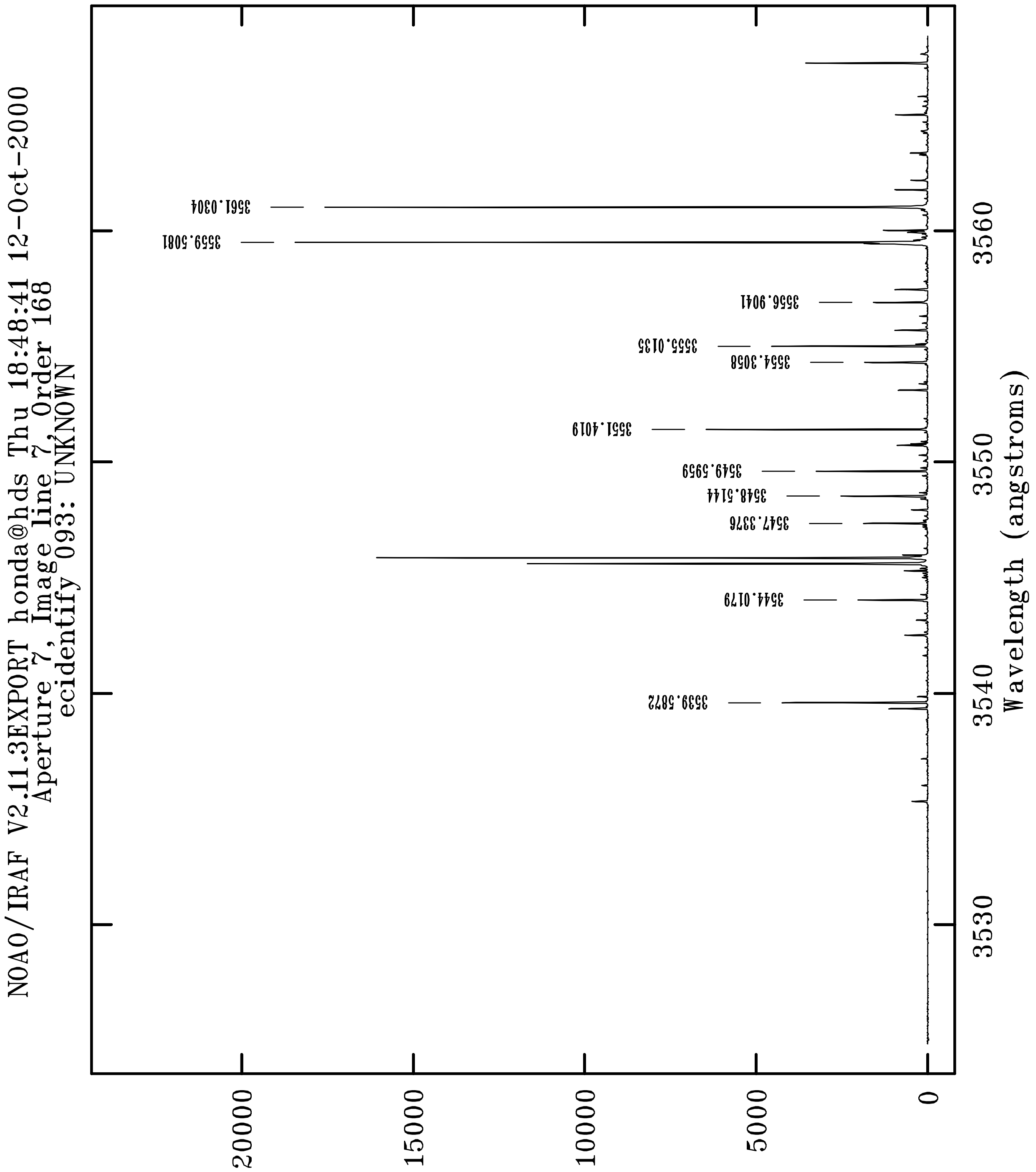

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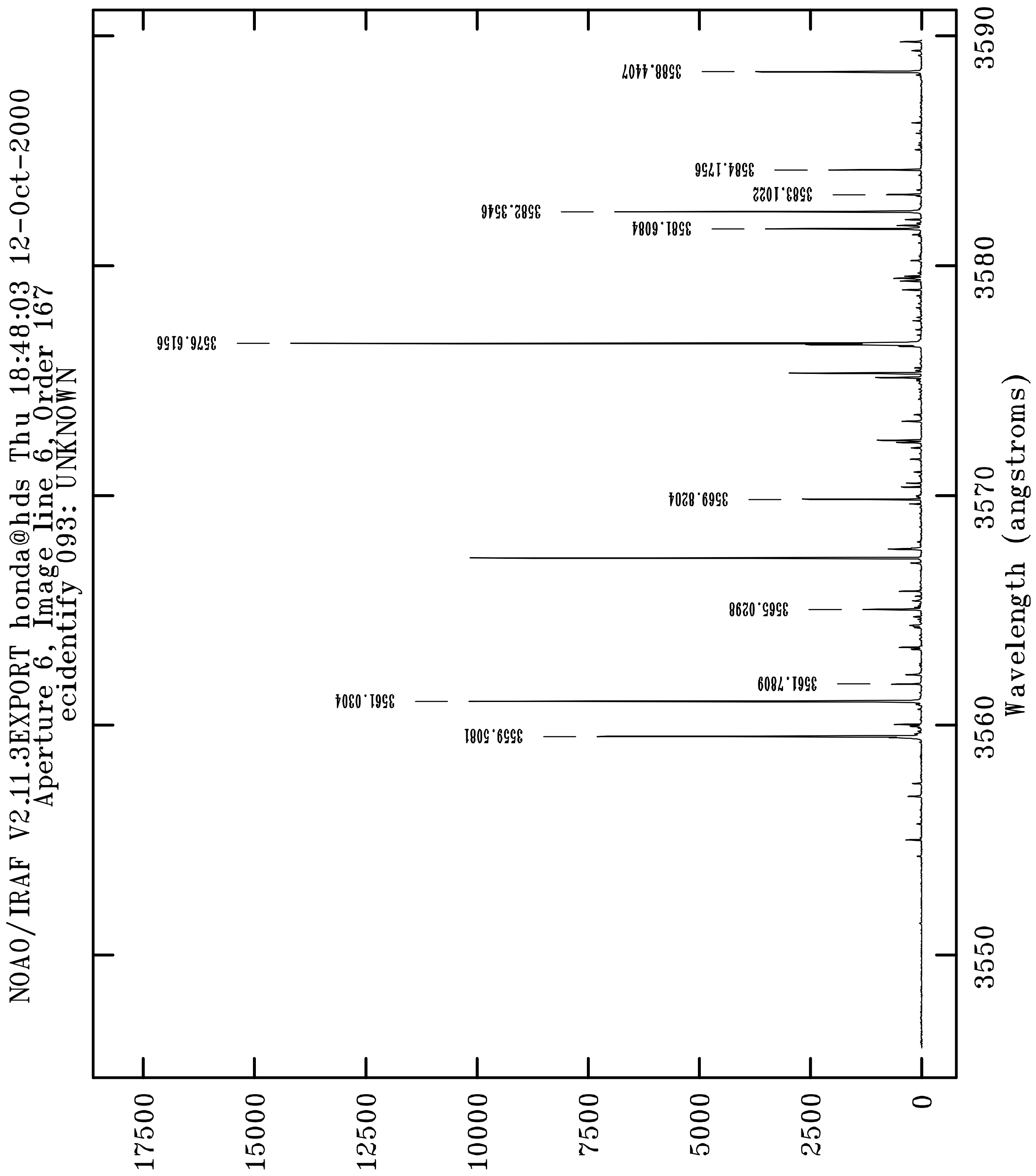

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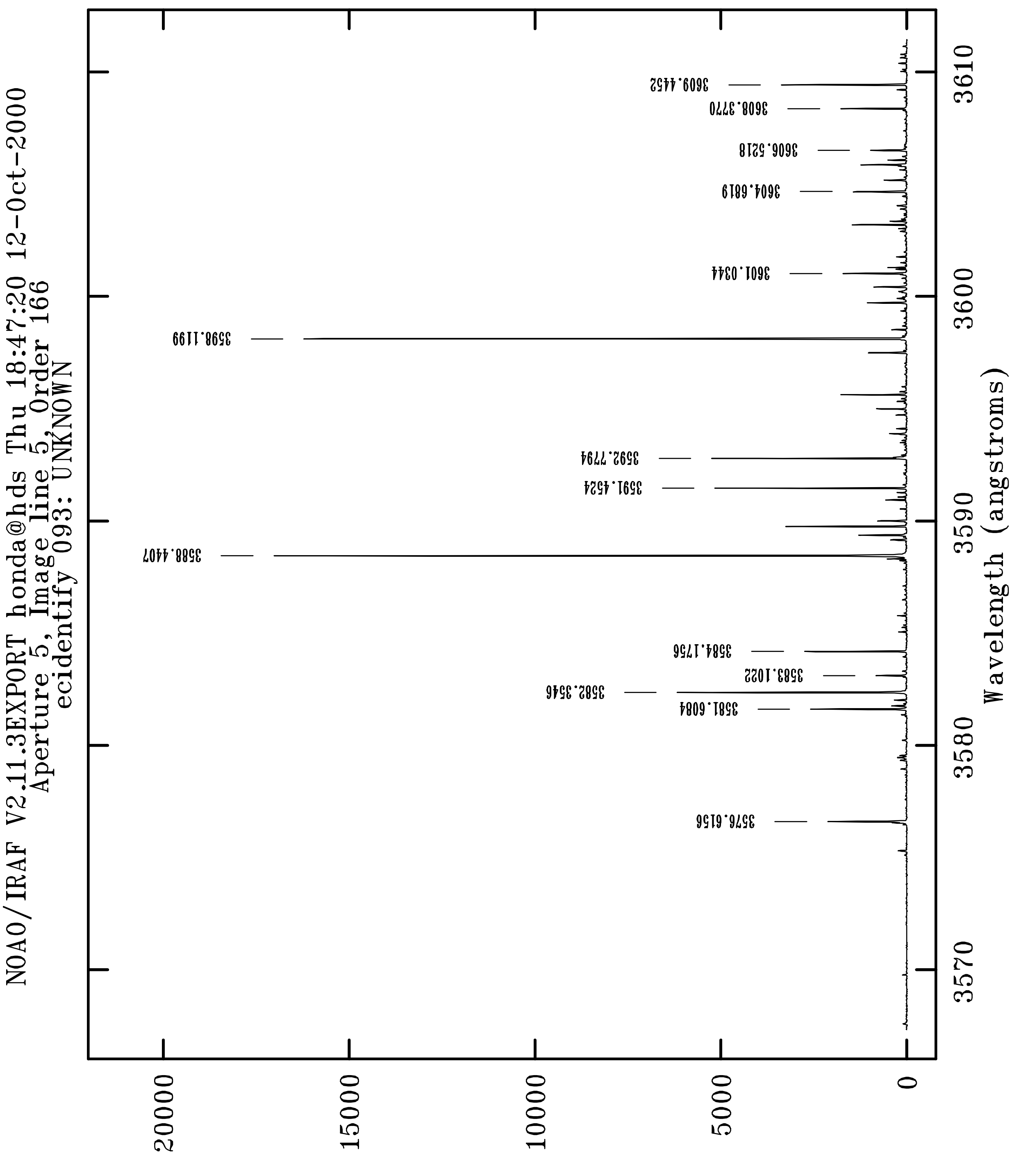

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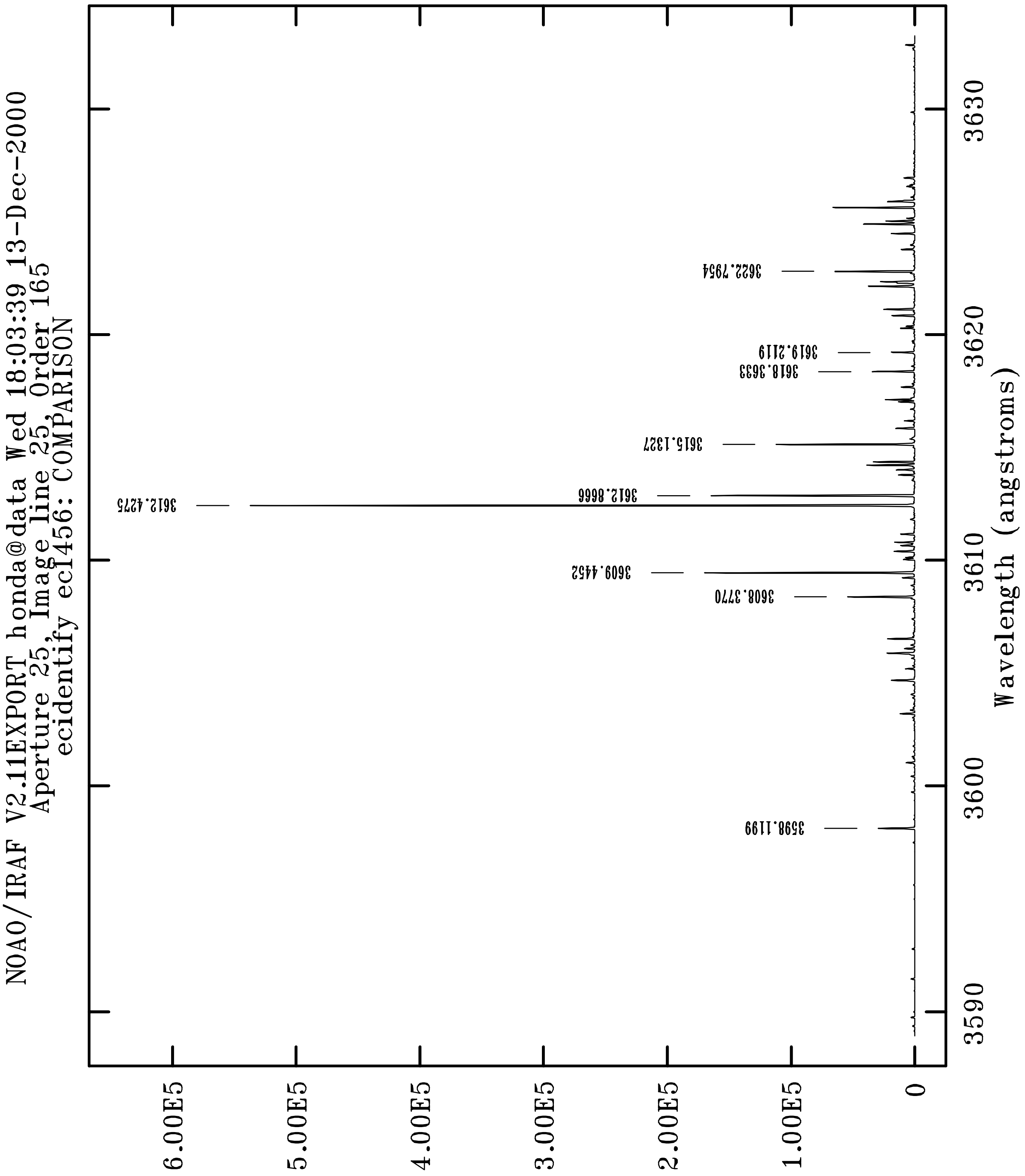

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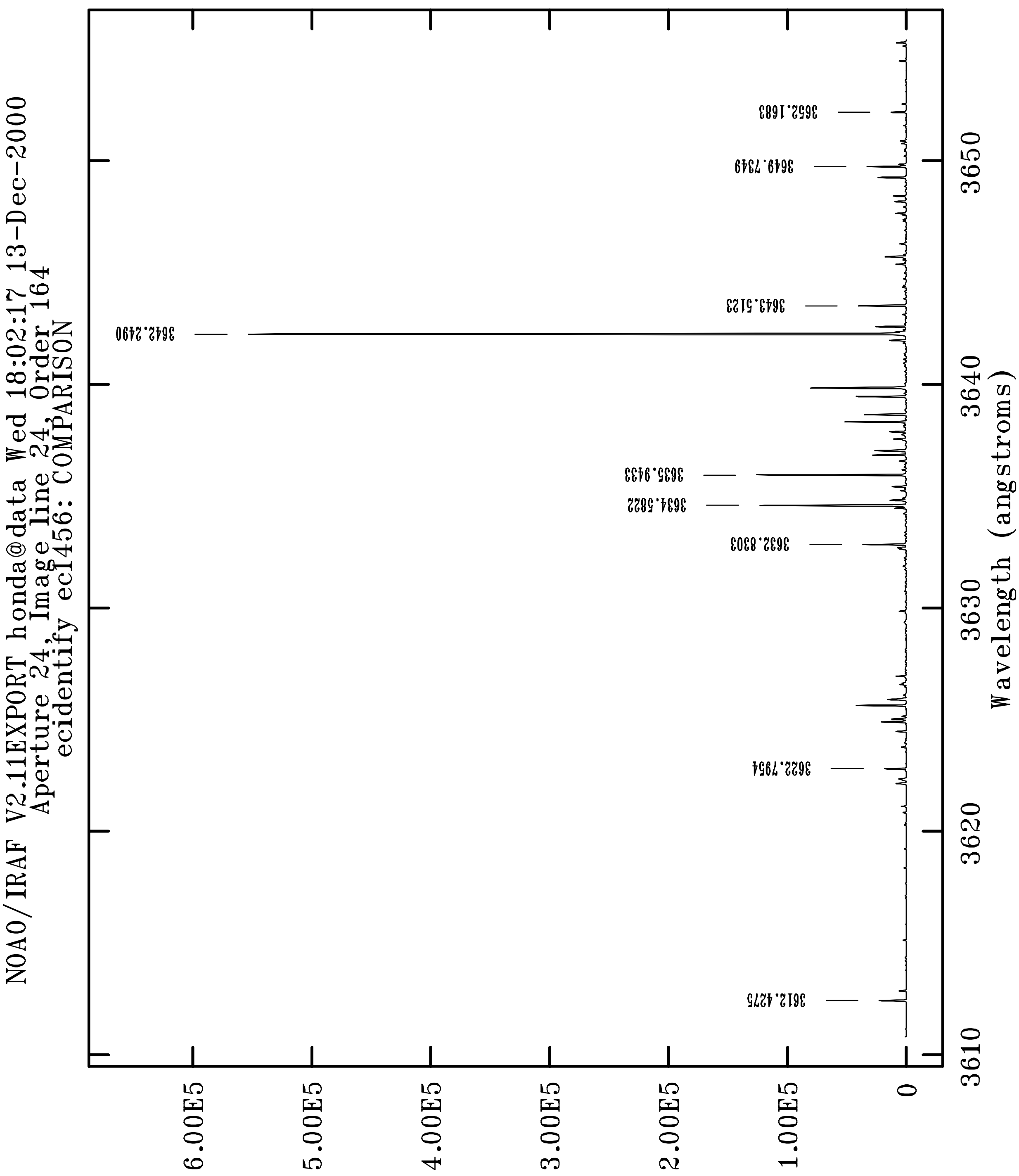

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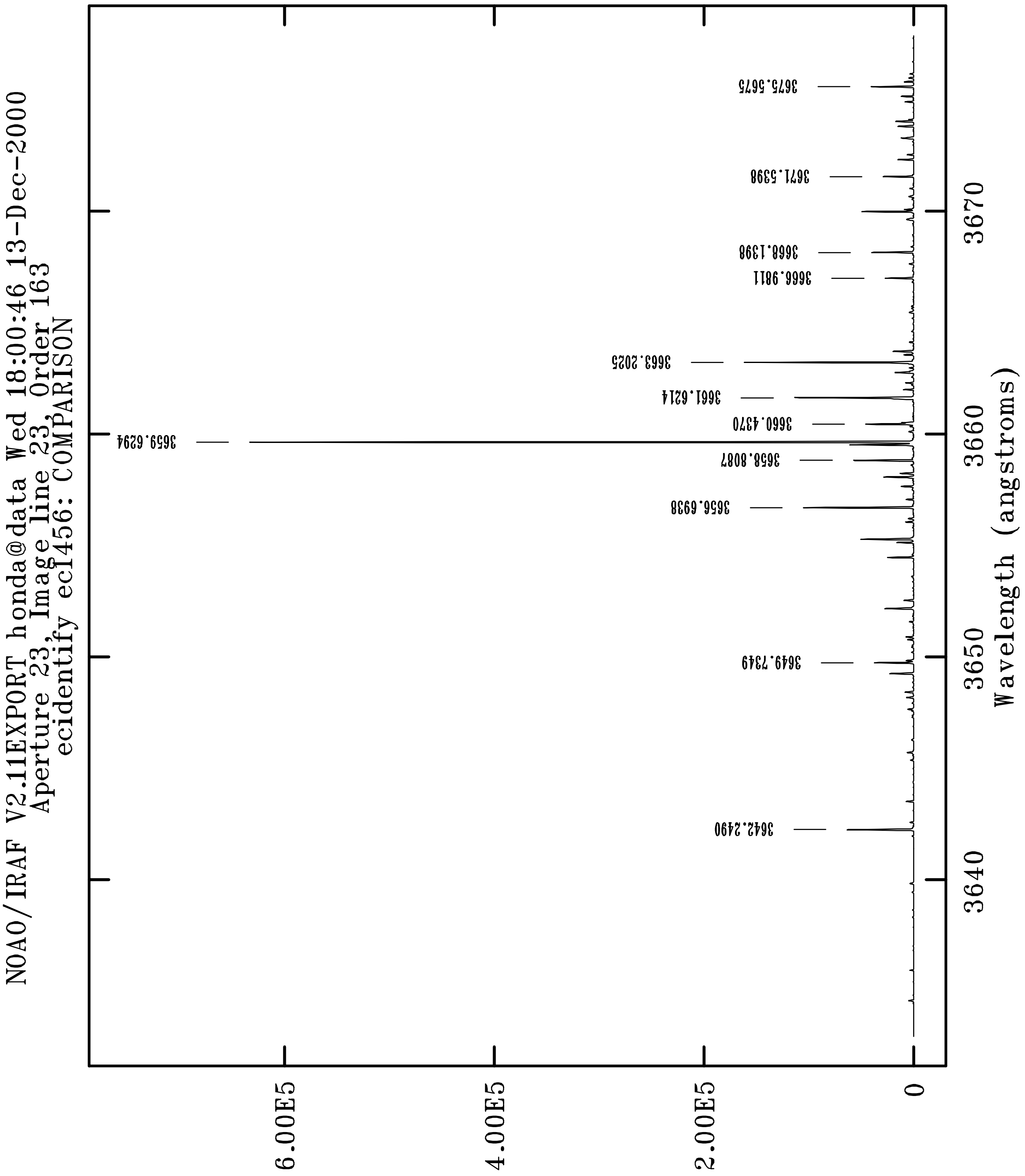

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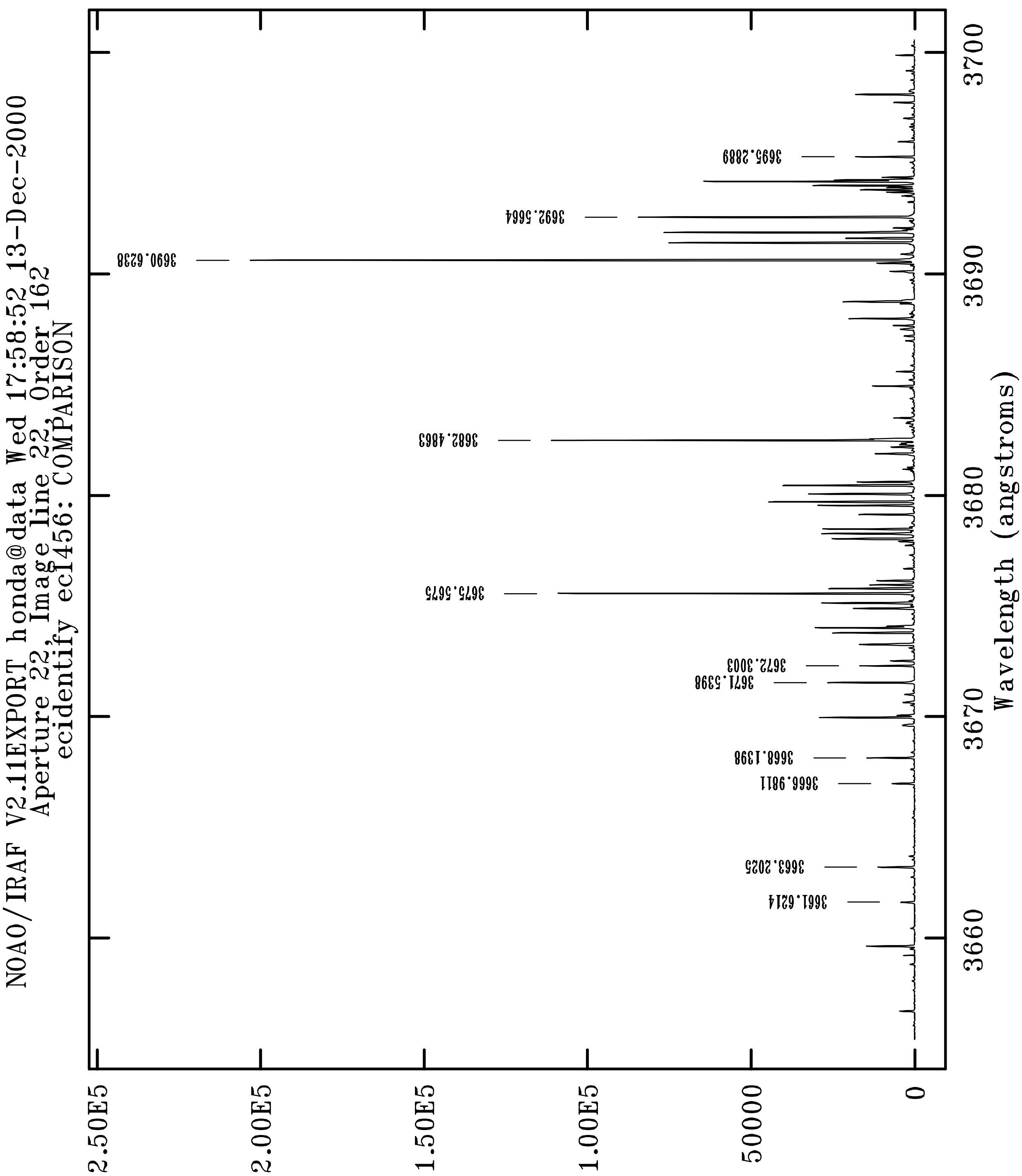

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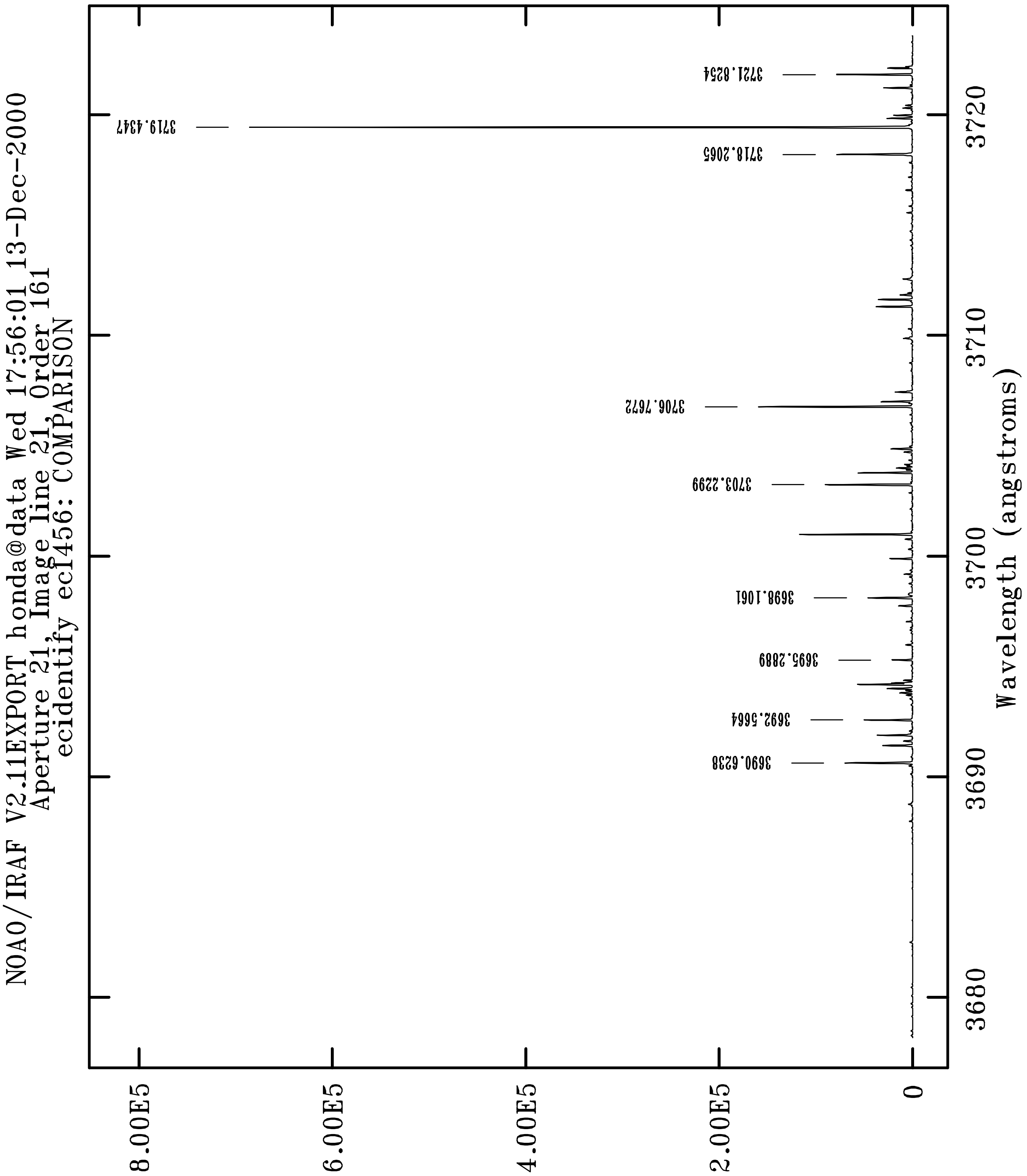

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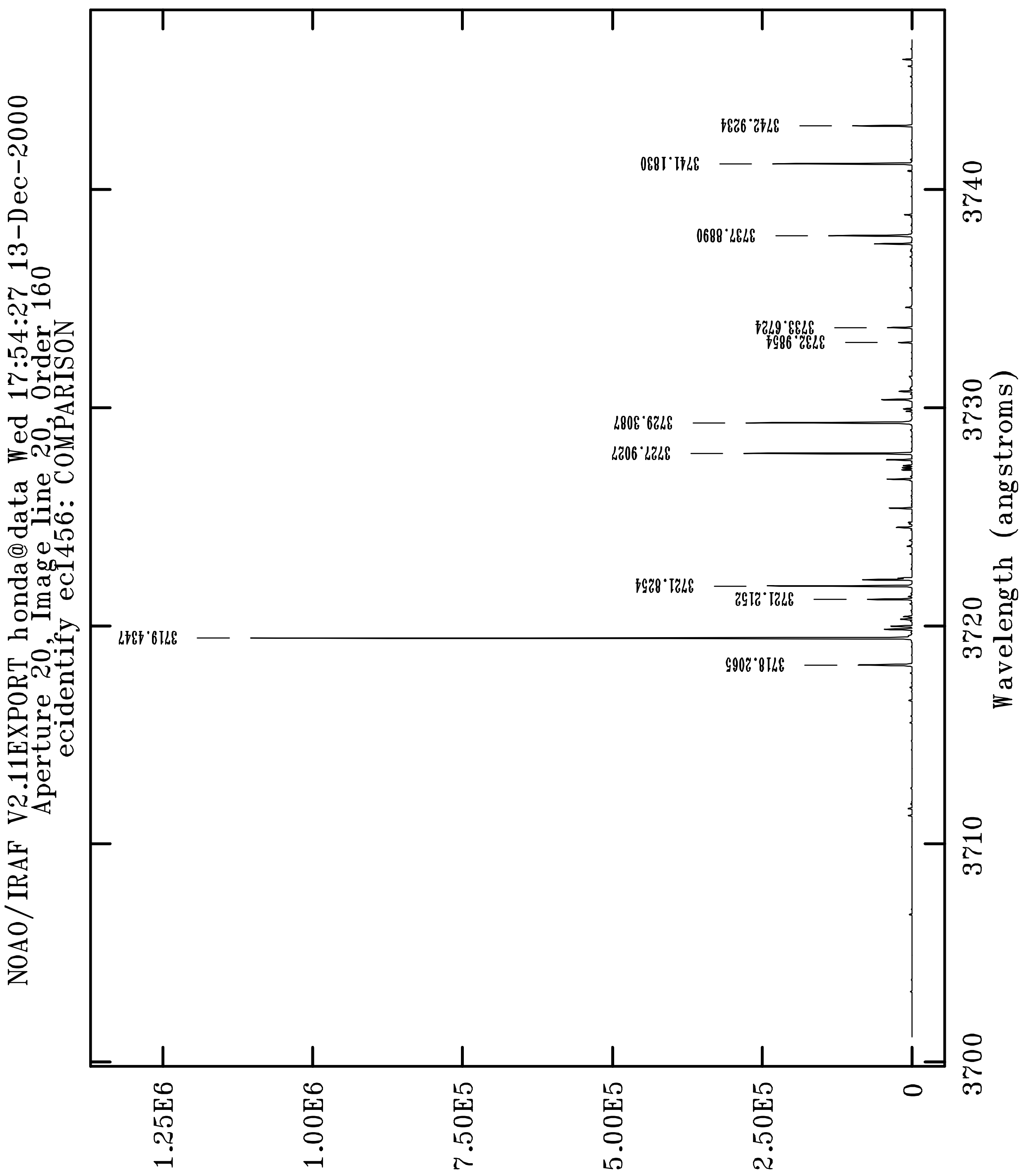

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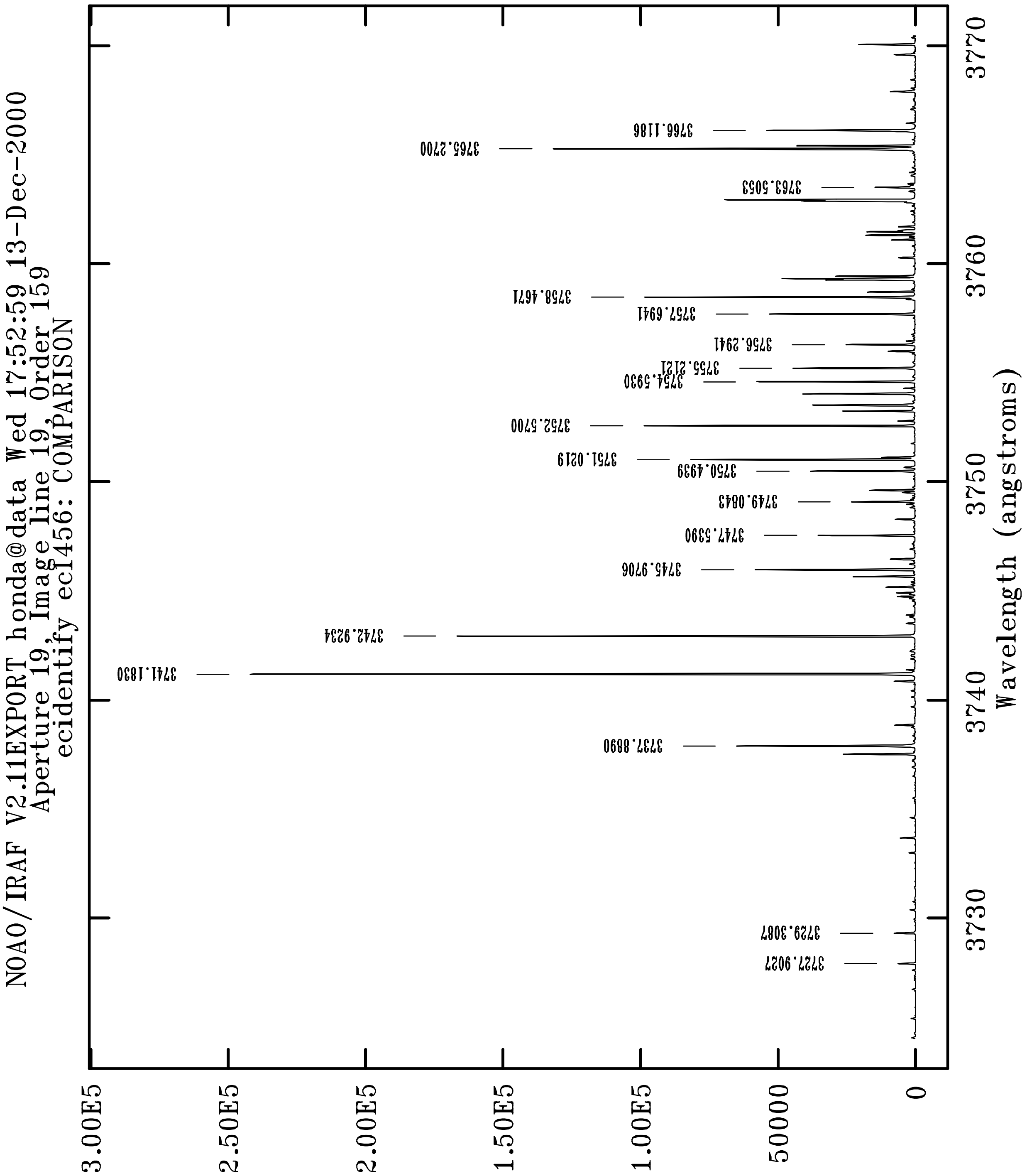

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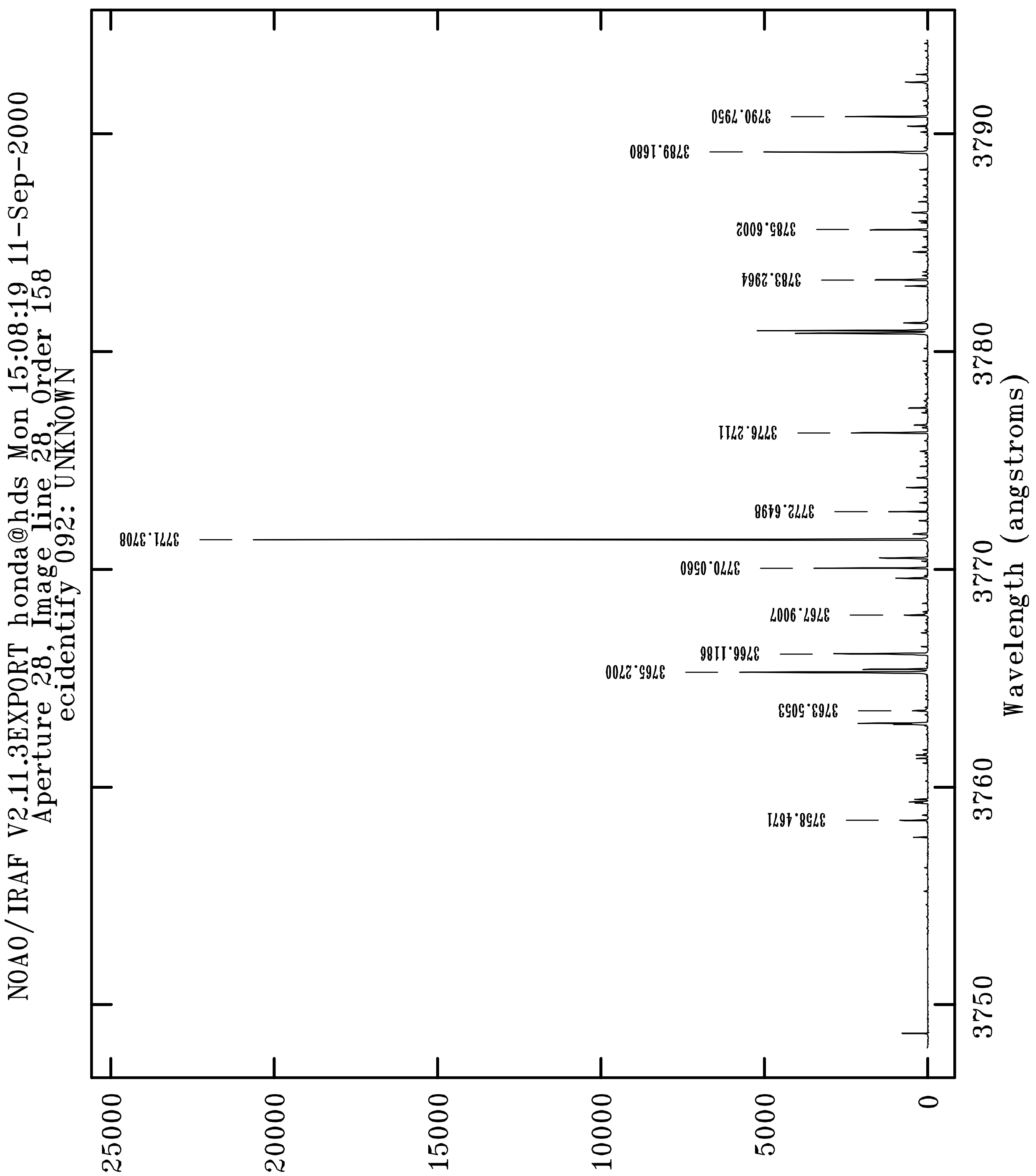

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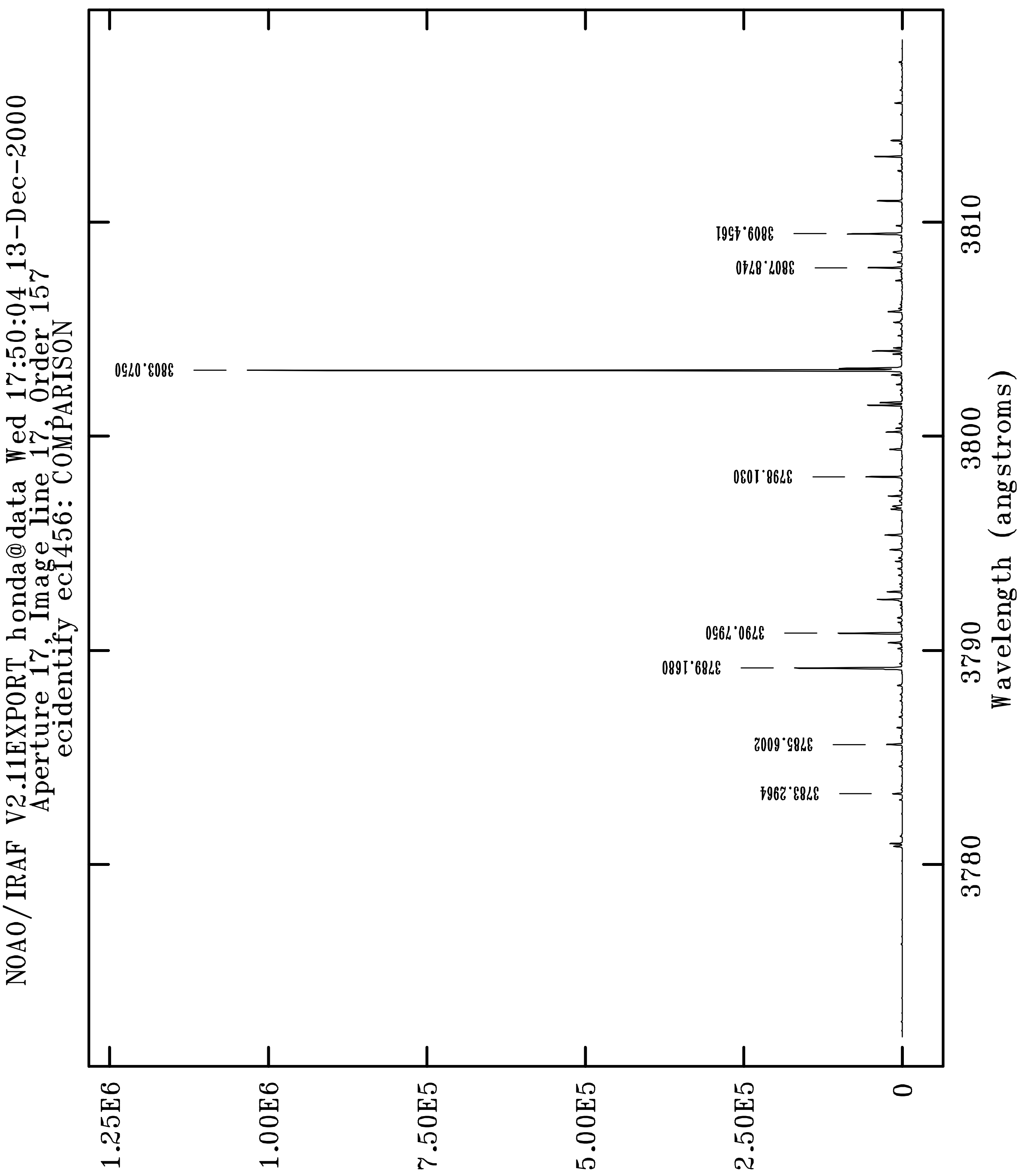

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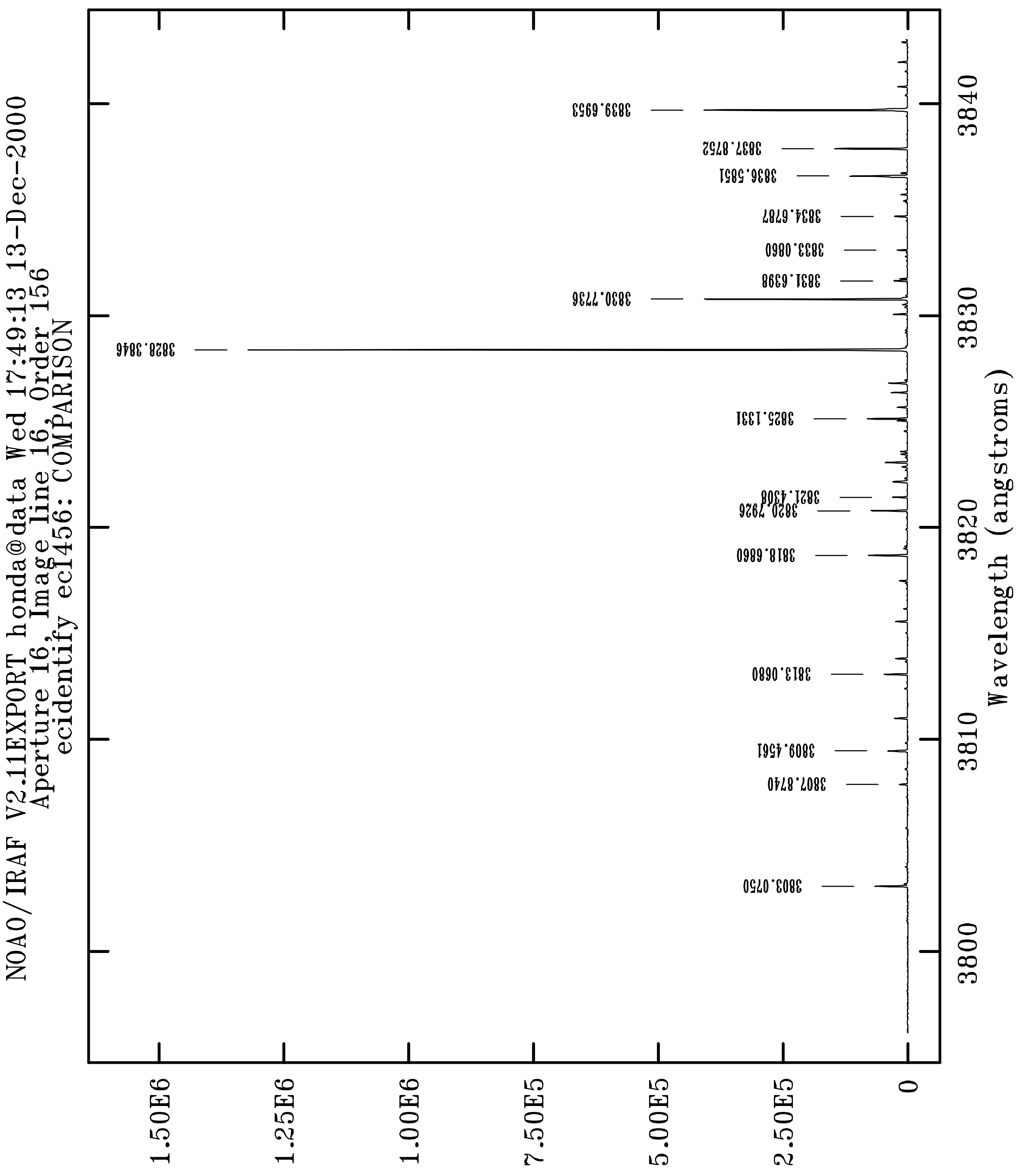

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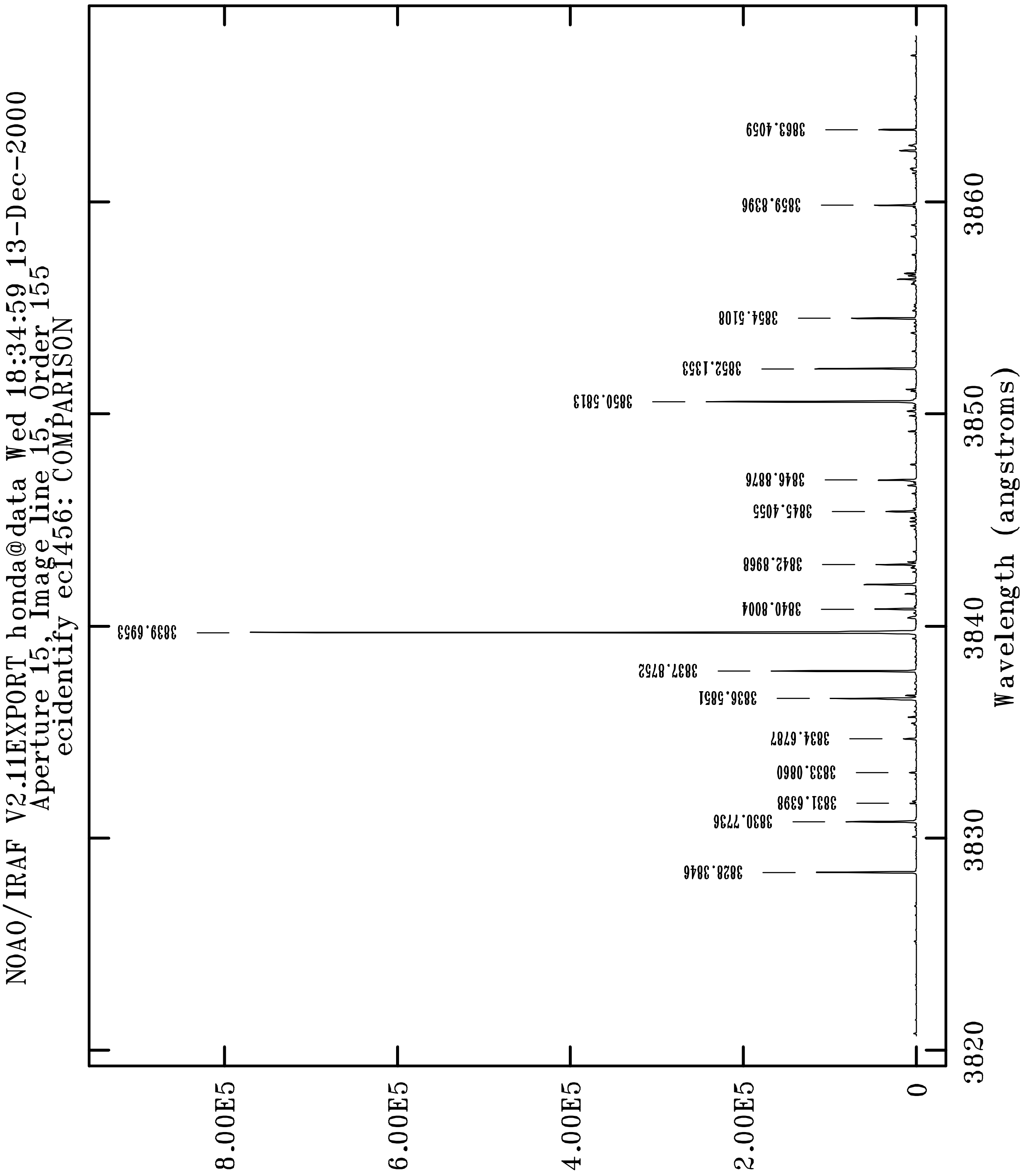

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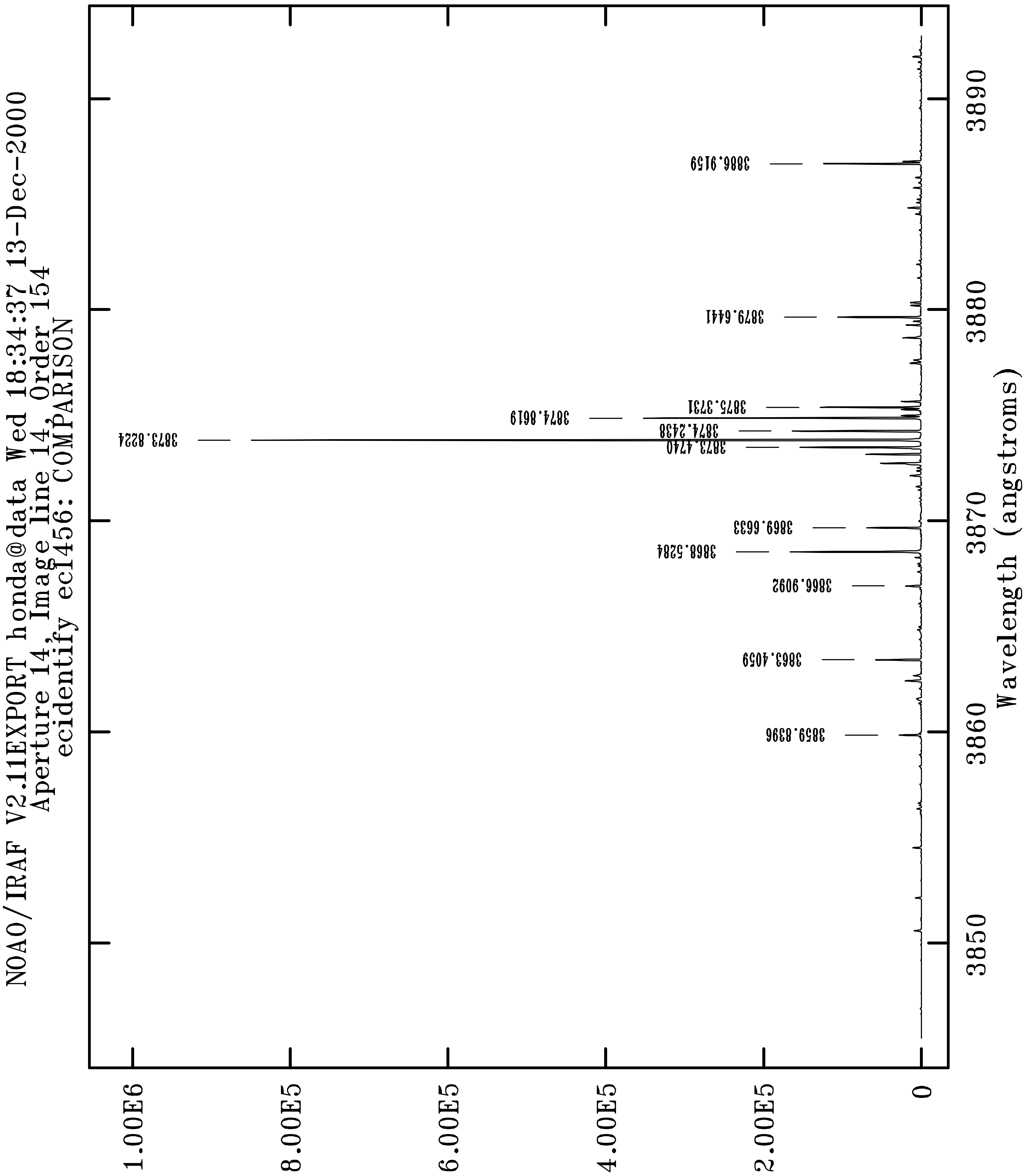

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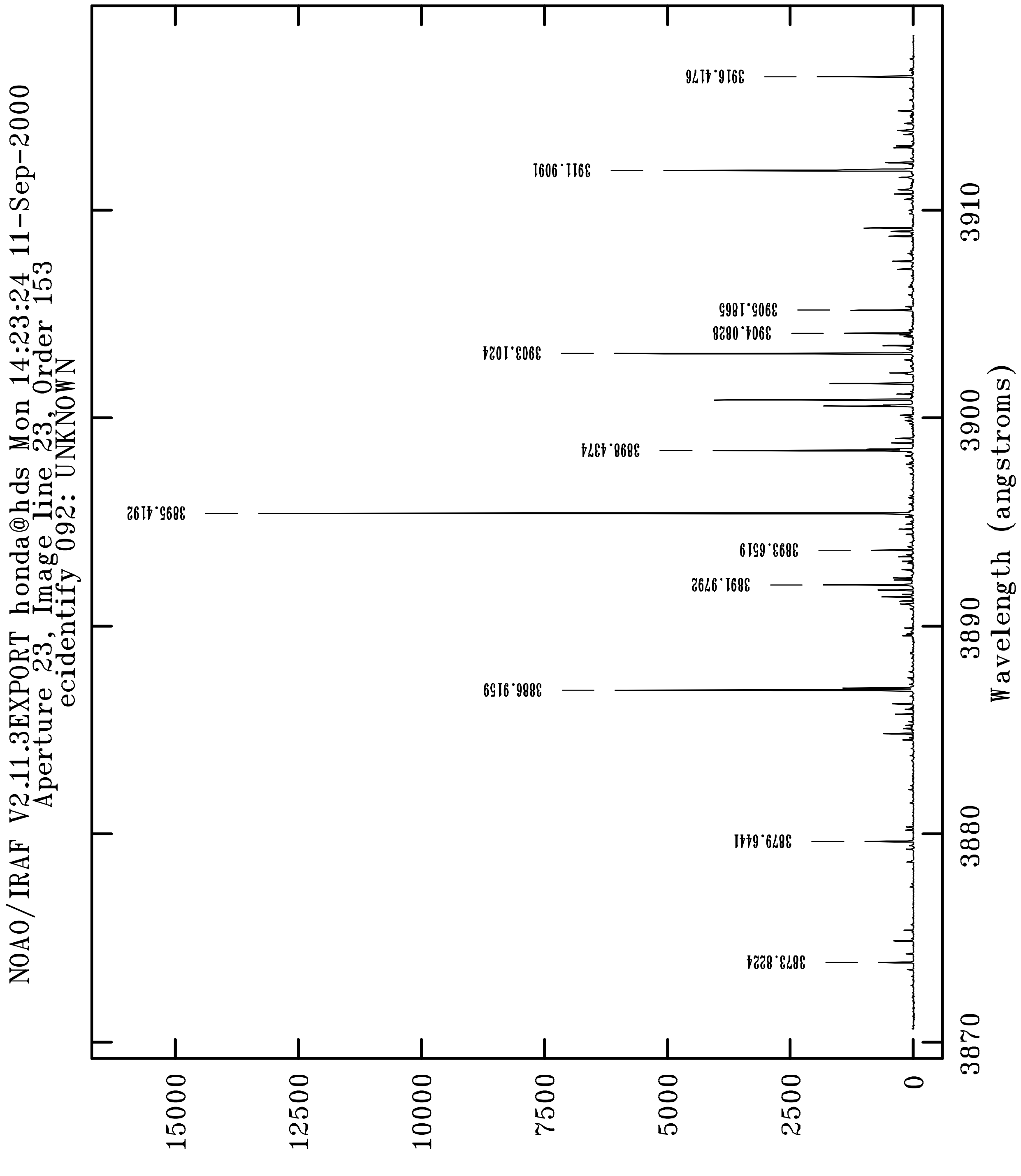

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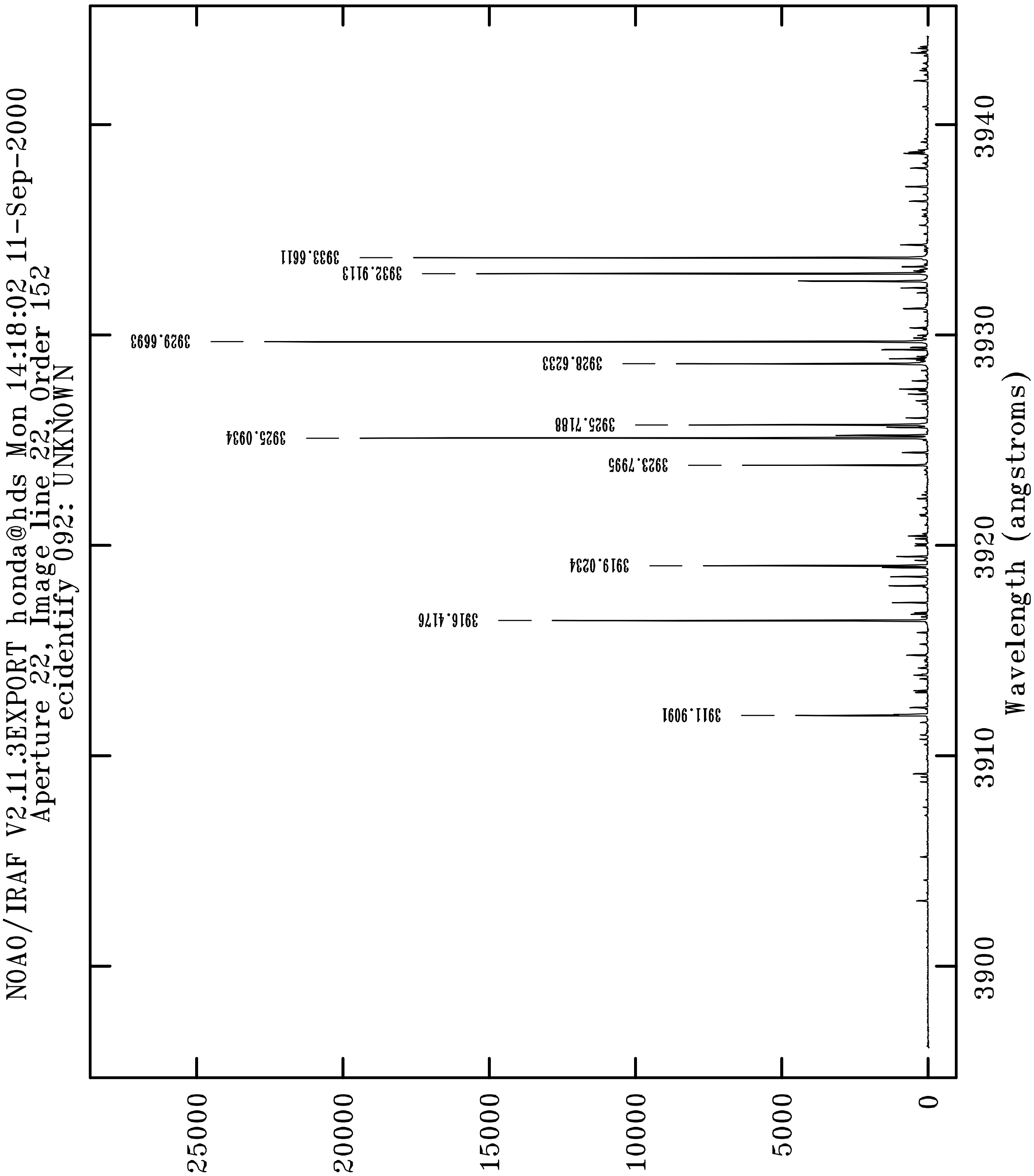

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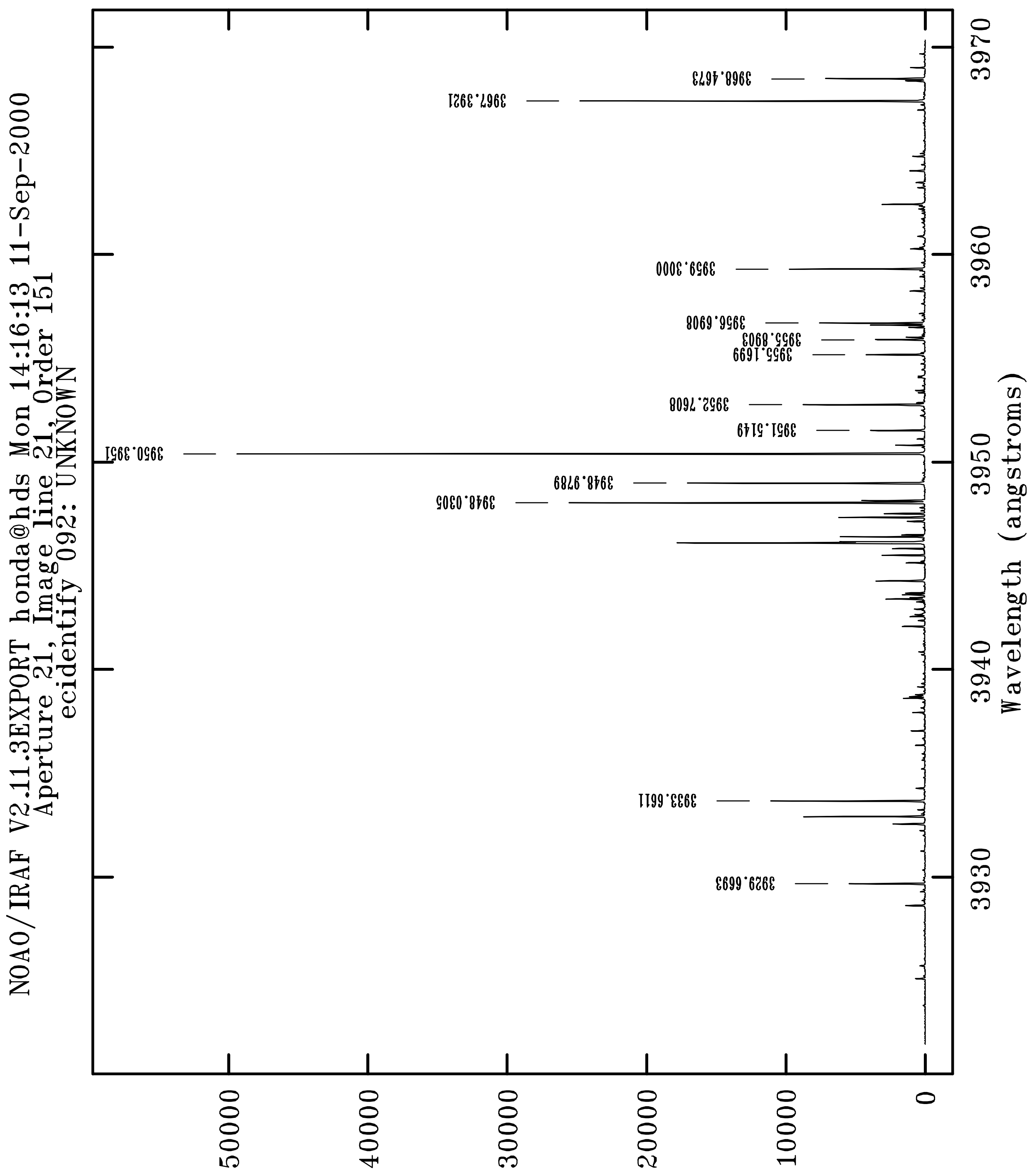

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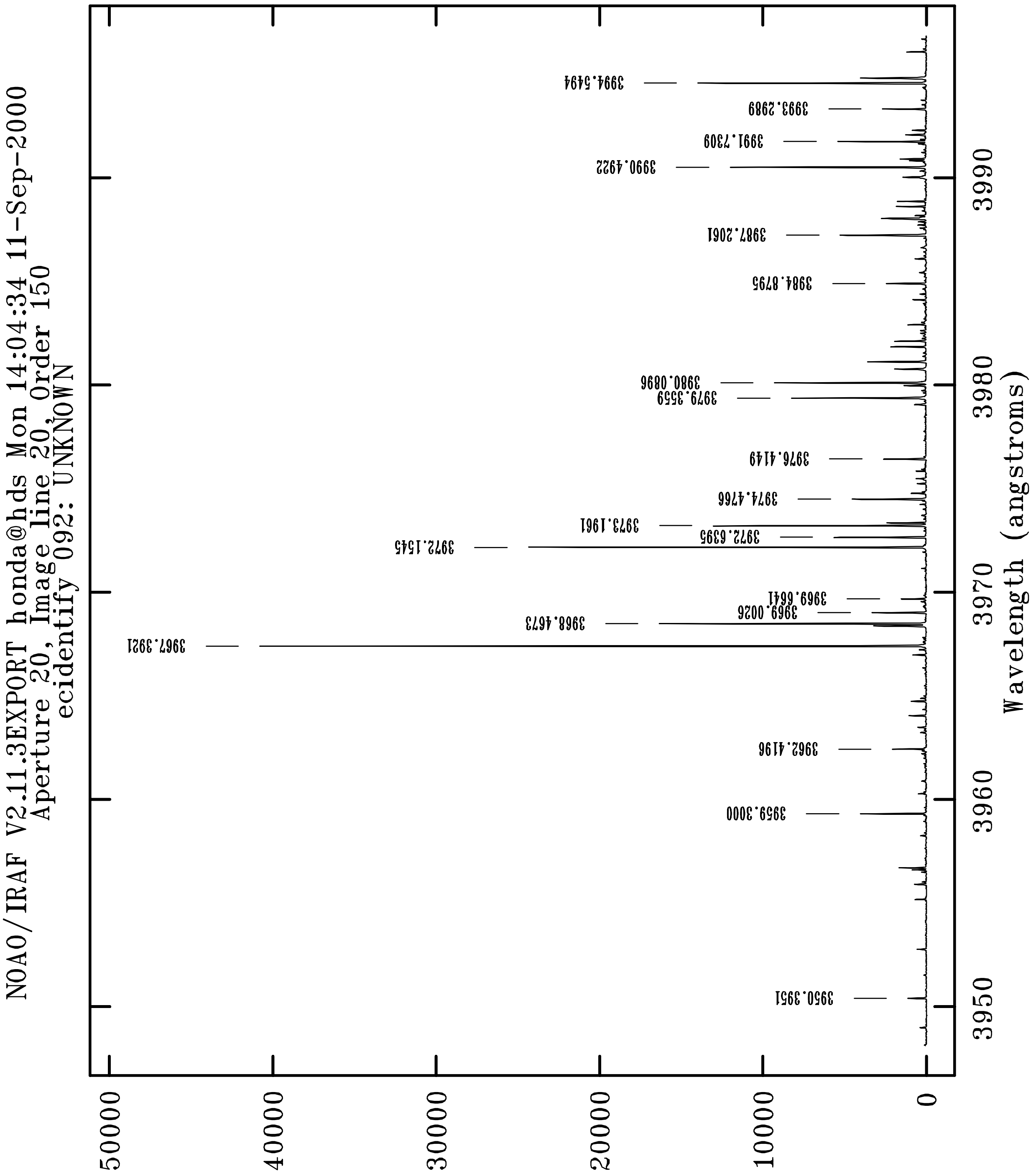

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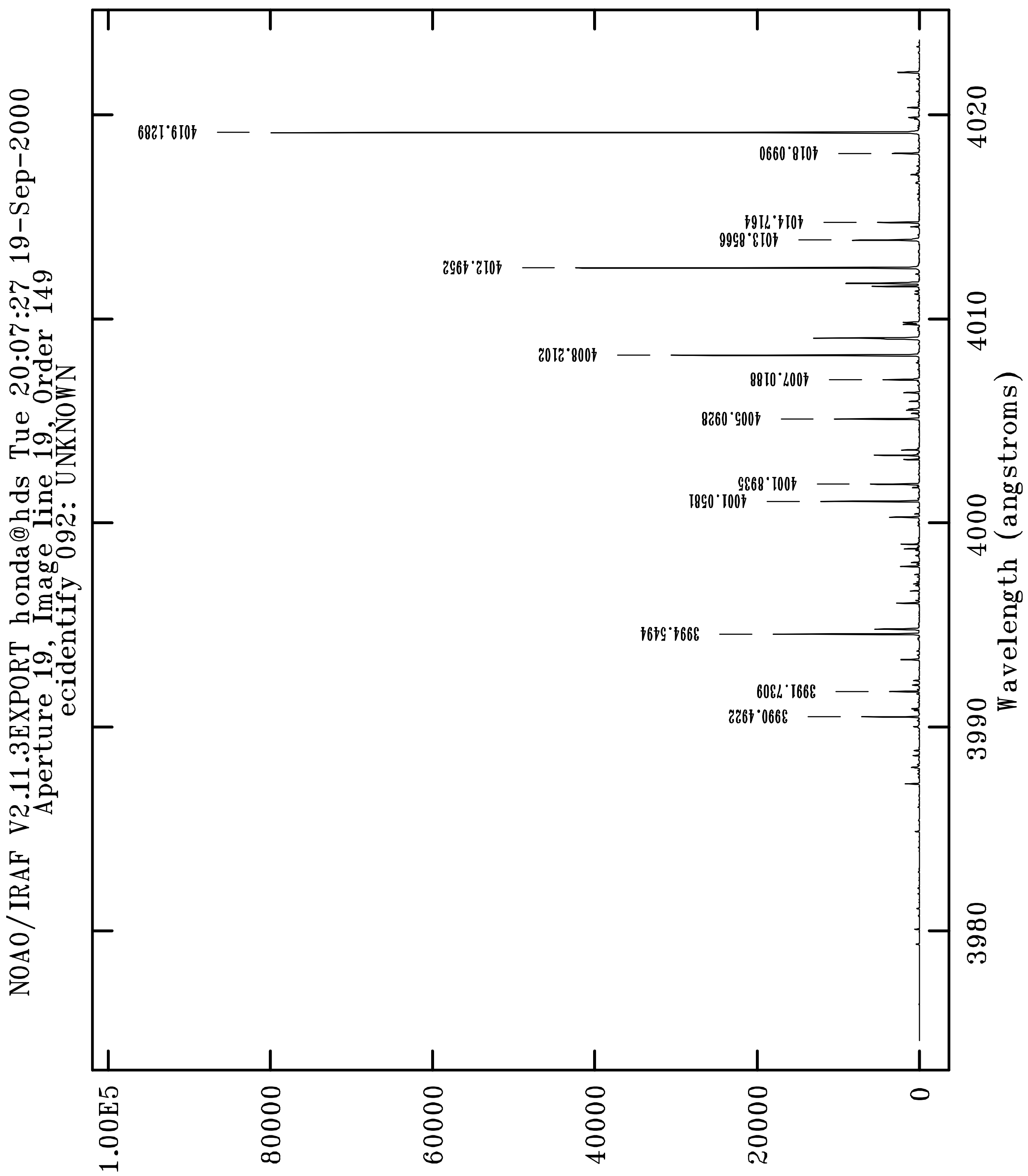

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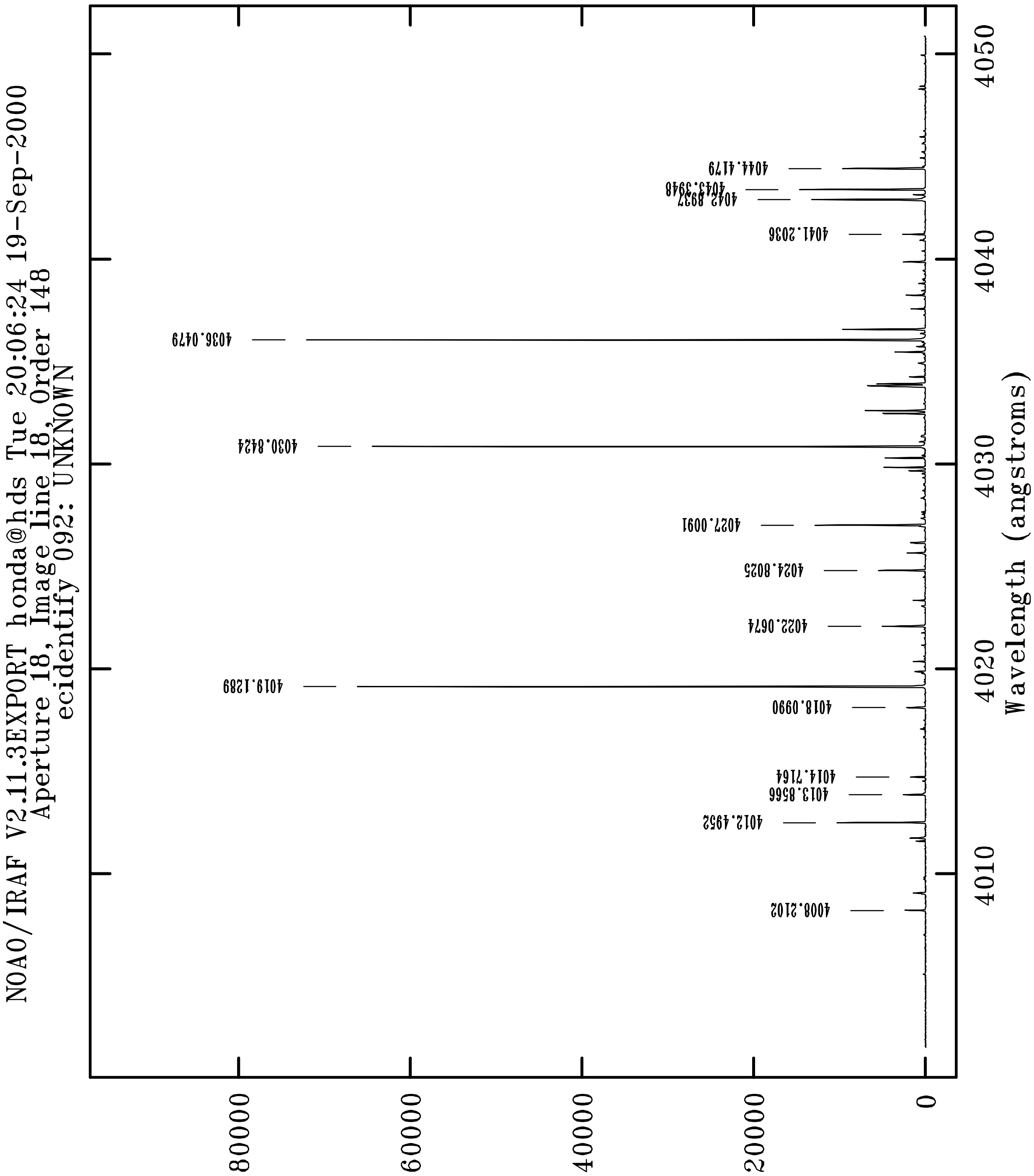

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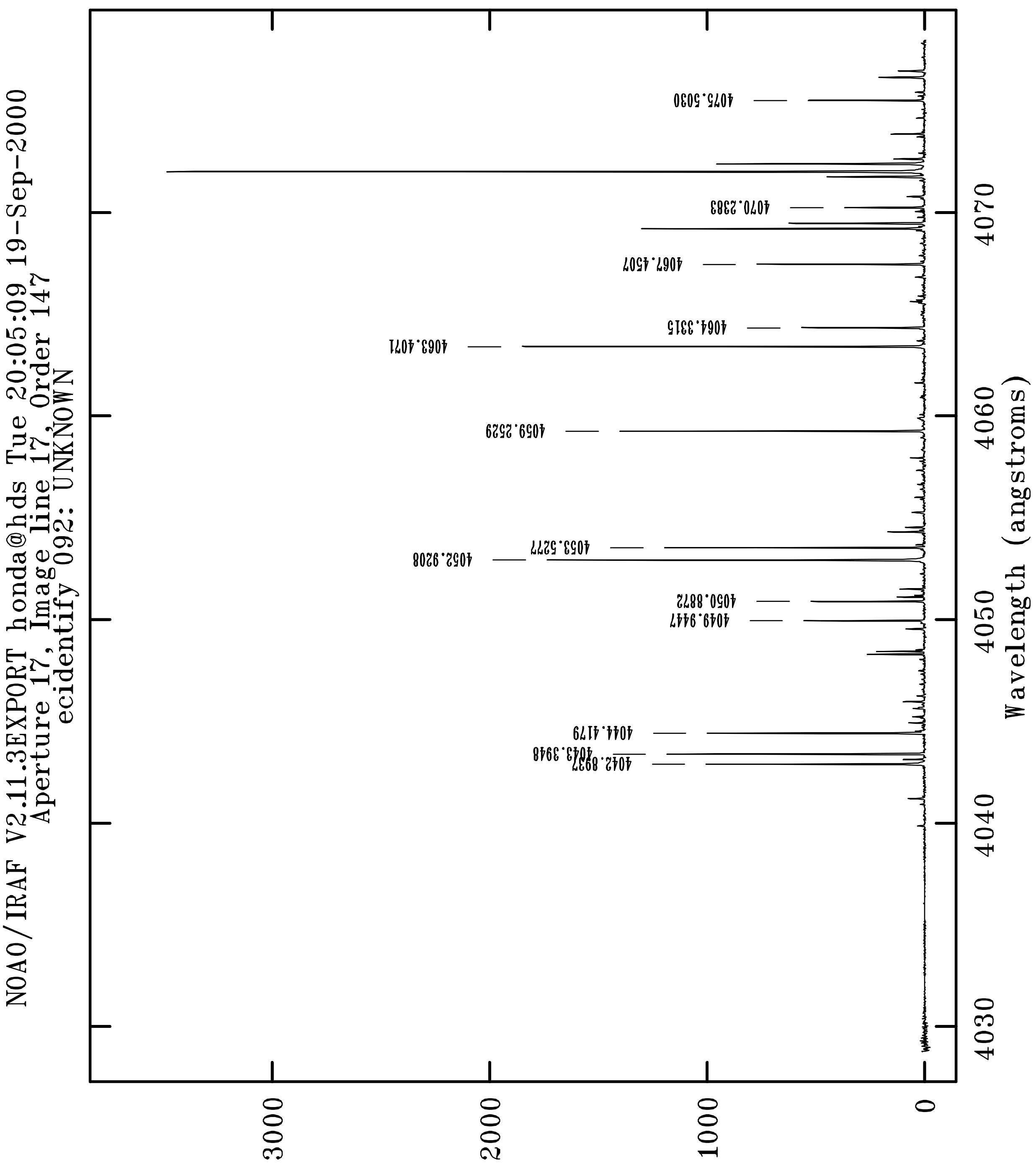

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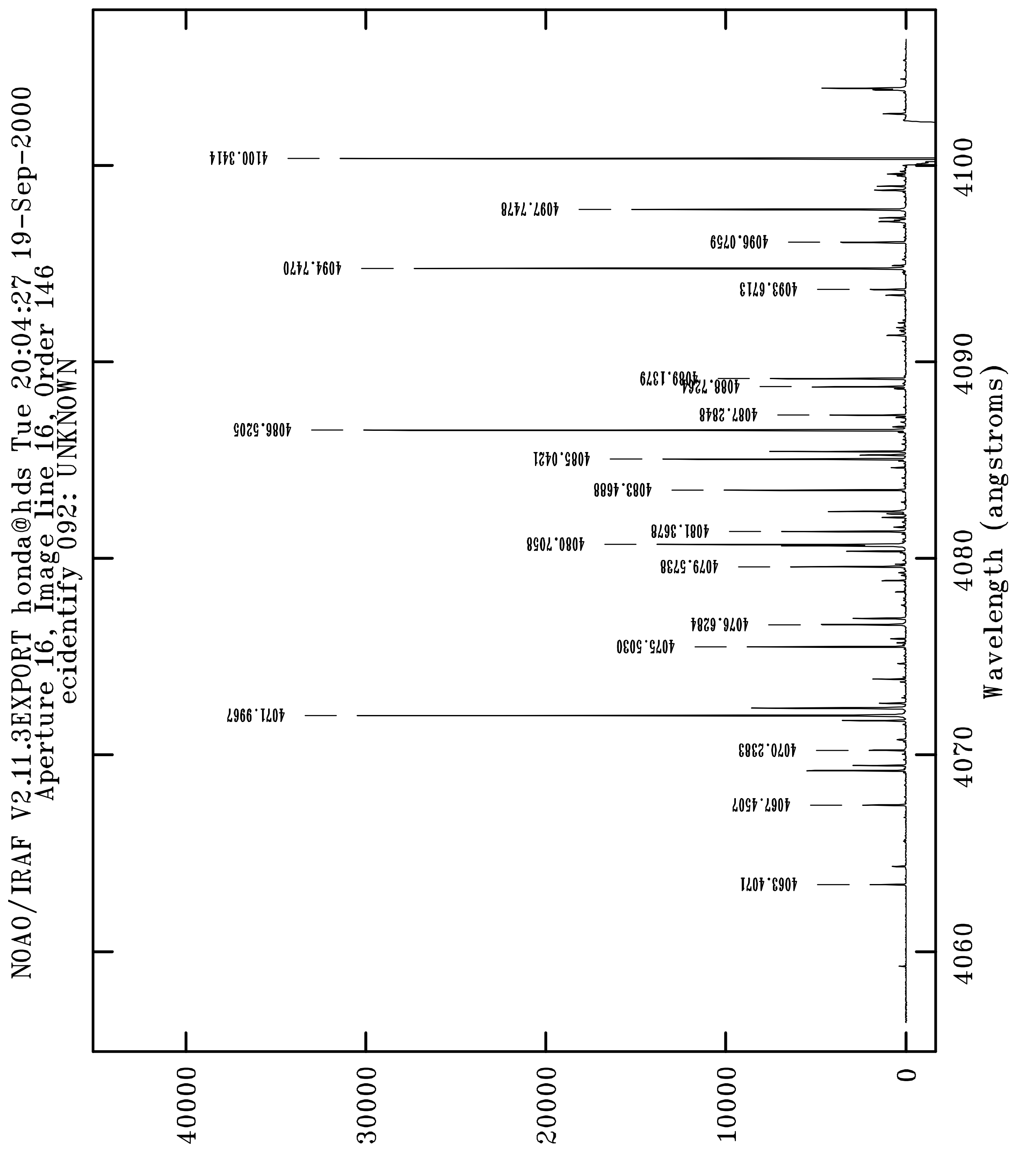

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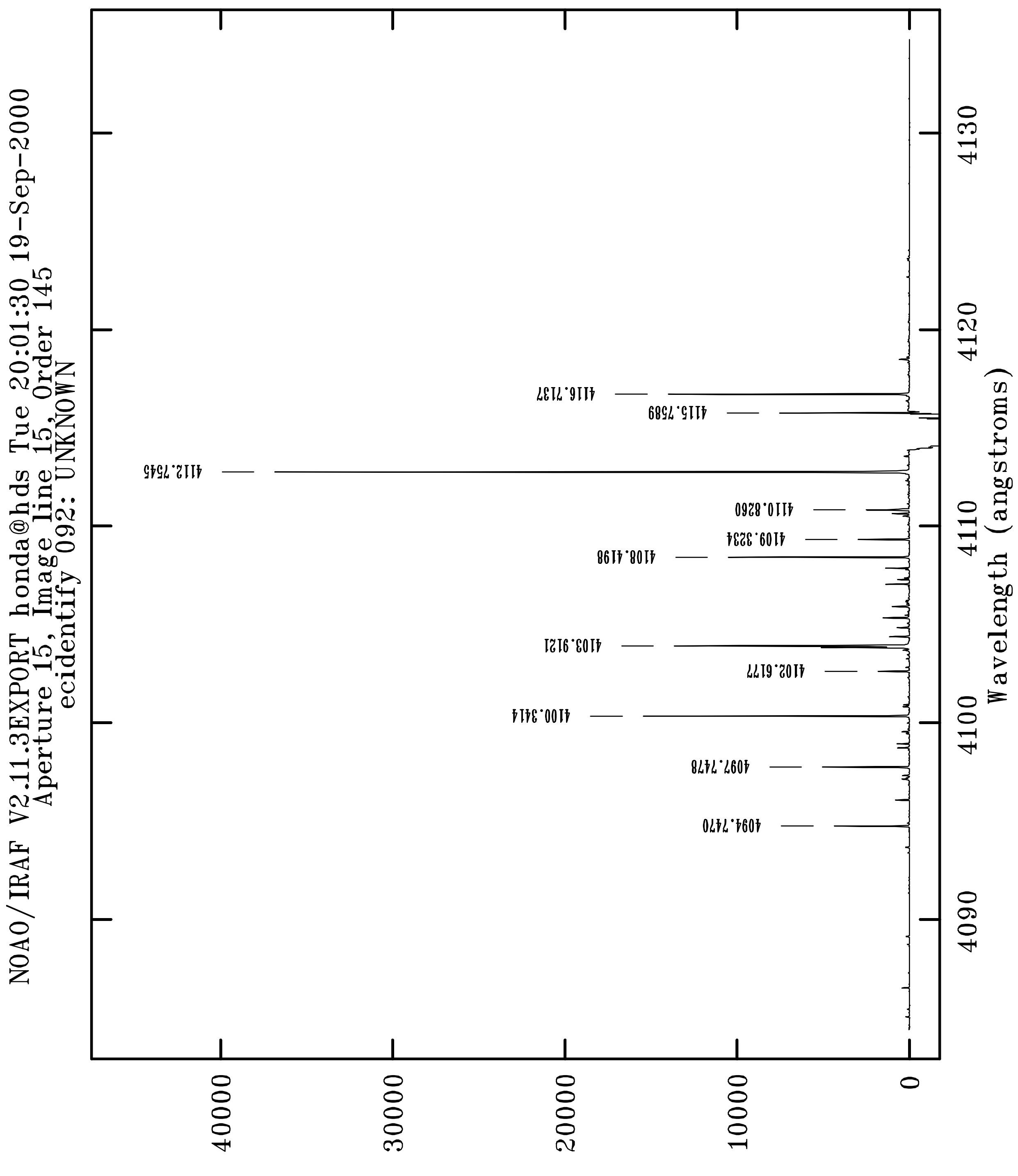

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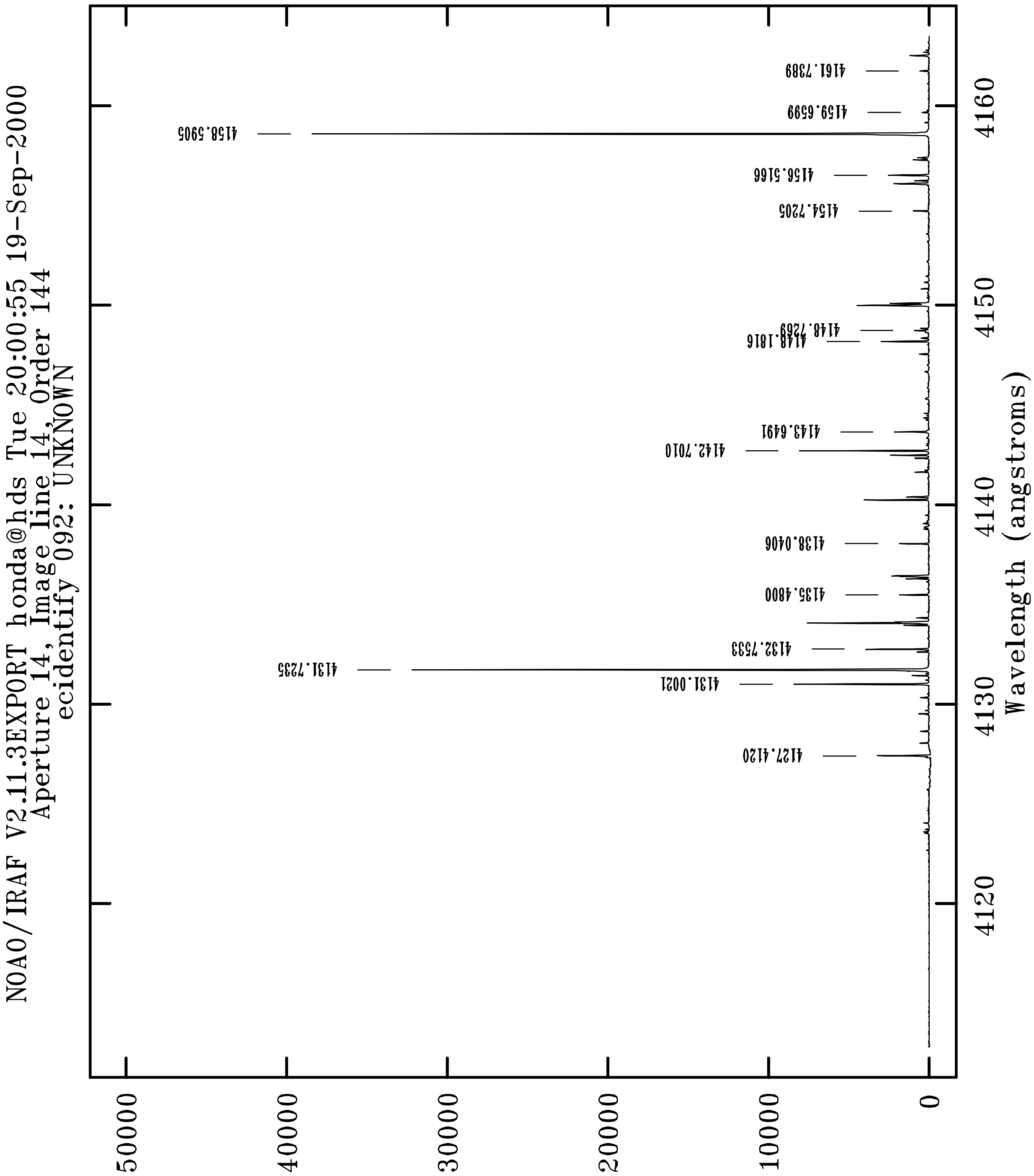

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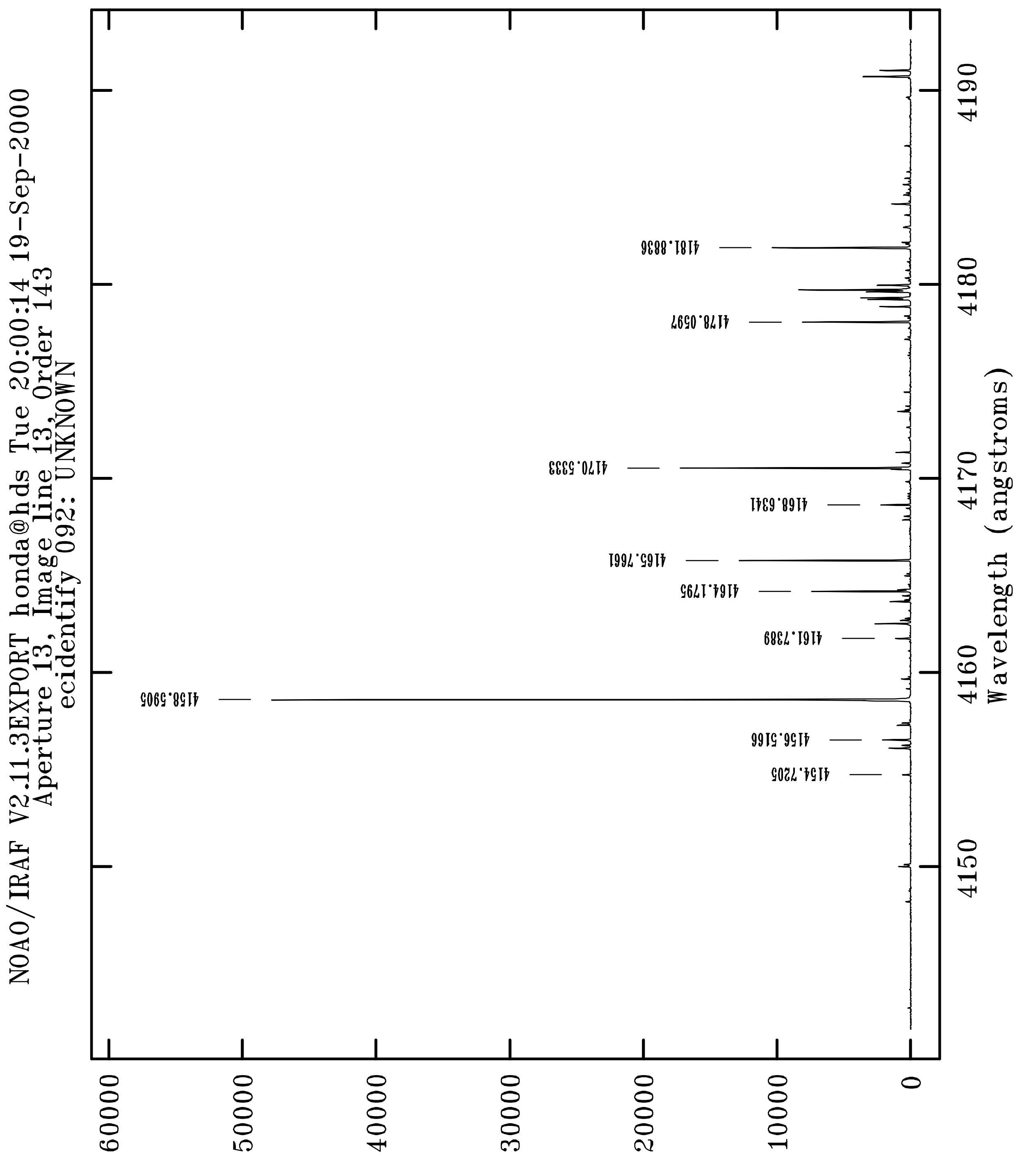

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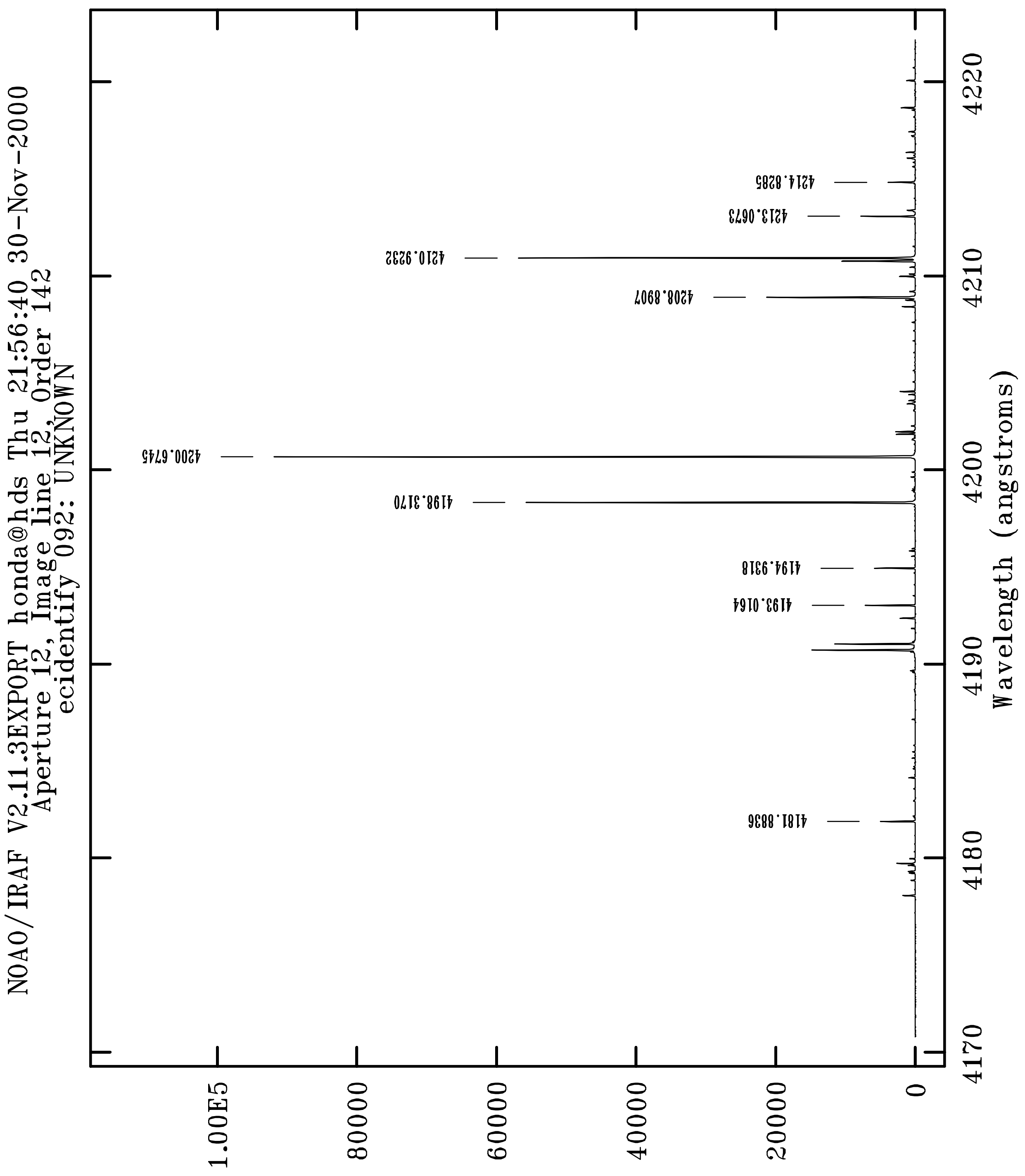

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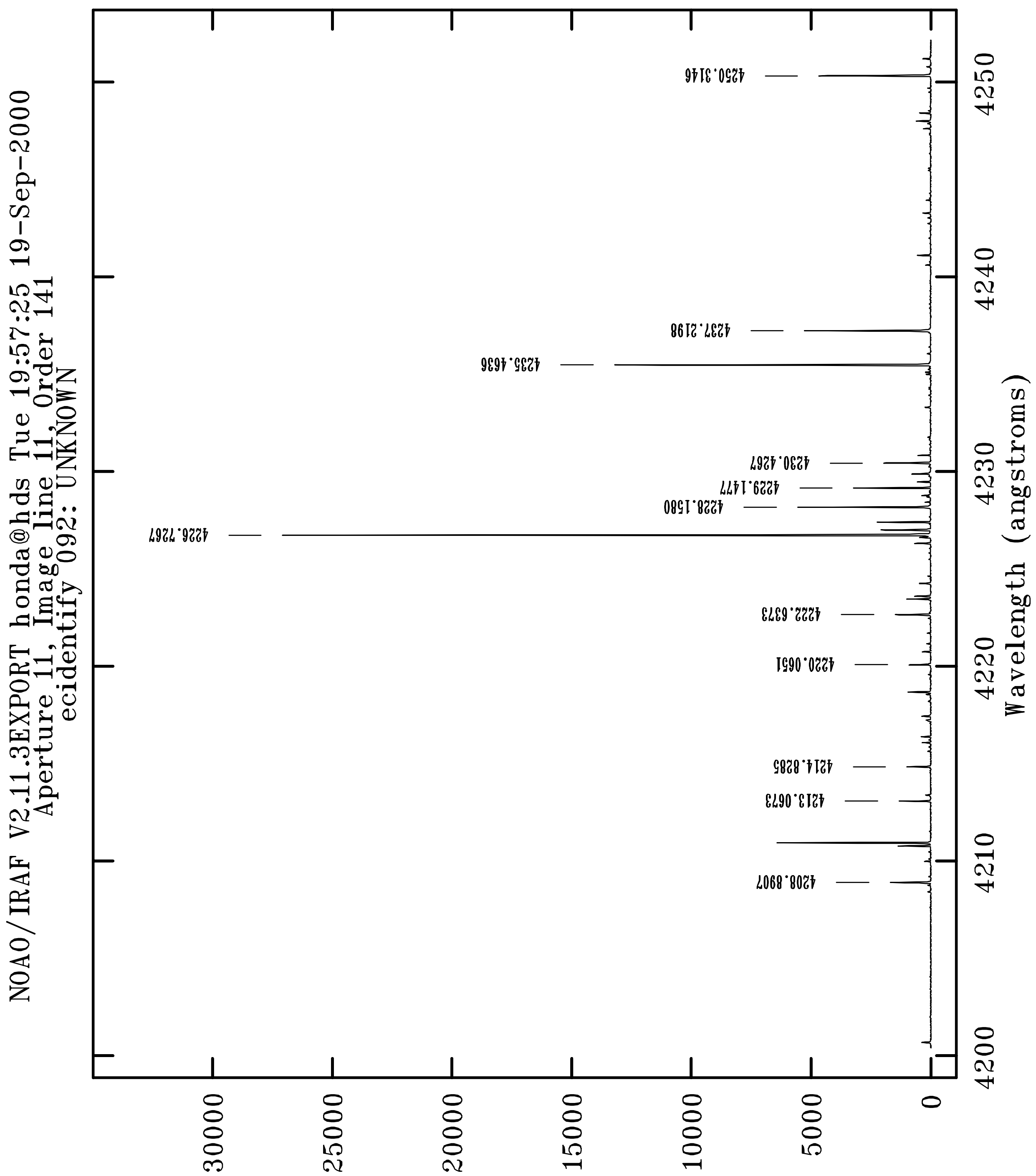

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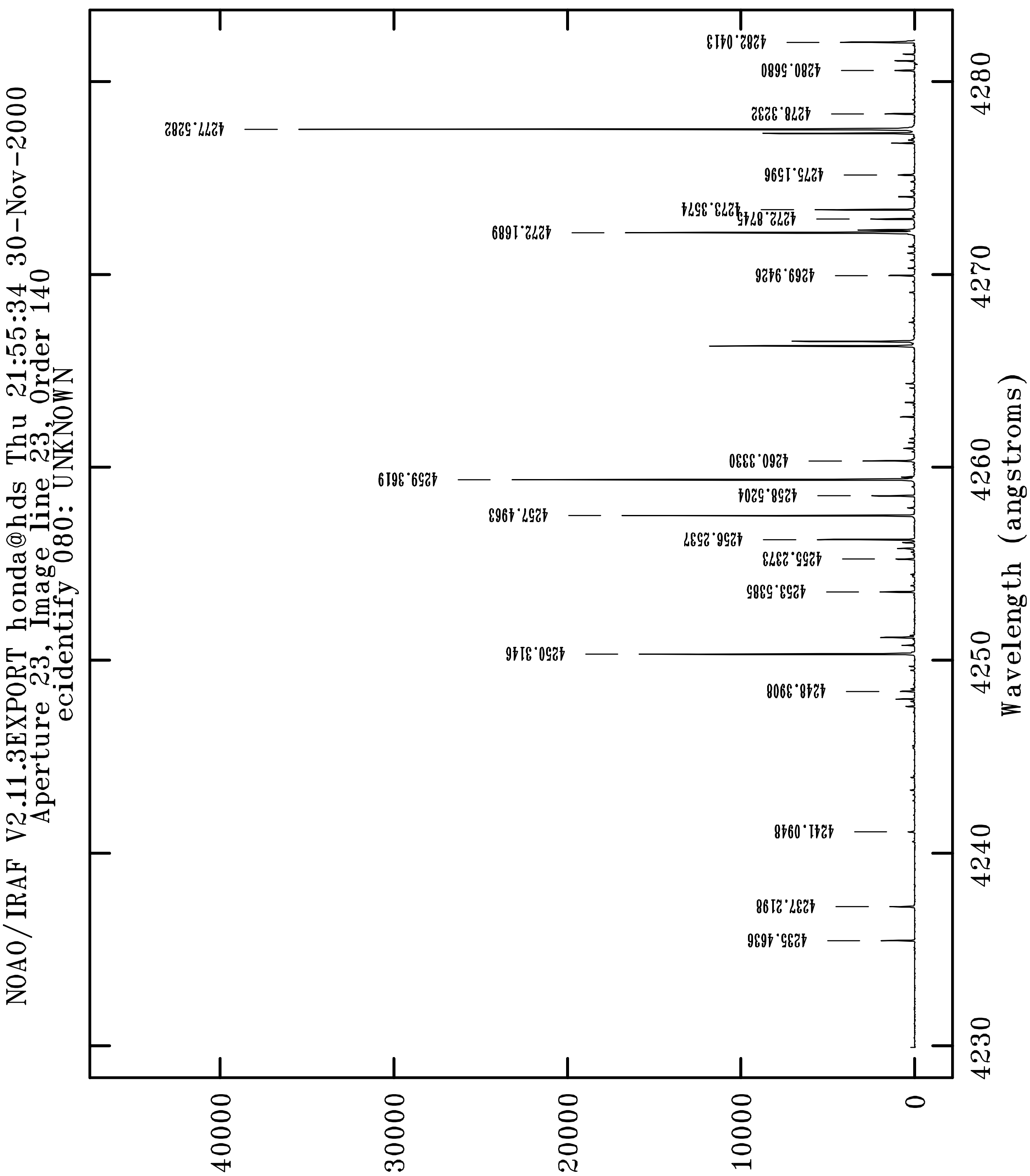

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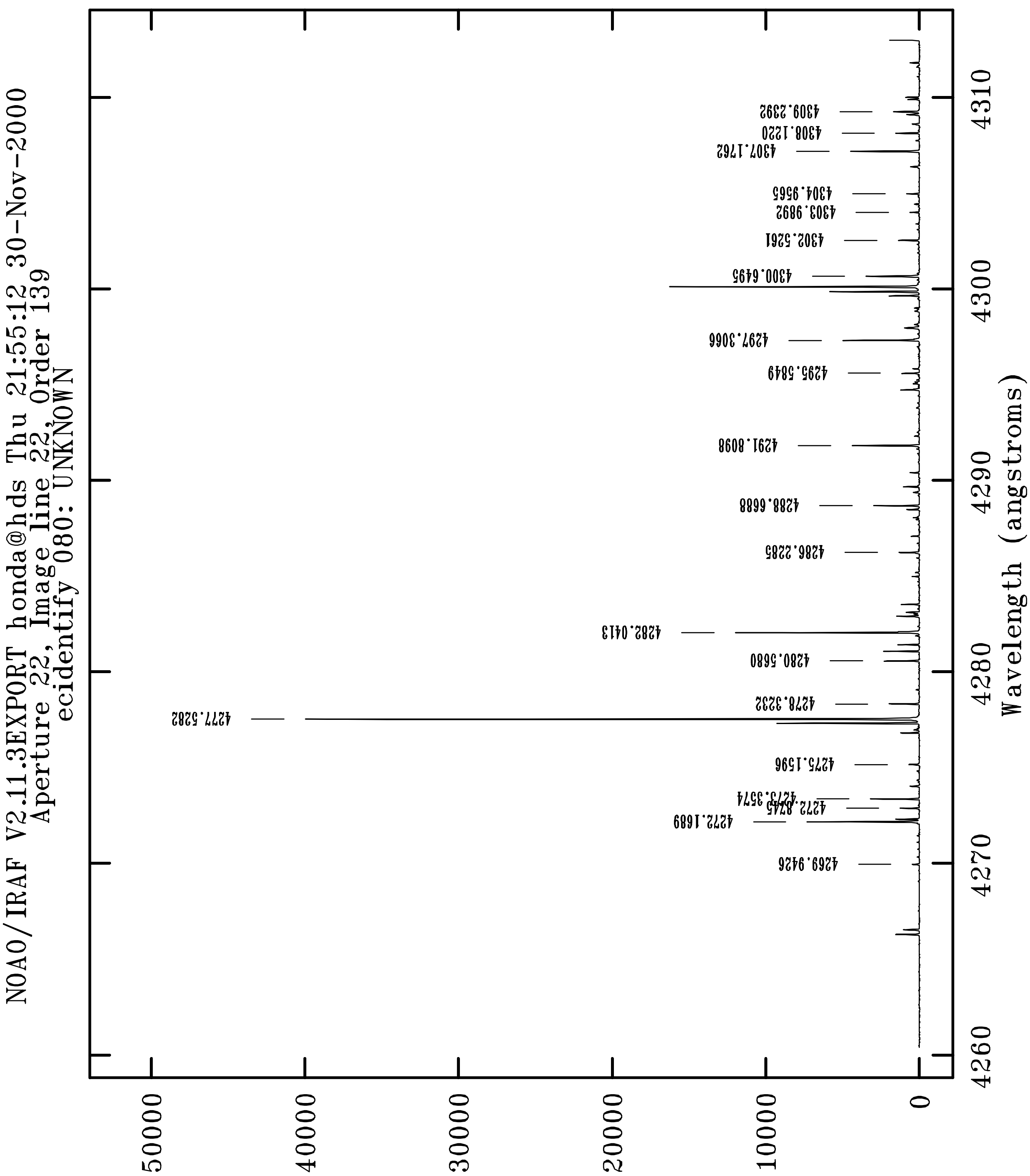

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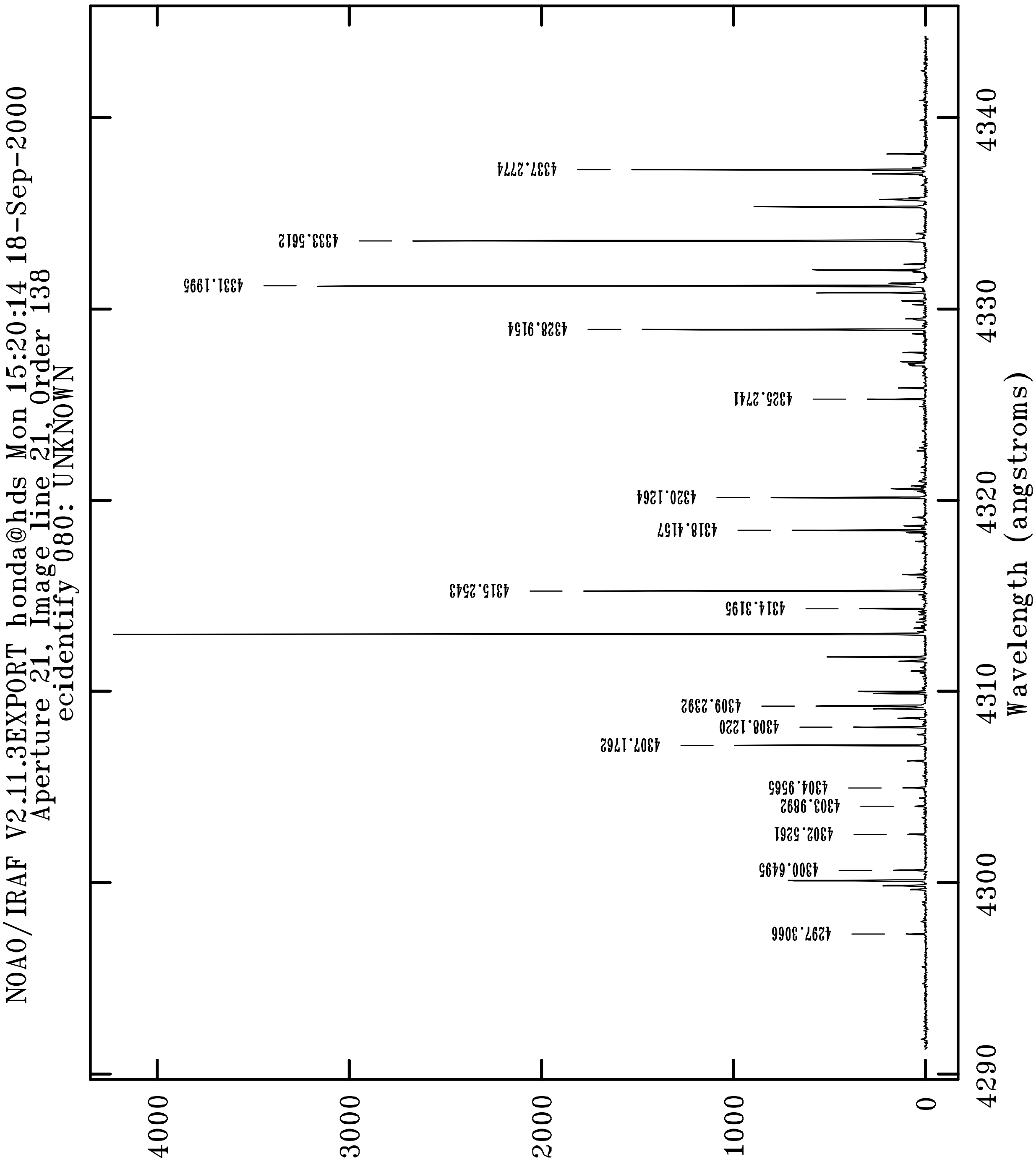

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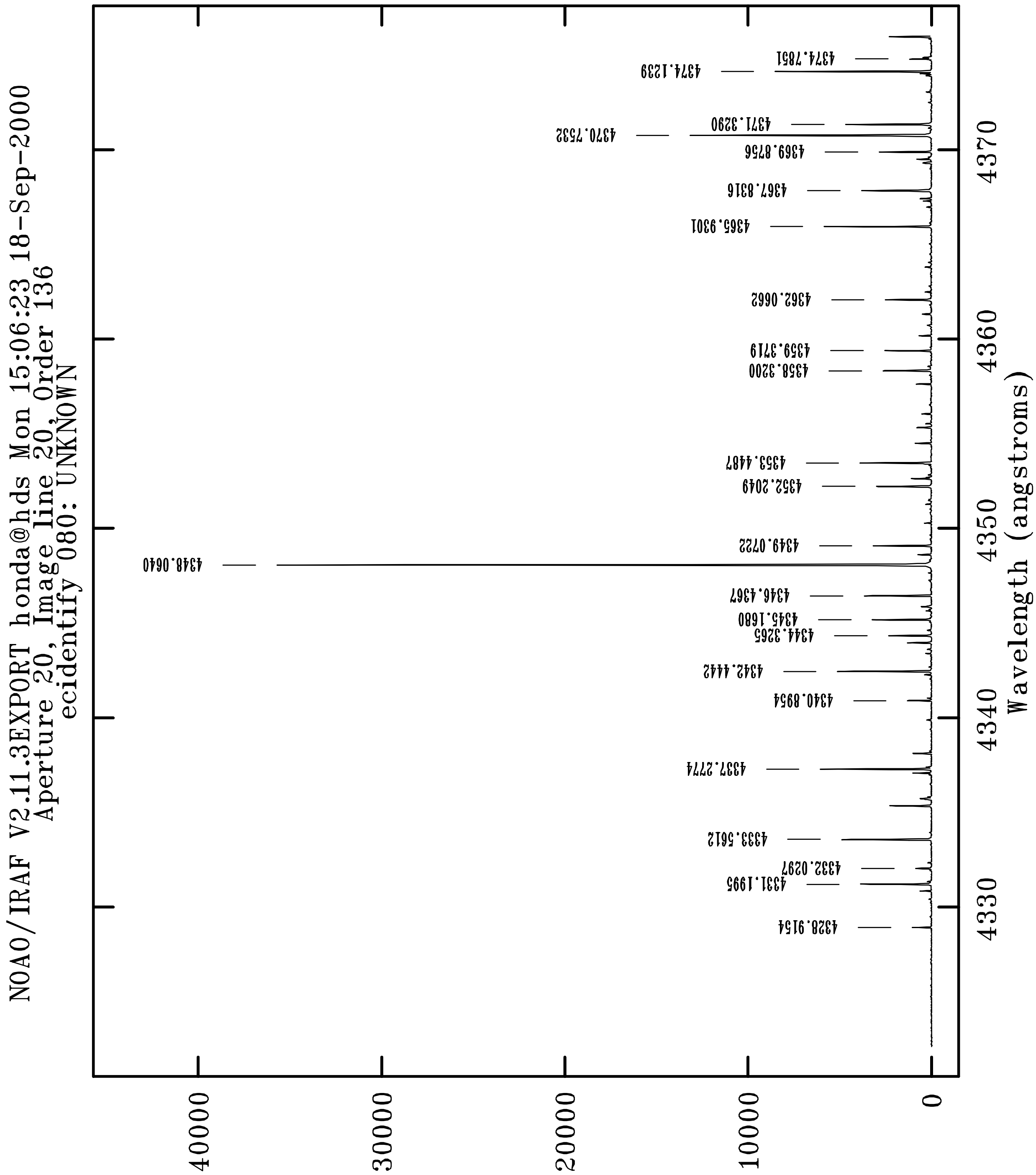

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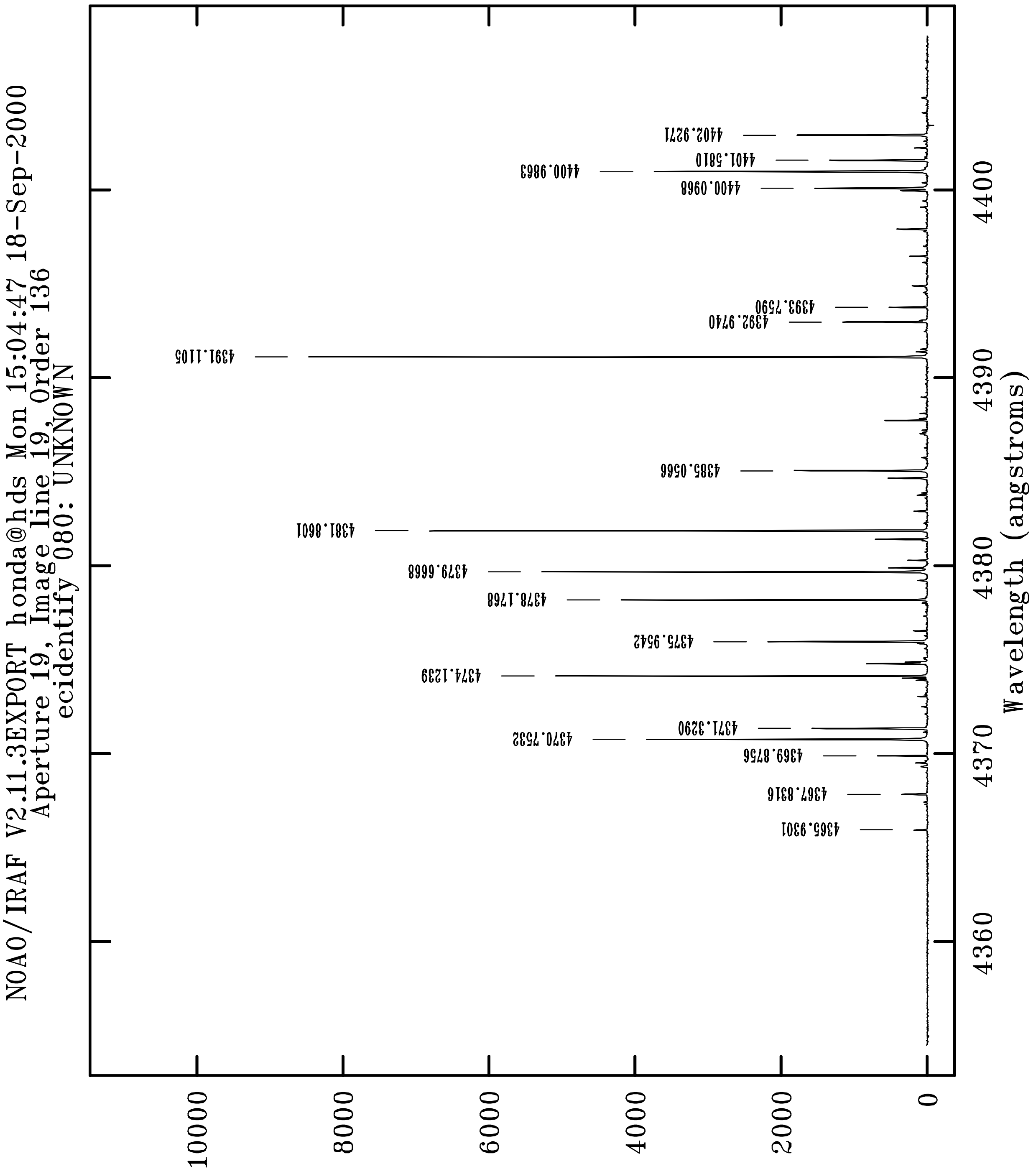

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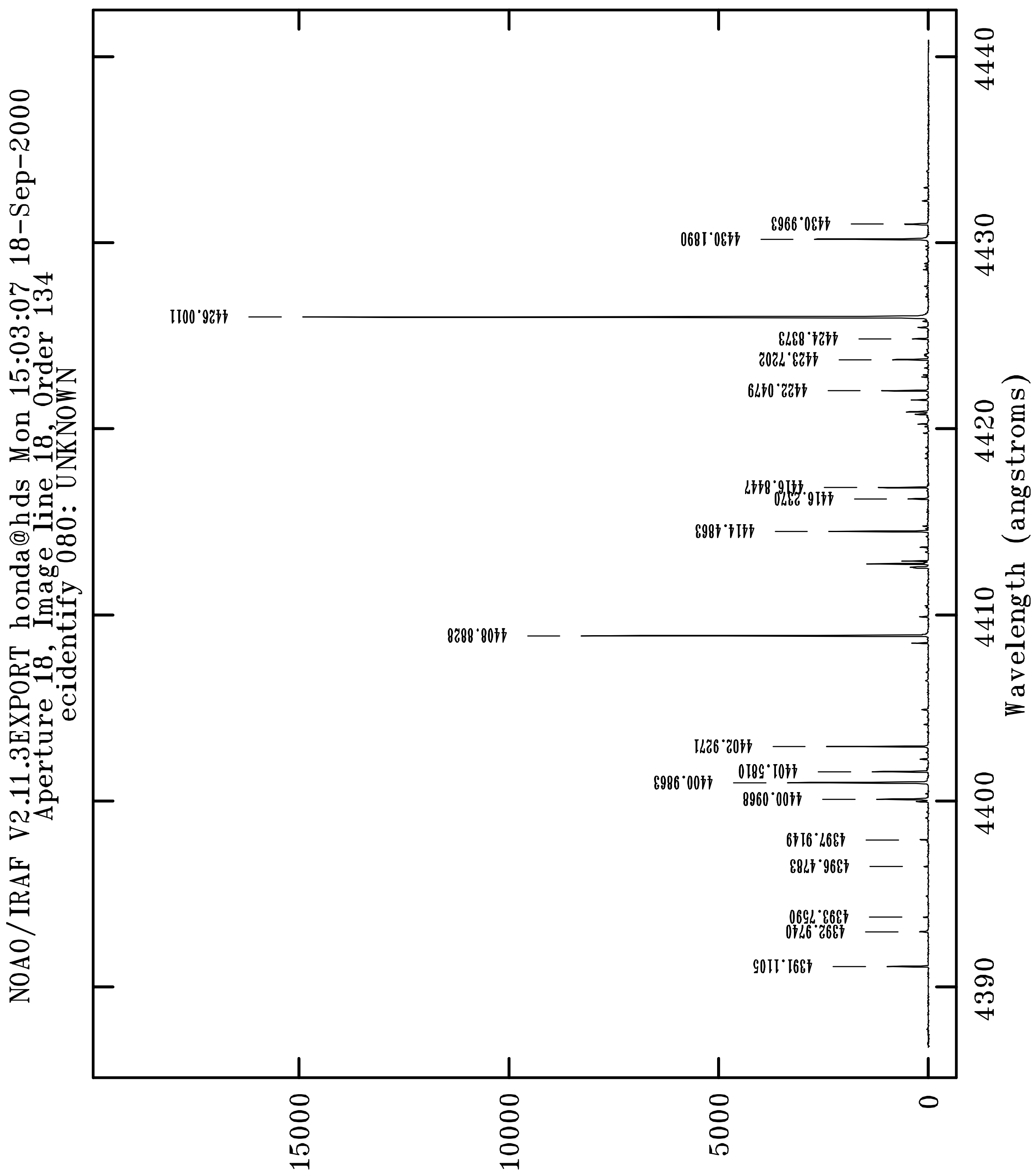

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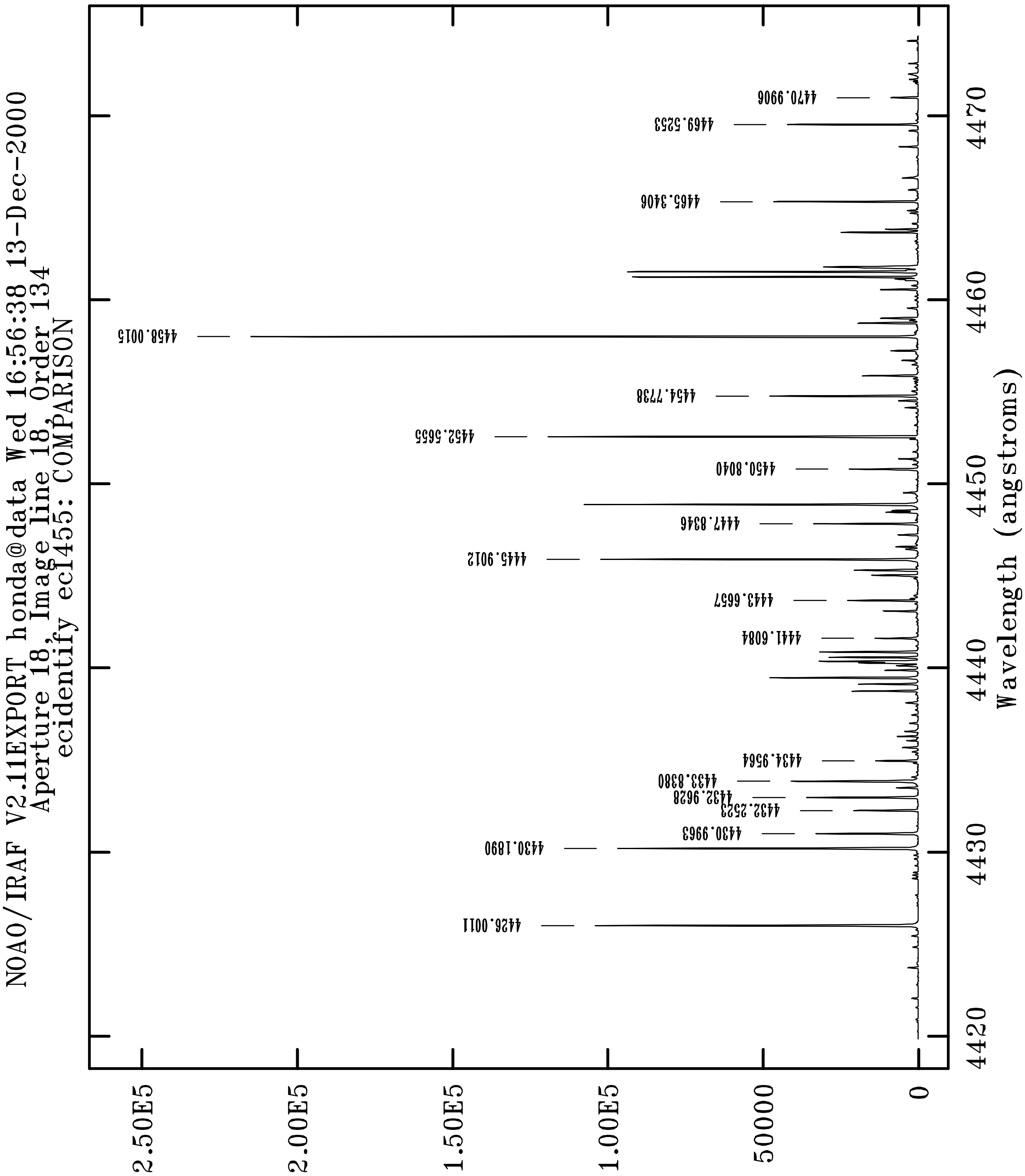

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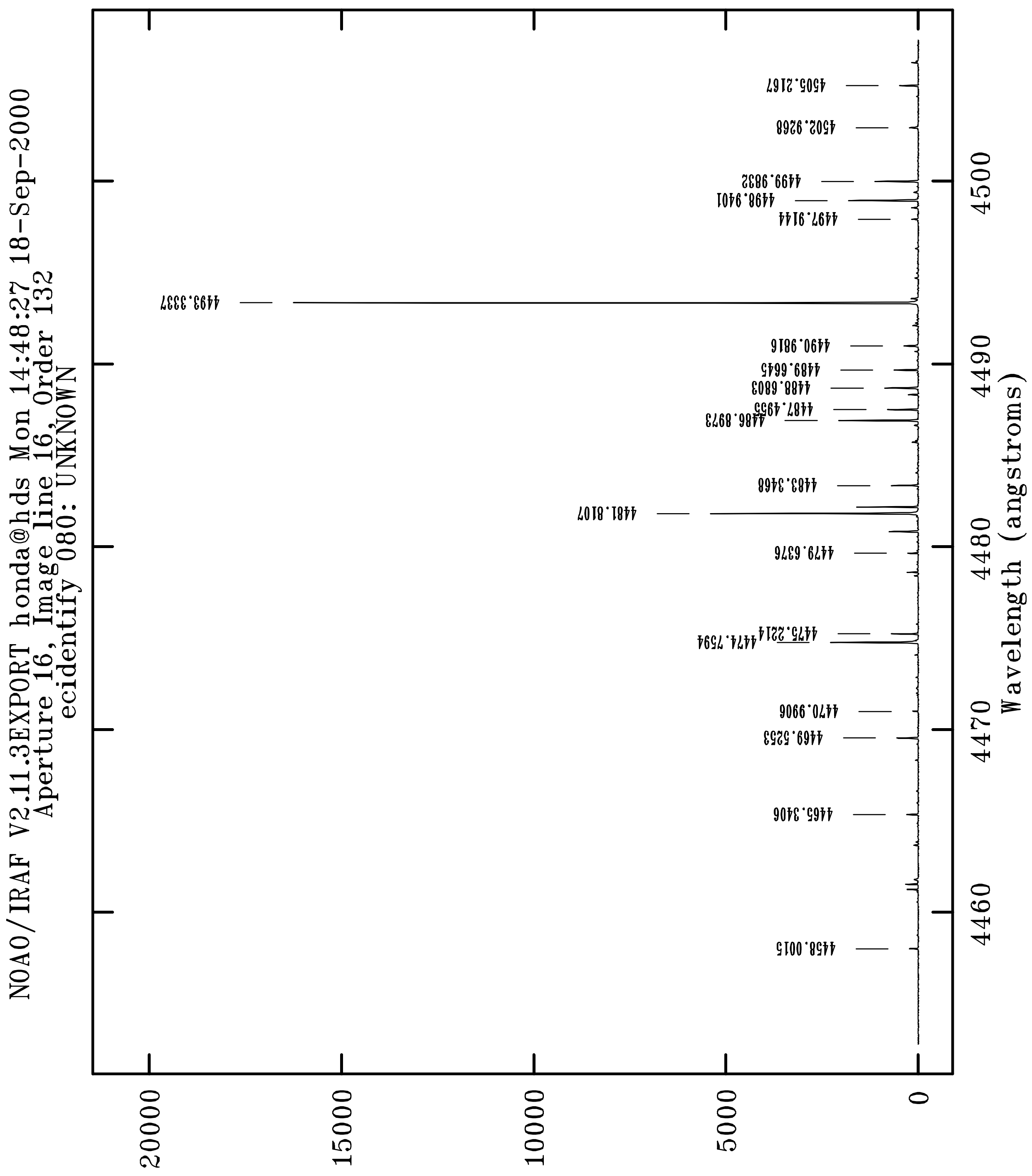

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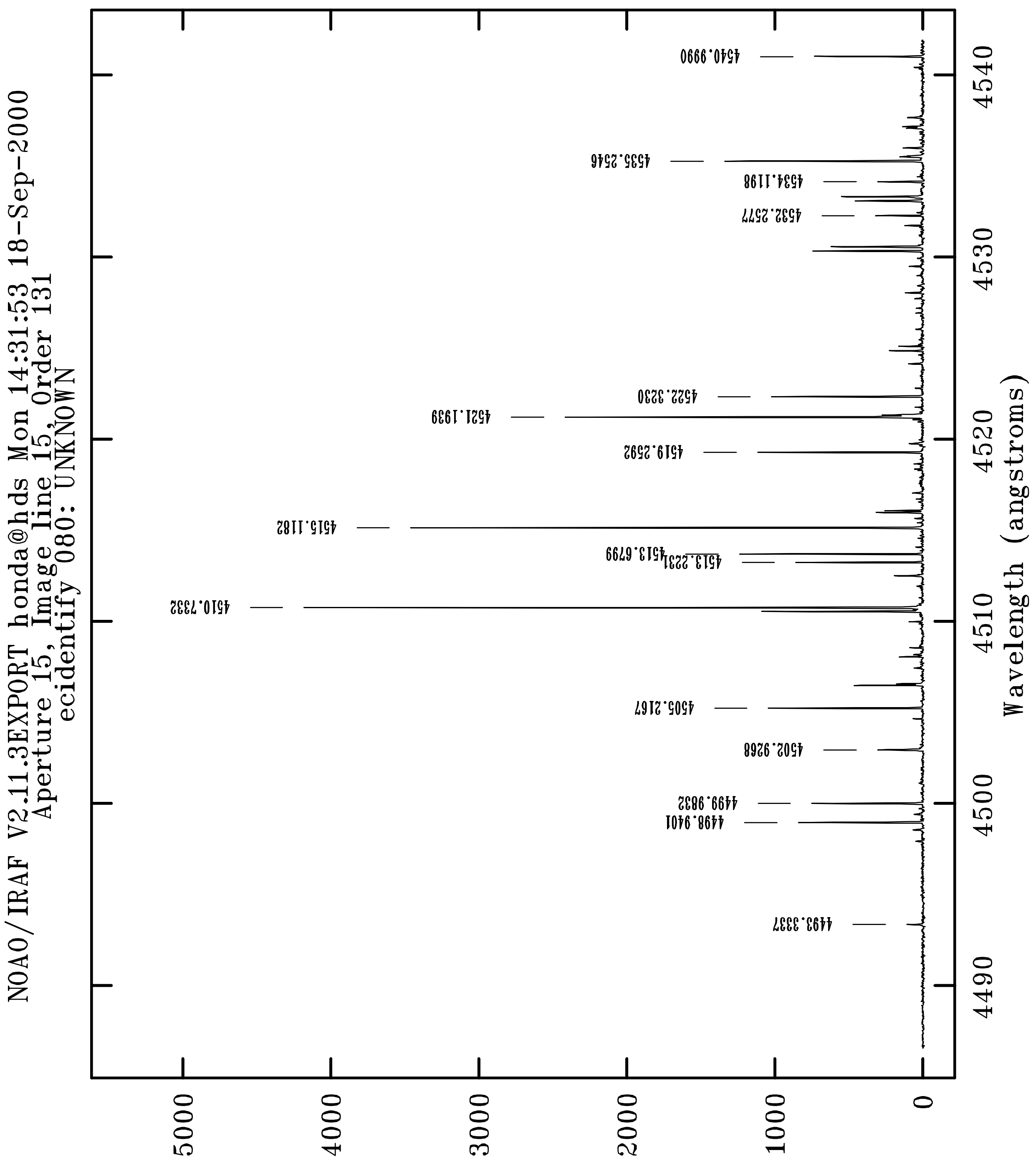

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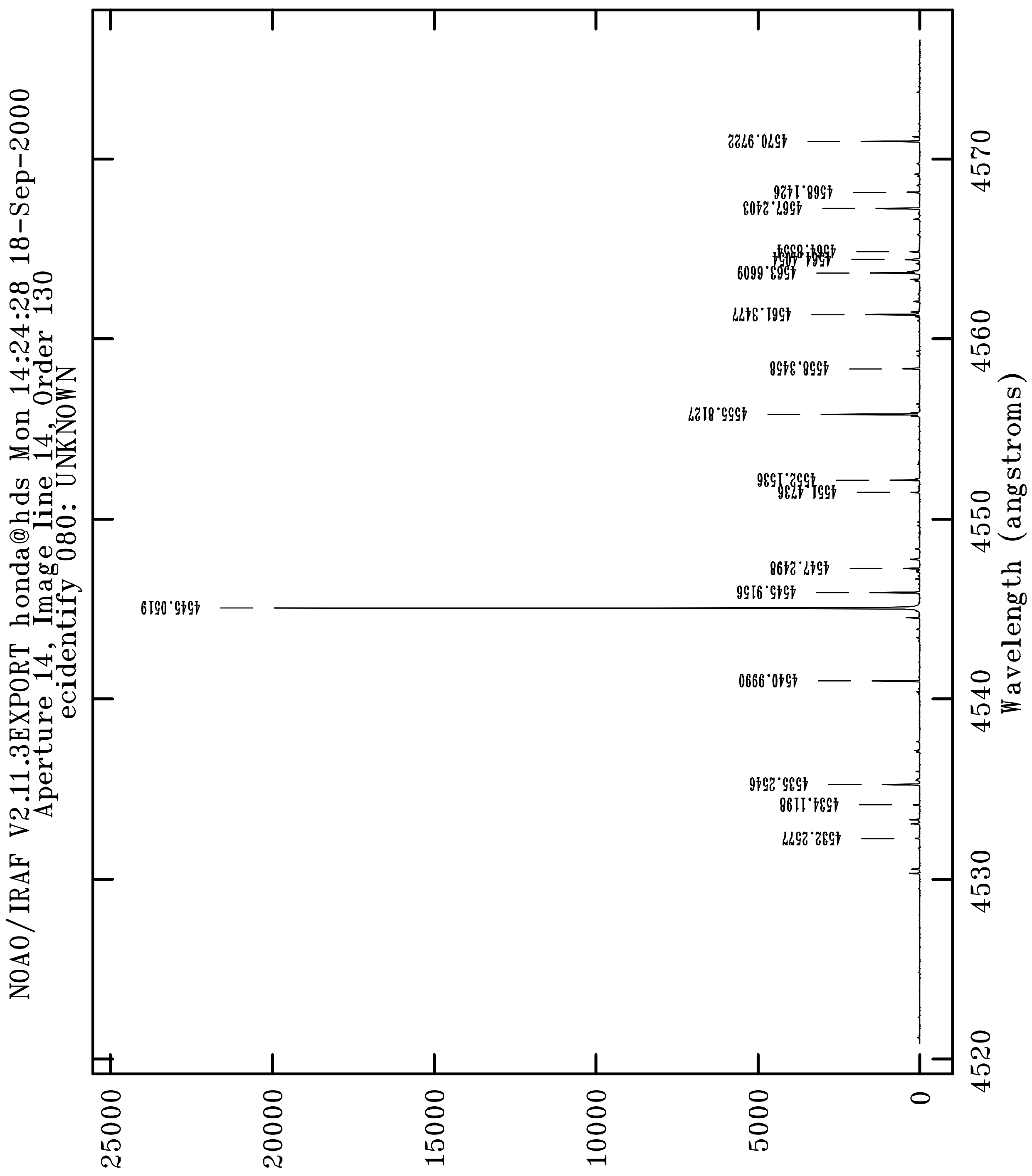

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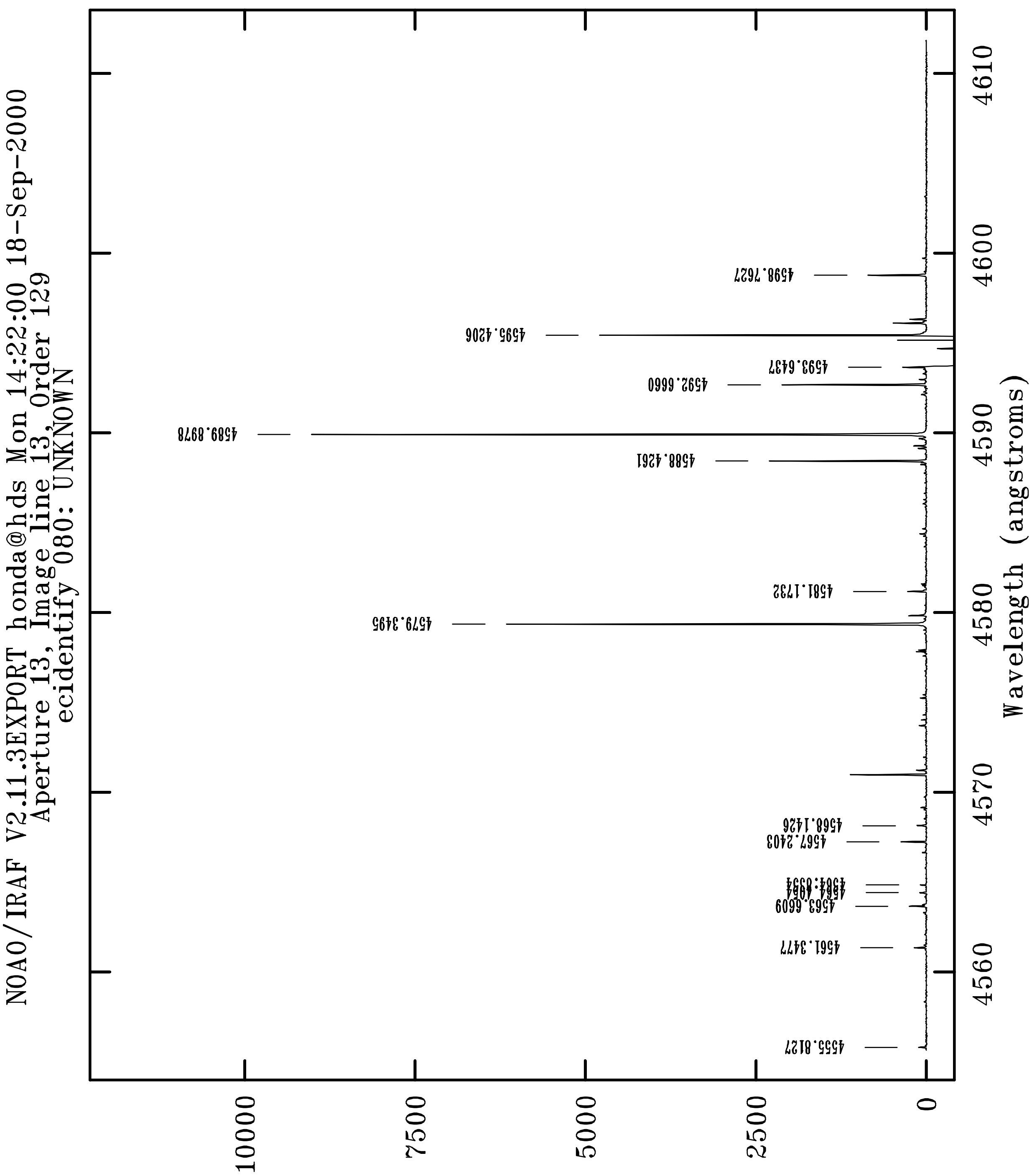

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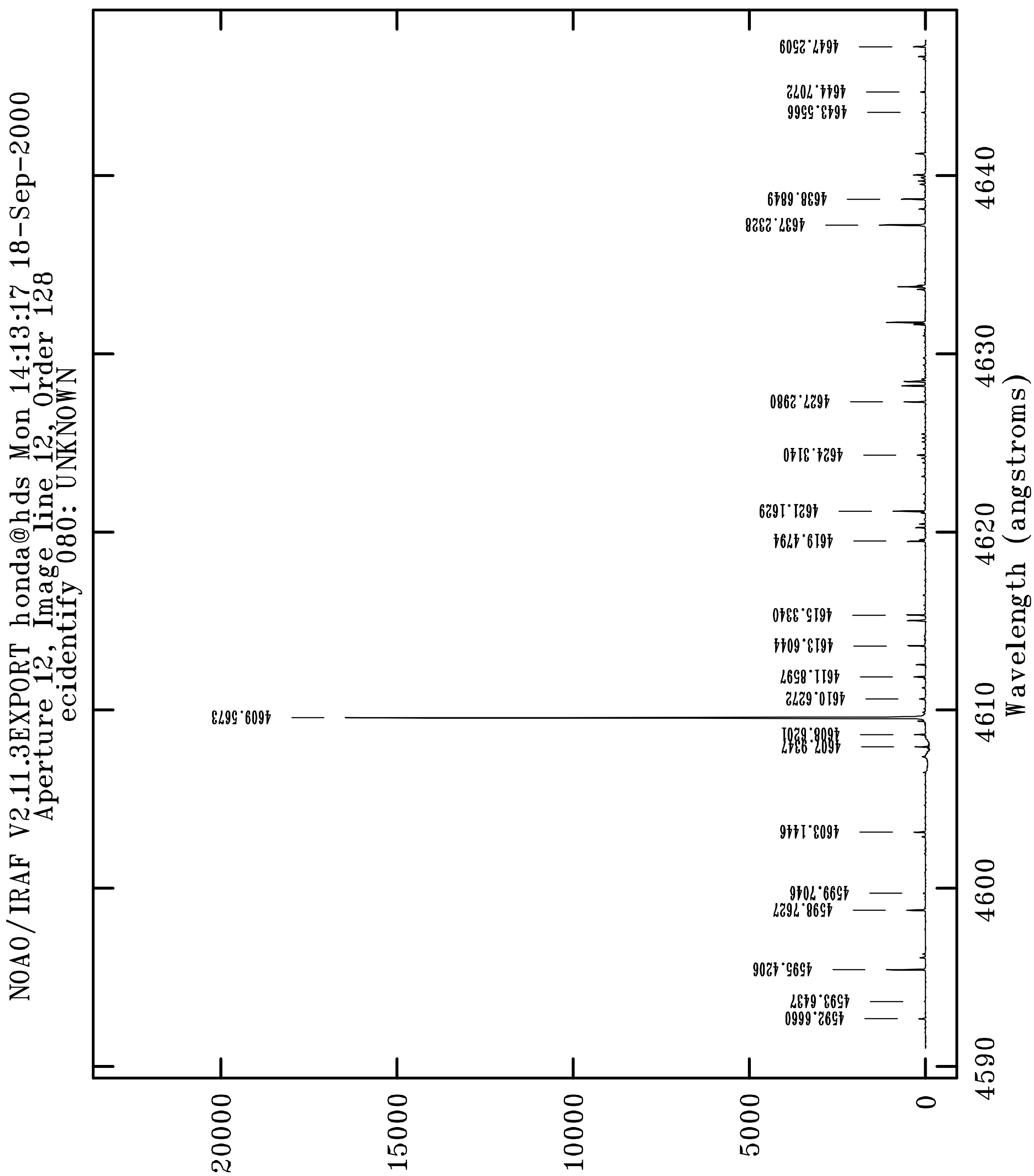

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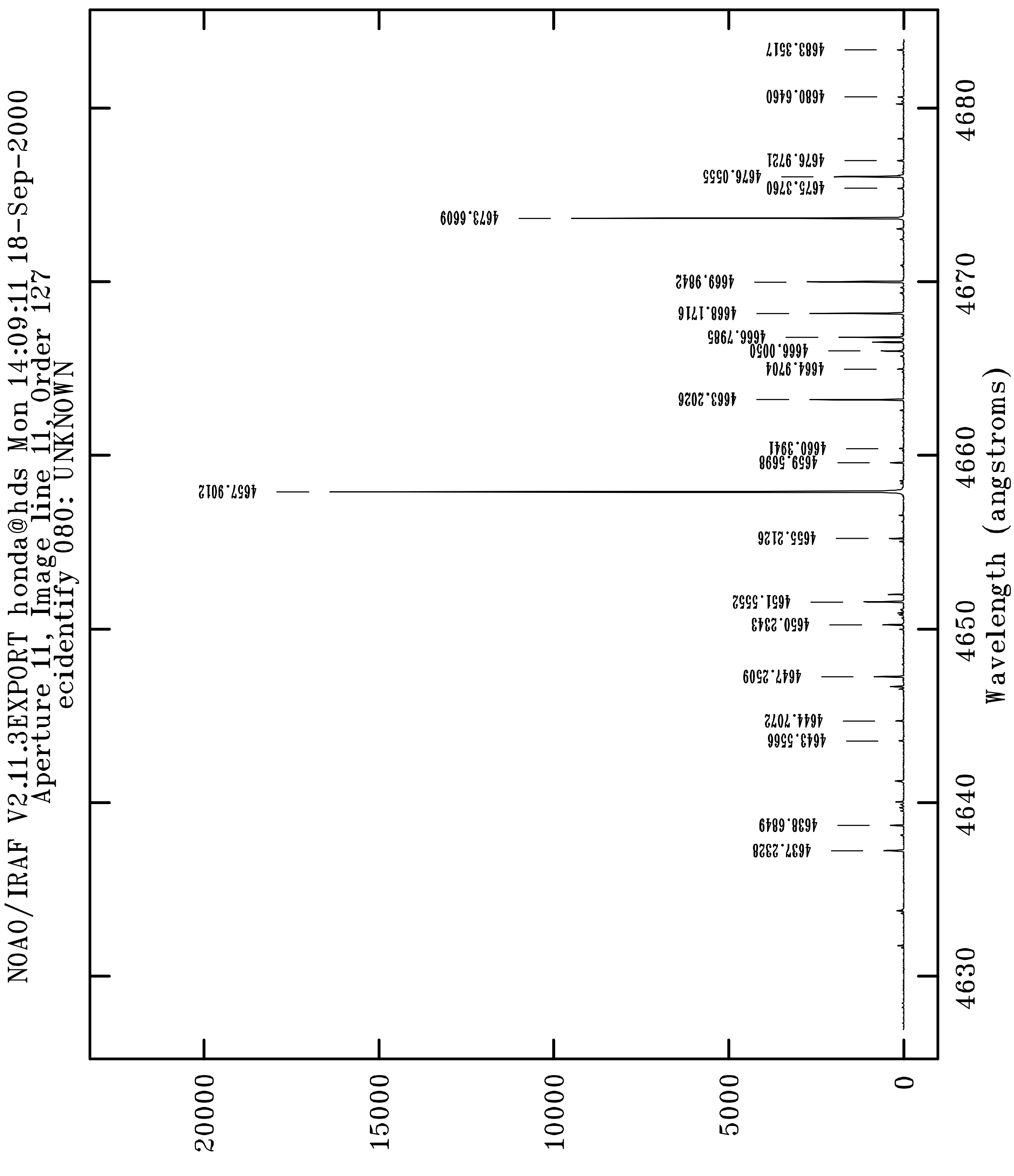

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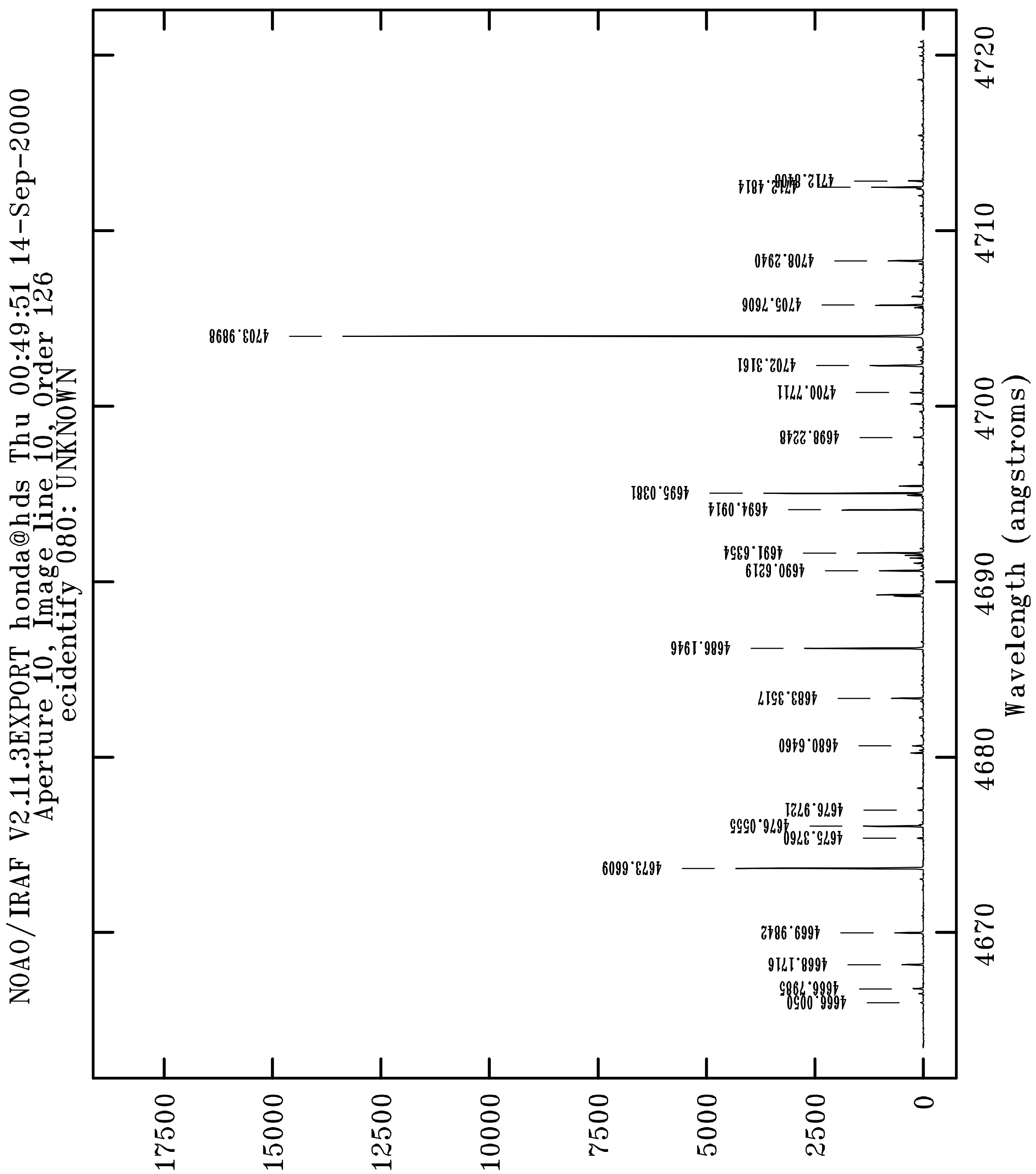

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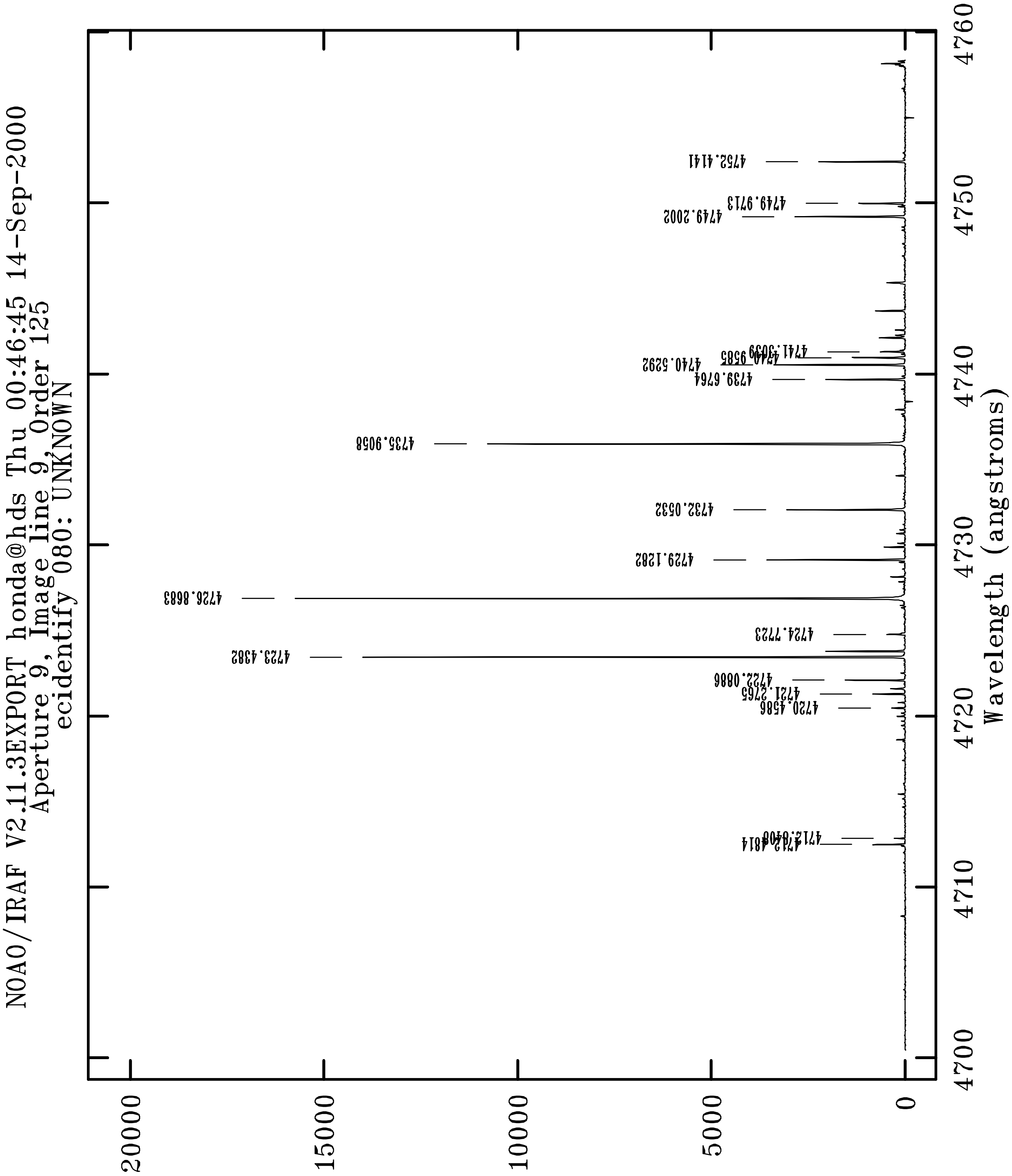

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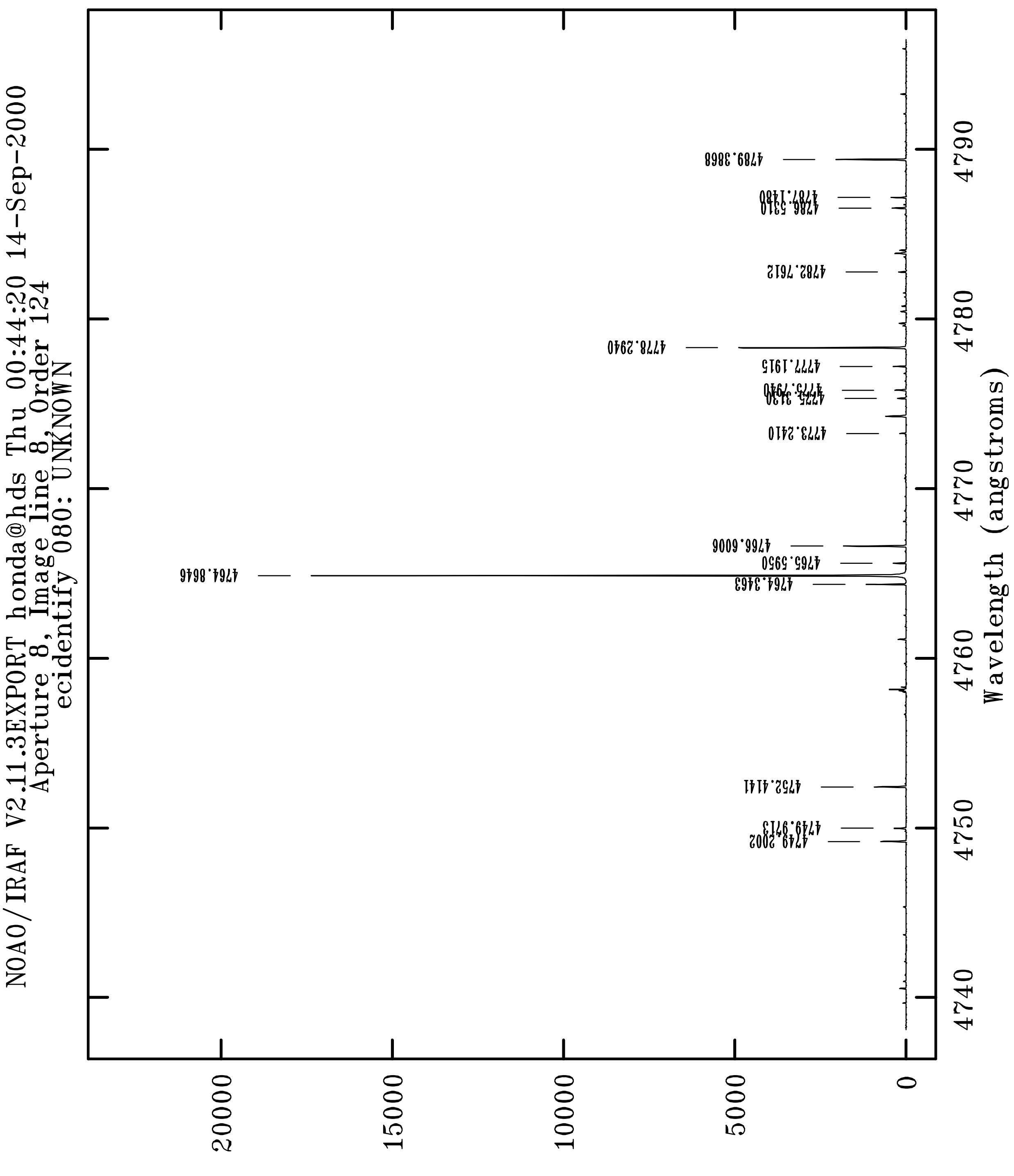

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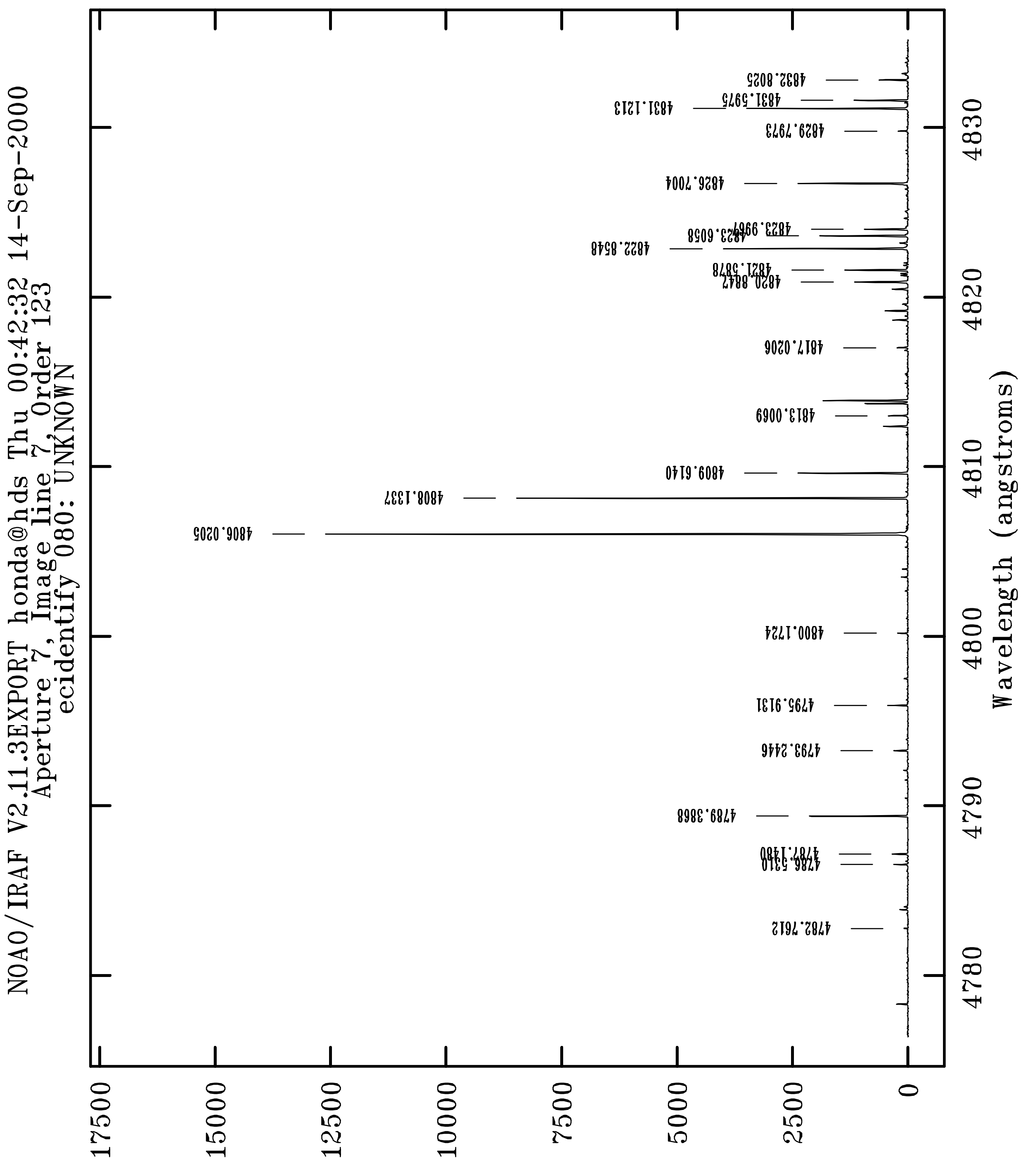

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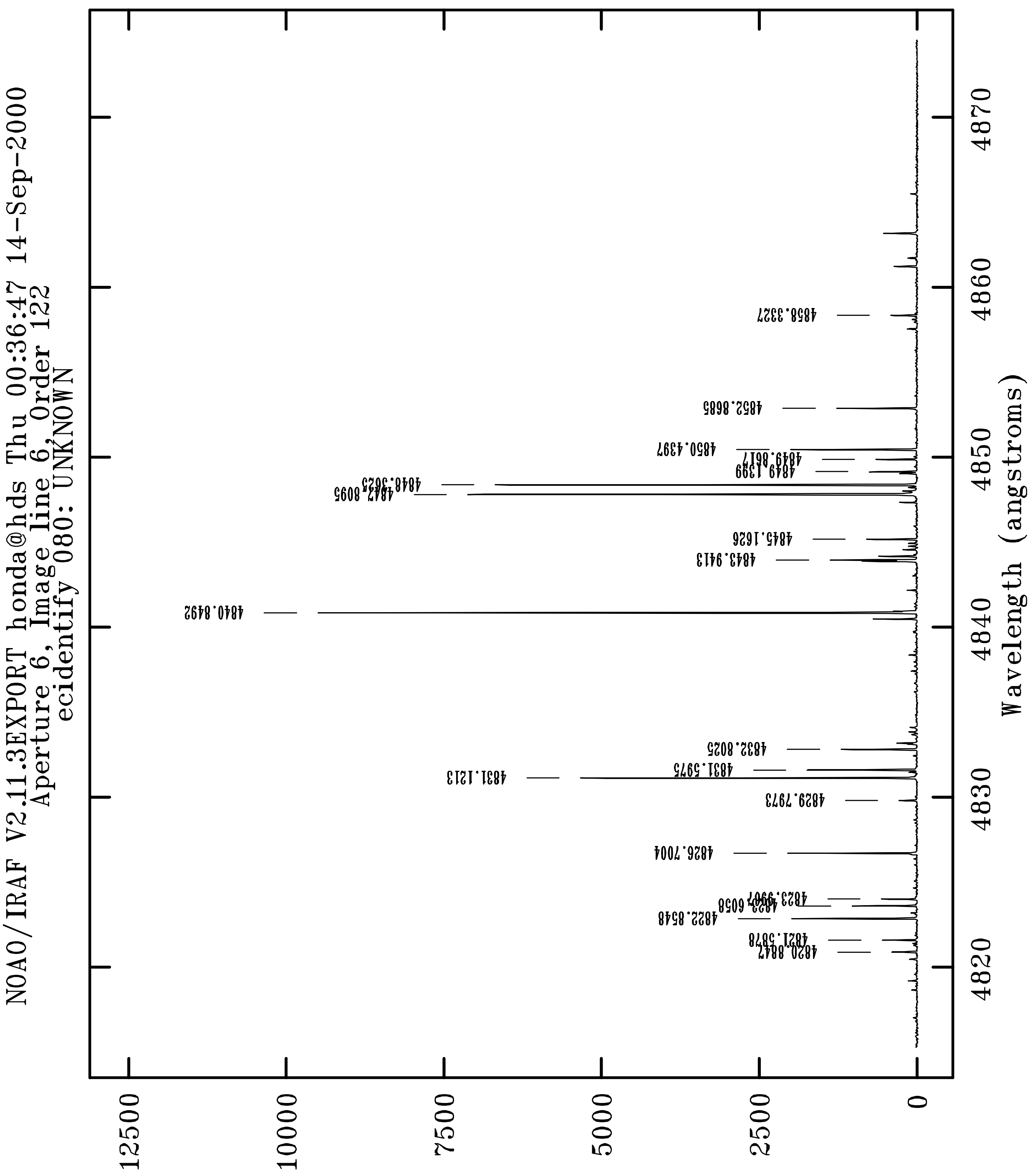

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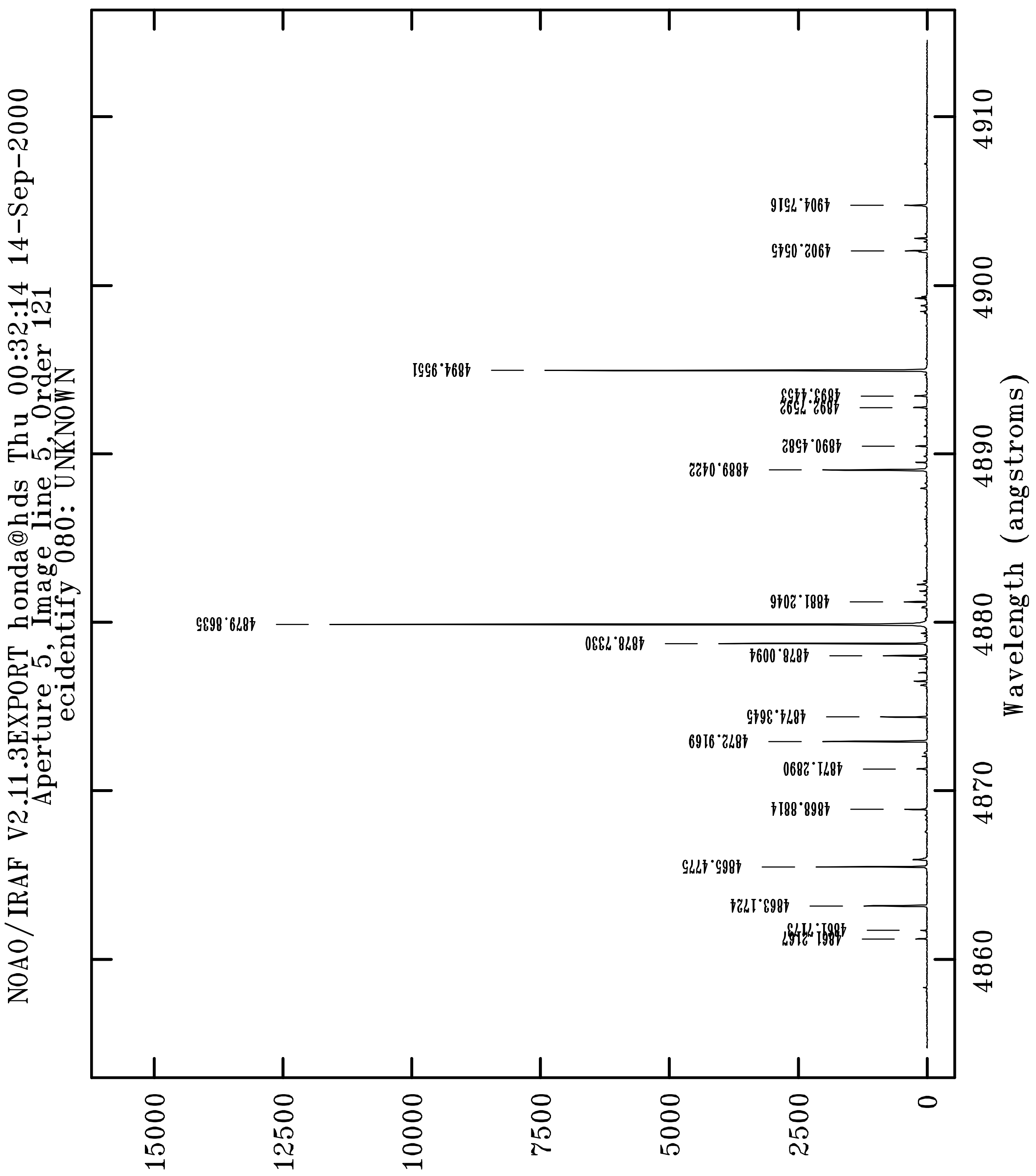

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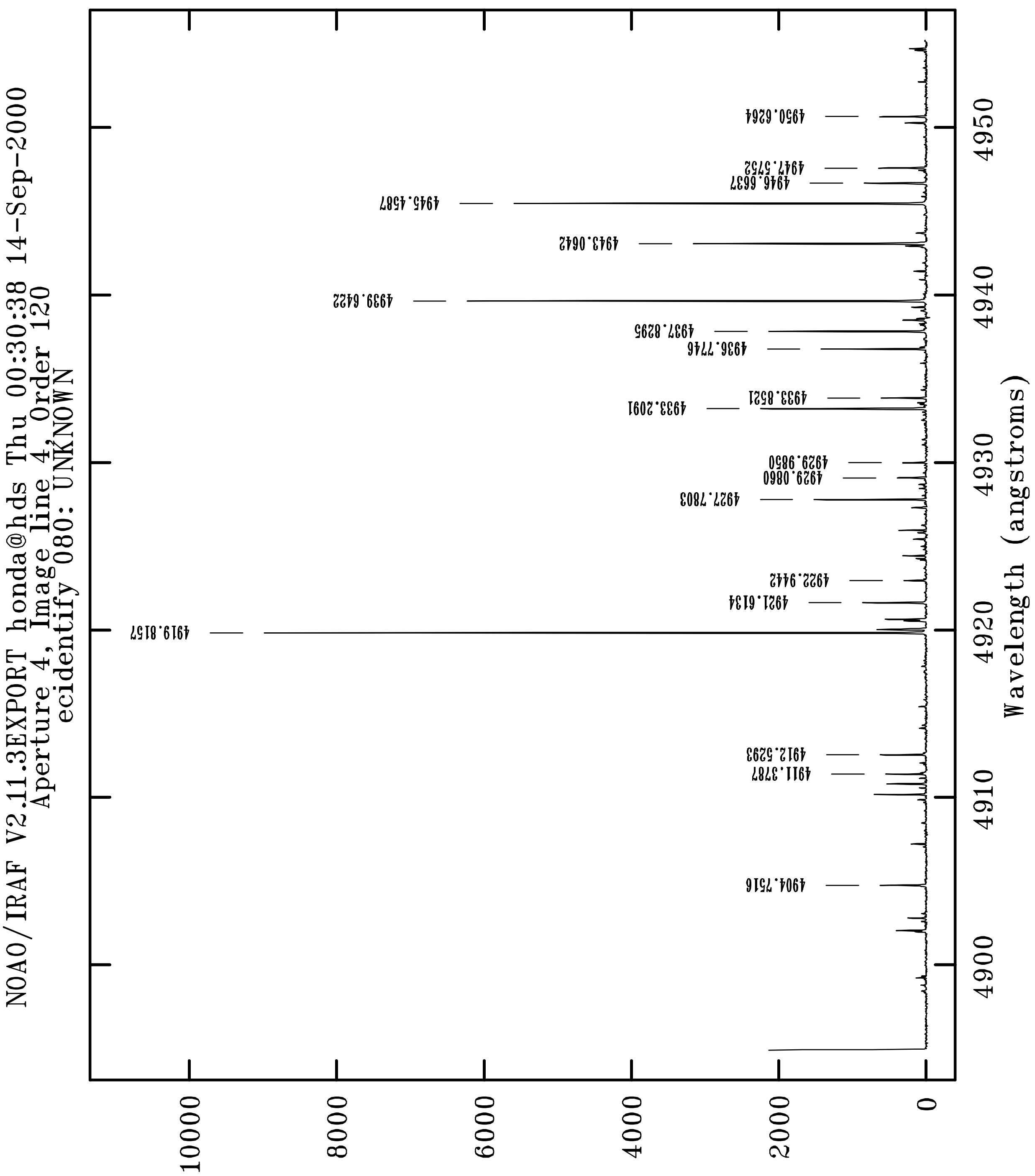

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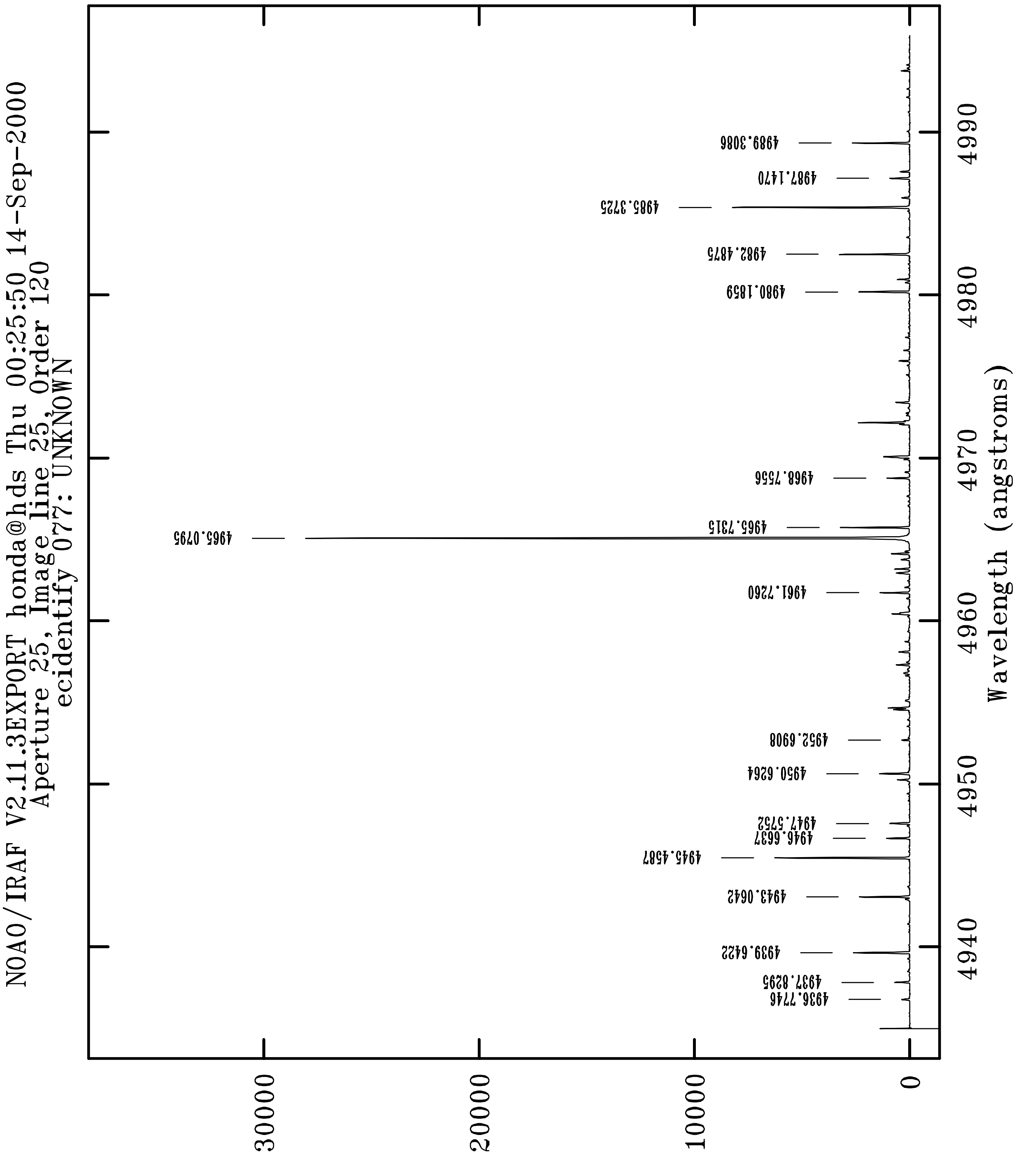

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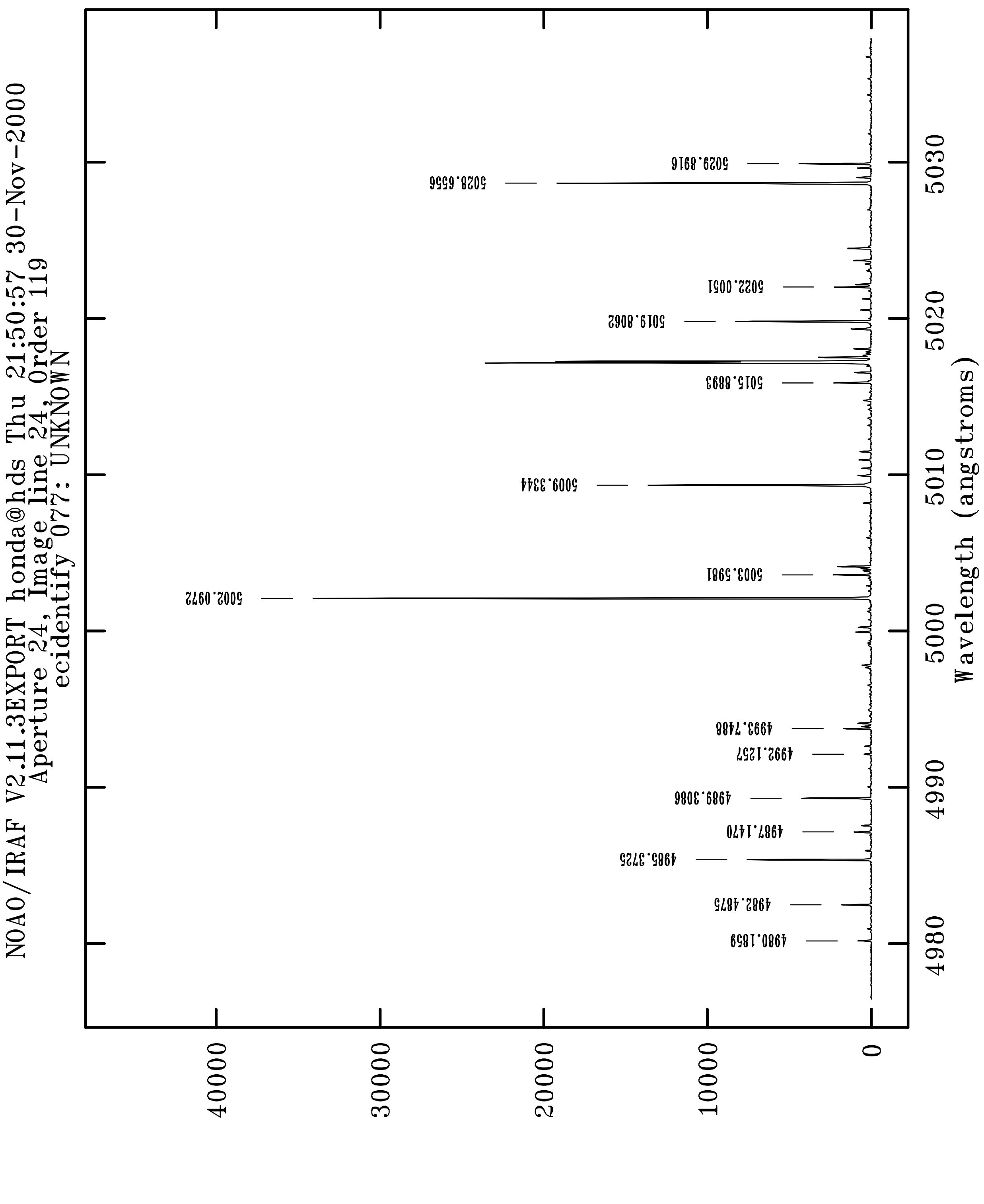

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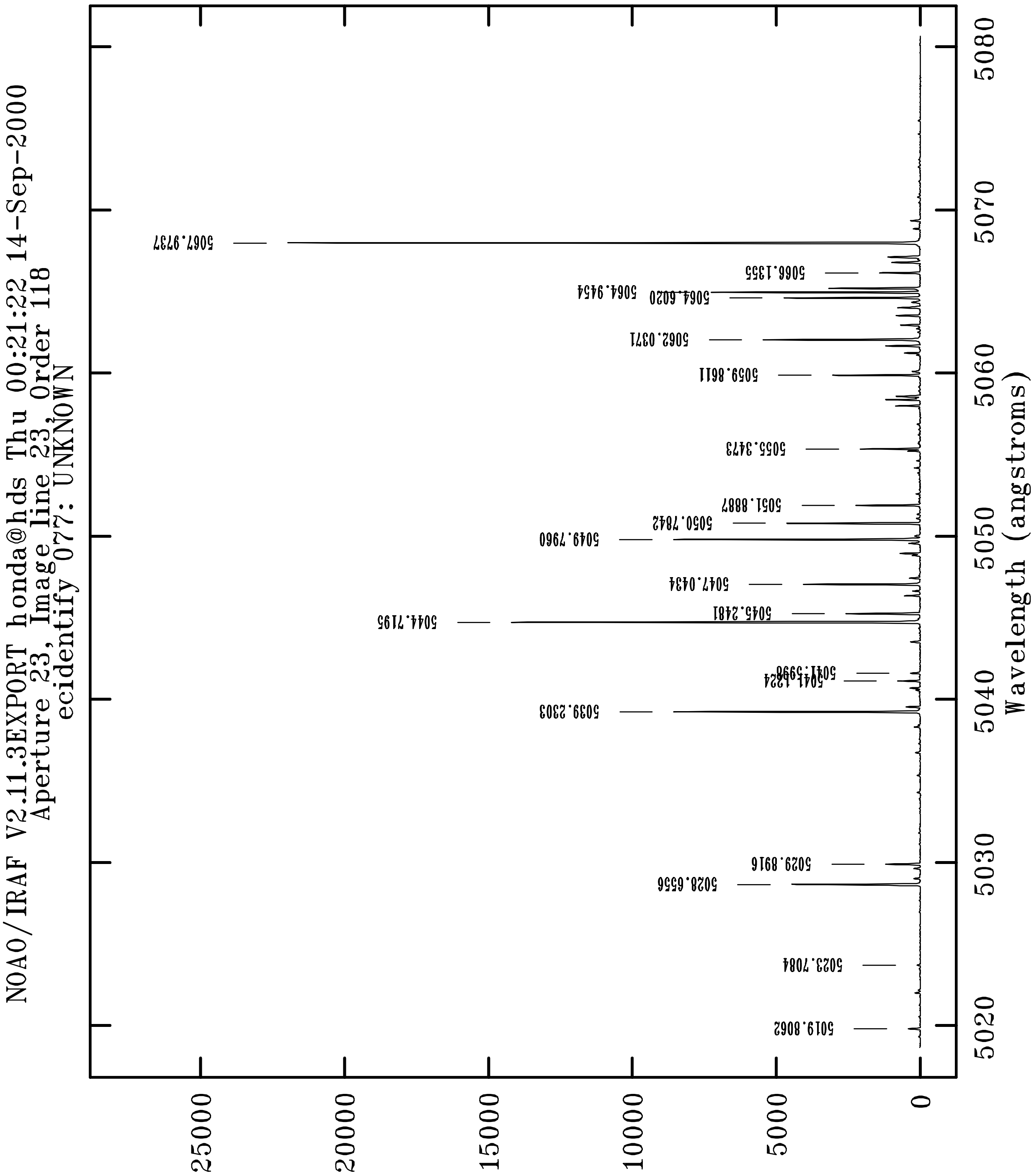

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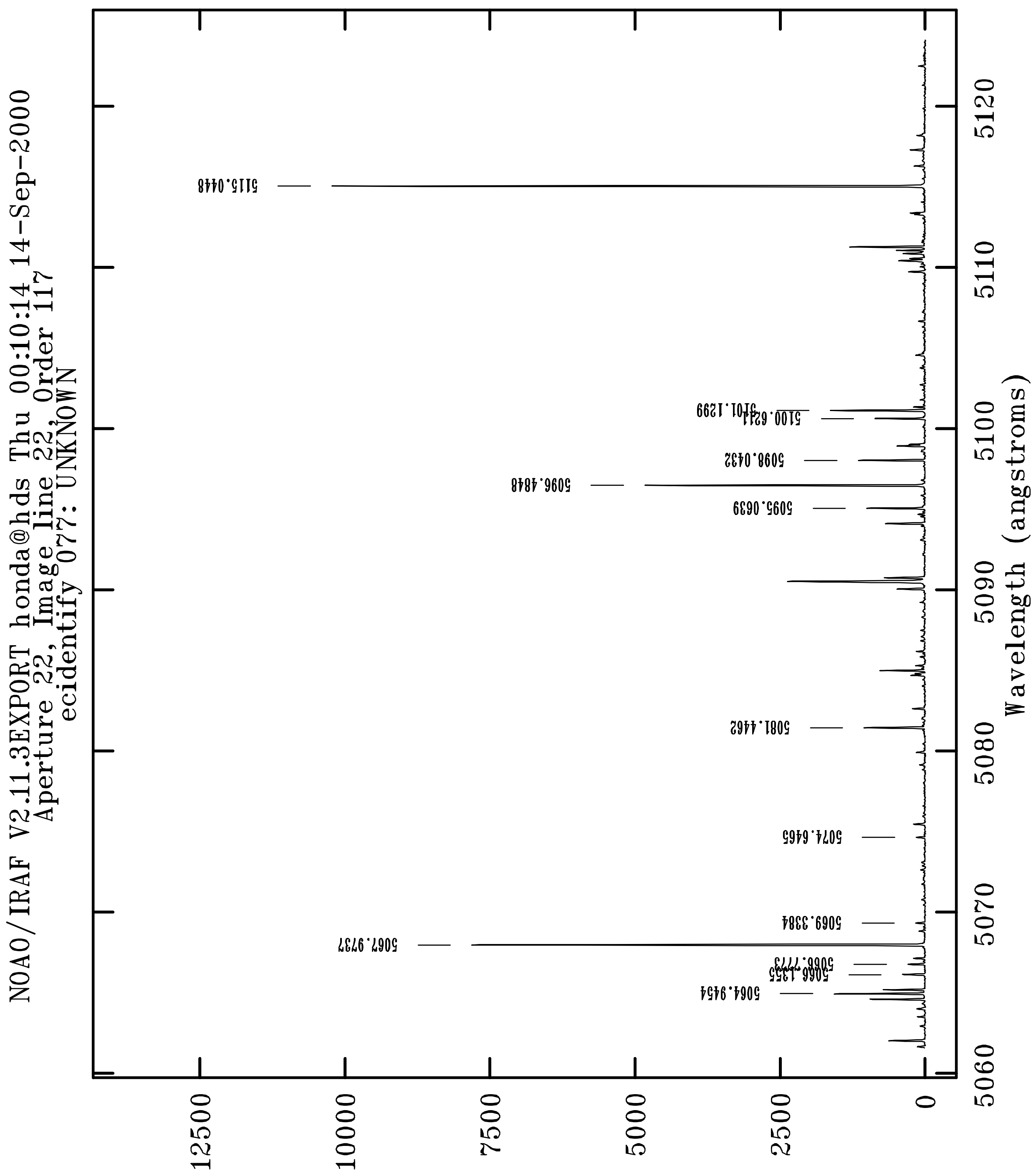

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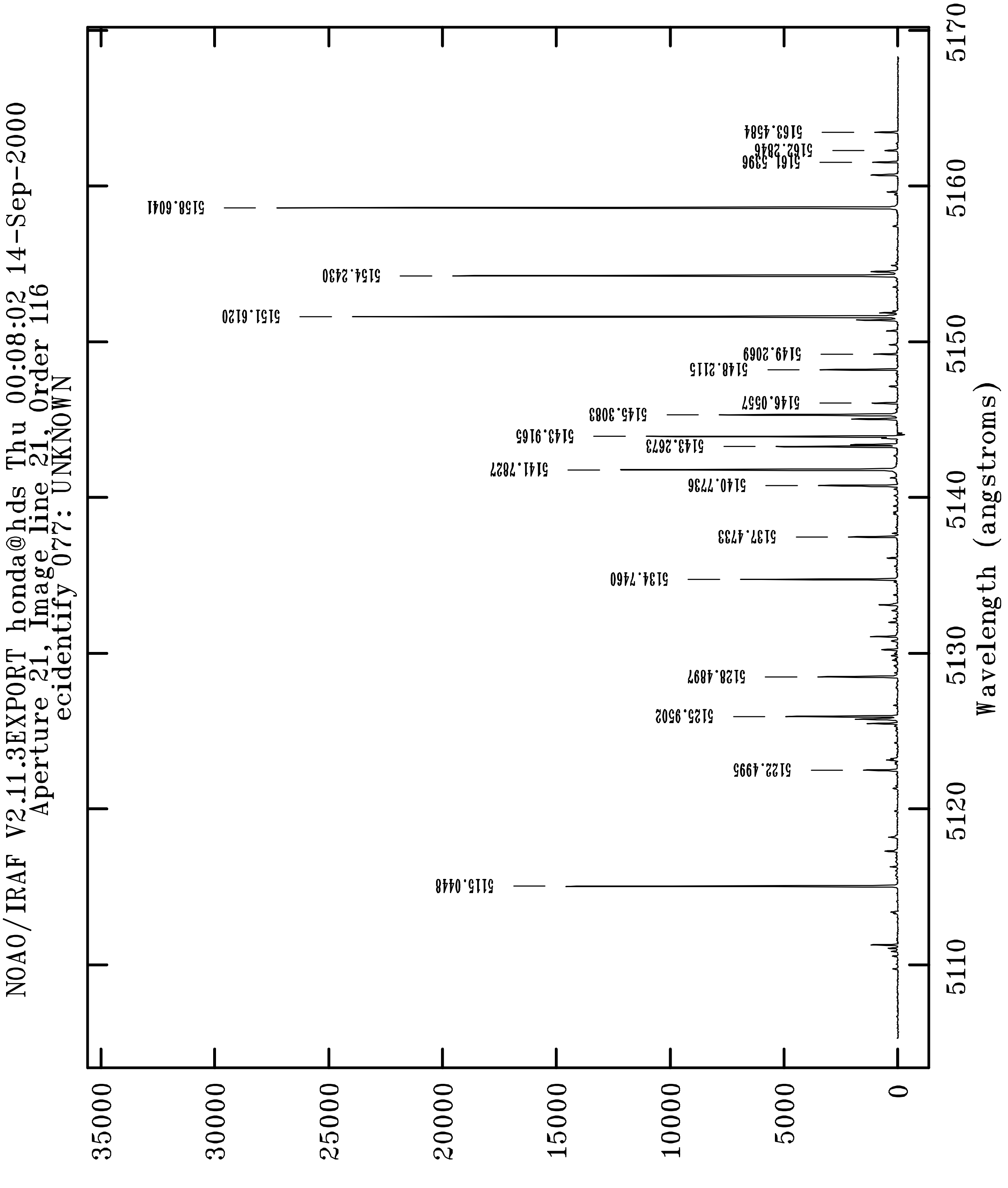

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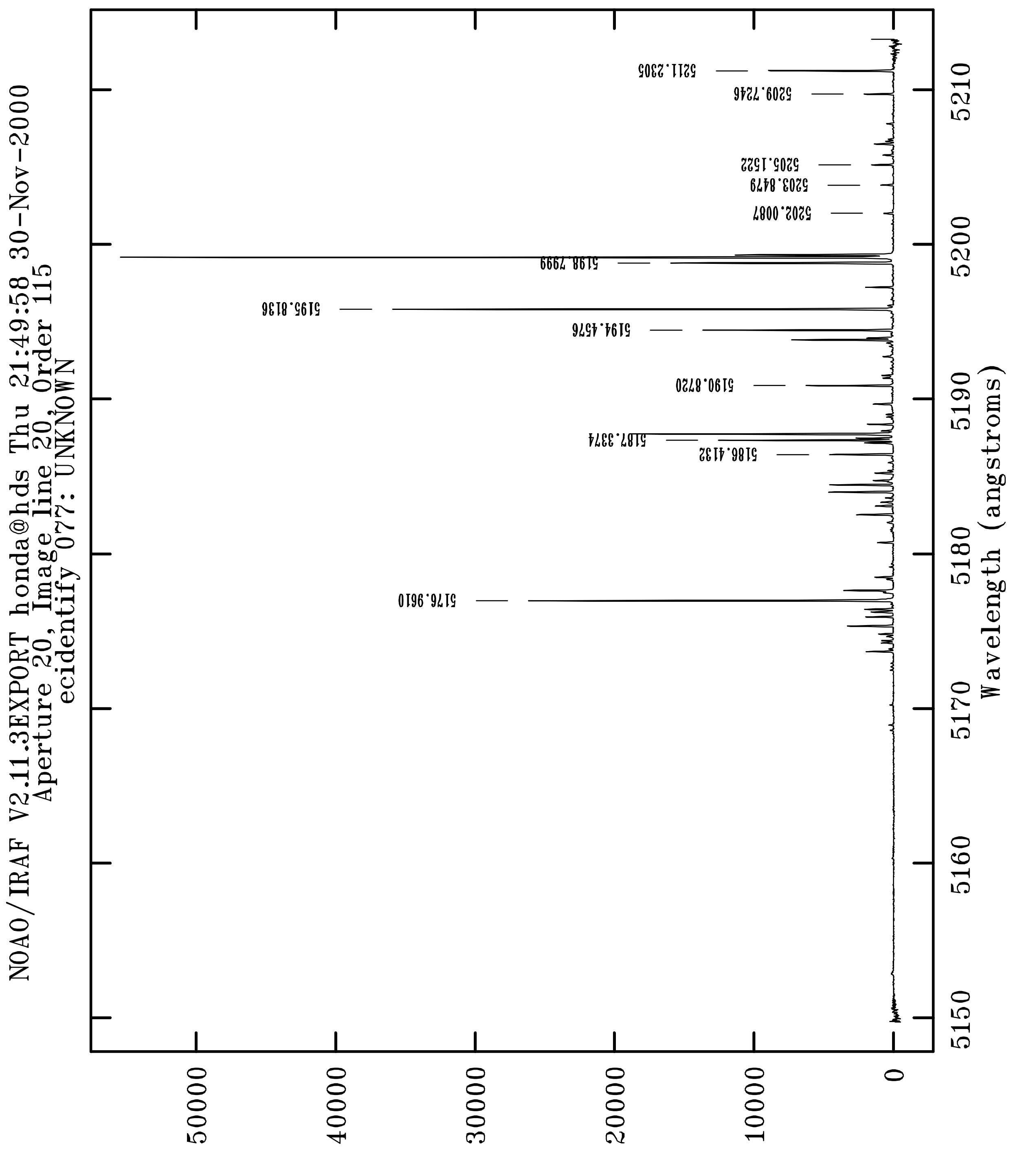

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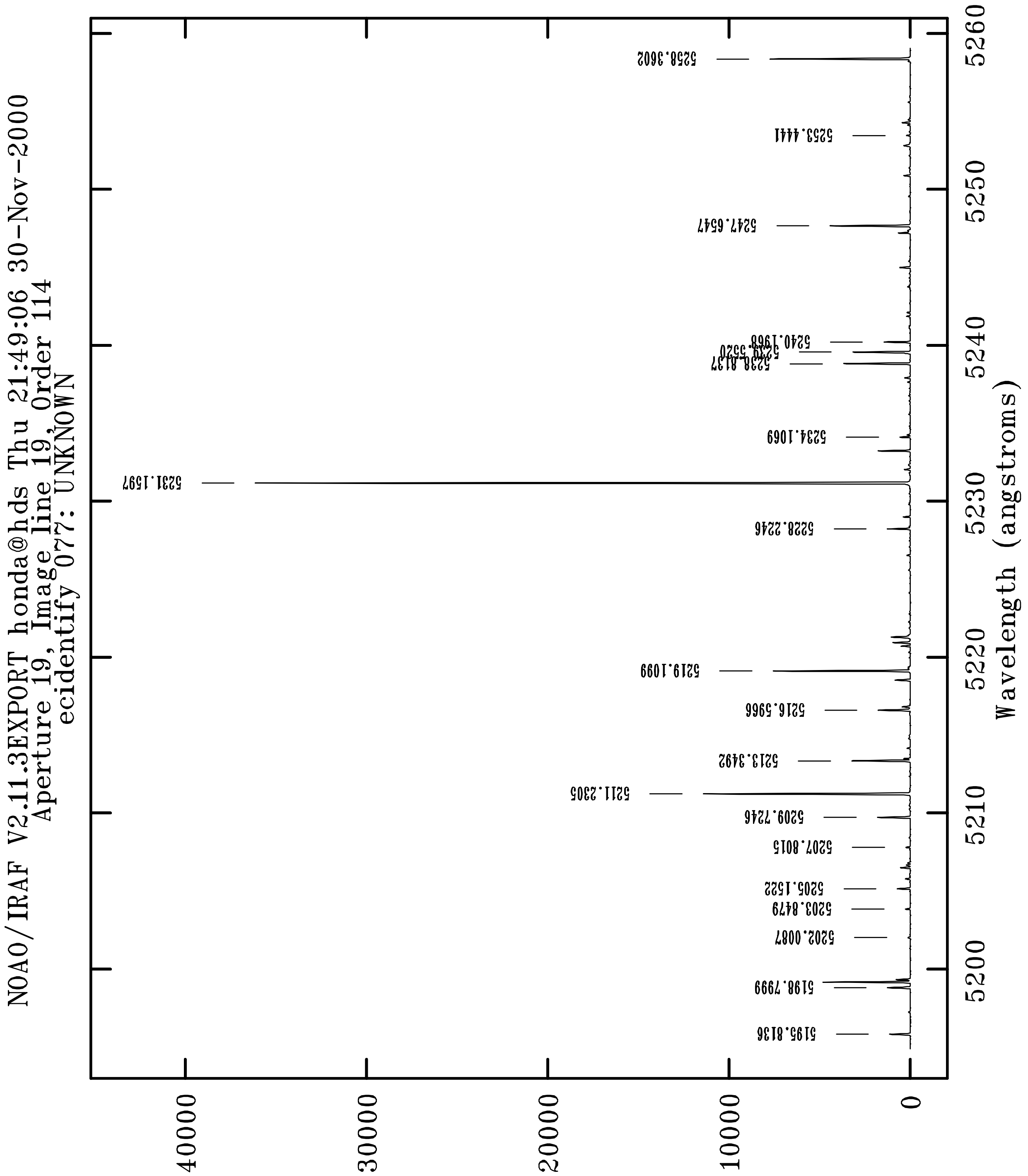

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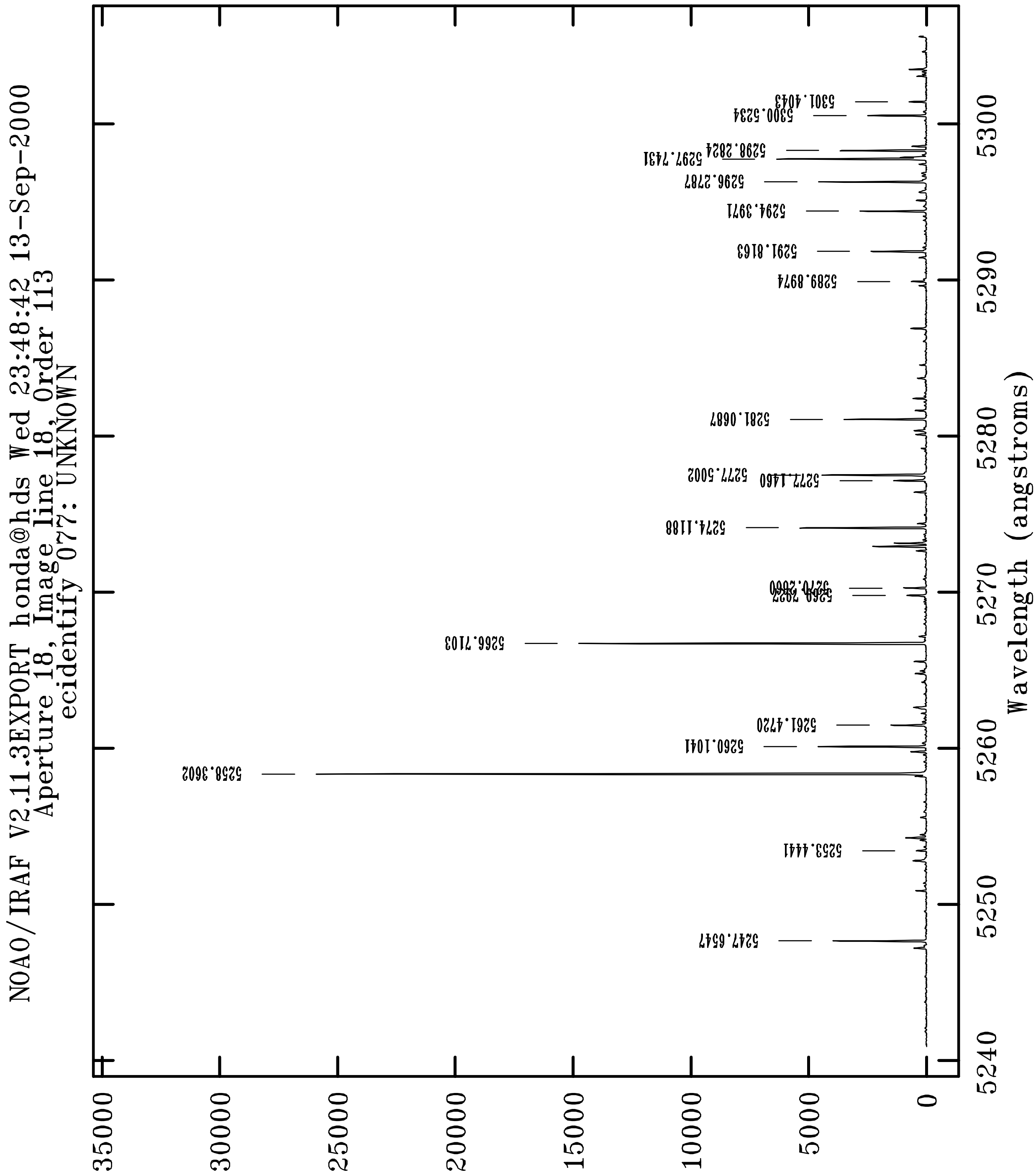

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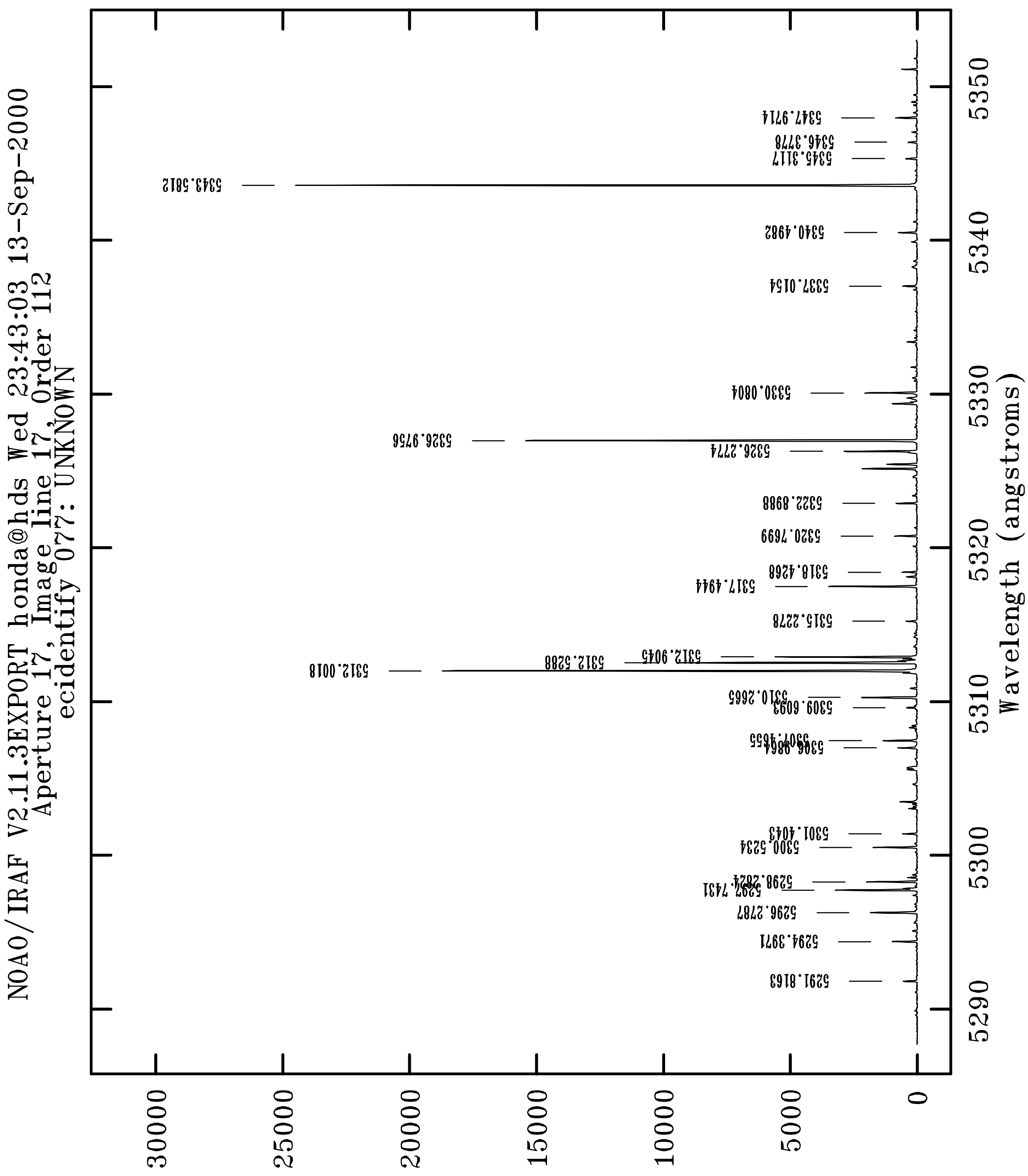

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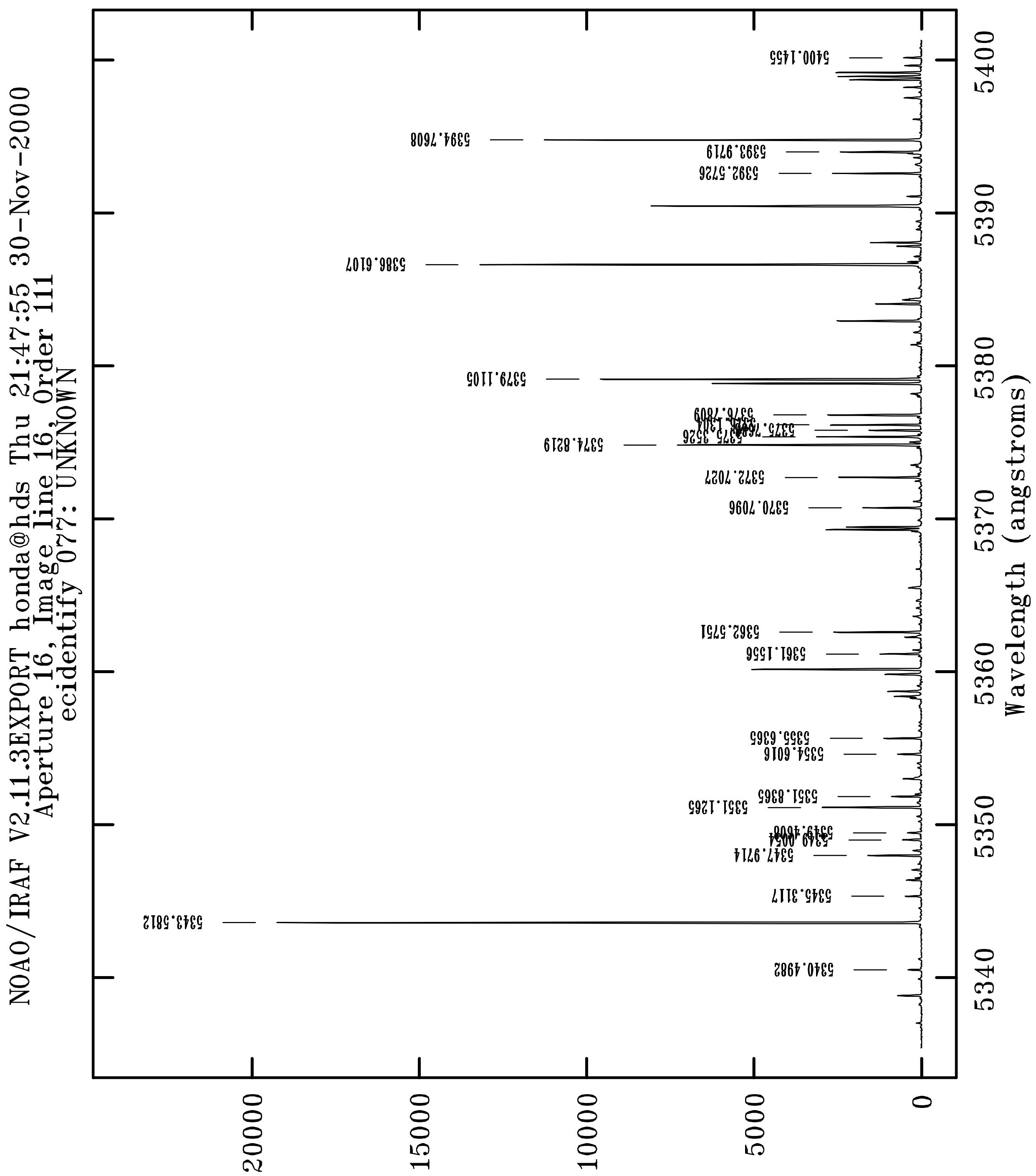

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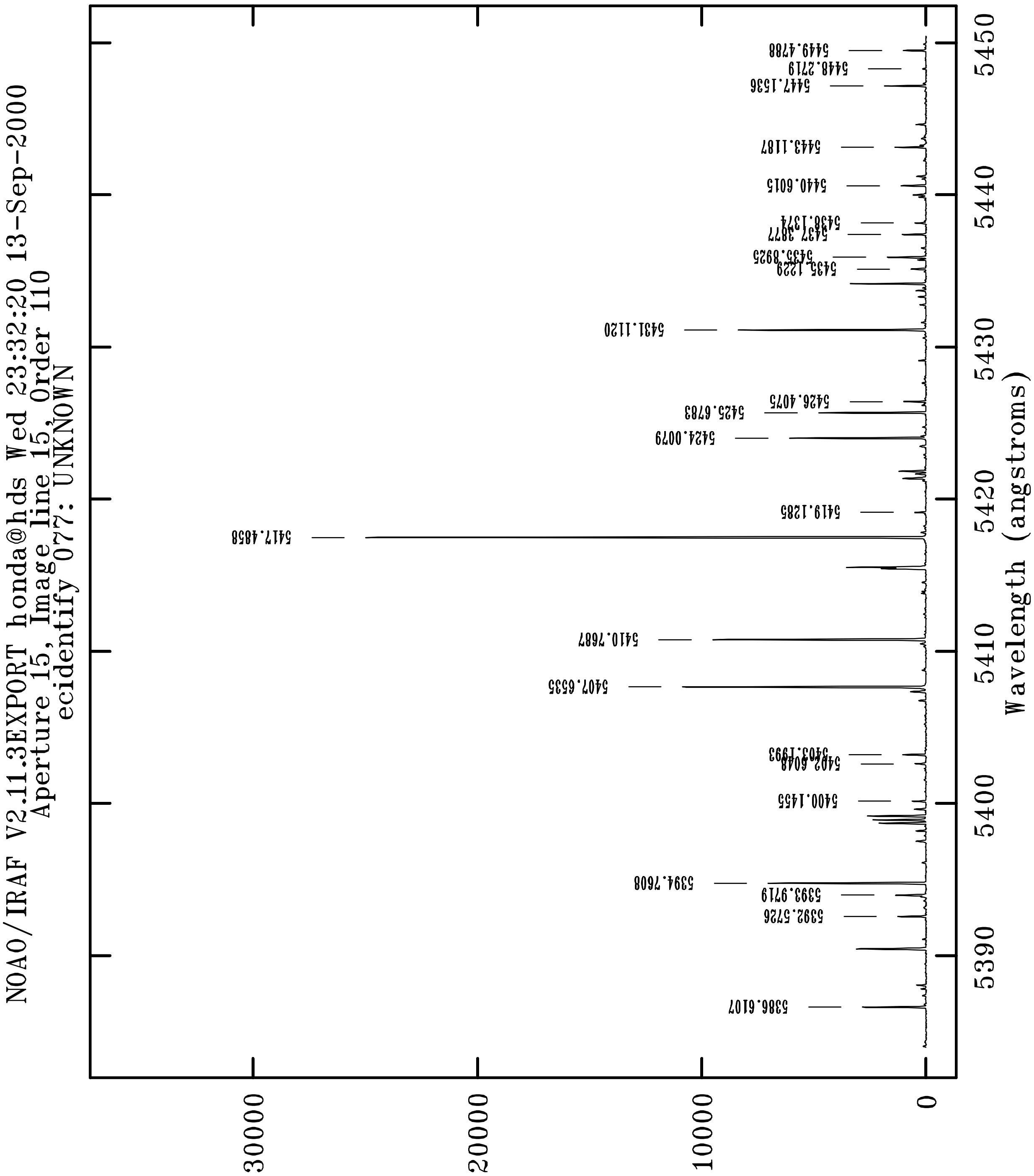

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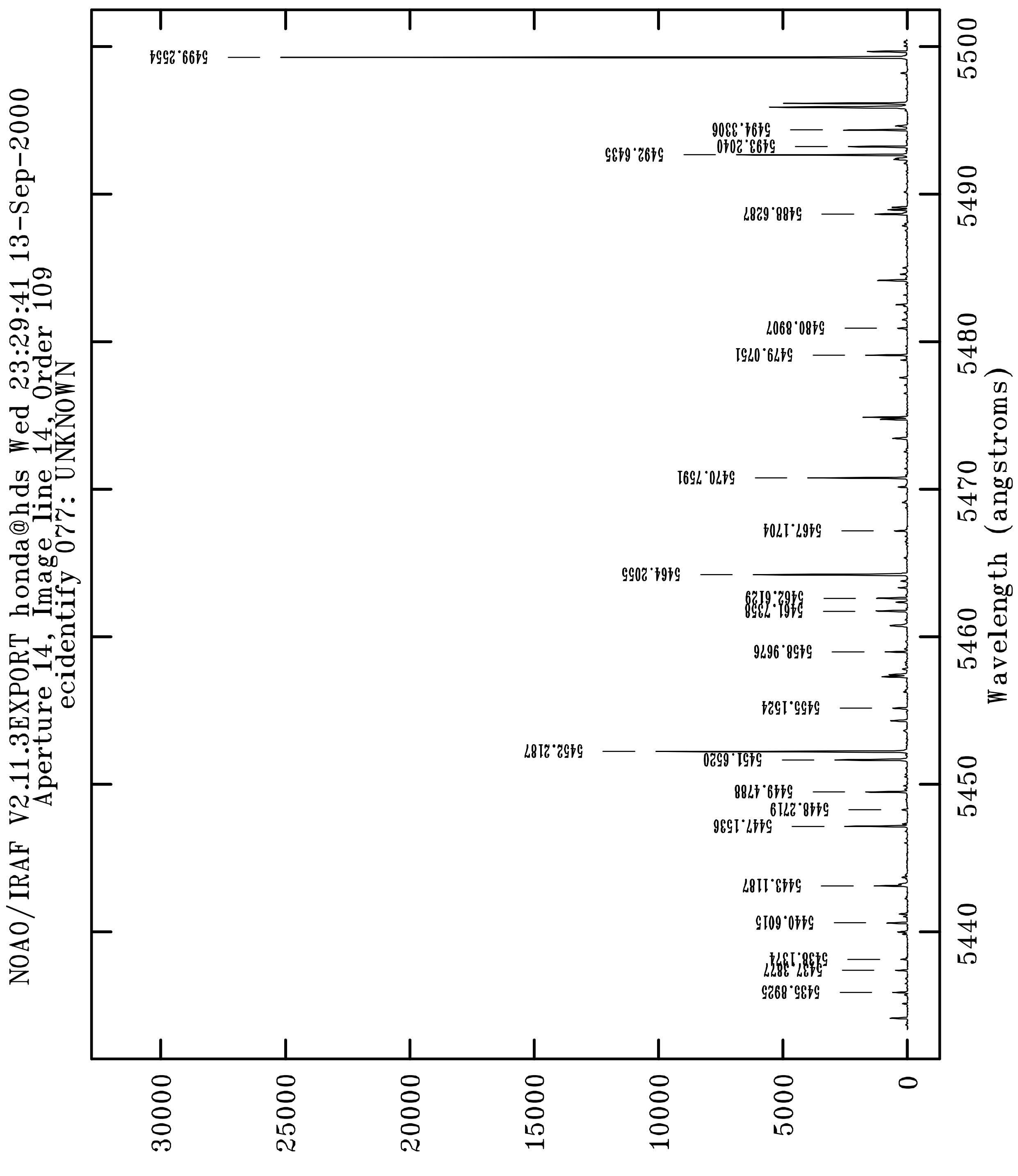

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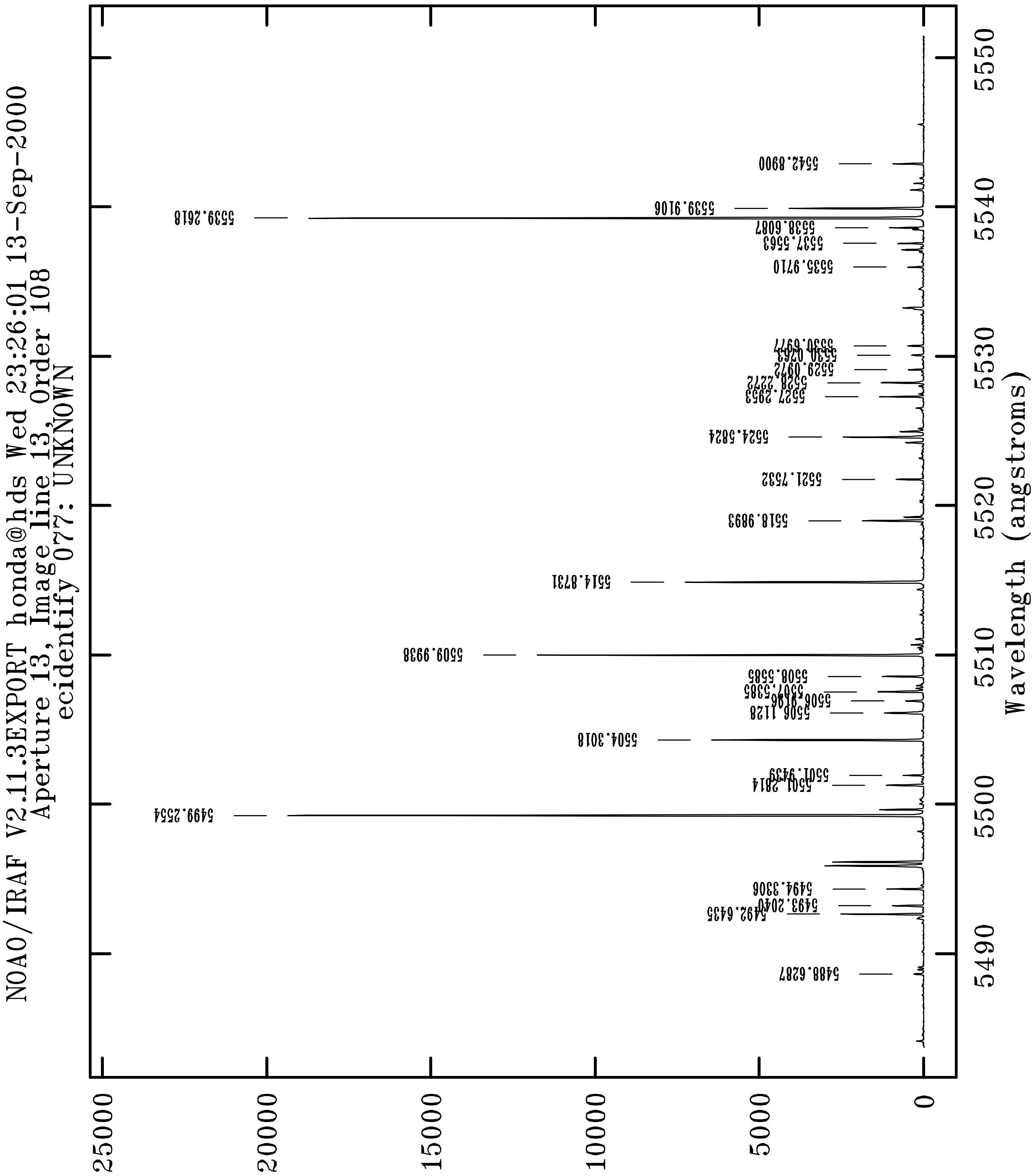

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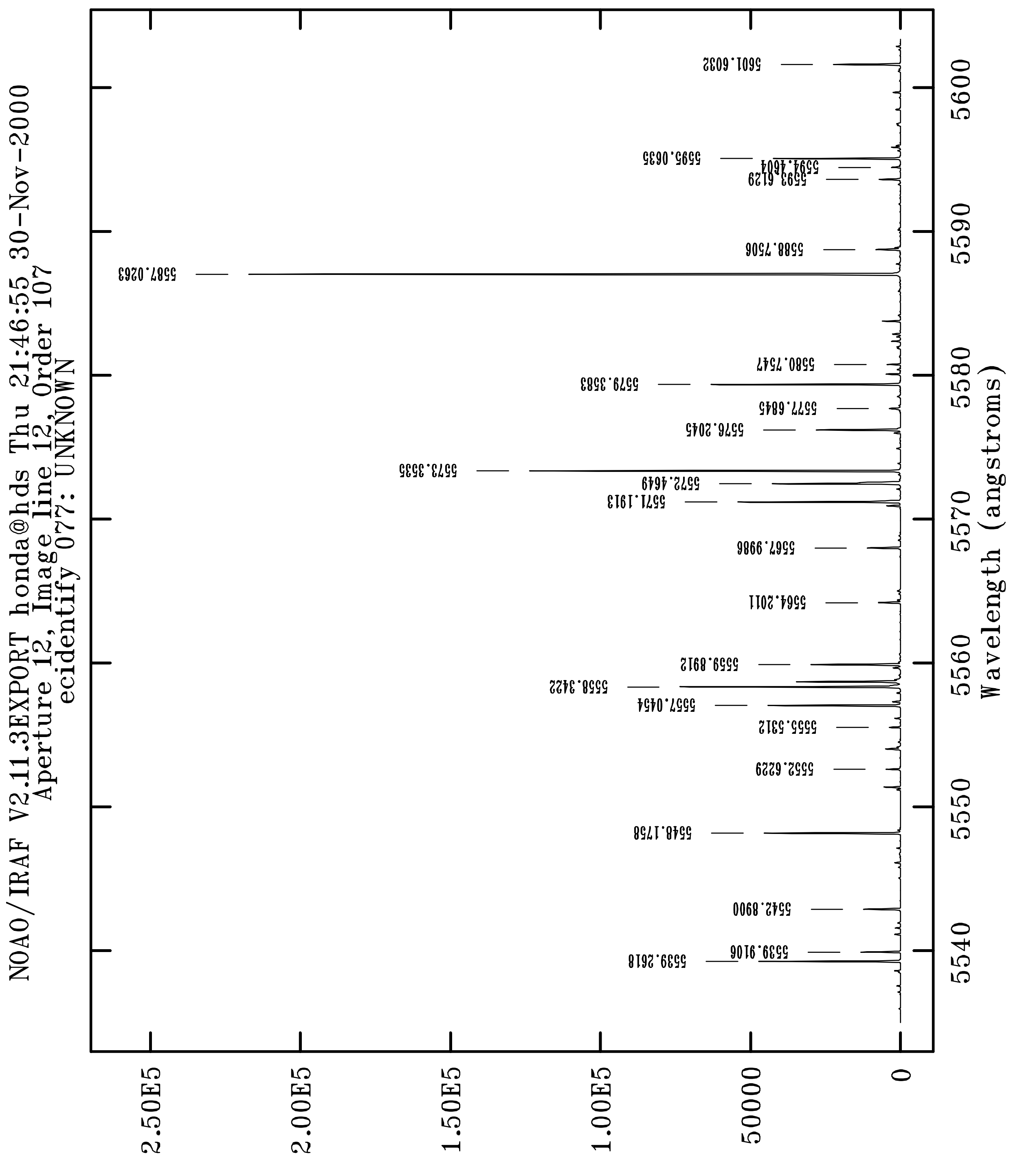

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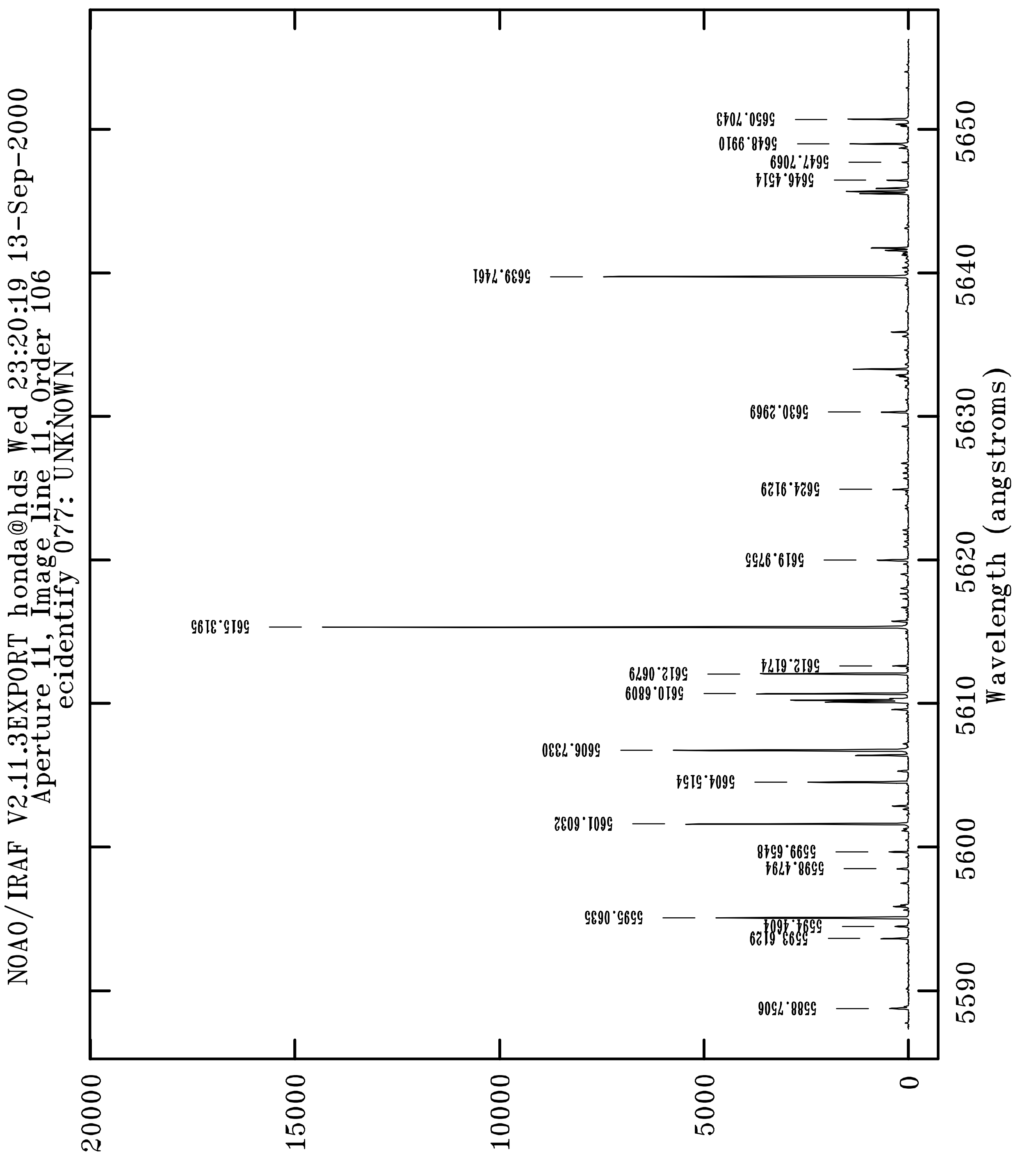

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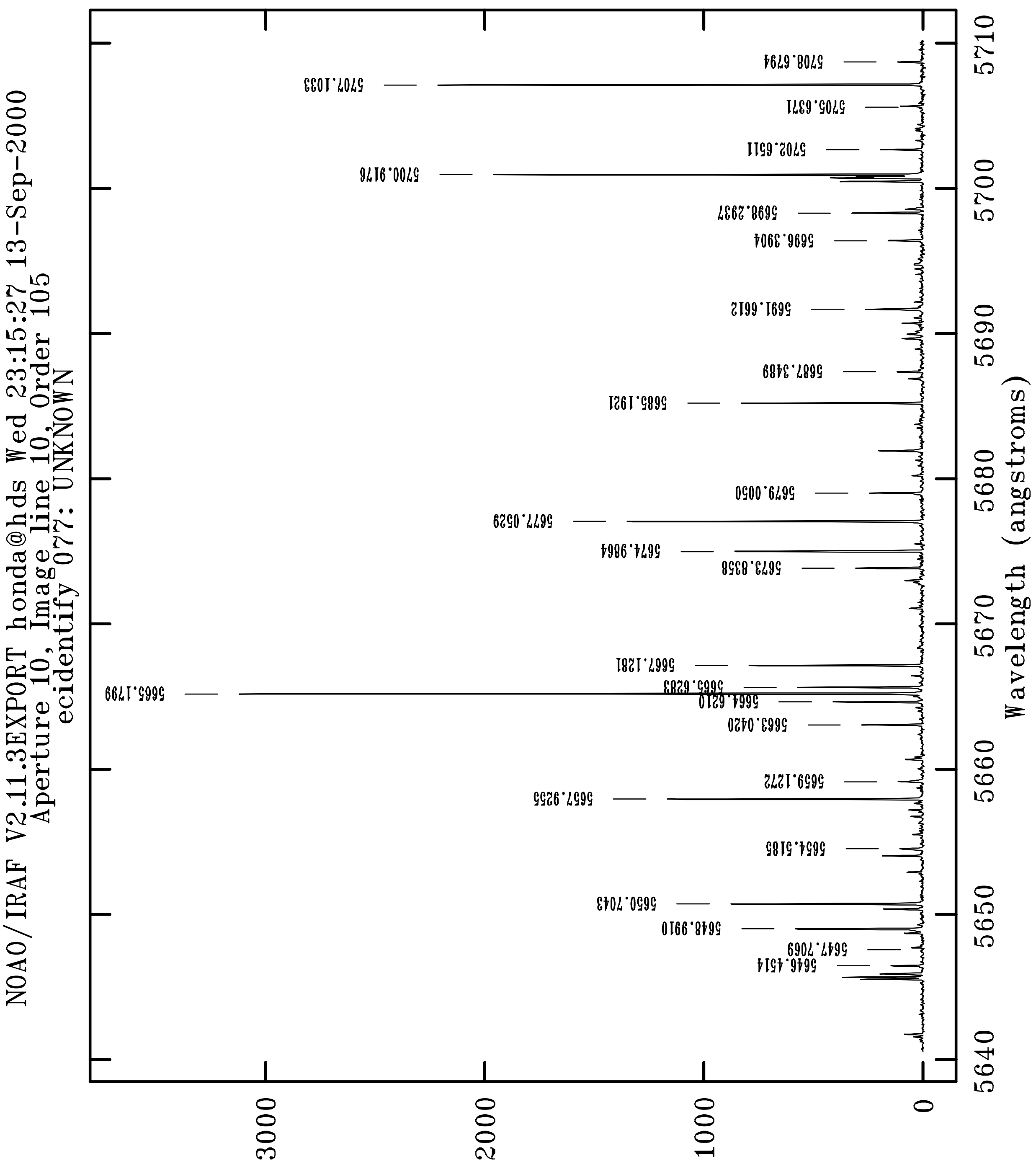

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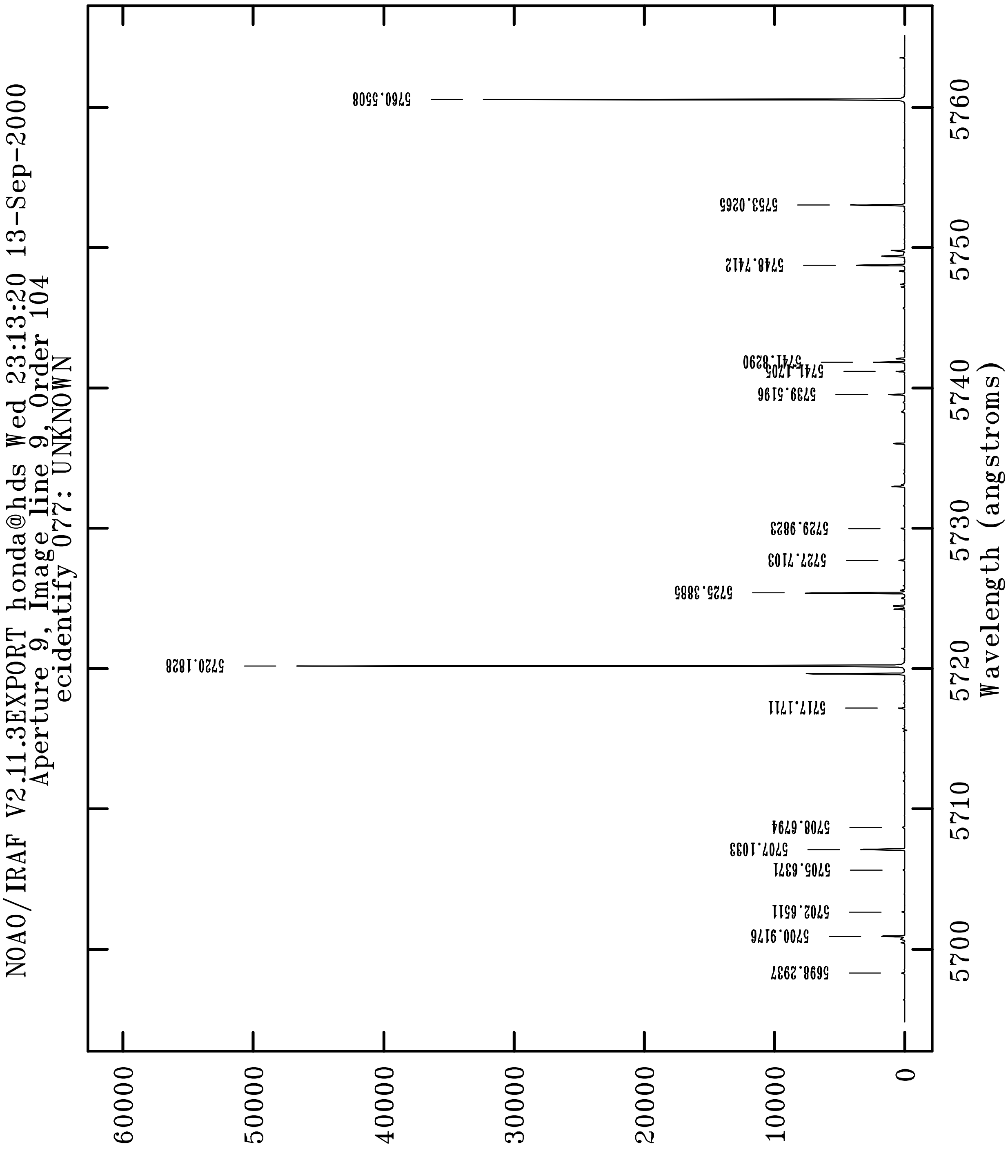

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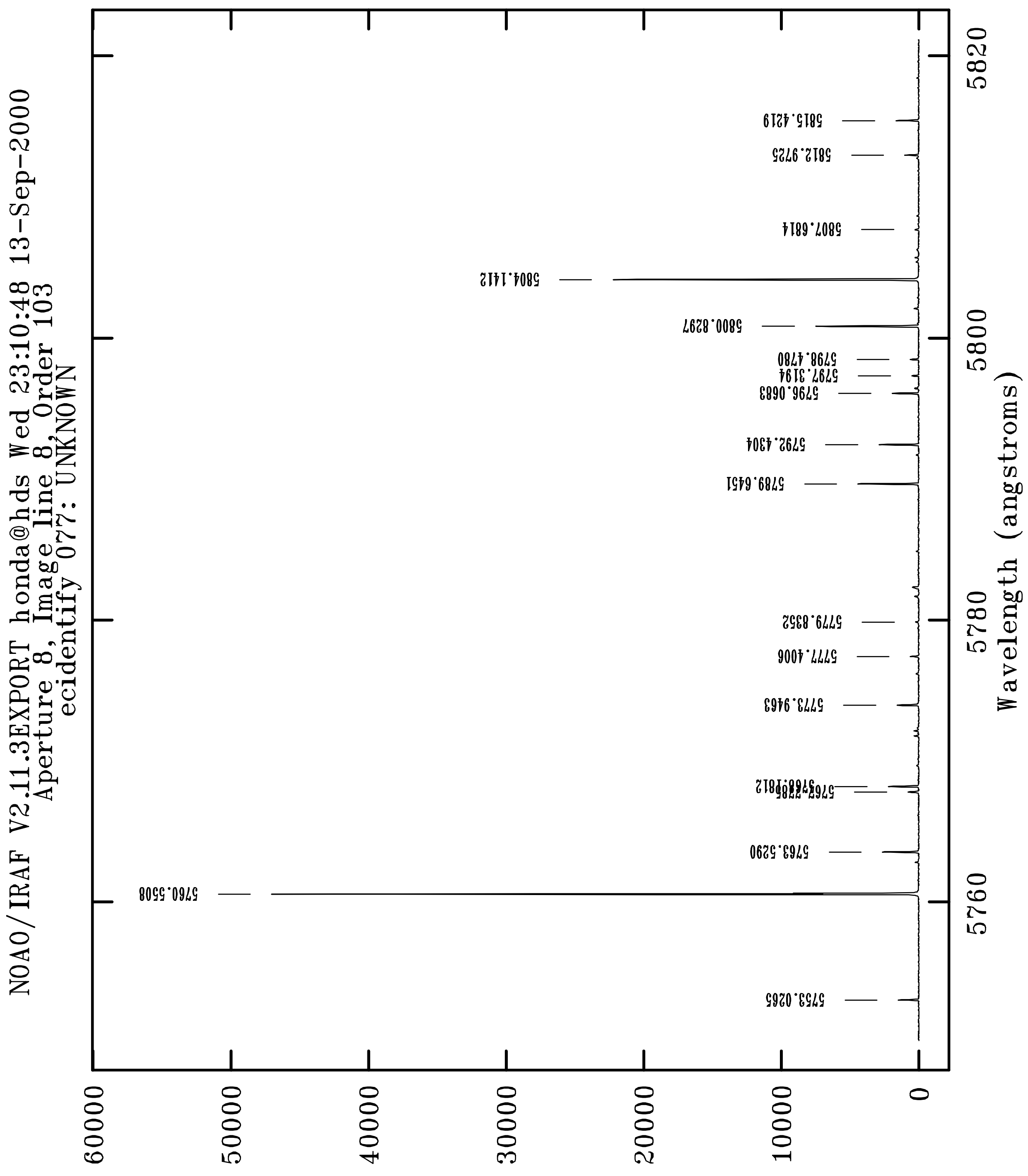

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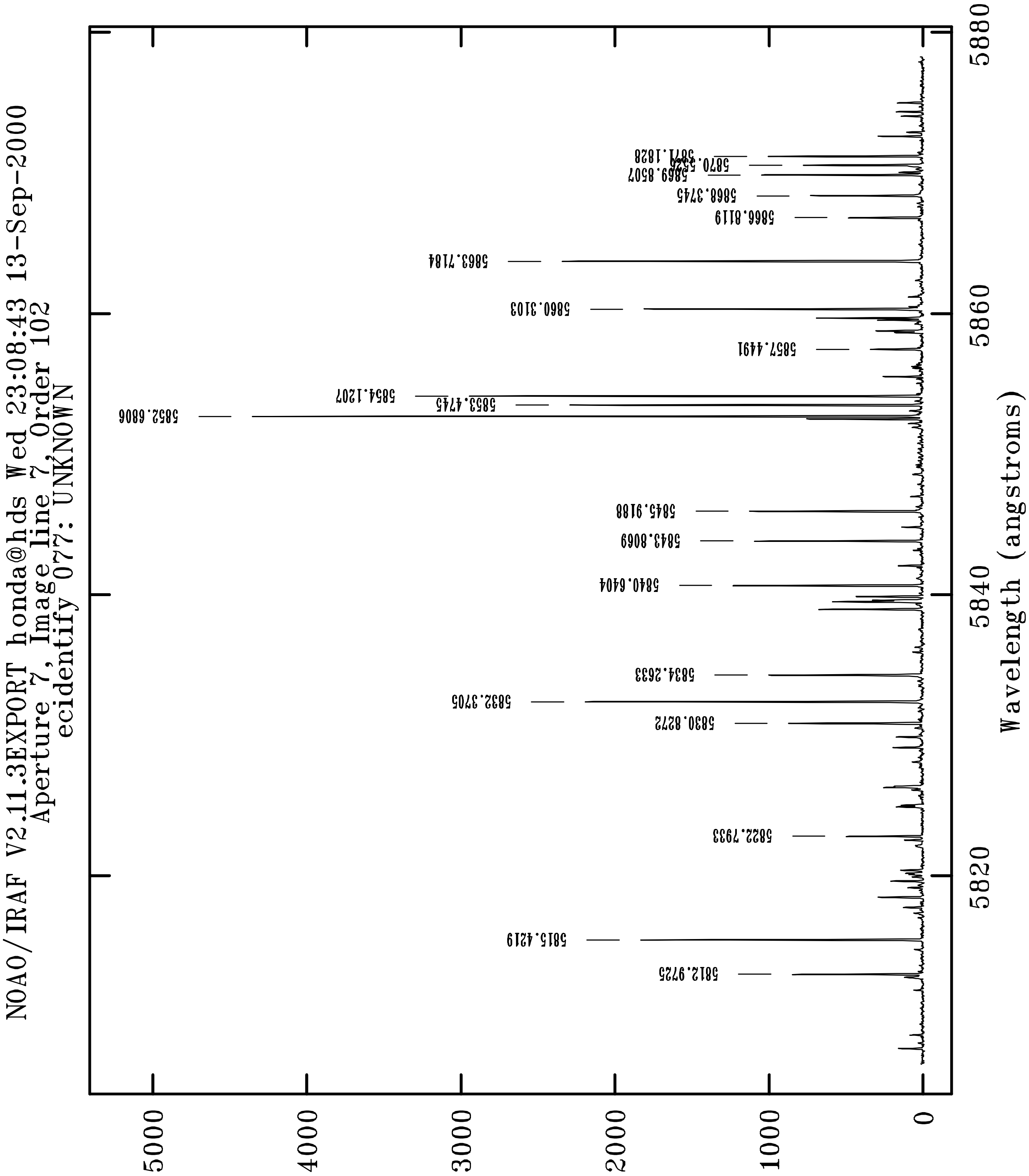

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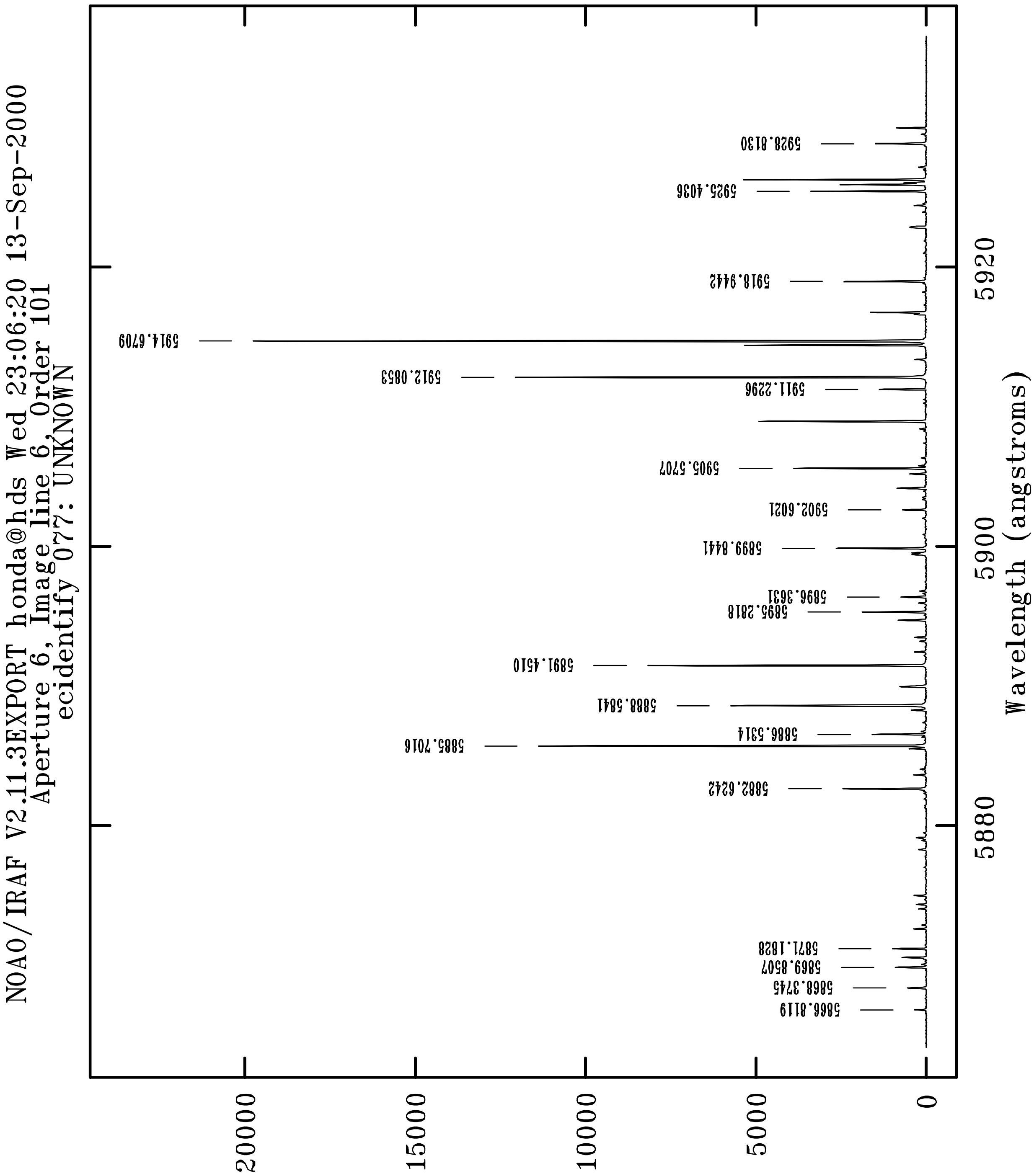

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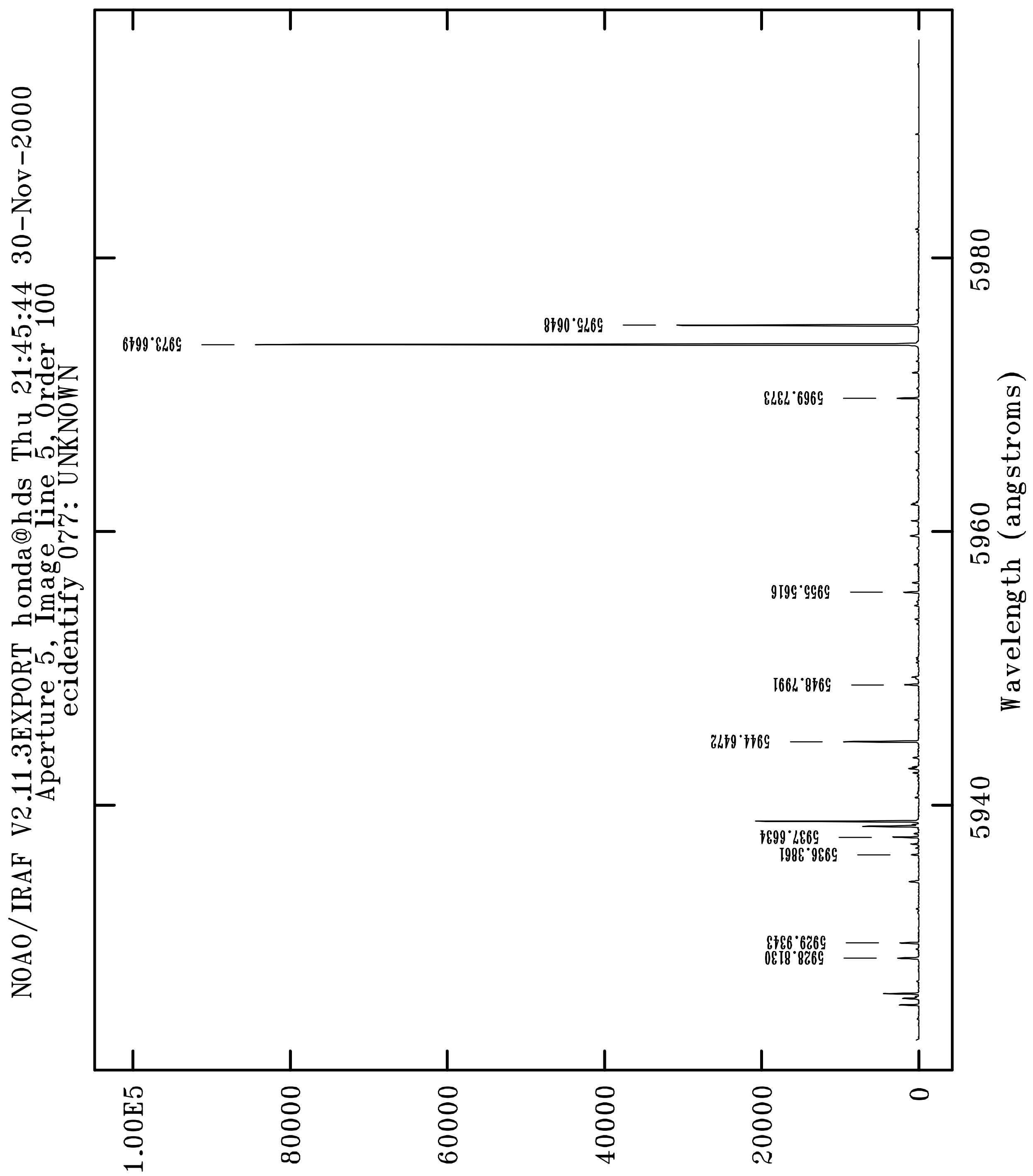

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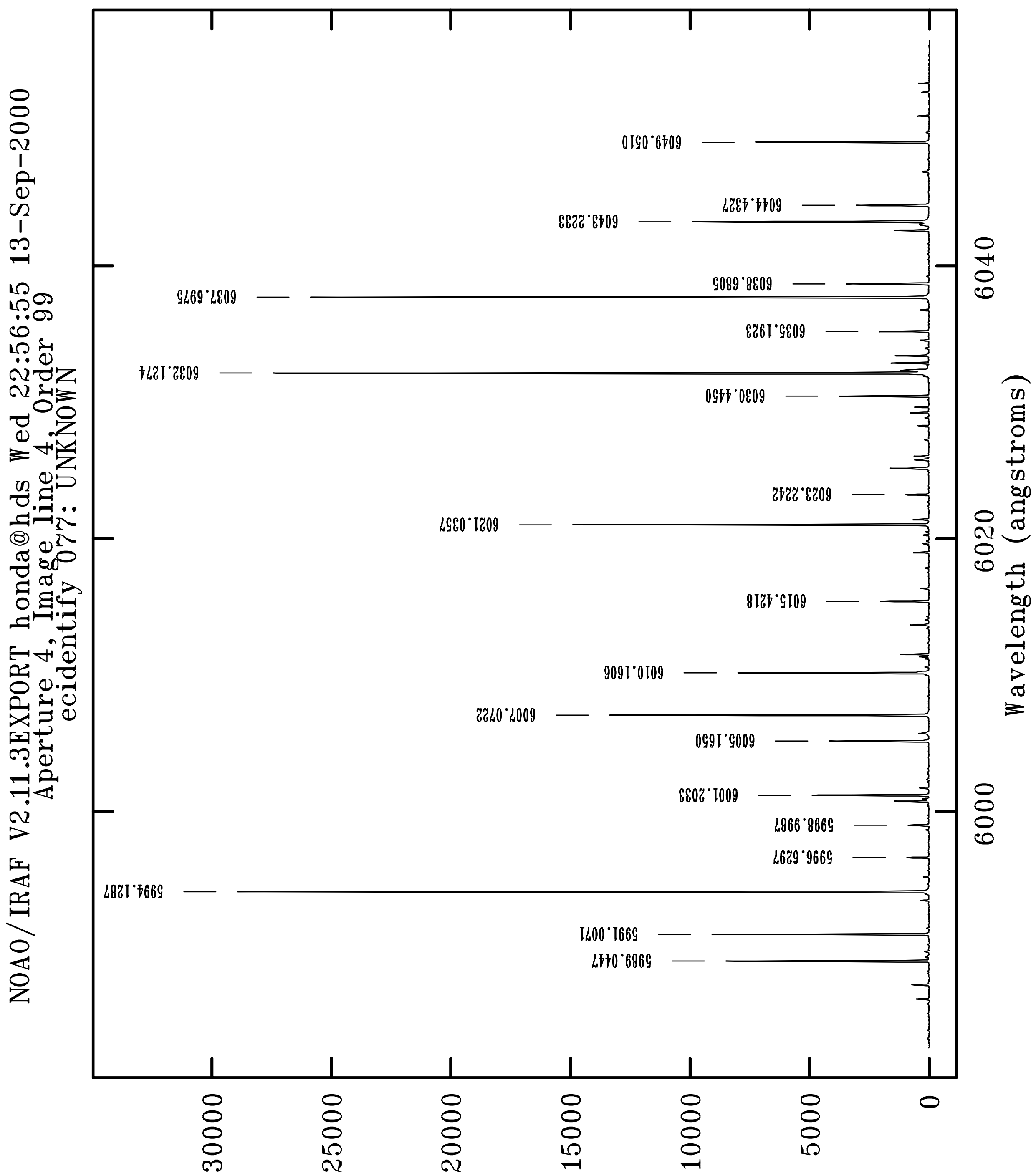

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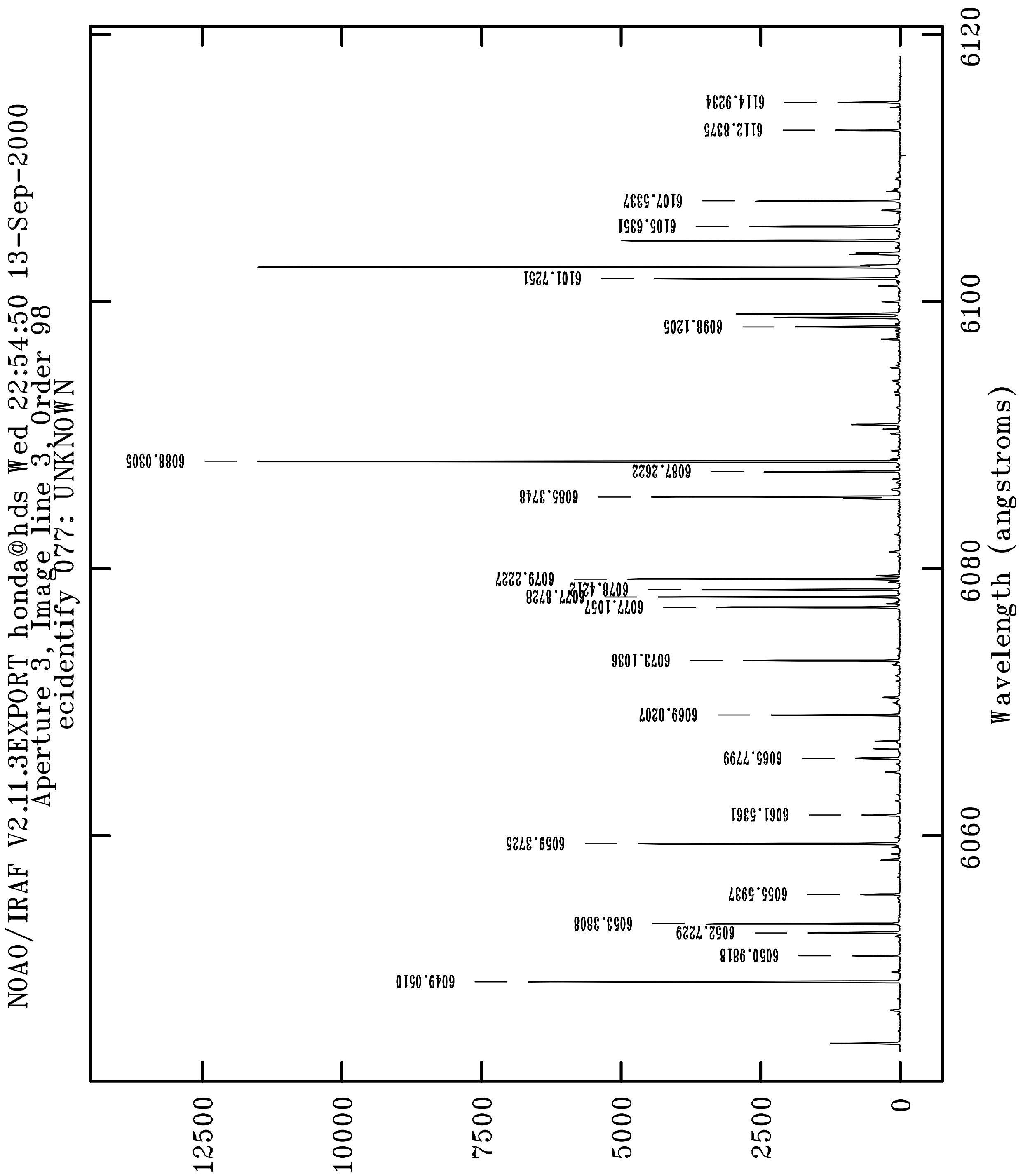

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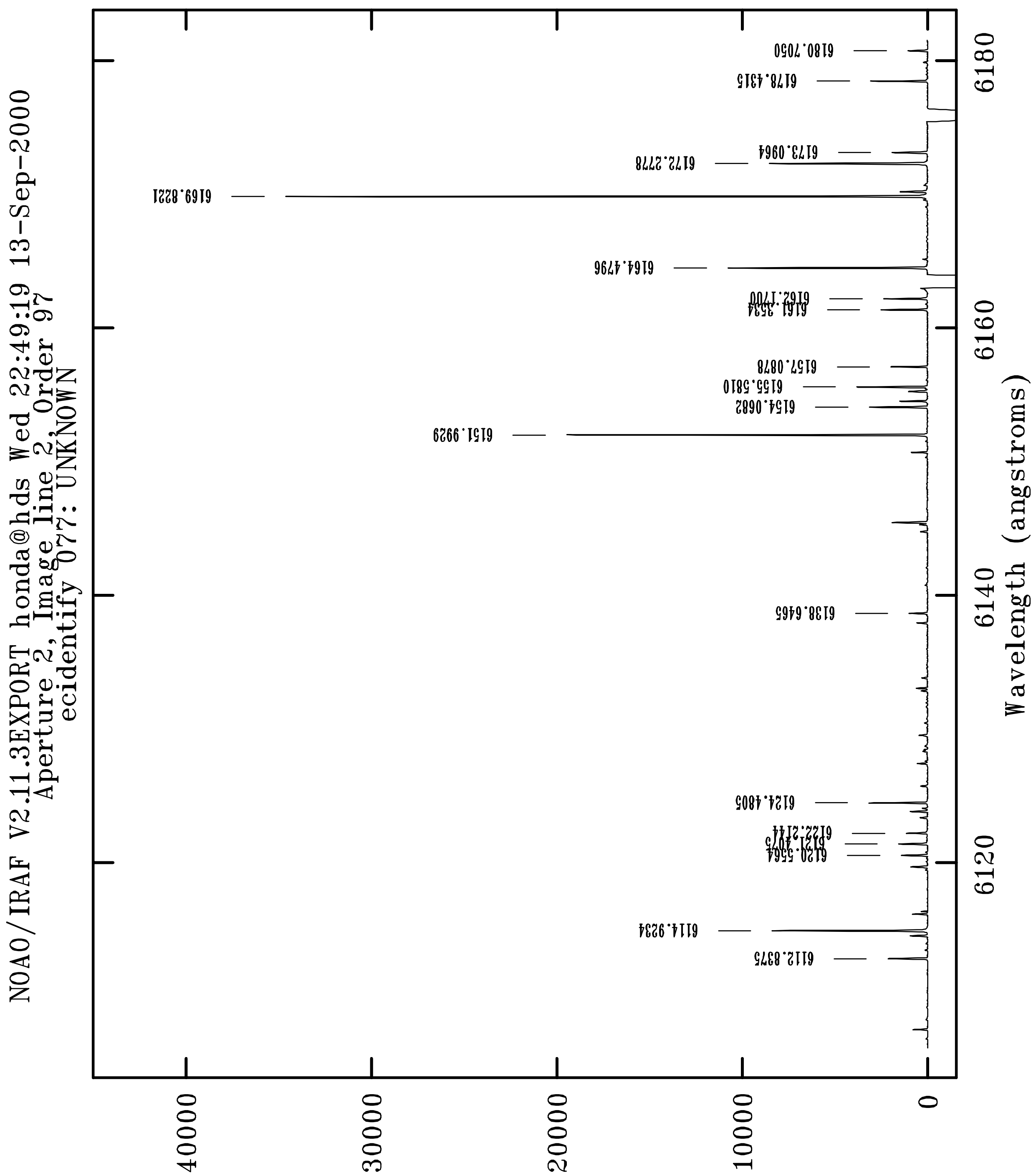

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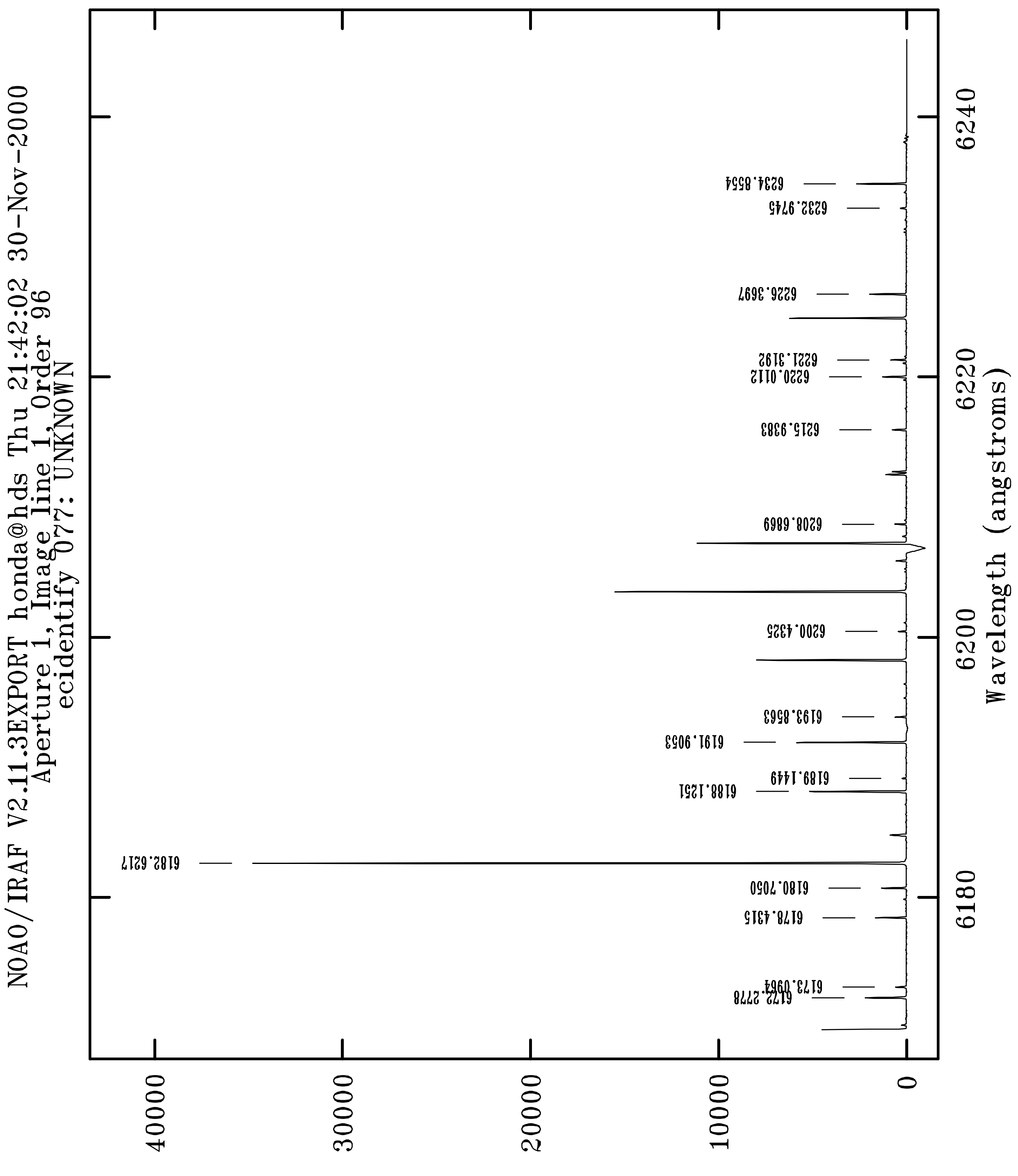

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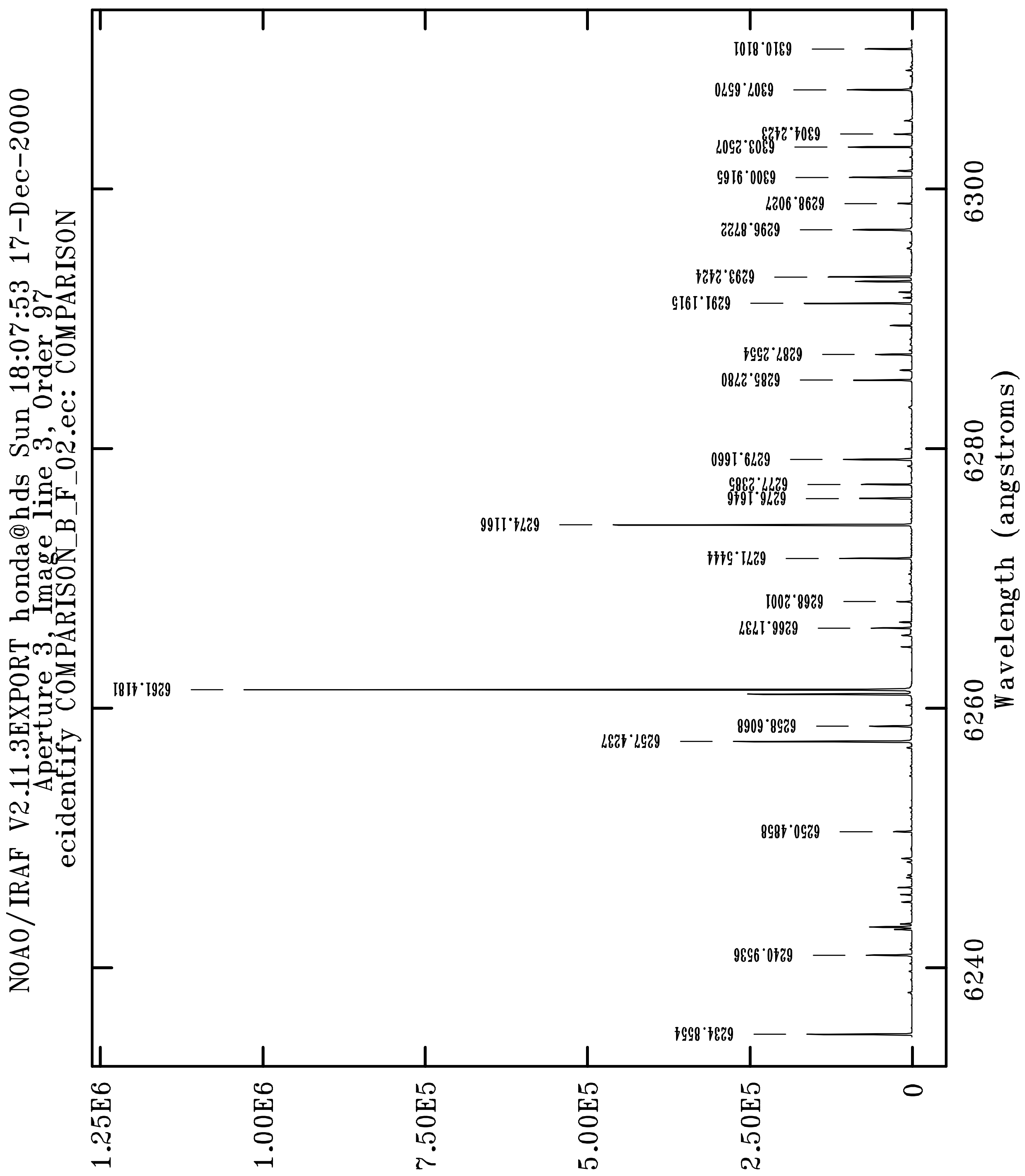

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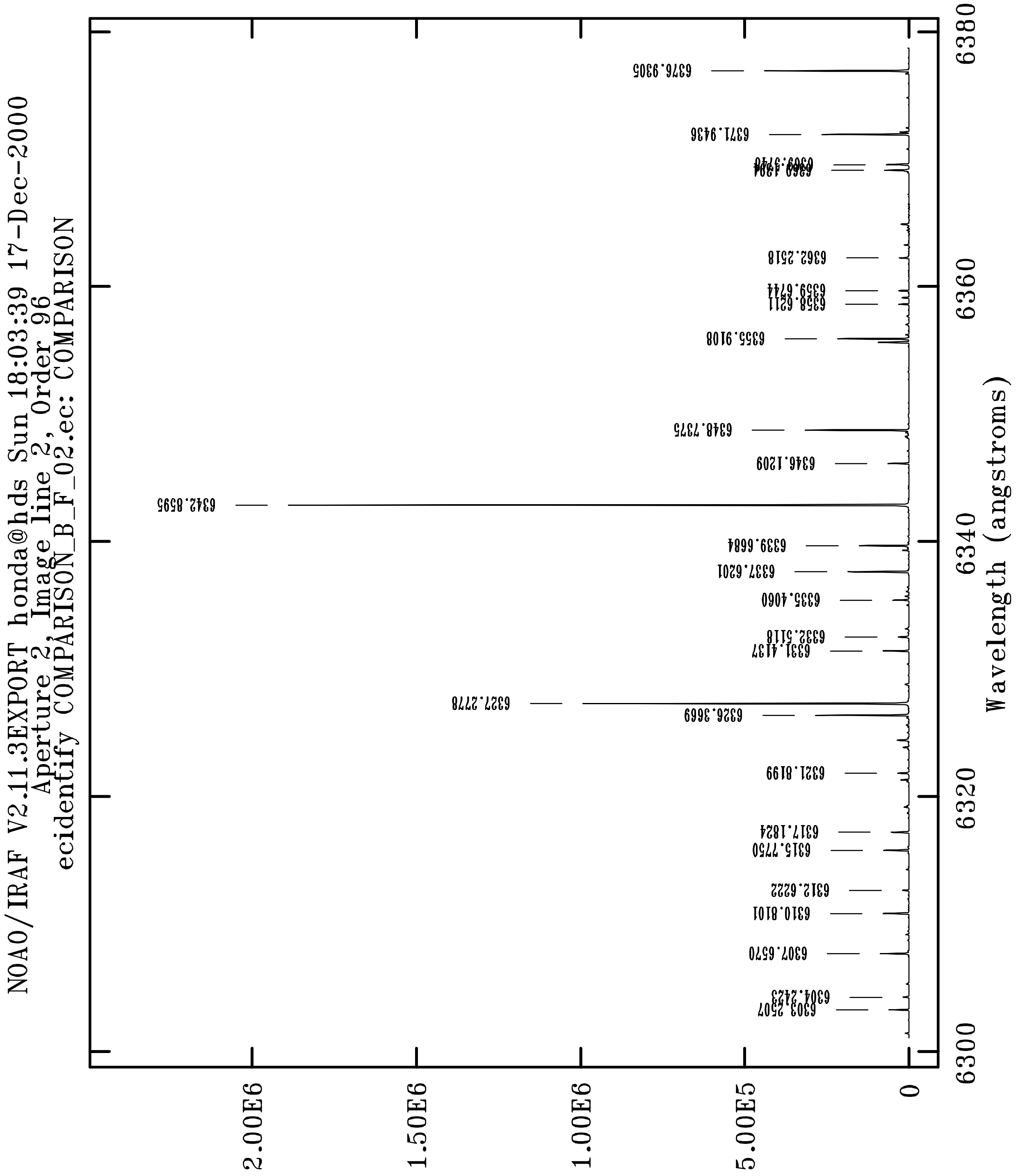

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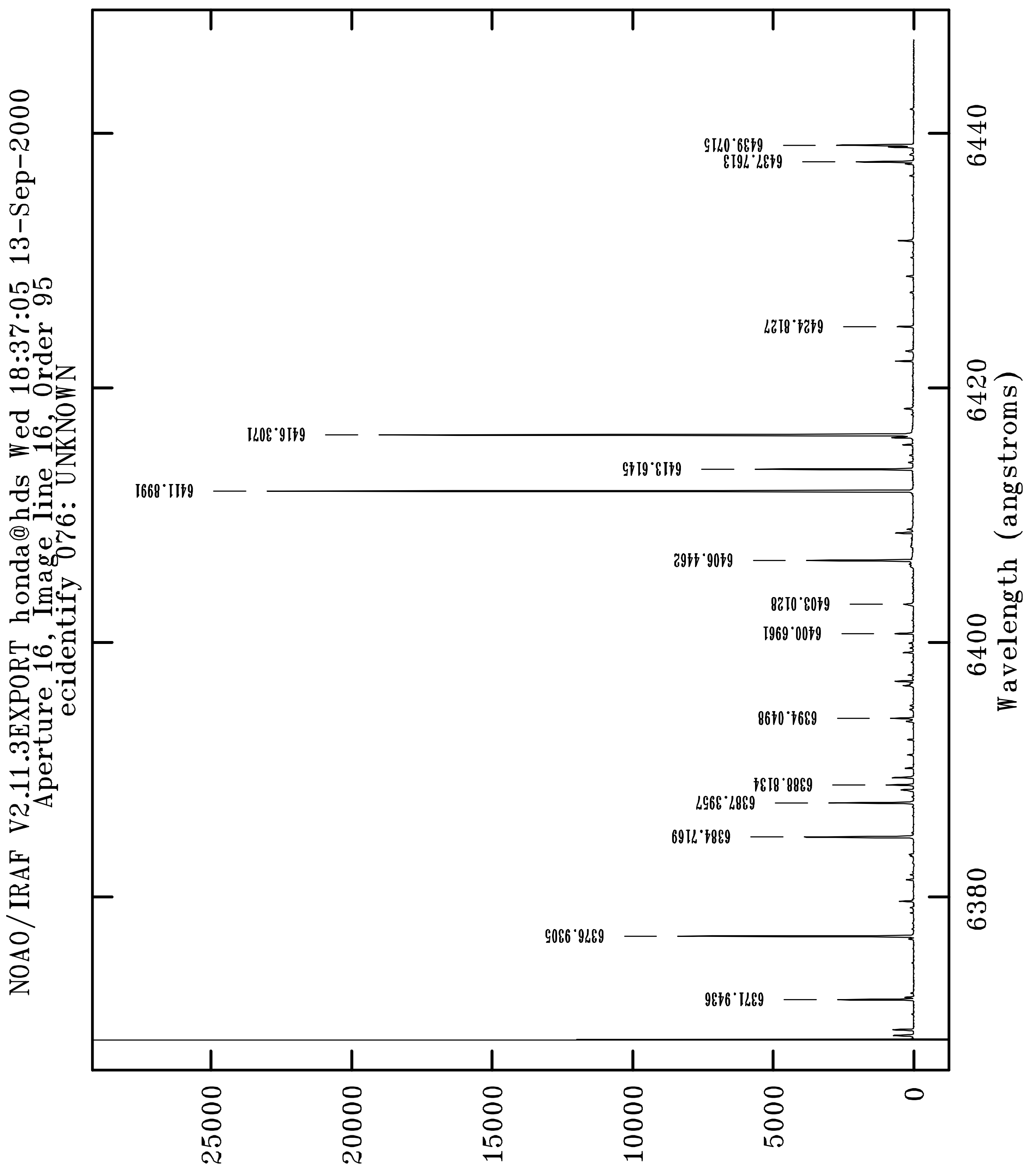

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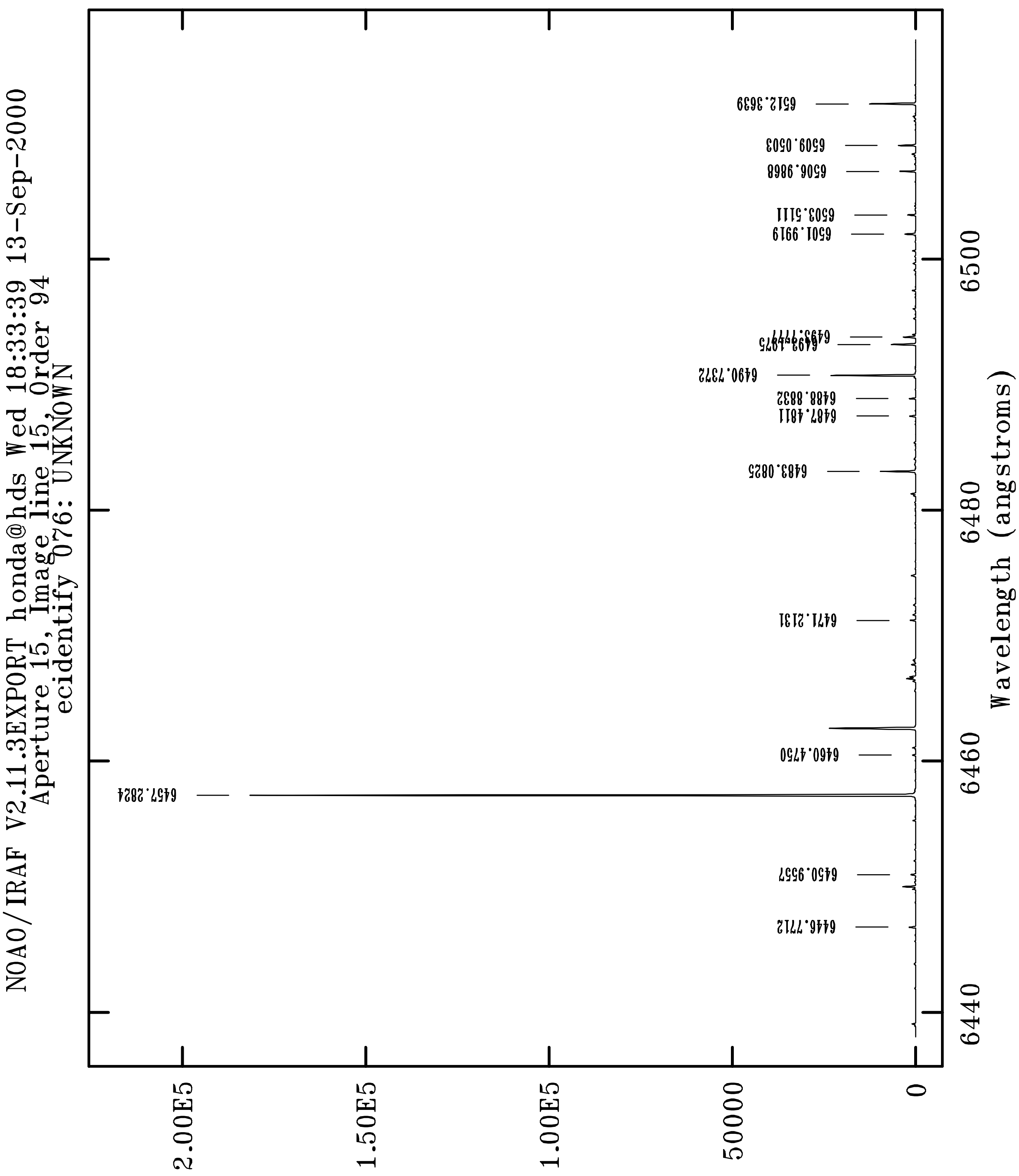

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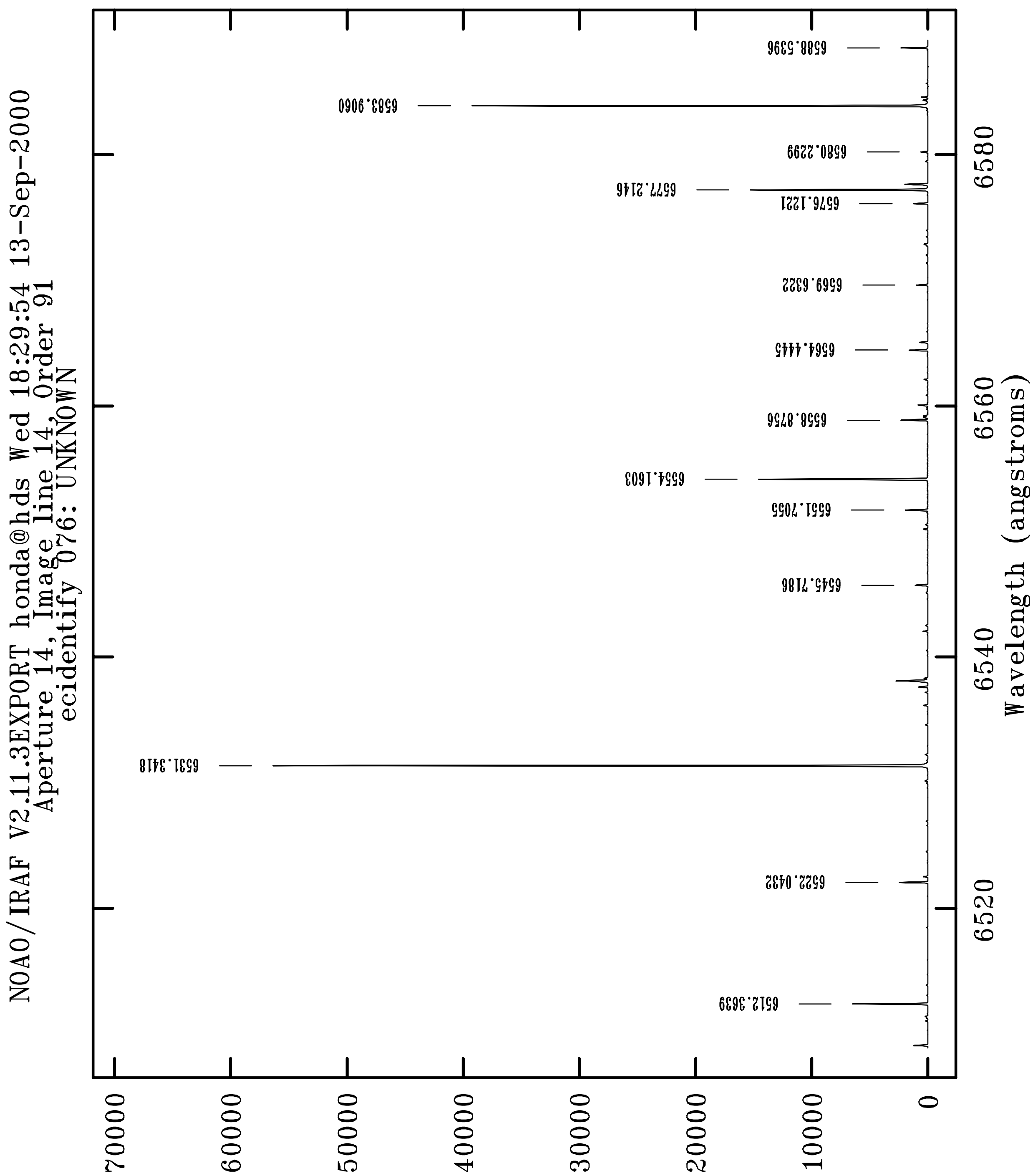

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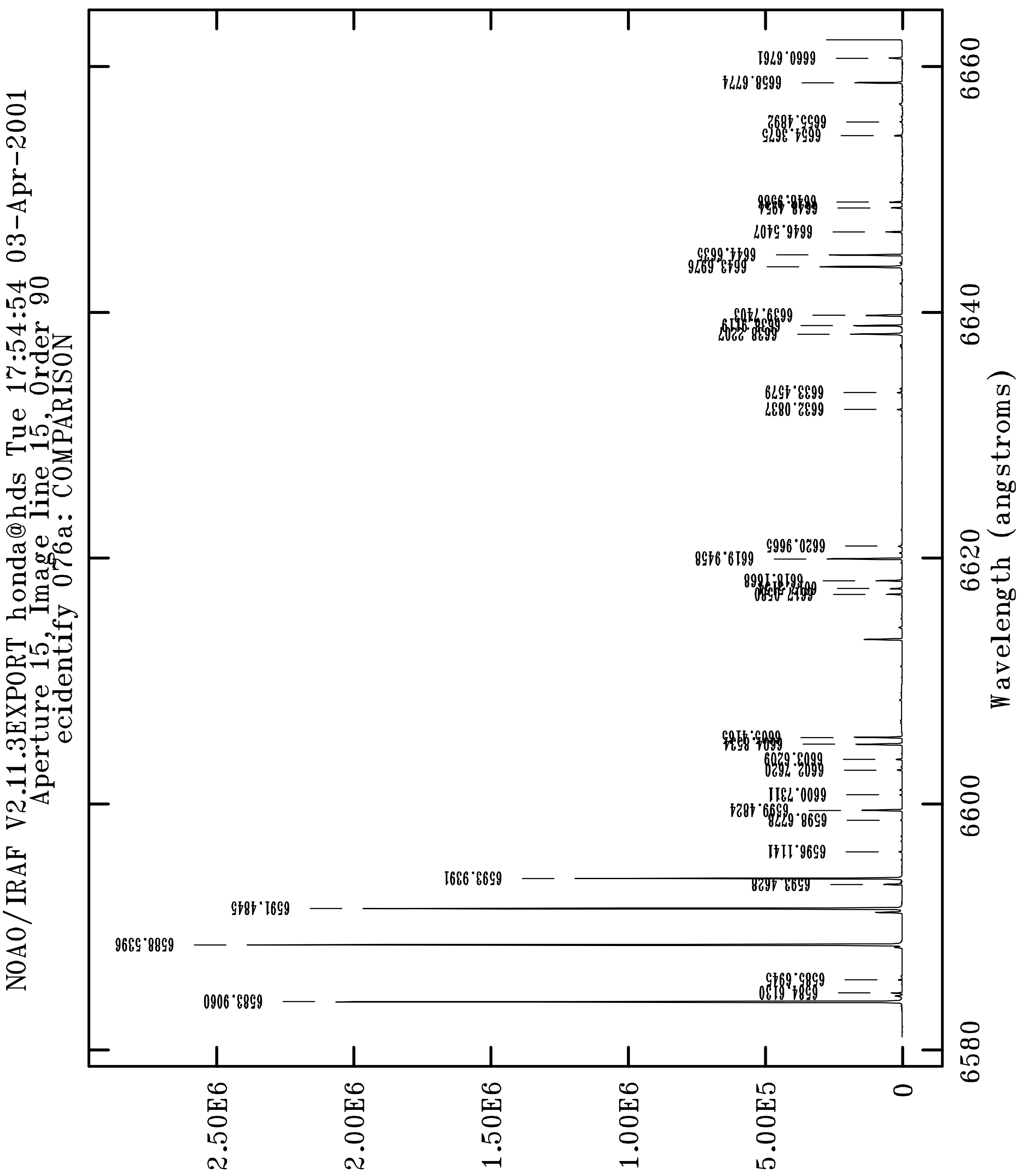

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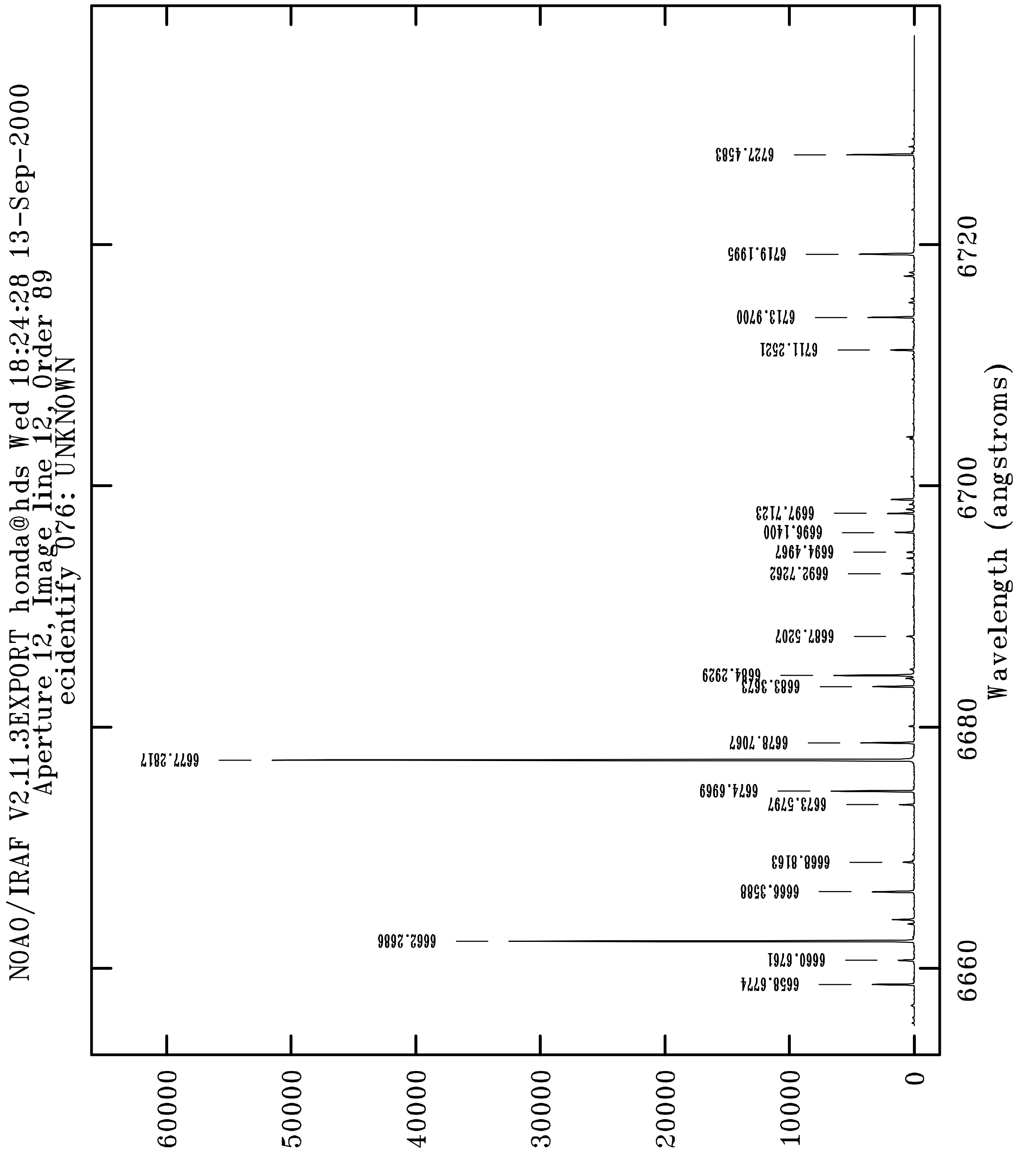

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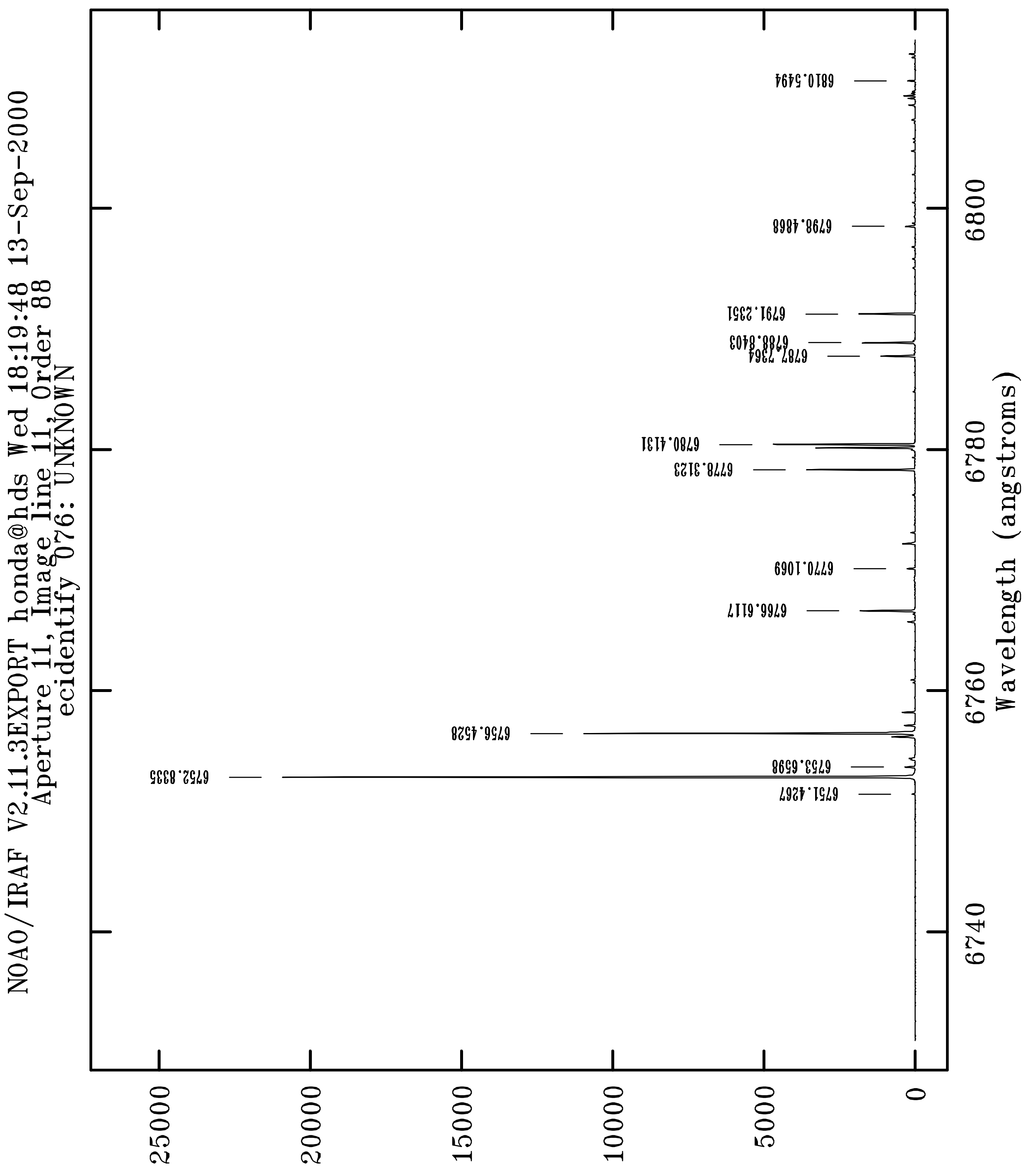

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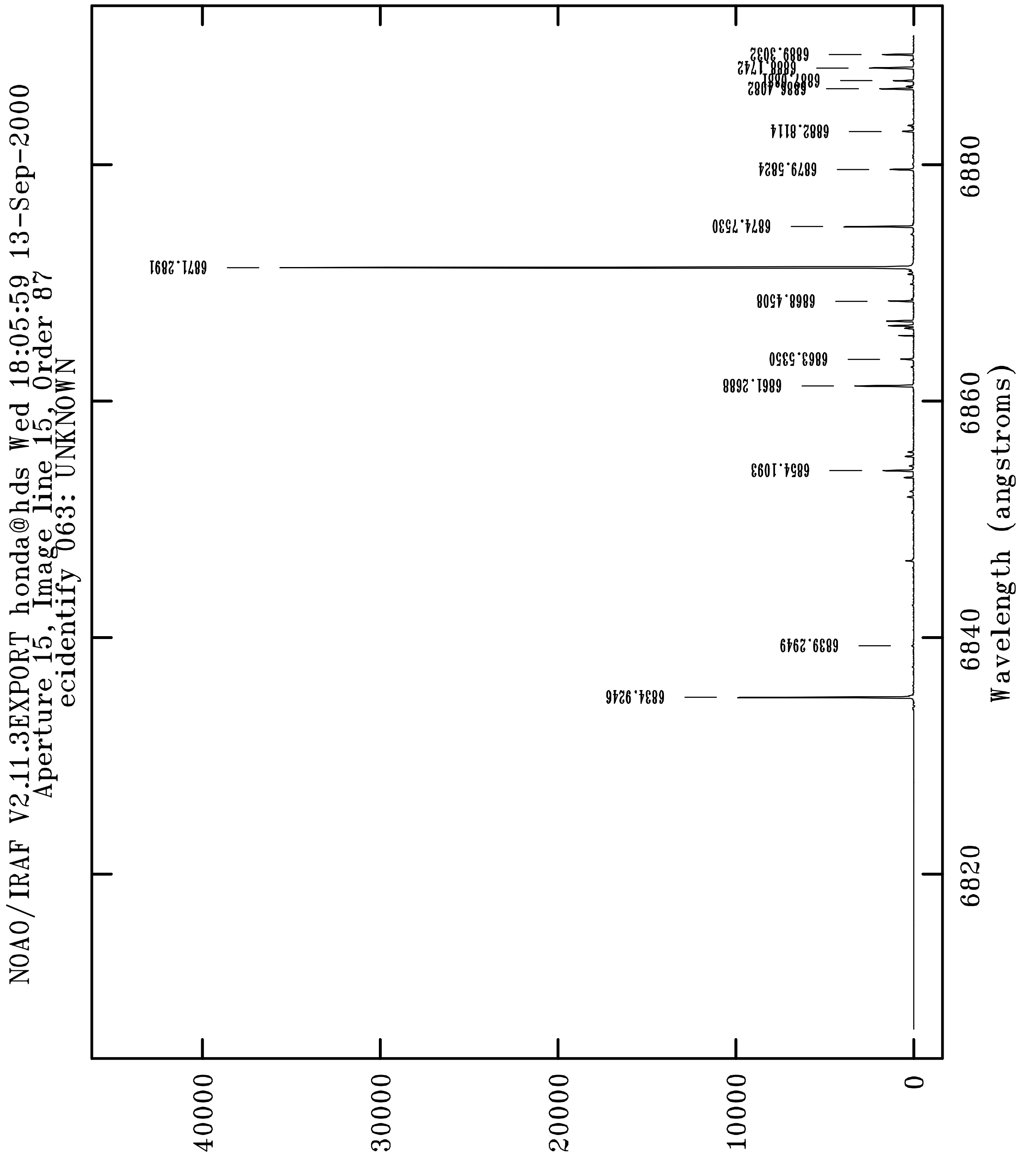

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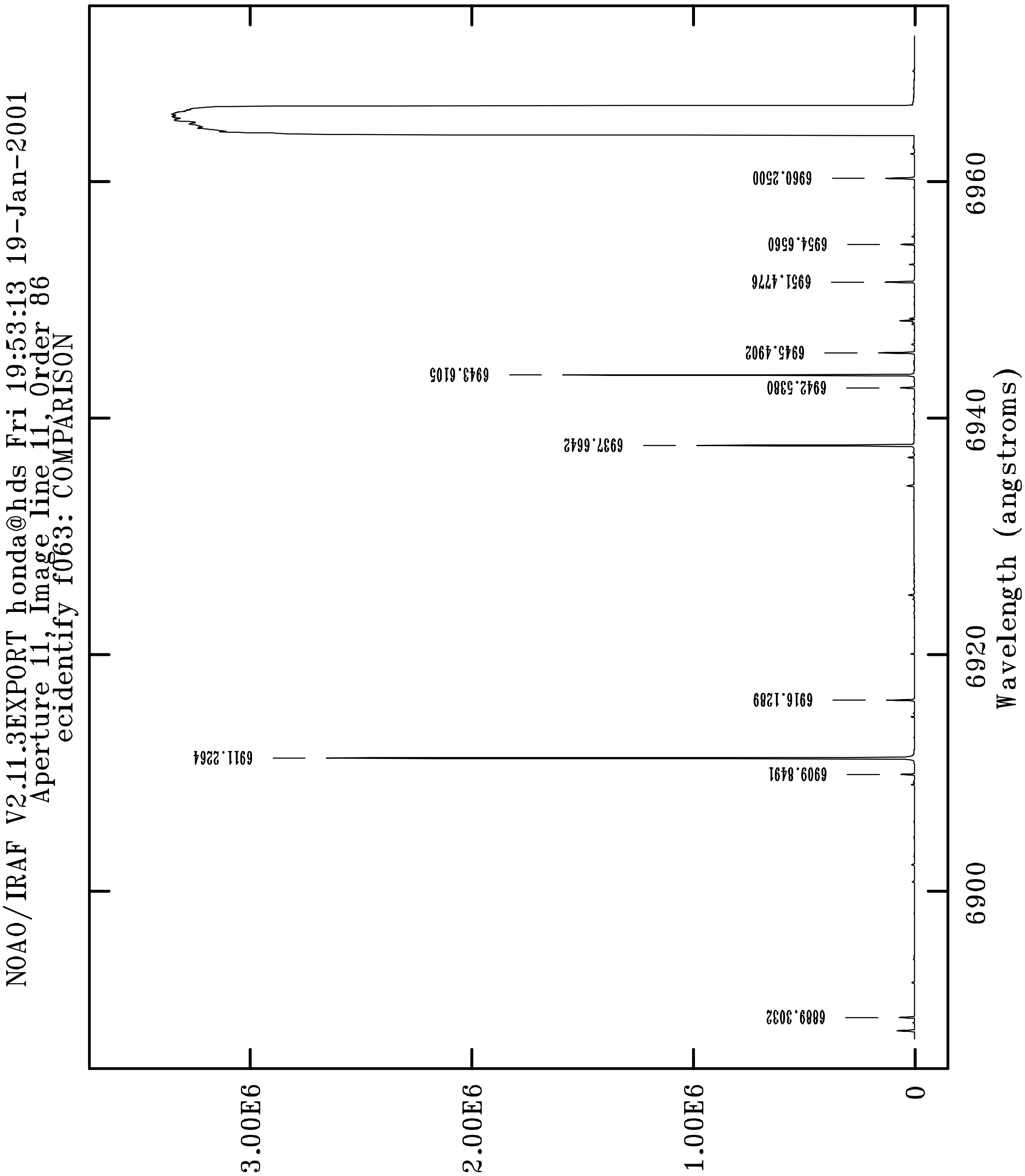

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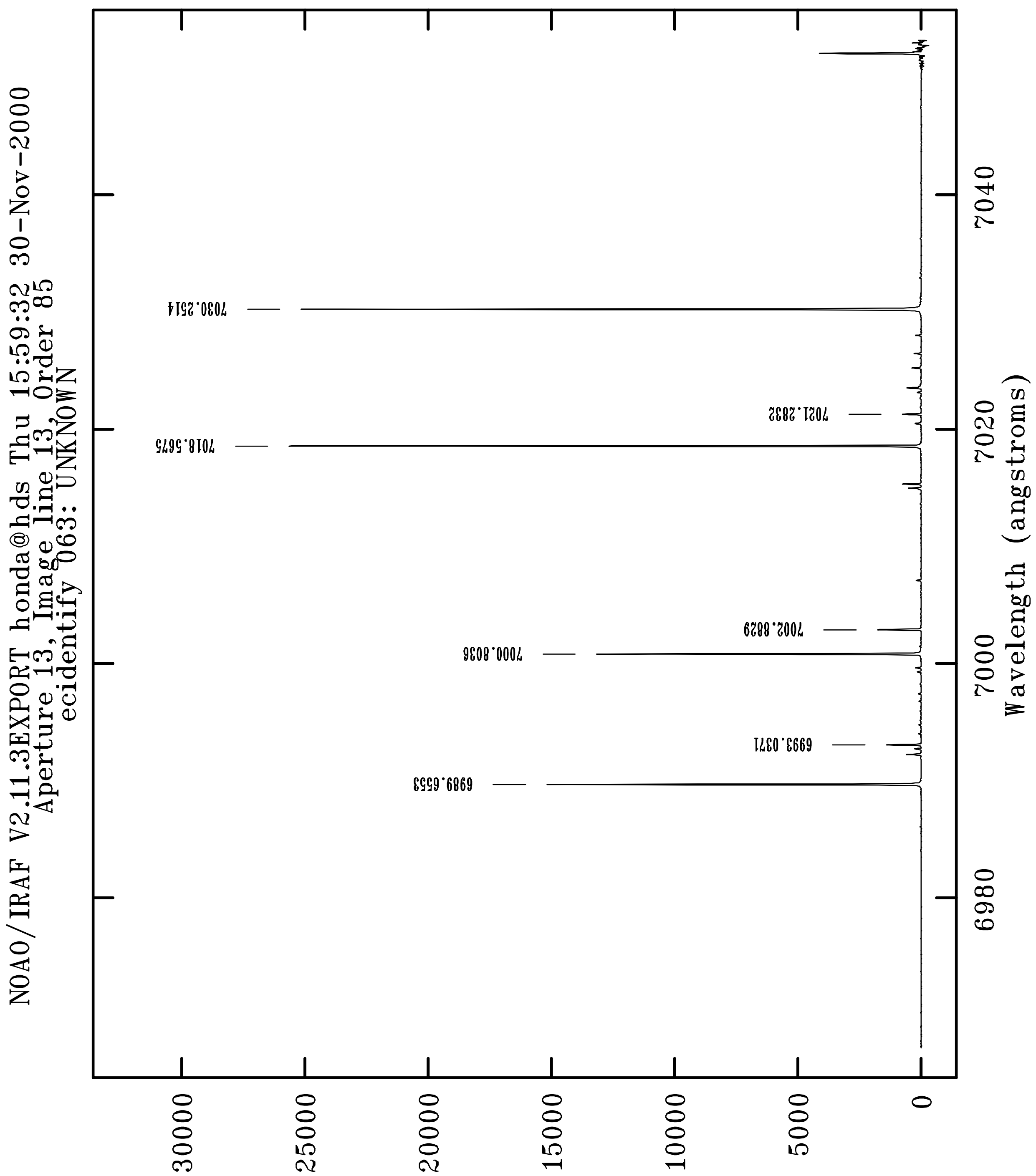

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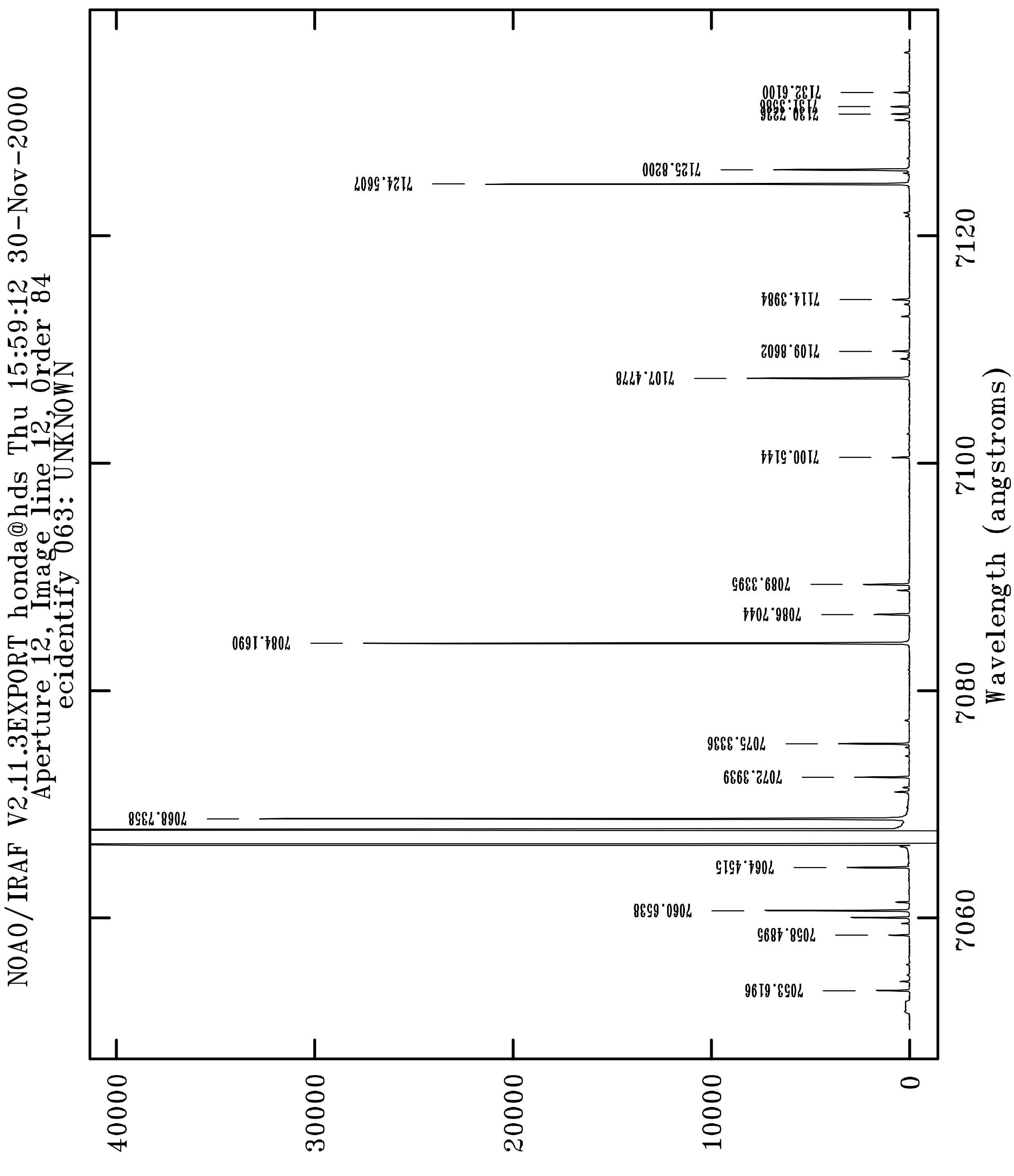

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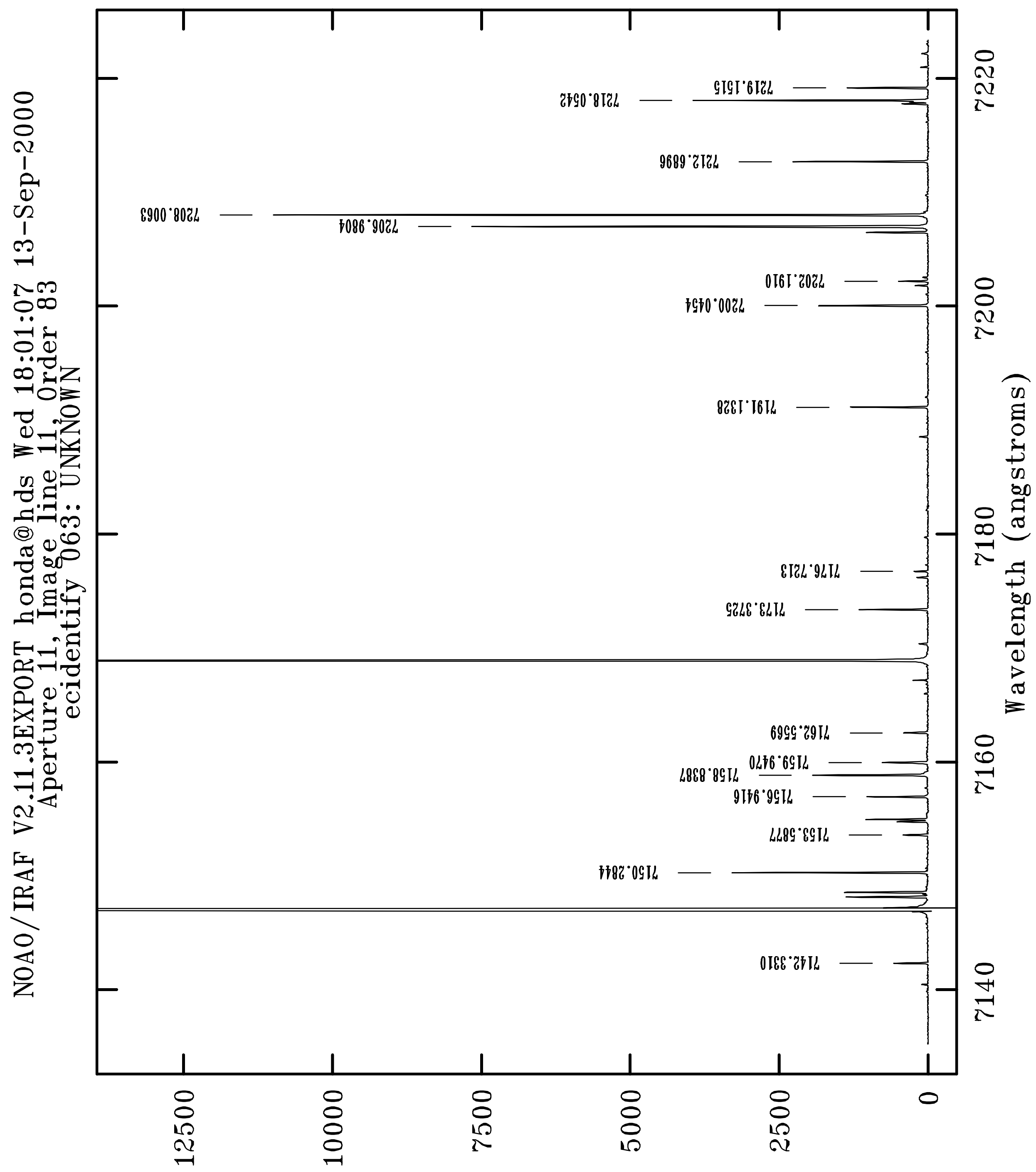

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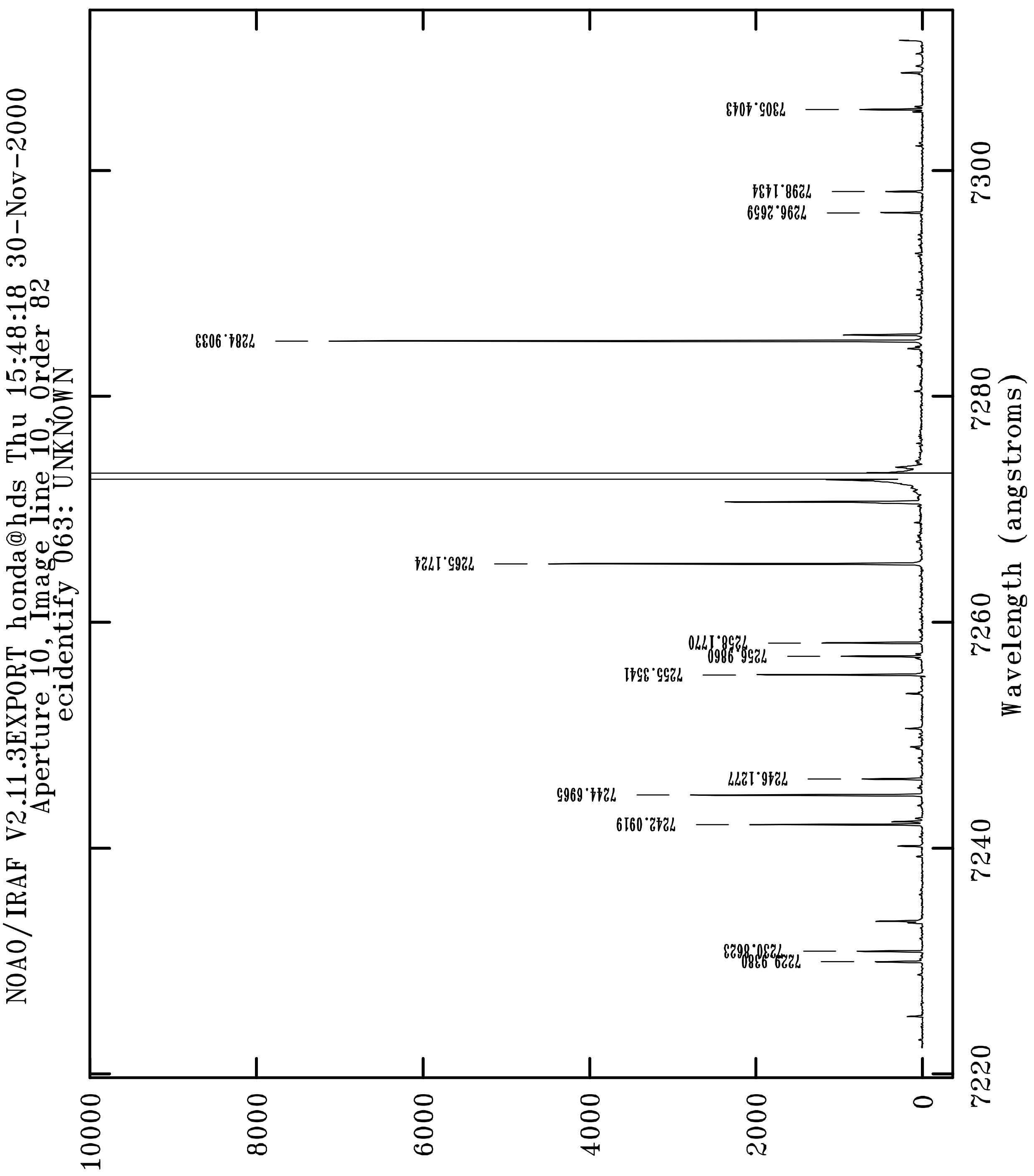

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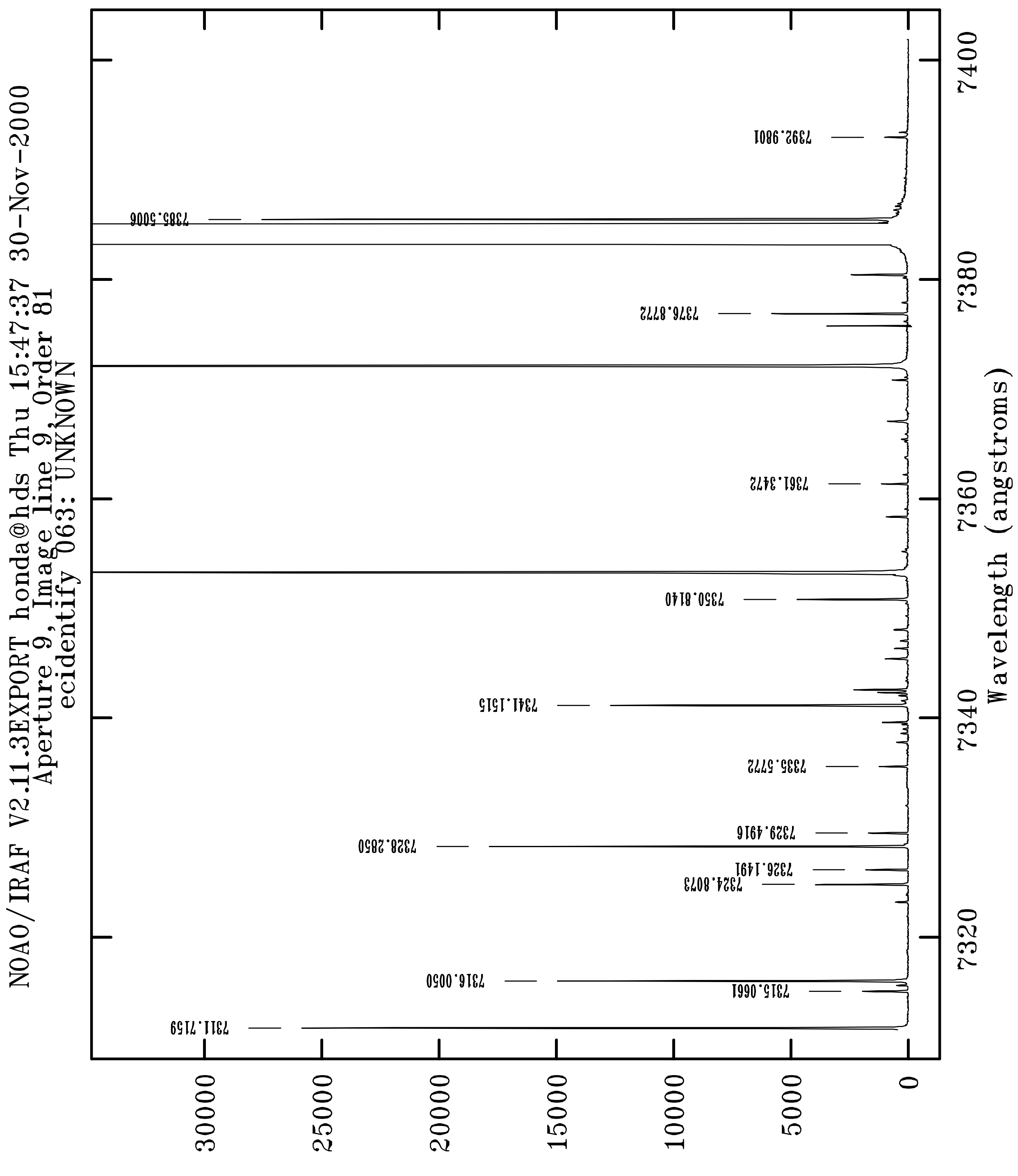

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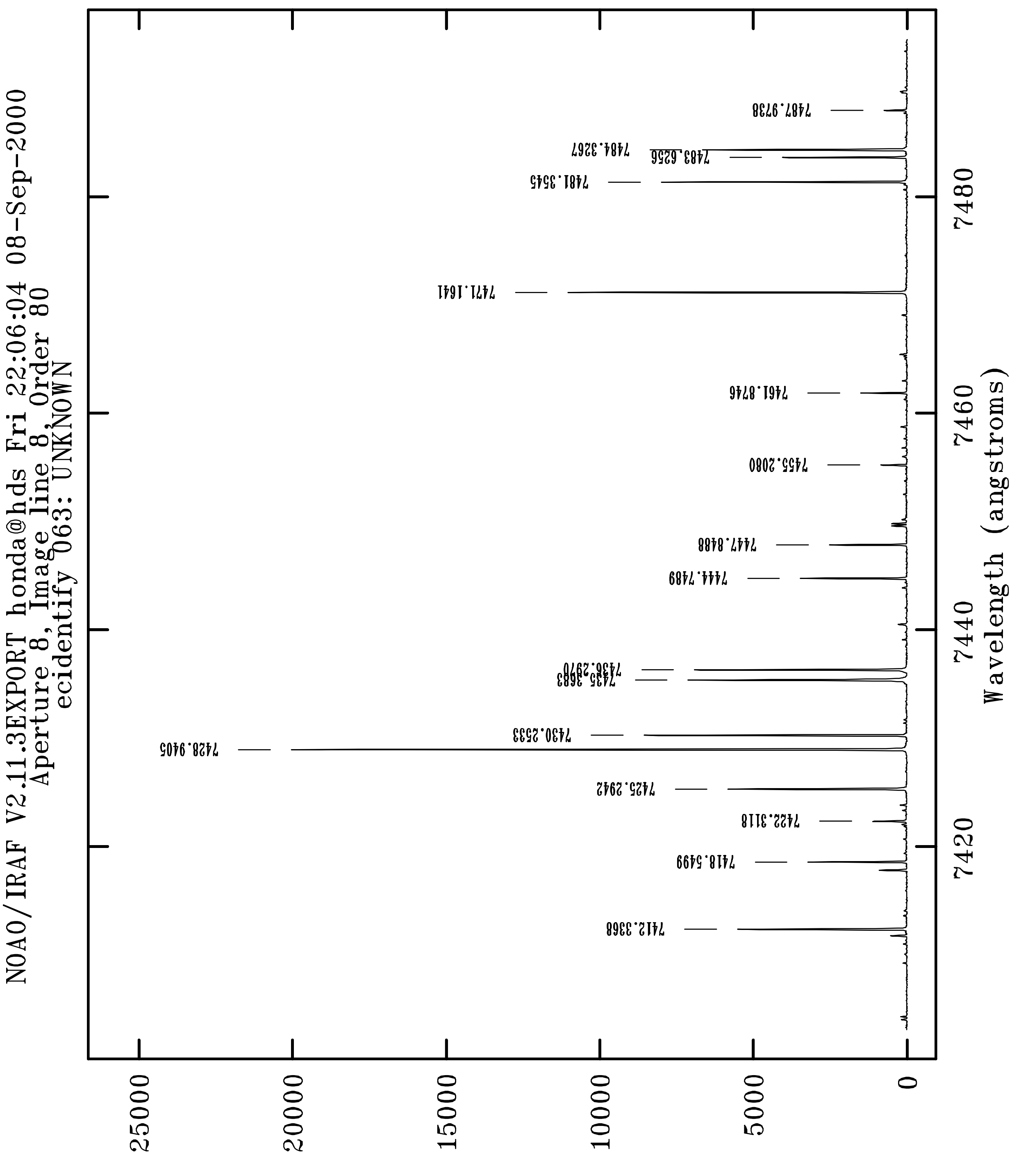

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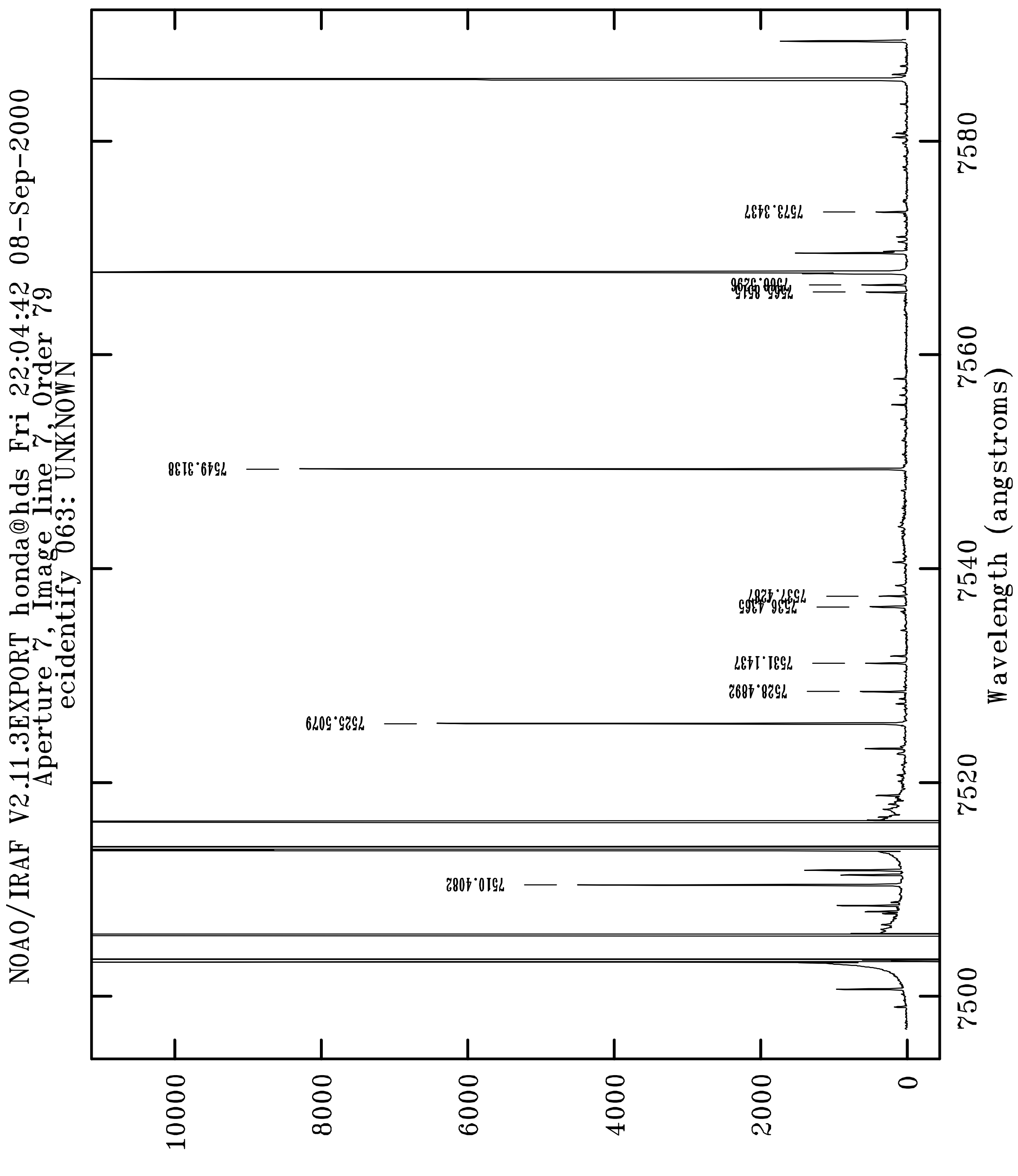

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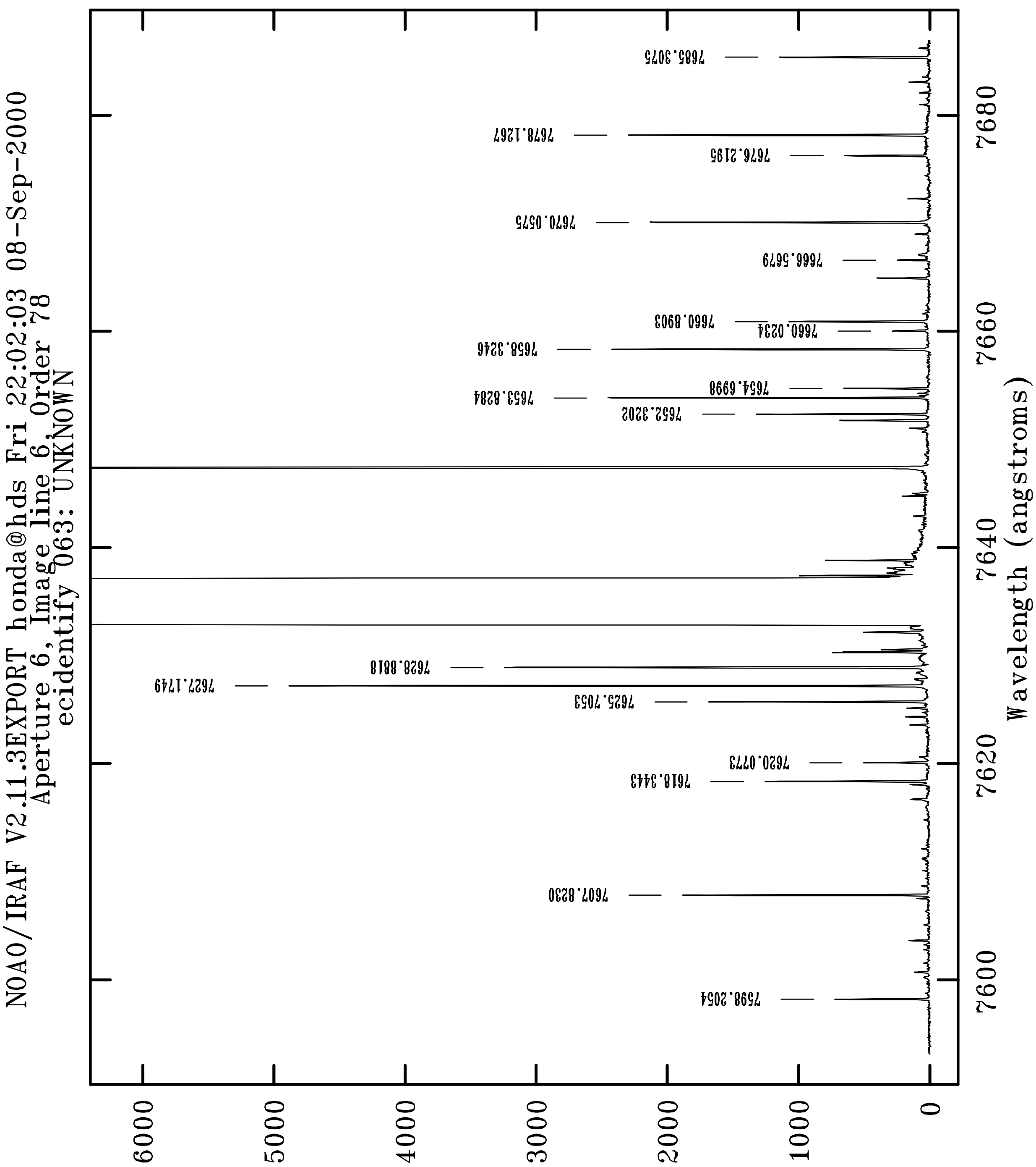

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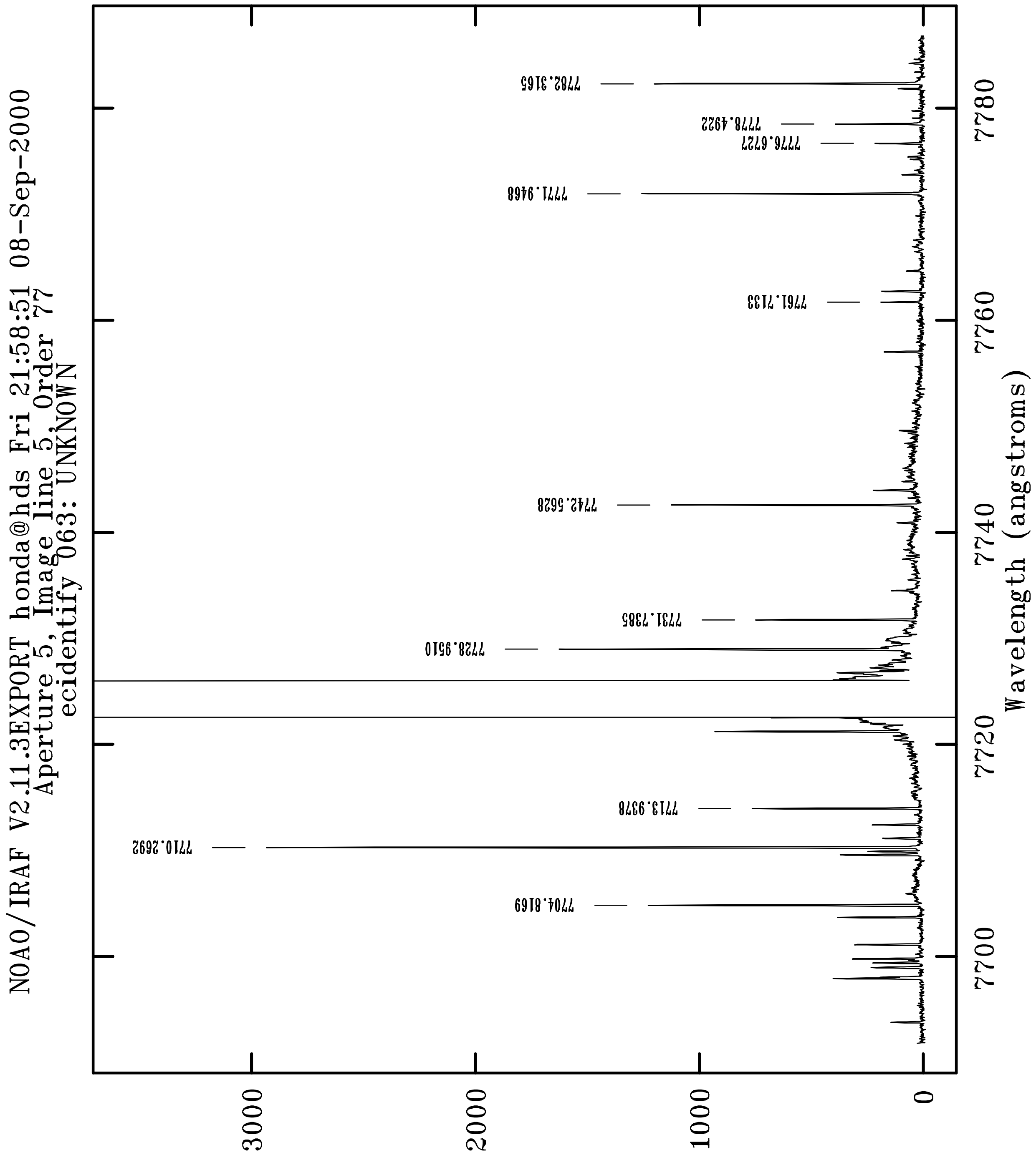

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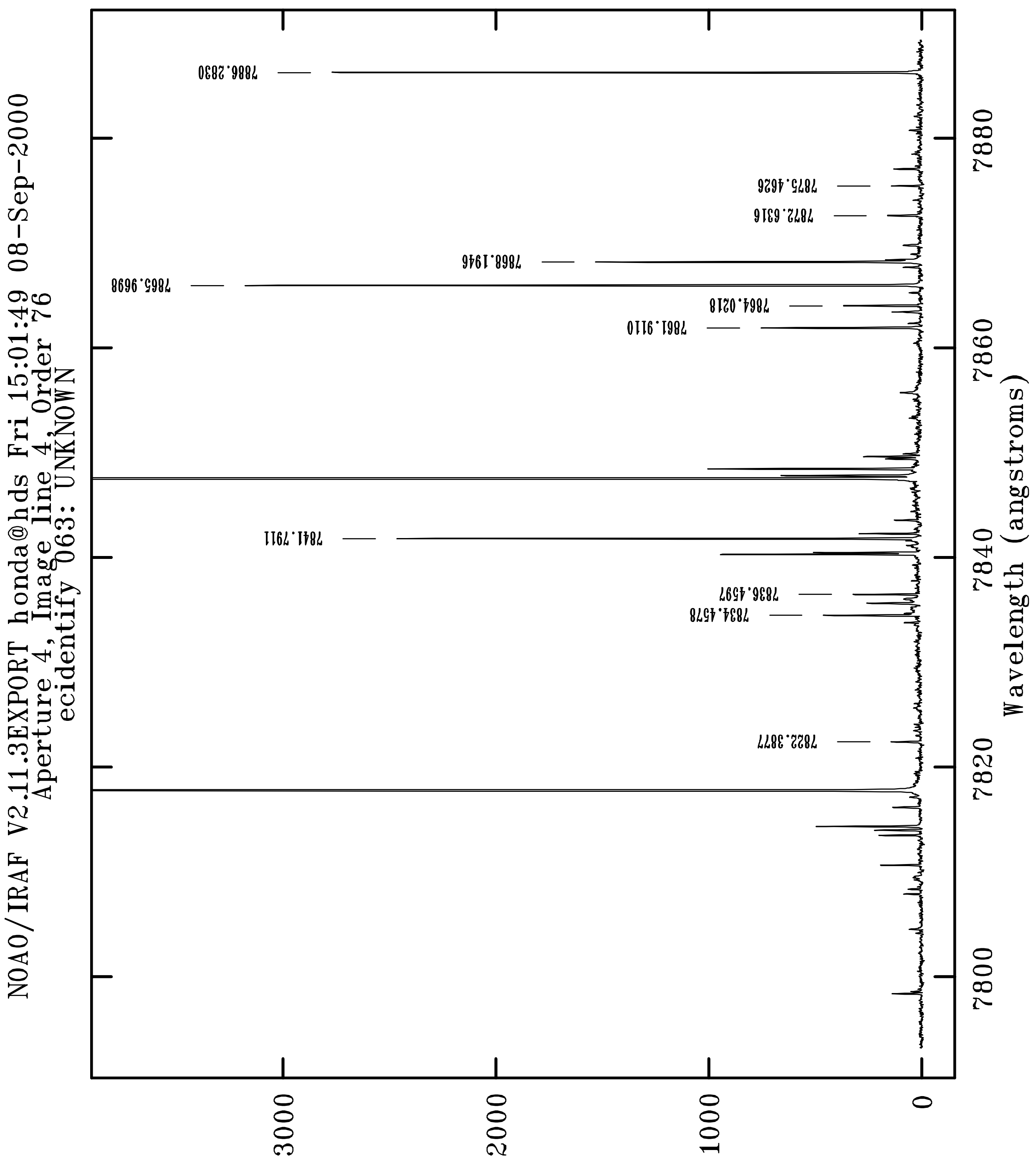

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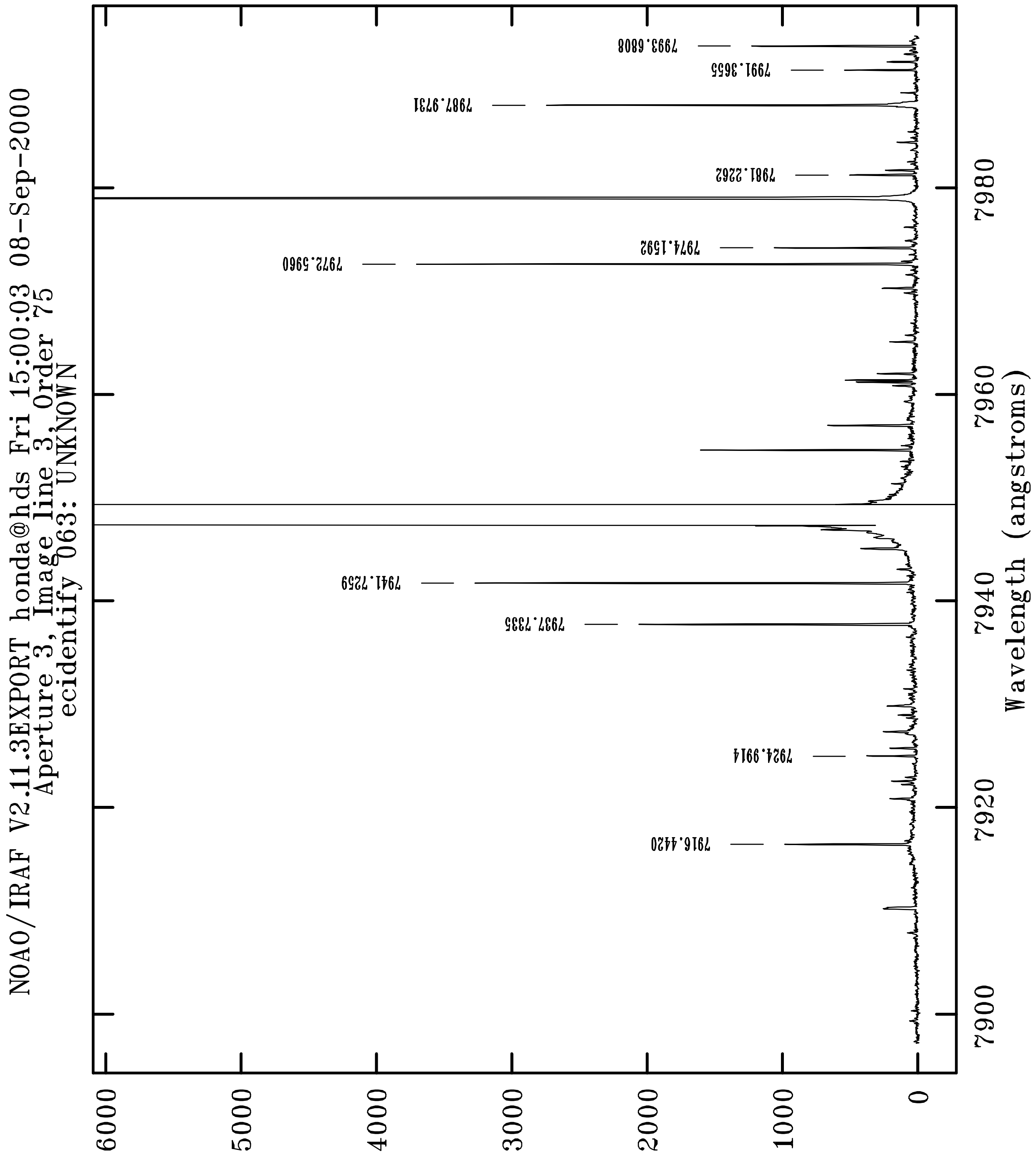

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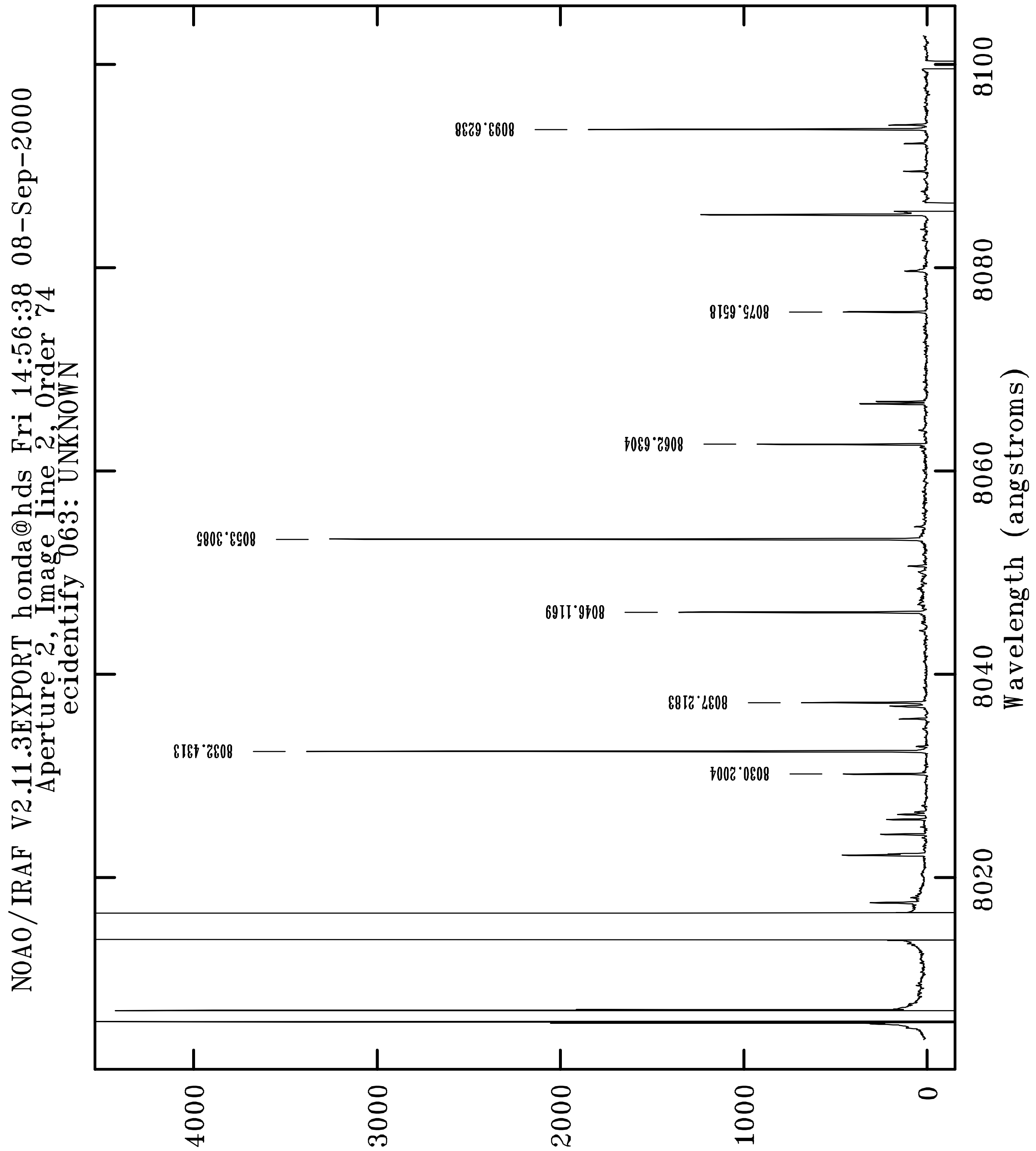

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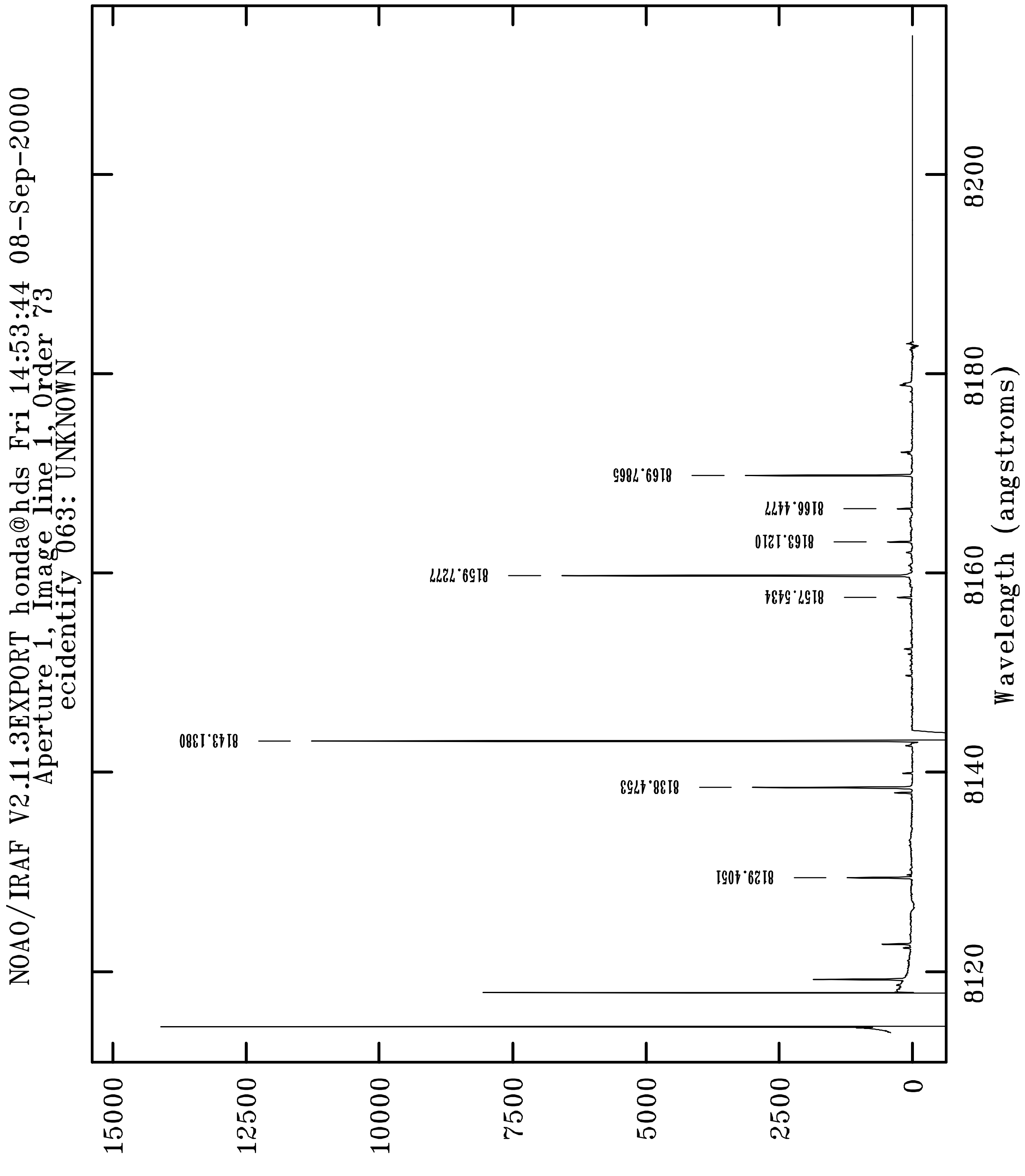

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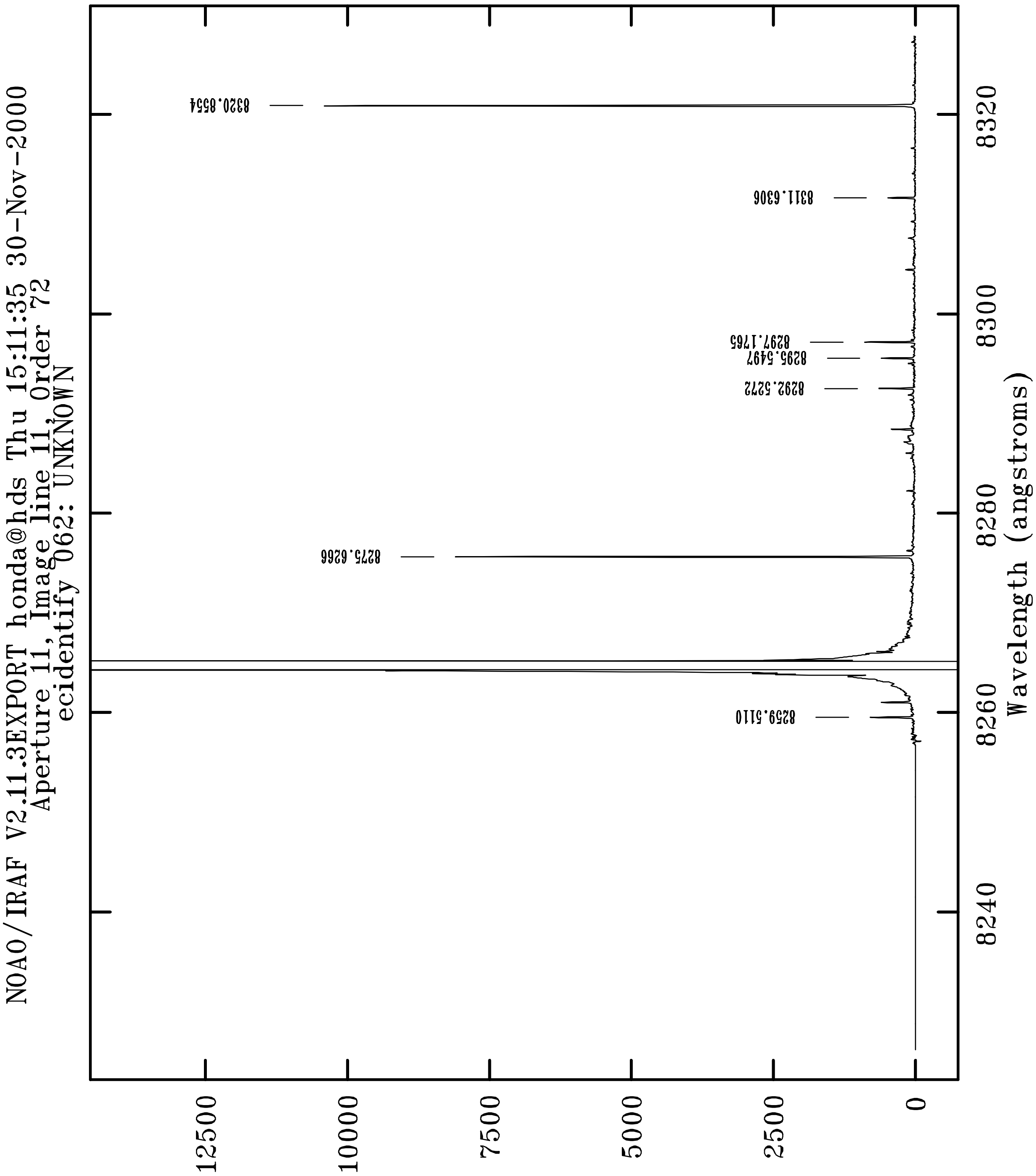

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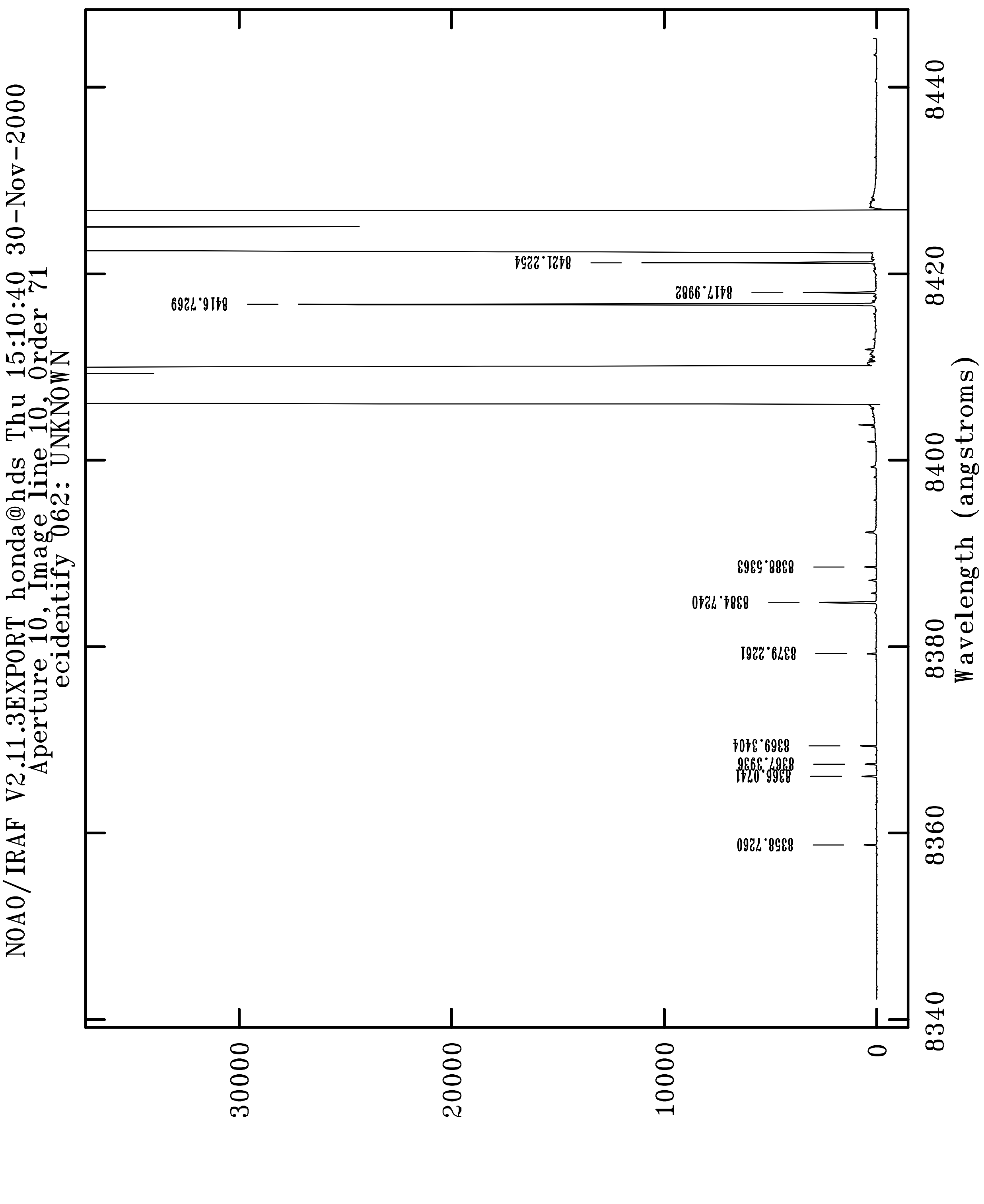

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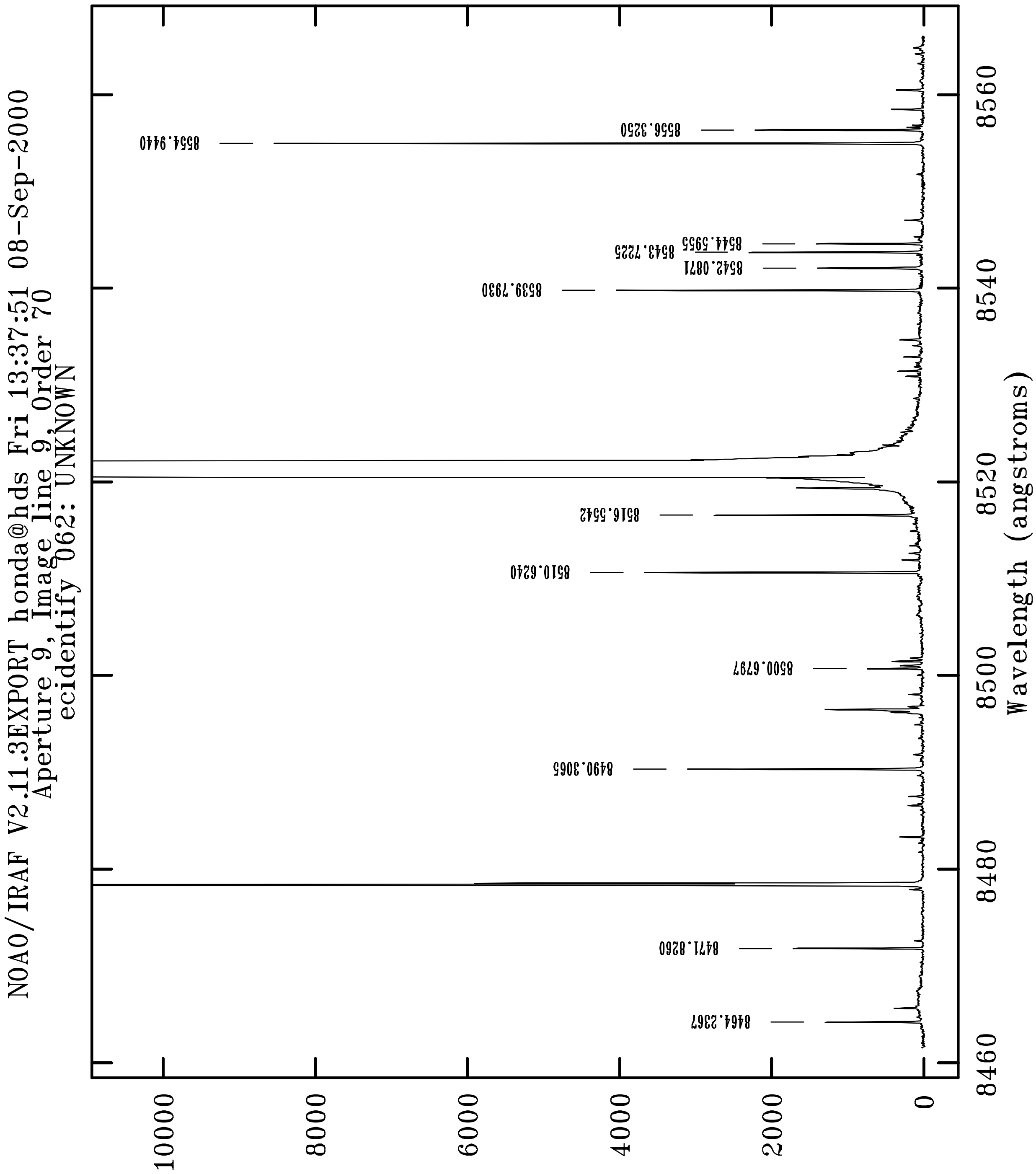

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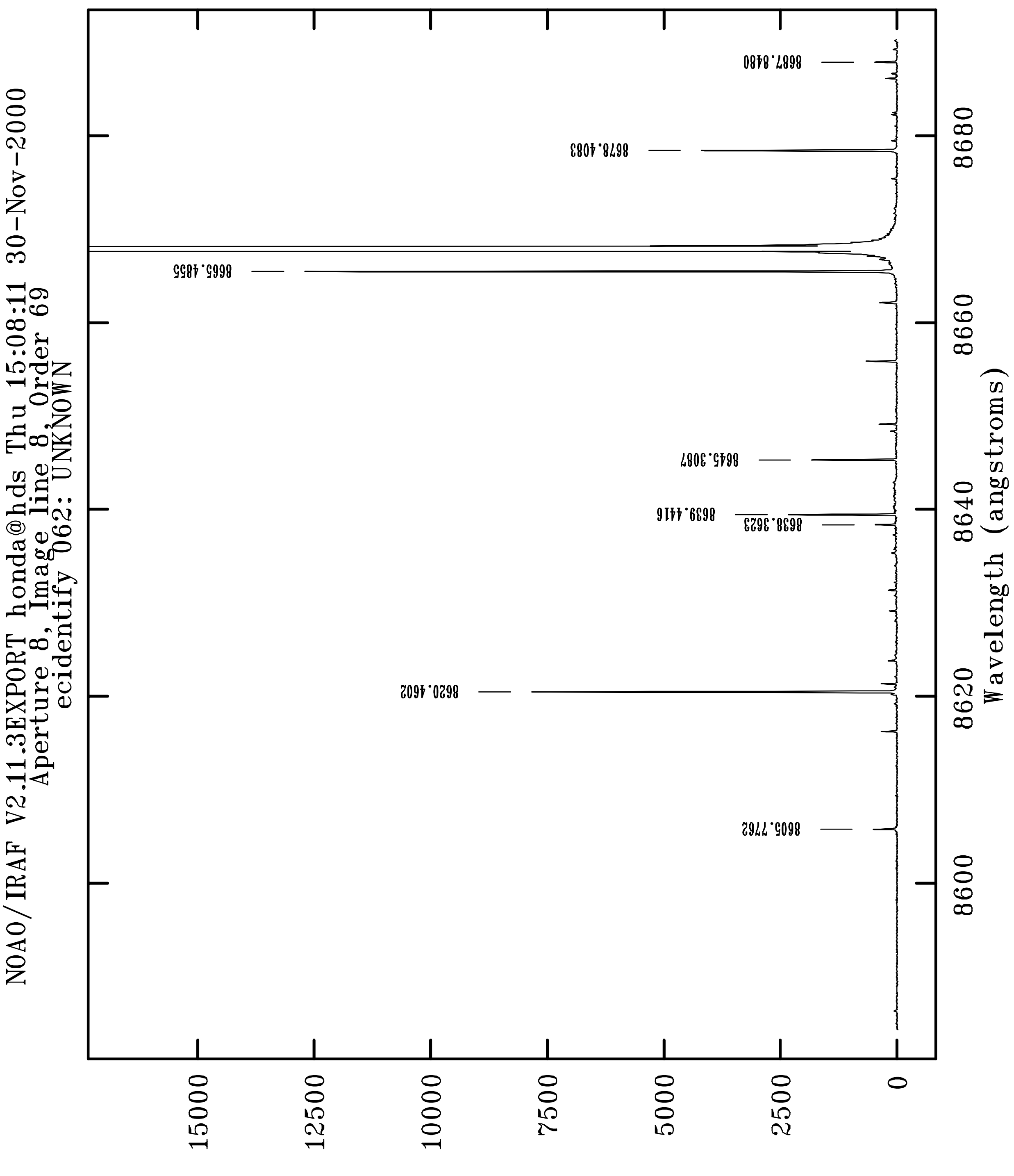

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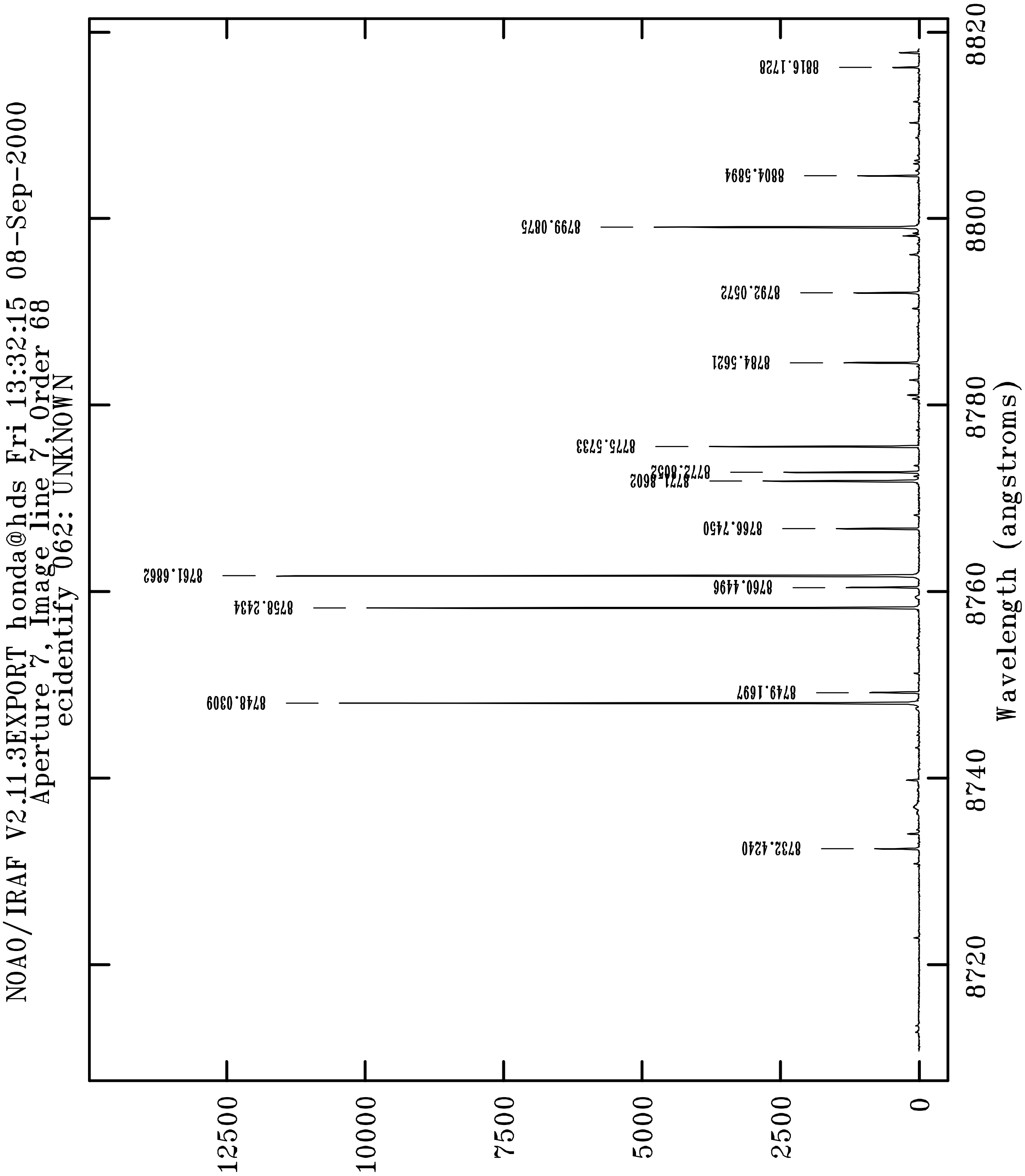

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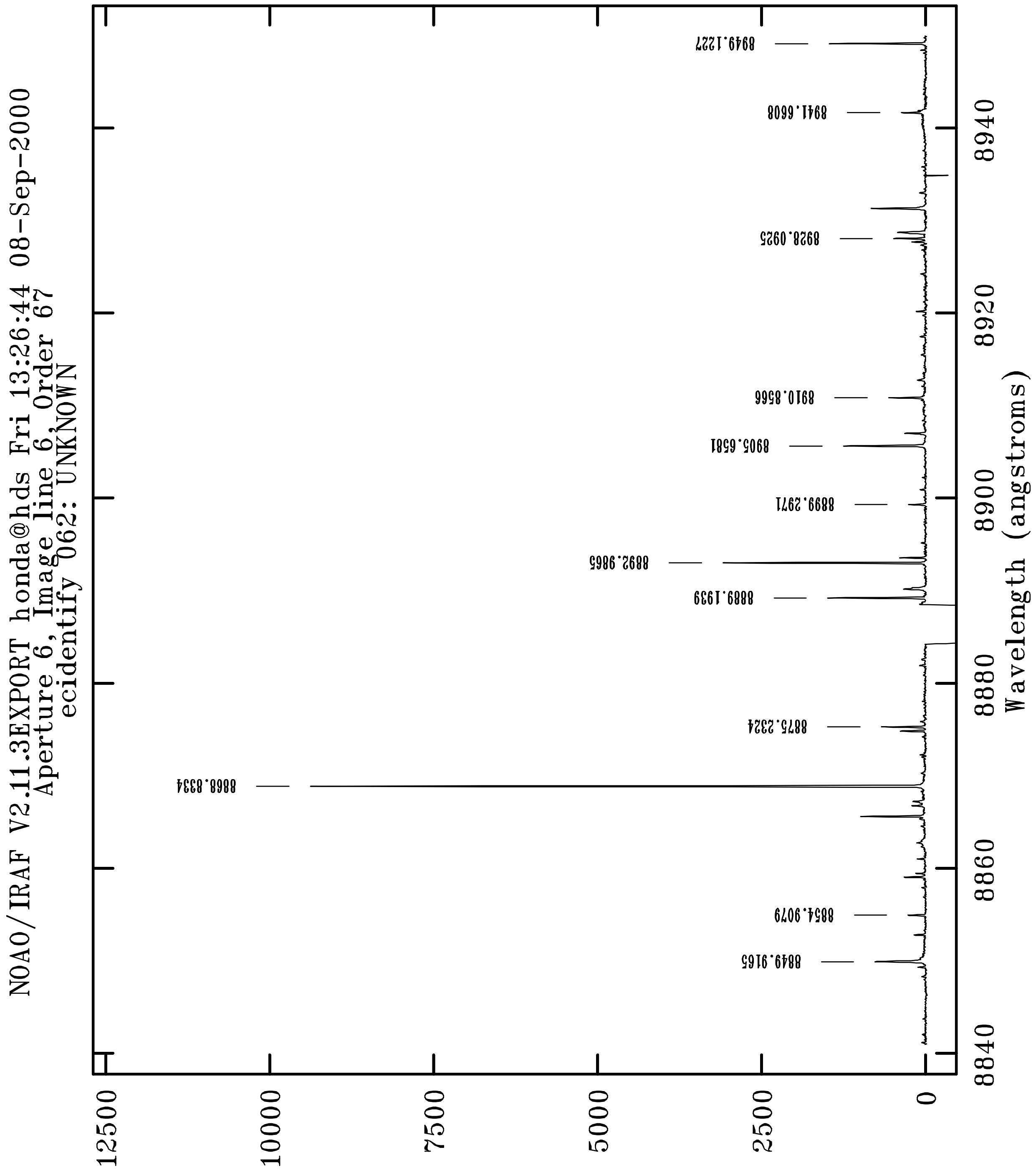

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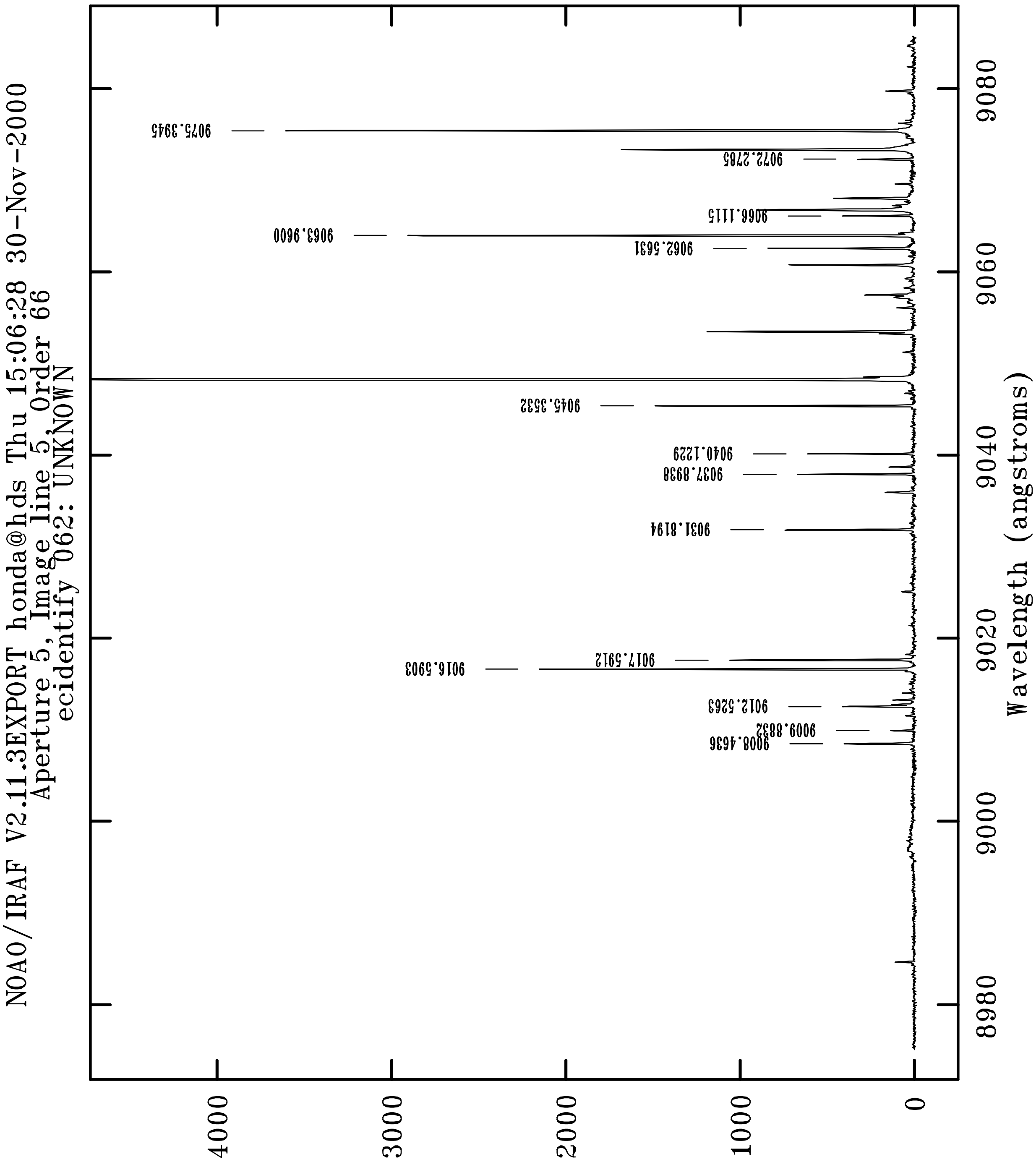

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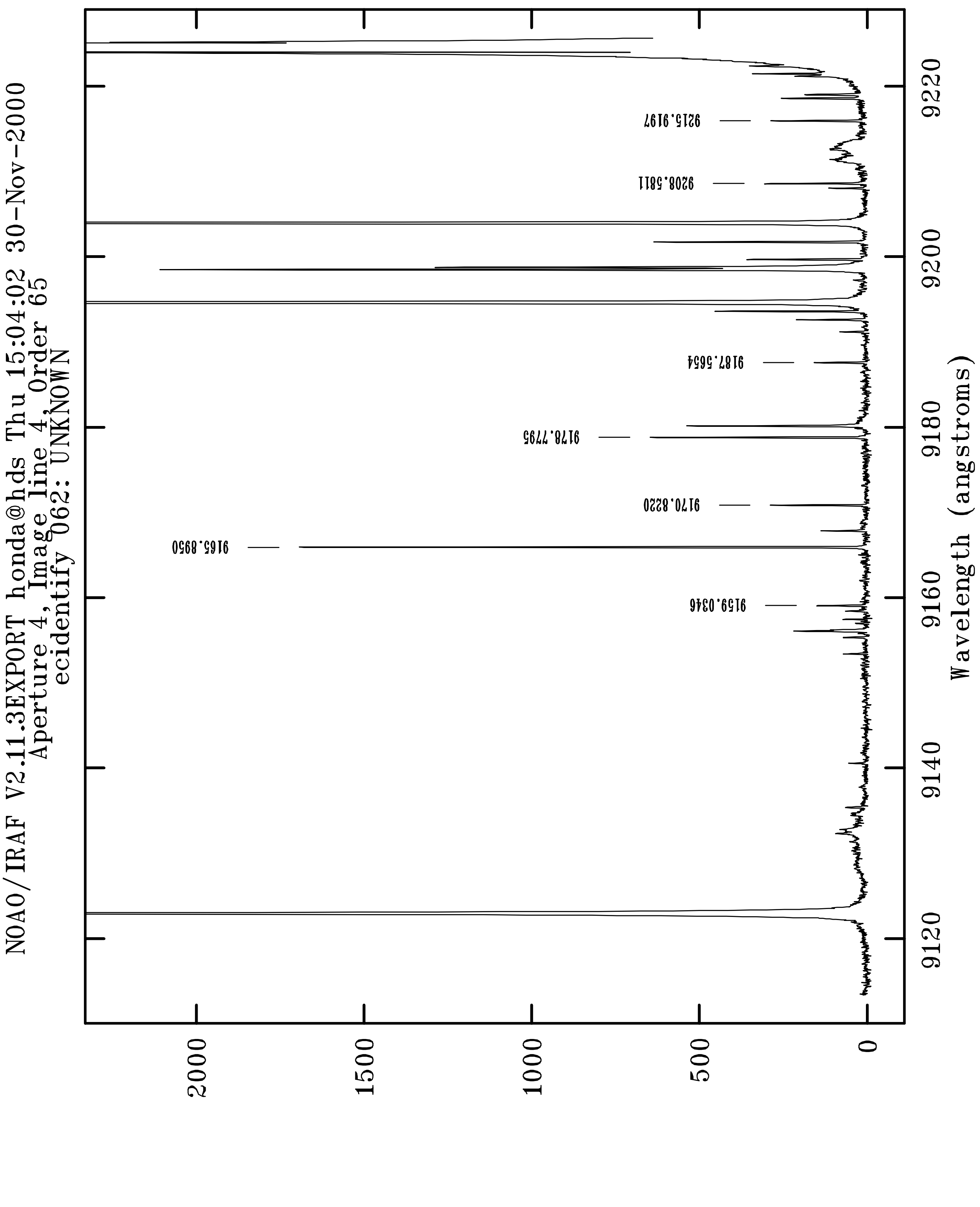

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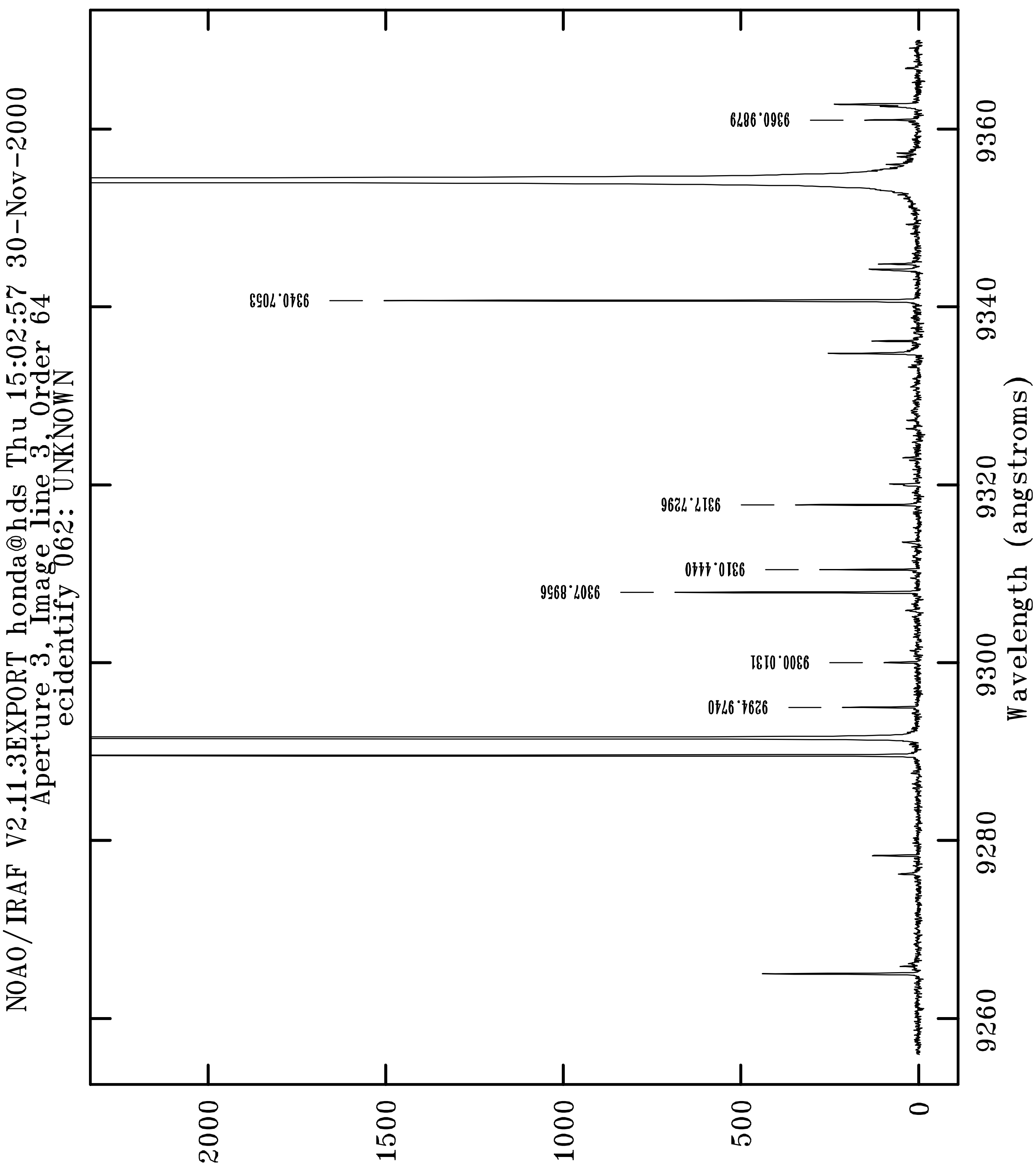

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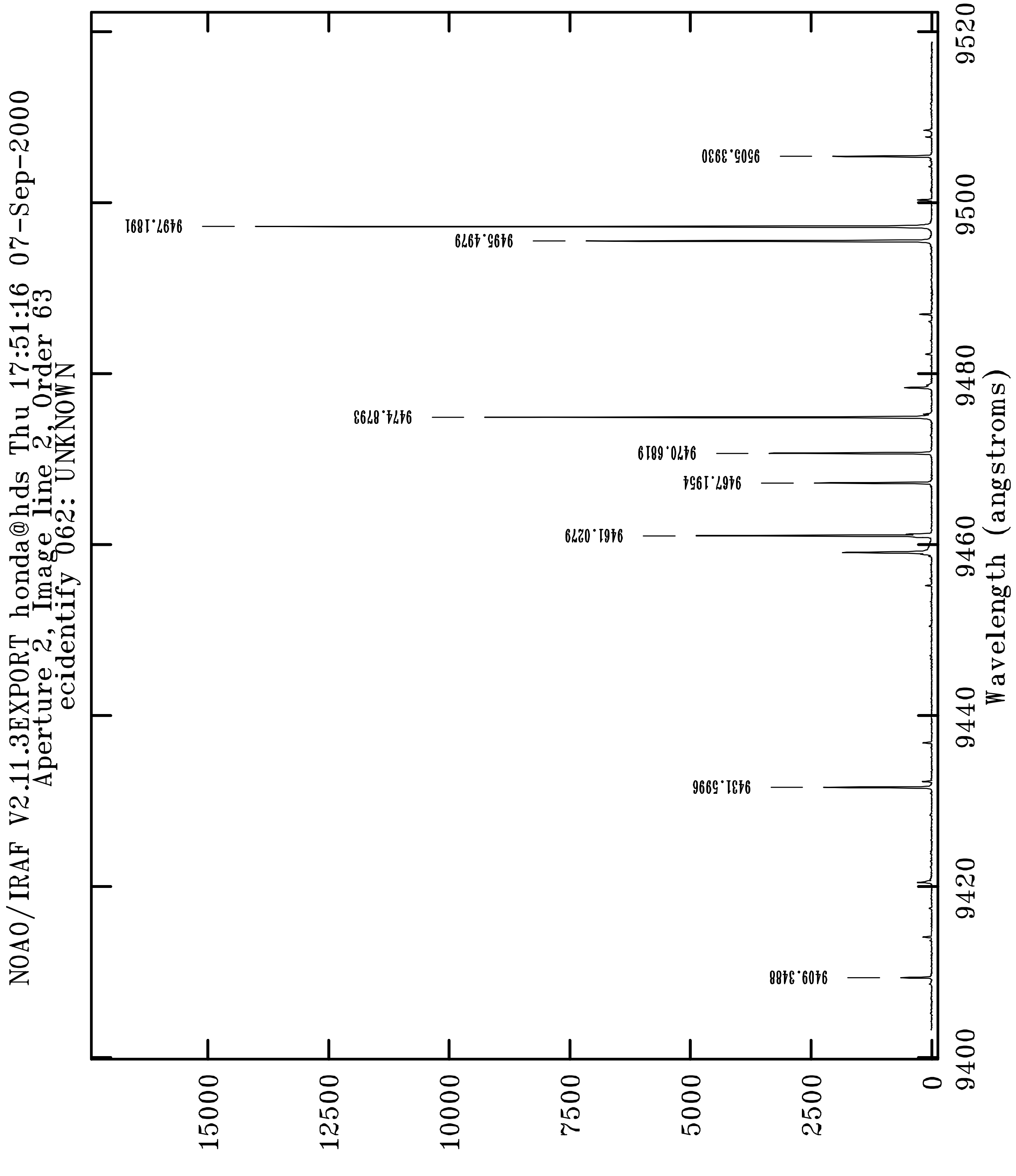

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