

Clouds: When Physics meets Biology [cover version of Both Sides Now, Joni Mitchell]

Lyrics as of 5th line by Cindy E. Morris
(1st 4 lines are original lyrics of J. Mitchell)

Rows and flows of angel hair
And ice cream castles in the air
And feather canyons everywhere,
We've looked at clouds that way.

But are they blankets or albedo shields?
Or lakes of rain for crops in fields?
Impressions in the painter's dream
Meet a science theme.

We've looked at clouds that come & go
That surge or fade, or rain or snow
How can we hold them in our hands,
In hopes to one day understand?

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Particles and drops so small
That billow in the clouds so tall.
Nucleate and aggregate
Will make the great rains fall.

They say that microbes are at the core
When crystals splinter and thunder roars.
When physics meets biology
Imagination soars.

We've looked at clouds superficially
But now we want to really see
The complex web of processes
Do we really know clouds at all?

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Proteins in the dance of ice
Hold water bonds that they've enticed.
With such appeal, their fate is sealed
Encased in falling rime.

Leaf blades spring as drops rebound
And trickle deep into the ground.
To be absorbed and launched again
For yet another round.

Aerosols in masquerade
Take fleeting shapes in a white parade
Where Gibb's free energy is king
We really shall know clouds someday.

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30 Jan 2017, C.E. Morris*