SPECTRAL MAPPING OF THE GALILEAN SATELLITES

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Fig. 1
HYDRATED SALTS
THE RADIOLYTIC SULFUR CYCLE

$\text{H}_2\text{SO}_4 \cdot n \text{H}_2\text{O}$

$(n = 6.5, 8)$

$G \approx 10^{-3}$

$G \approx 0.6 - 5$

$\text{SO}_2, S_x, S_x \text{O (?)}$
SULFUR ION IMPLANTATION

RADIOLYSIS

MASS WASTING

ACIDIC OR BRINY OCEAN

SO₂, H₂S

SALTS
Mg(OH)$_2$ in ice (77 K),
compared to NIMS dark line spectra

![Graph showing reflectance against wavelength for Mg(OH)$_2$ in ice at 77 K, compared to NIMS dark line spectra. The graph includes a line labeled 'Pure H$_2$O', a dotted line labeled '3% Mg(OH)$_2$', a dashed line labeled '5% Mg(OH)$_2$', and two dotted lines labeled 'E-14' and 'E-15'.]
Hydrated Materials on Ganymede's Trailing Side

- Hydrated material: 270 W, 0 N
- Icy material: 270 W, 45 S

Reflectance vs. Wavelength, μm
Altitude Range = 5 - 40 km

\[ p(0) = 7.5 \text{ pbar} \]
\[ T = 150 \text{ K} \]
Reflectance of Callisto Dark Material

![Graph showing the reflectance of Callisto Dark Material as a function of wavelength (µm)].

- The x-axis represents Wavelength (µm) ranging from 1 to 5.
- The y-axis represents Reflectance ranging from 0.00 to 0.12.
- The graph shows a series of data points connected by a line, indicating the reflectance values at different wavelengths.

The graph illustrates the reflectance properties of Callisto's dark material across the specified wavelength range.