OMMENTS

The <u>WxProj</u> data collection sheet remains on the roof top clipboard at all times!

Example Data Collection Sheet

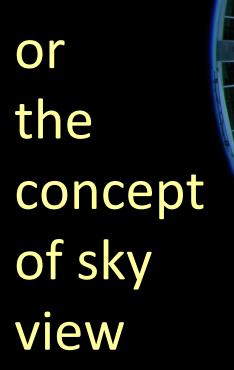
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This is how we normally see the sky

But we need to consider the entire sky



Sky View continued....

Sky view imagines the sky as a crushed dome (looks like a disk).

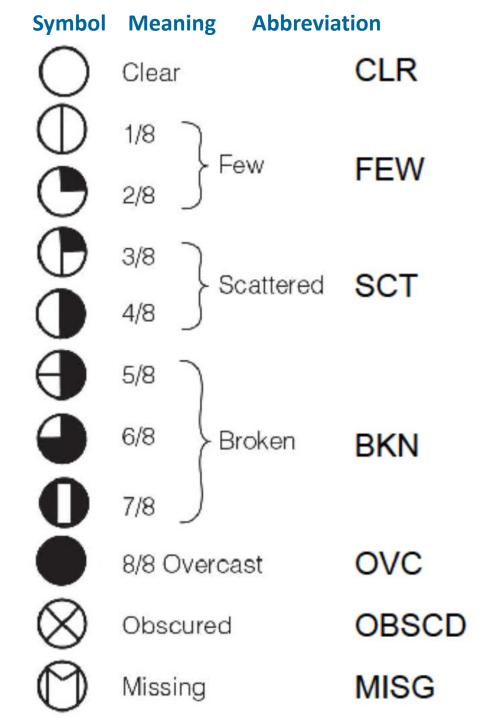
We use sky view to determine cloud amounts & sky condition.

Today we will focus on *sky condition*.



Sky Condition, Cloud Amounts ...

Sky Condition is determined by cloud coverage which is reported in eighths for standard weather station observations.



Sky Condition, Cloud Amounts...

The concept of sky view as applied to cloud amounts & determining sky condition.

> View the whole sky as a disk

Sky Condition, Cloud Amounts...

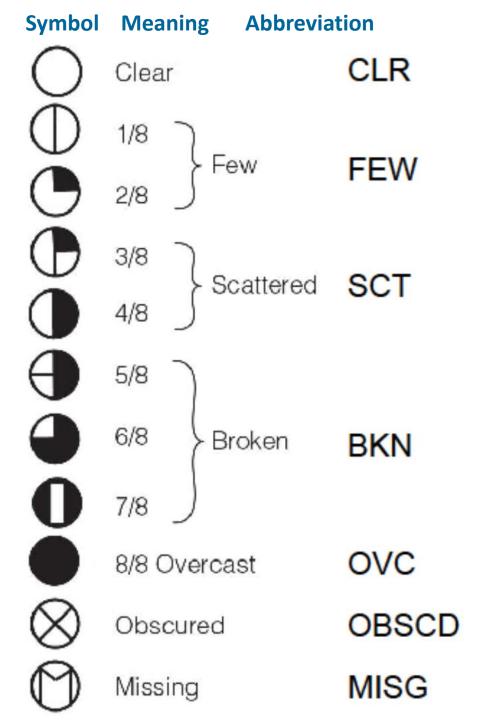
- divide the sky into quadrants (¼'s)
- 2. gather all the clouds together
- 3. divide the quadrants into 1/8's
- 4. estimate sky coverage /cloud amount
- 5. report sky condition using code terms in eighths of cloud

Answer: FEW

Sky Condition continued...

When do you use:

- Obscured (OBSCD)
- Missing (MISG)?



Example Data Collection Sheet

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The Four Major Cloud Groups & their Types



High Clouds

- Cirrus (*Ci*)^µ
- Cirrostratus (Cs)
- Cirrocumulus (Cc)

Middle Clouds

- Altostratus (As)
- Altocumulus (Ac)

Low Clouds

- Stratus (St)
- Stratocumulus (Sc)
- Nimbostratus (Ns)

Clouds with Vertical Development

•Cumulonimbus (*Cb*) (low to high cloud)

• Cumulus (*Cu*) (low to middle cloud)

Infer cloud heights from their types

Wx Proj - Clouds

The Four Major Cloud Groups & their Types

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- Cirrostratus (Cs)
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Middle Clouds

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Low Clouds

- Stratus (St)
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Cirrus /cirro: high, thin, wispy clouds of ice

Alto: middle height clouds **Clouds with Vertical Development**

• Cumulonimbus (Cb) (low to high cloud)

Cumulus / cumulo: clouds with vertical development due to turbulence - puffy

• Cumulus (*Cu*) (low to middle cloud)

Stratus /strato – layered clouds Nimbus /nimbo – rain clouds

Infer cloud heights from their types

Wx Proj - Clouds

Clouds Types...

Cloud names indicate meaning...

strato /stratus (flat /layered - stable) cumulo /cumulus

(fluffy /turbulent – convective)

nimbo / nimbus (currently precipitating or just about to start)

verses

High Clouds

- Cirrus (*Ci*)
- Cirrostratus (Cs)
- Cirrocumulus (Cc)

Middle Clouds

- Altostratus (As)
- Alto**cumulus (<u>A</u>c**)

Low Clouds

- Stratus (St)
- Stratocumulus (Sc)
- Nimbostratus (Ns)

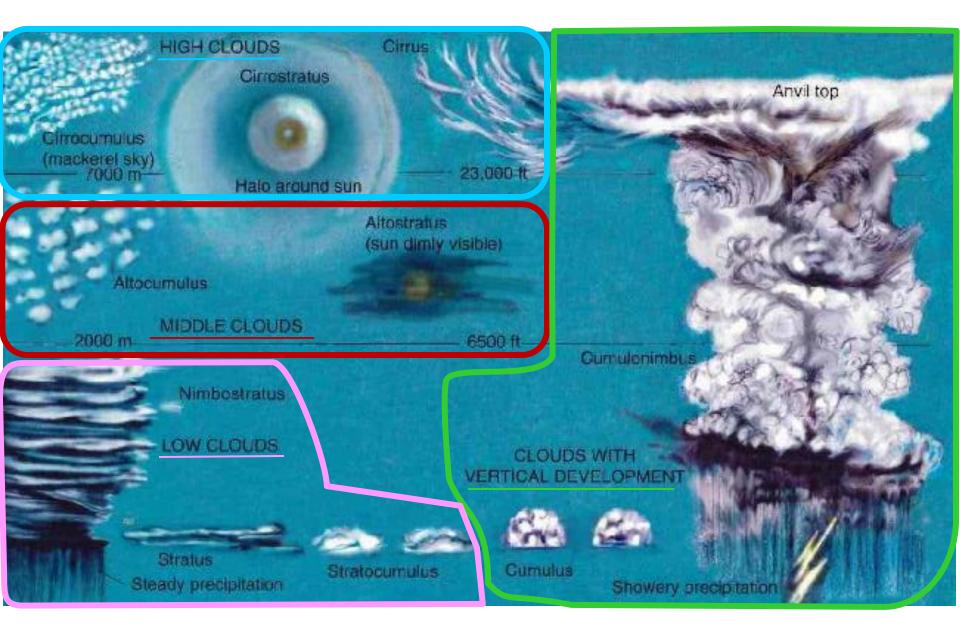
Clouds with Vertical Development

•Cumulonimbus (Cb) (low to high cloud)

• Cumulus (Cu) (low to middle cloud)

Clouds Types...

Cloud types and their heights



Cloud height ranges vary with latitude due to air temperature differences

Approximate Height of Cloud Bases above the Surface for Various Locations

Cloud Group	Tropical Regions	Mid-Latitudes	Polar Regions
High Clouds	6,000 to 18,000 meters	5,000 to 13,000 meters	3,000 to 8,000 meters
Ci, Cs, Cc	(20,000 to 60,000 ft)	(16,000 to 43,000 ft)	(10,000 to 26,000 ft)
Middle Clouds	2,000 to 8,000 m	2,000 to 7,000 m	2,000 to 4,000 m
As, Ac	(6,500 to 2,600 ft)	(6,500 to 23,000 ft)	(6,500 to 13,000 ft)
Low Clouds	Surface to 2,000 m	Surface to 2,000 m	Surface to 2,000 m
St, Sc, Ns	(0 to 6,500 ft)	(0 to 6,500 ft)	(0 to 6,500 ft)

Example Data Collection Sheet

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Reporting Sky & Clouds...

Sky Condition & Cloud Reporting:

- Report type & amount at each height
- Properly use abbreviations for types
- Report a double dash (--) for layers you can't see
- Sky condition must match total cloud amount (8^{ths} of cloud summed for all cloud heights)

Example data recording (observations below):

50% cirrocumulus (Mackerel sky) \rightarrow

1/8 stratocumulus, 2/8 altocumulus, 3/8 cirrus \rightarrow

6/8 stratus, 2/8 altostratus, ?cirro...? \rightarrow

