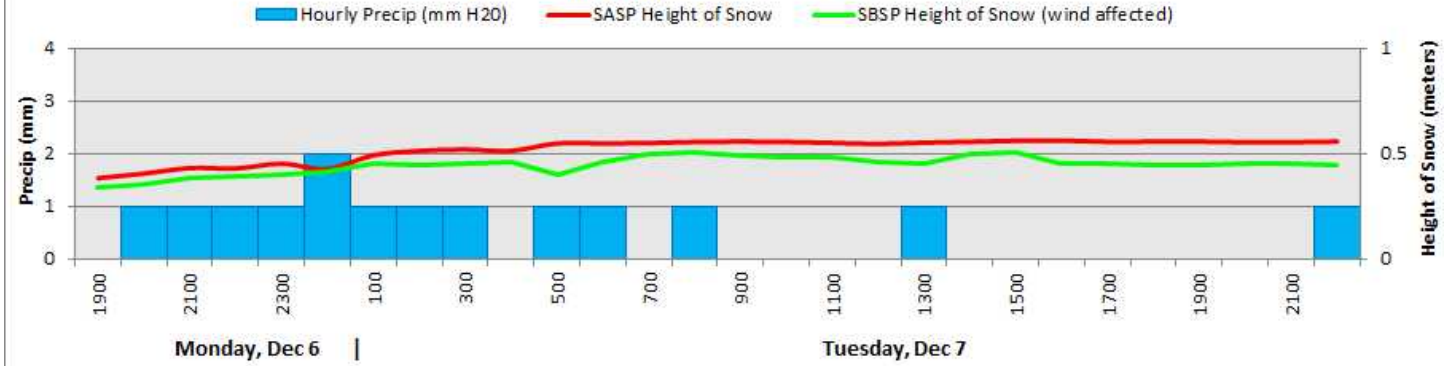


# 2021/2022 WINTER STORM #1

2021-2022 Winter Storm #1: Dec 6-7, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



## Storm Summary Statistics:

Storm precip began between 1900 – 2000 hrs MST Monday, December 6, 2021 (DOY 340)

Storm precipitation ended: 2200 hrs MST Tuesday, December 7, 2021 (DOY 341)

Storm duration = 28 hrs

Storm total water content at SASP = 14 mm (0.6 inches)

Mean precip intensity: 0.50 mm/hr

Max precip intensity: 2 mm/hour, on Dec 6 at 2400

Max gain in snow depth at SASP = 17.4 cm (6.9 inches)

Max gain in snow depth at SBSP (wind affected) = 10.4 cm (4.1 inches)

Peak gust at PTSP at: 31.7 mph at 1902 hrs MST Monday, December 6, 2021 (DOY 340)

## Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 28

No. of missing hours: 0

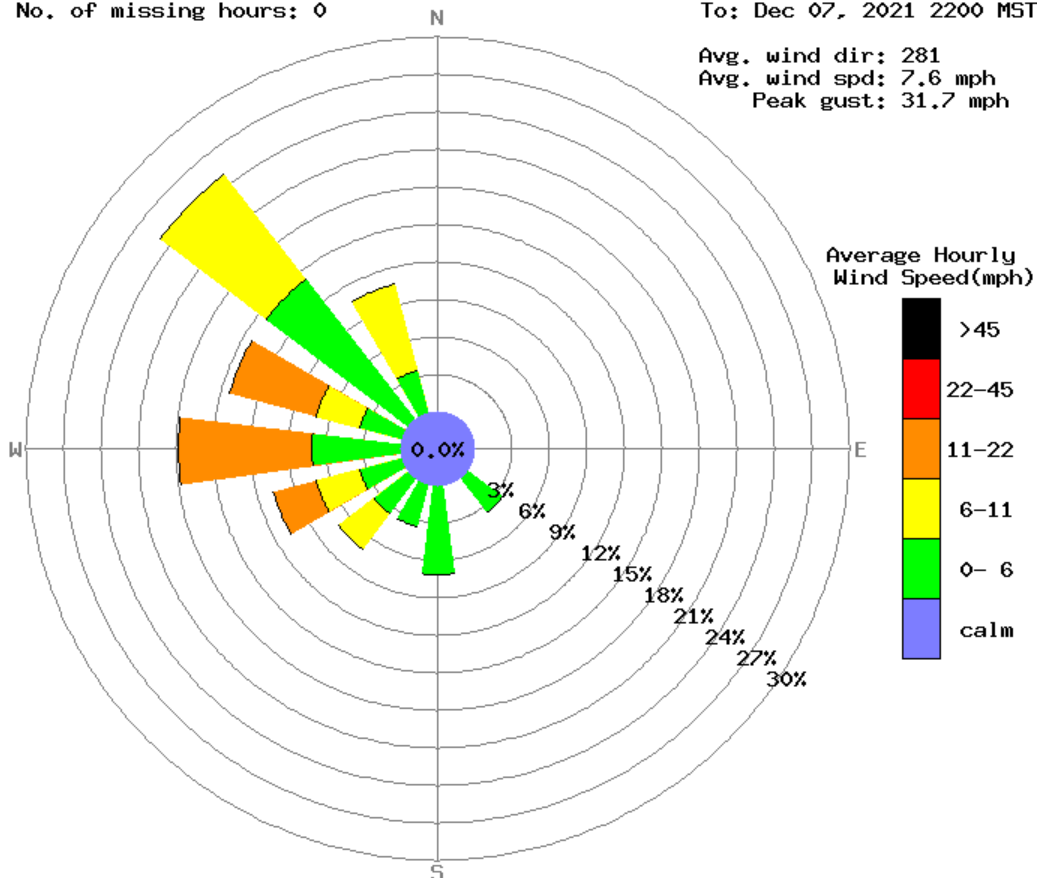
From hour ending: Dec 06, 2021 1900 MST

To: Dec 07, 2021 2200 MST

Avg. wind dir: 281

Avg. wind spd: 7.6 mph

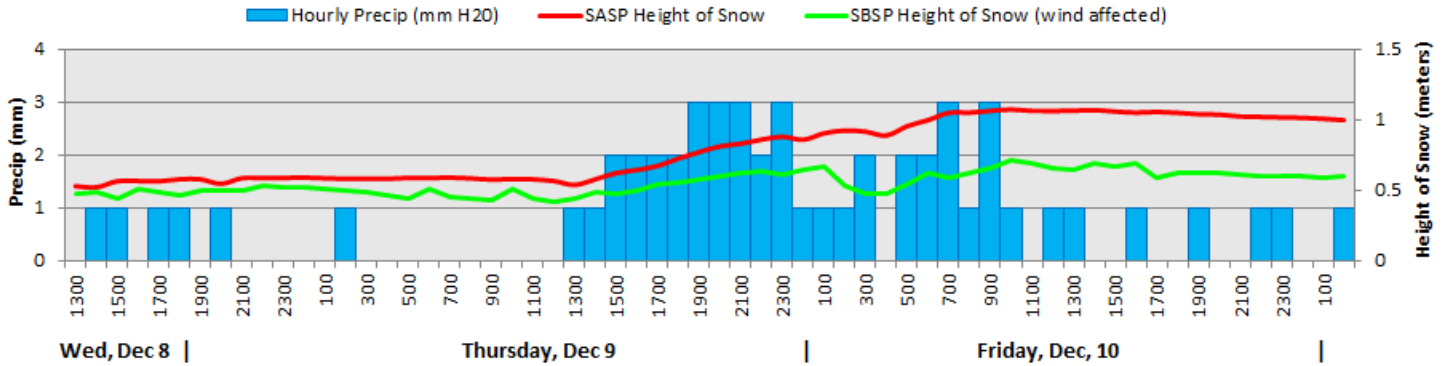
Peak gust: 31.7 mph



# 2021/2022 WINTER STORM #2

2021-2022 Winter Storm #2: Dec 8-11, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



**Storm Summary Statistics:**

Storm precip began between 1300 – 1400 hrs MST Wednesday, December 8, 2021 (DOY 342)

Storm precipitation ended: 0200 hrs MST Saturday, December 11, 2021 (DOY 345)

Storm duration = 62 hrs

Storm total water content at SASP = 54 mm (2.1 inches)

Mean precip intensity: 0.87 mm/hr

Max precip intensity: 3 mm/hour, on multiple occasions

Max gain in snow depth at SASP = 46.9 cm (18.5 inches)

Max gain in snow depth at SBSP (wind affected) = 12.3 cm (4.8 inches)

Peak gust at PTSP at: 61.2 mph at 1337 hrs MST Friday, December 10, 2021 (DOY 344)

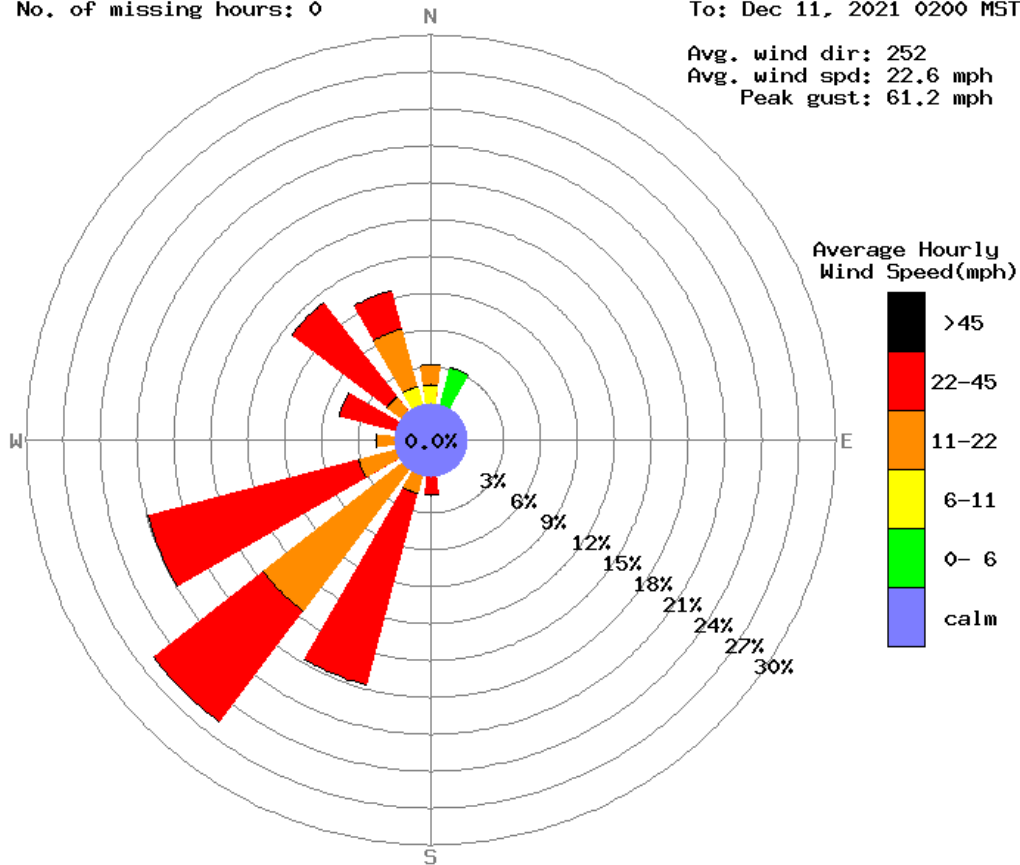
**Storm Wind Rose (Putney Study Plot data):**

CSAS Putney Study Plot 12,323 ft.

No. of hours: 62  
No. of missing hours: 0

From hour ending: Dec 08, 2021 1300 MST  
To: Dec 11, 2021 0200 MST

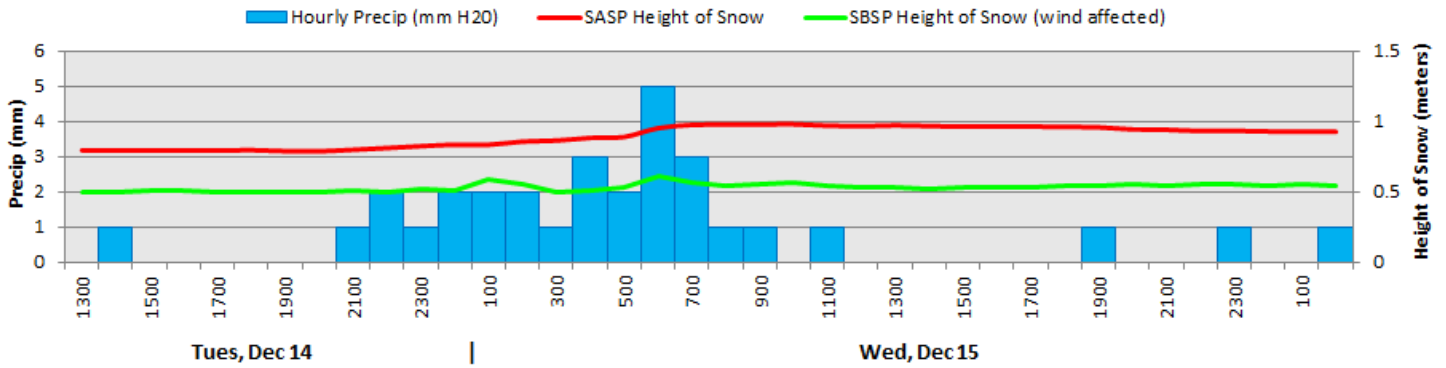
Avg. wind dir: 252  
Avg. wind spd: 22.6 mph  
Peak gust: 61.2 mph



# 2021/2022 WINTER STORM #3

2021-2022 Winter Storm #3: Dec 14-16, 2021

Senator Beck Basin Study Area, at Red Mountain Pass, CO



## Storm Summary Statistics:

Storm precip began between 1200 – 1300 hrs MST Tuesday, December 14, 2021 (DOY 348)

Storm precipitation ended: 0100 hrs MST Thursday, December 16, 2021 (DOY 350)

Storm duration = 38 hrs

Storm total water content at SASP = 31 mm (1.2 inches)

Mean precip intensity: 0.82 mm/hr

Max precip intensity: 5 mm/hour, on Wednesday, December 15, 2021 at 0500 hrs MST

Max gain in snow depth at SASP = 13.1 cm (5.2 inches)

Max gain in snow depth at SBSP (wind affected) = 5.3 cm (2.1 inches)

Peak gust at PTSP at: 106.5 mph at 0349 hrs MST Thursday, December 15, 2021 (DOY 349)

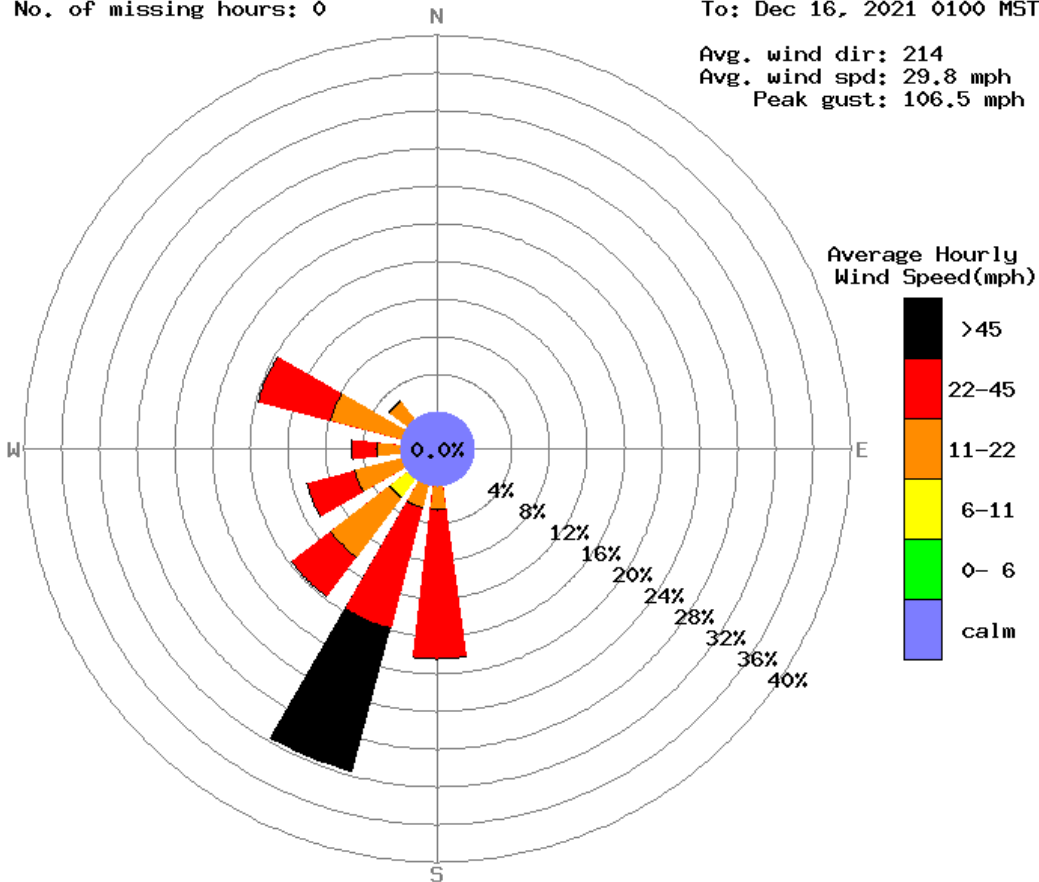
## Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

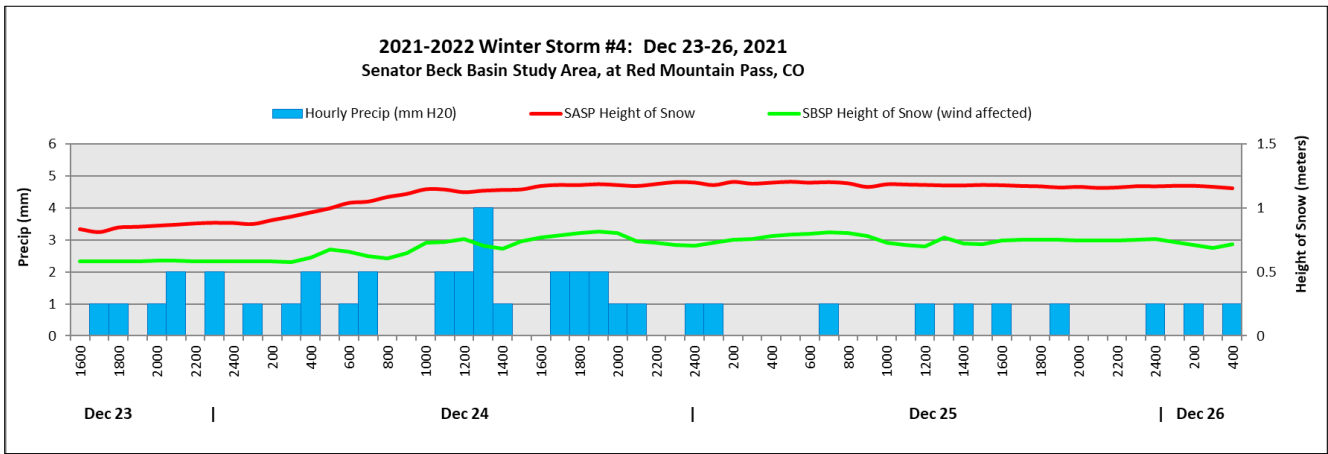
No. of hours: 38  
No. of missing hours: 0

From hour ending: Dec 14, 2021 1200 MST  
To: Dec 16, 2021 0100 MST

Avg. wind dir: 214  
Avg. wind spd: 29.8 mph  
Peak gust: 106.5 mph



# 2021/2022 WINTER STORM #4



## Storm Summary Statistics:

**Storm precip began** between 1600-1700 hrs MST December 23, 2021 (DOY 357)

**Storm precipitation ended:** 0400 hrs MST December 26, 2021 (DOY 360)

**Storm duration** = 61 hrs

**Storm total water content at SASP** = 41 mm (1.6 inches)

**Mean precip intensity:** 0.67 mm/hr

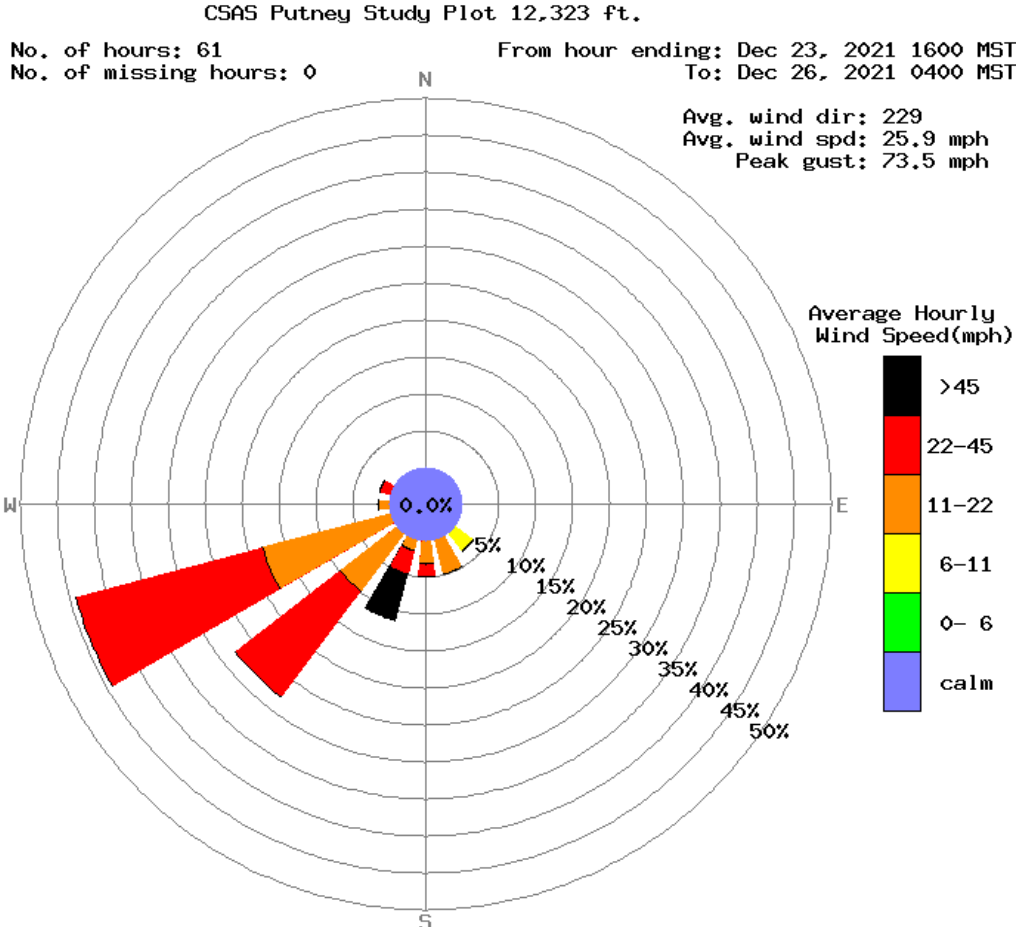
**Max precip intensity:** 4 mm/hour, on December 24, 2021 at 1300 hrs MST

**Max gain in snow depth at SASP** = 32.1 cm (12.6 inches)

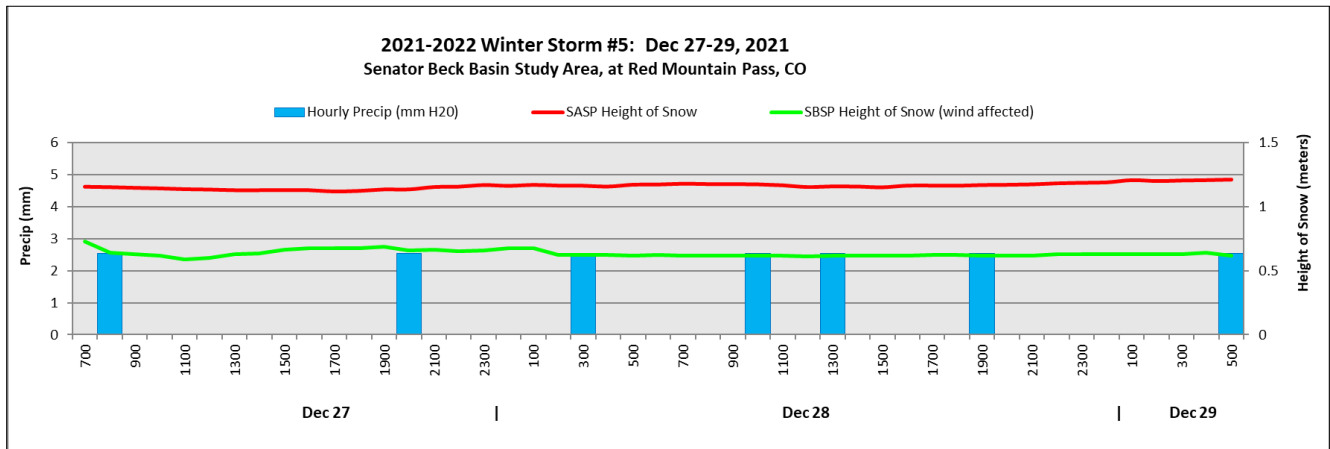
**Max gain in snow depth at SBSP** (wind affected) = 13.9 cm (5.5 inches)

**Peak gust at PTSP at:** 73.5 mph at 0144 hrs MST December 26, 2021 (DOY 360)

## Storm Wind Rose (Putney Study Plot data):



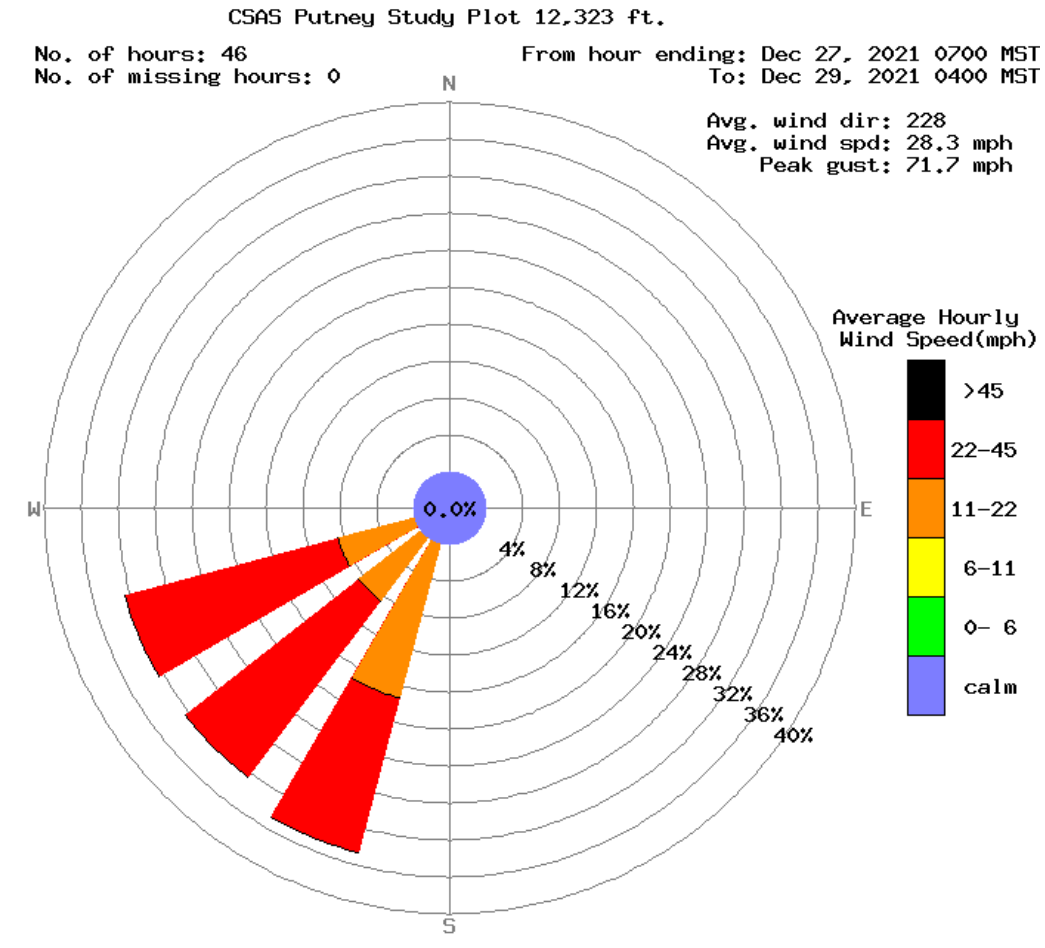
# 2021/2022 WINTER STORM #5



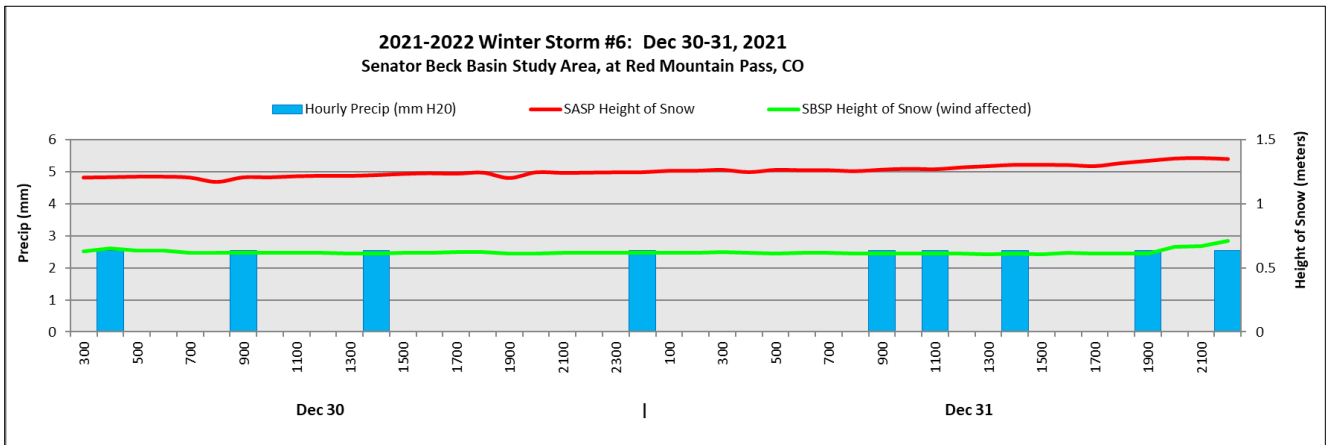
**Storm Summary Statistics:**

Storm precip began between 0700-0800 hrs MST December 27, 2021 (DOY 361)  
 Storm precipitation ended: 0500 hrs MST December 29, 2021 (DOY 363)  
 Storm duration = 46 hrs  
 Storm total water content at SASP = 15 mm (0.6 inches)  
 Mean precip intensity: 0.33 mm/hr  
 Max precip intensity: 2.54 mm/hour, multiple  
 Max gain in snow depth at SASP = 5.4 (2.1 inches)  
 Max gain in snow depth at SBSP (wind affected) = -2.2 (-0.9 inches)  
 Peak gust at PTSP at: 71.7 mph at 0223 hrs MST December 28, 2021 (DOY 361)

**Storm Wind Rose (Putney Study Plot data):**



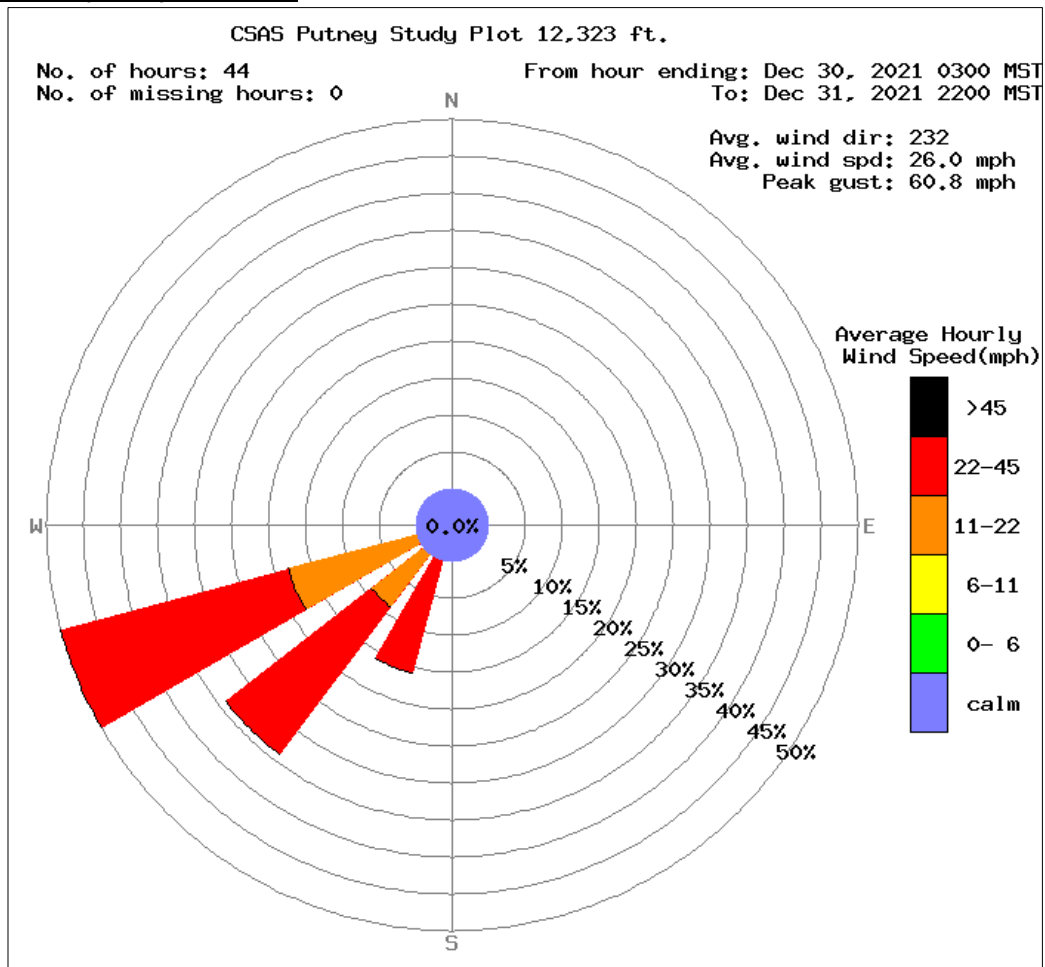
# 2021/2022 WINTER STORM #6



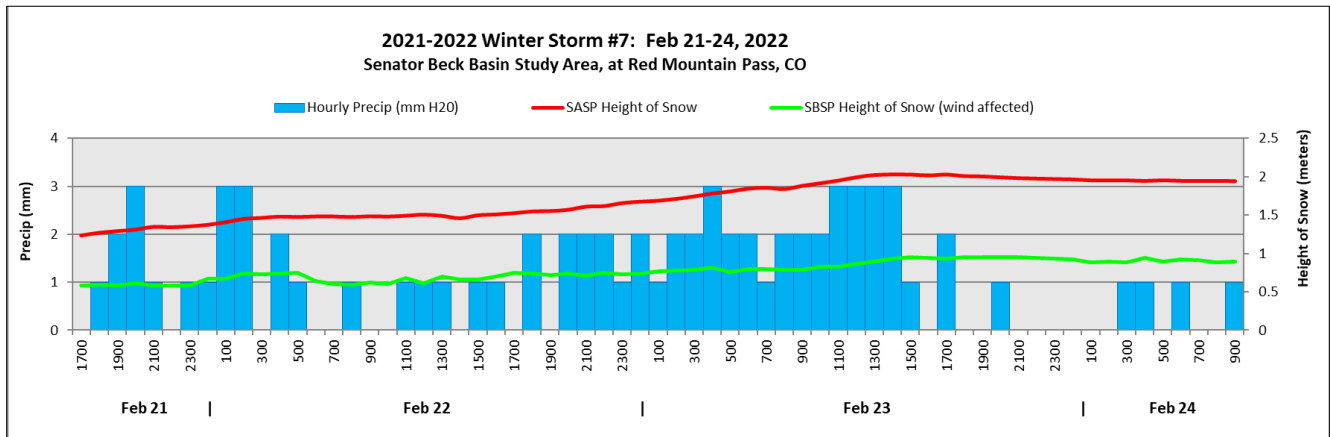
**Storm Summary Statistics:**

- Storm precip began between 0300-0400 hrs MST December 30, 2021 (DOY 364)
- Storm precipitation ended: 2200 hrs MST December 31, 2021 (DOY 365)
- Storm duration = 44 hrs
- Storm total water content at SASP = 21 mm (0.8 inches)
- Mean precip intensity: 0.47 mm/hr
- Max precip intensity: 2.54 mm/hour, multiple
- Max gain in snow depth at SASP = 14.2 (5.6 inches)
- Max gain in snow depth at SBSP (wind affected) = 8.6 (3.4 inches)
- Peak gust at PTSP at: 60.9 mph at 1511 hrs MST December 28, 2021 (DOY 365)

**Storm Wind Rose (Putney Study Plot data):**



# 2021/2022 WINTER STORM #7



## Storm Summary Statistics:

**Storm precip began** between 1700-1800 hrs MST February 21, 2022 (DOY 52)

**Storm precipitation ended:** 0900 hrs MST February 24, 2022 (DOY 55)

**Storm duration** = 65 hours

**Storm total water content at SASP** = 74 mm (2.9 inches)

**Mean precip intensity:** 1.14 mm/hr

**Max precip intensity:** 3 mm/hour, multiple

**Max gain in snow depth at SASP** = 71.1 (28 inches)

**Max gain in snow depth at SBSP** (wind affected) = 31.6 (12.4 inches)

**Peak gust at PTSP at:** 71.5 mph at 0526 hrs MST February 23, 2022 (DOY 54)

## Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 65

No. of missing hours: 0

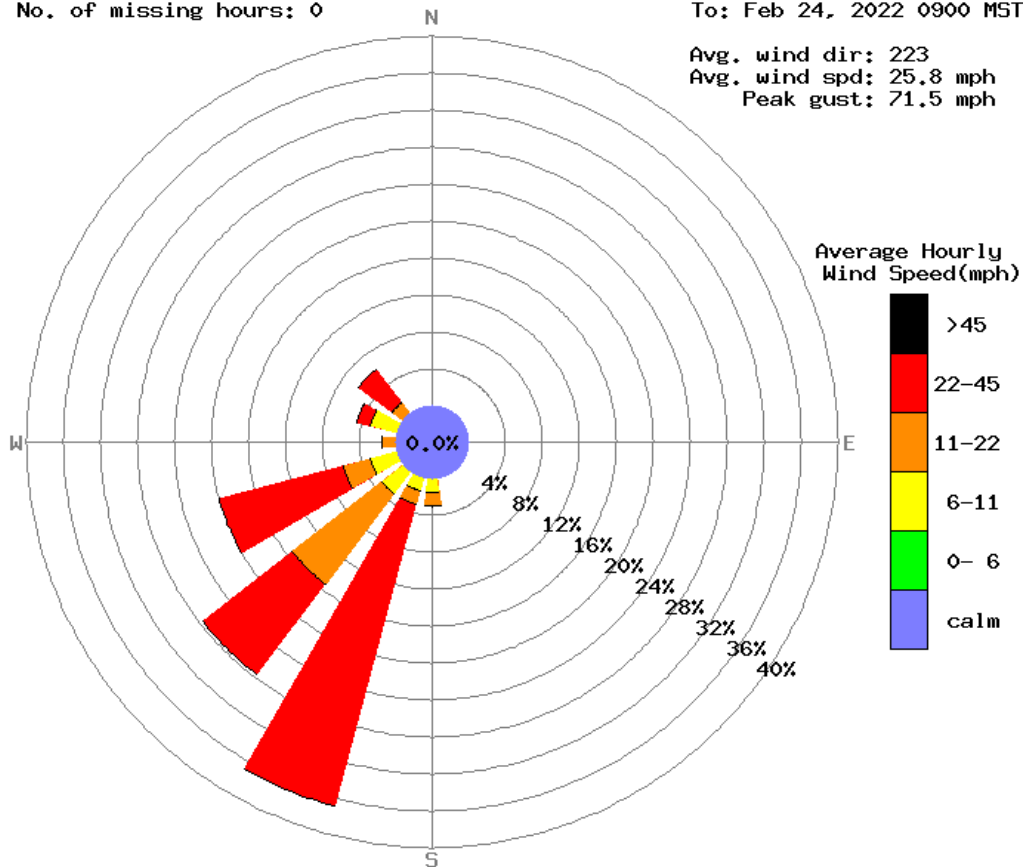
From hour ending: Feb 21, 2022 1700 MST

To: Feb 24, 2022 0900 MST

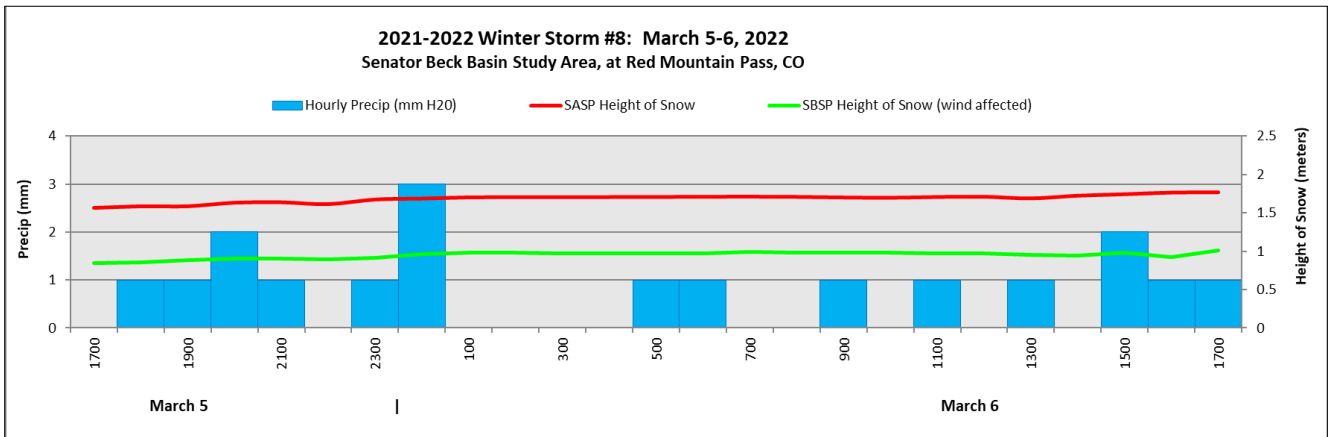
Avg. wind dir: 223

Avg. wind spd: 25.8 mph

Peak gust: 71.5 mph



# 2021/2022 WINTER STORM #8



**Storm Summary Statistics:**

Storm precip began between 1700-1800 hrs MST March 5, 2022 (DOY 64)

Storm precipitation ended: 1700 hrs MST March 6, 2022 (DOY 65)

Storm duration = 25 hours

Storm total water content at SASP = 18 mm (0.7 inches)

Mean precip intensity: 0.72 mm/hr

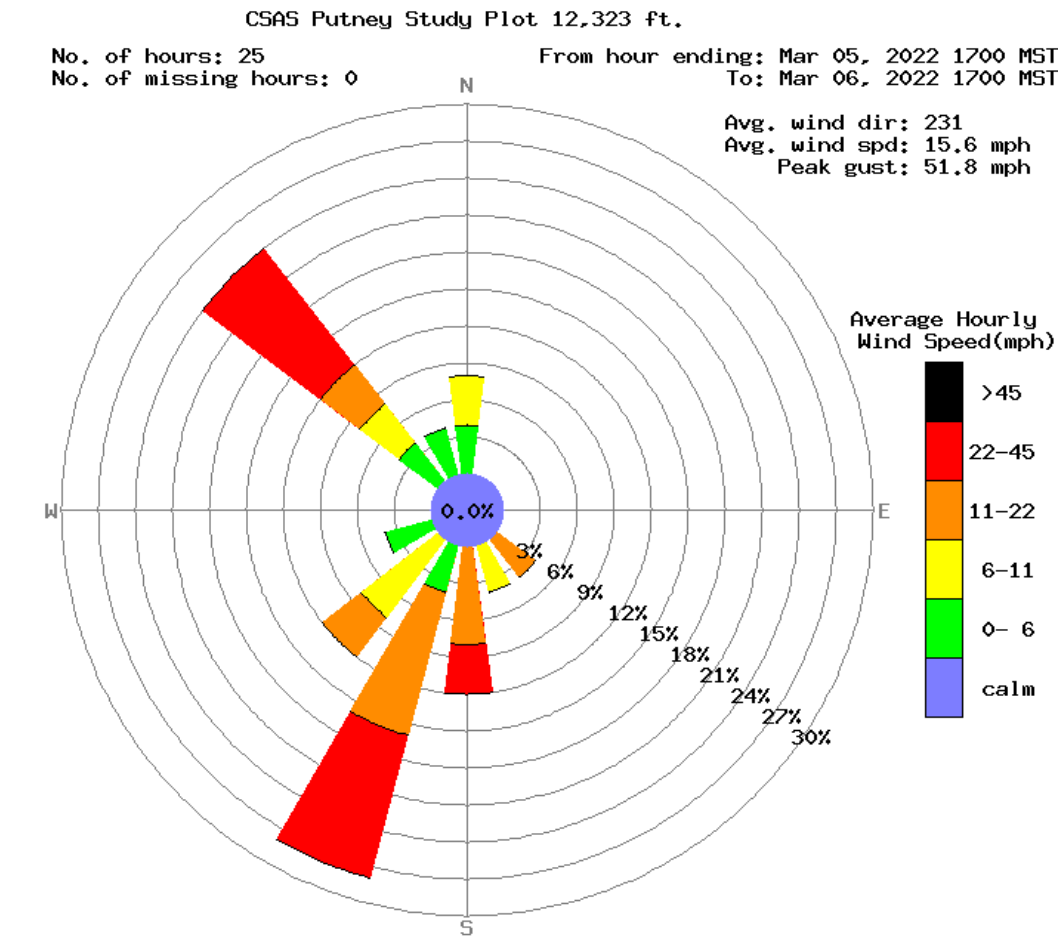
Max precip intensity: 3 mm/hour, March 6 at 2400 (DOY 65)

Max gain in snow depth at SASP = 20.6 cm (8.1 inches)

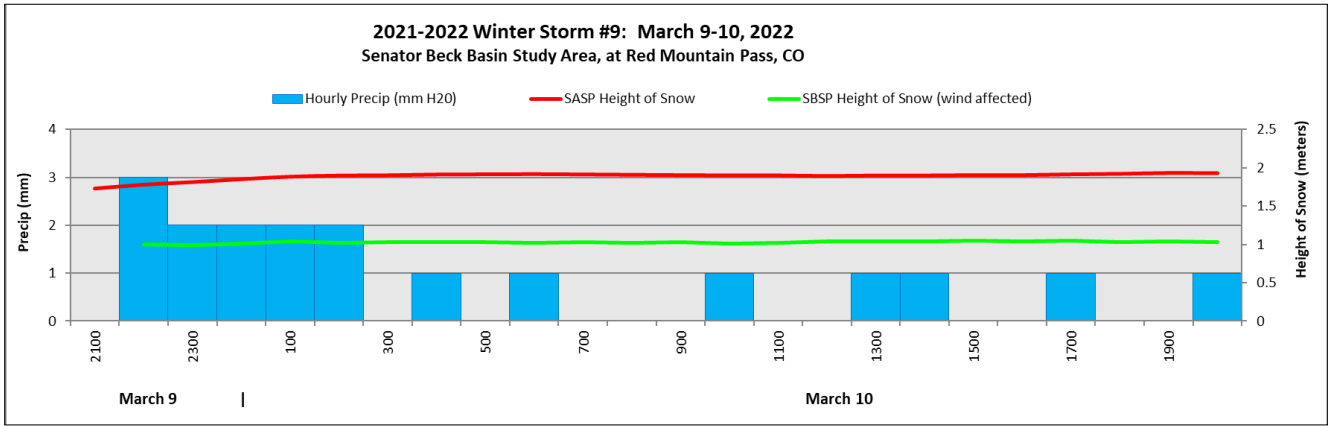
Max gain in snow depth at SBSP (wind affected) = 16.8 cm (6.6 inches)

Peak gust at PTSP at: 51.8 mph at 2359 hrs MST March 5, 2022 (DOY 64)

**Storm Wind Rose (Putney Study Plot data):**



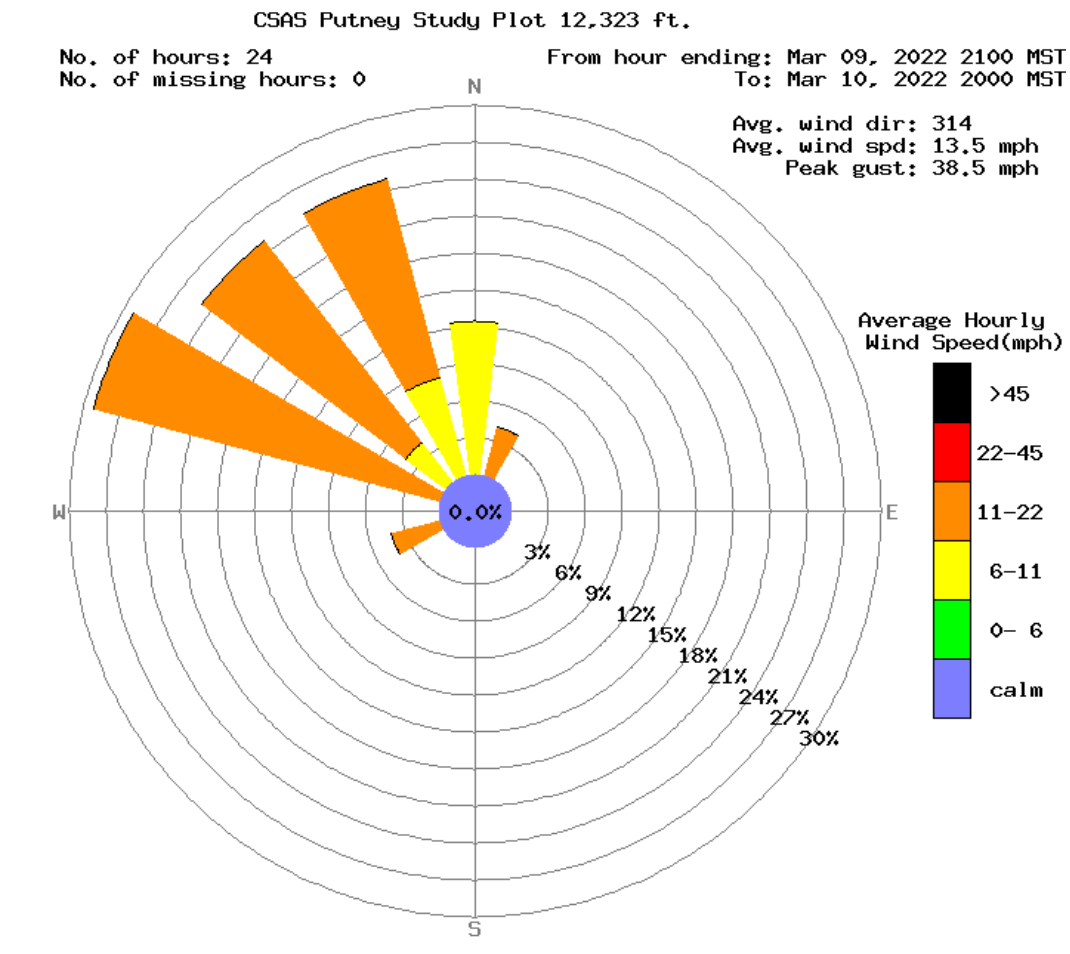
# 2021/2022 WINTER STORM #9



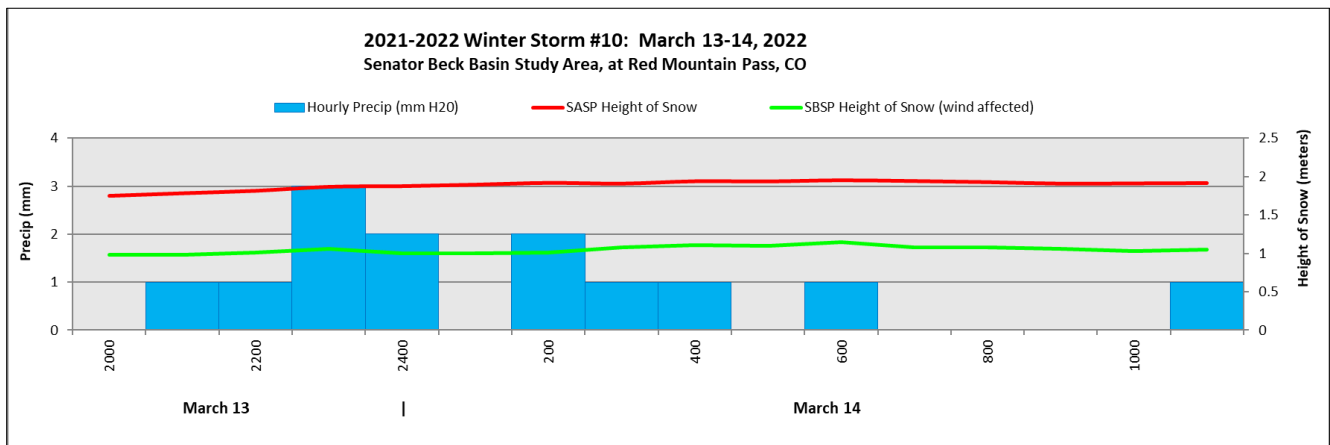
**Storm Summary Statistics:**

- Storm precip began between 2100-2200 hrs MST March 9, 2022 (DOY 68)
- Storm precipitation ended: 2000 hrs MST March 10, 2022 (DOY 69)
- Storm duration = 24 hours
- Storm total water content at SASP = 18 mm (0.7 inches)
- Mean precip intensity: 0.75 mm/hr
- Max precip intensity: 3 mm/hour, March 6 at 2400 (DOY 65)
- Max gain in snow depth at SASP = 20 cm (7.9 inches)
- Max gain in snow depth at SBSP (wind affected) = 3.7 cm (1.5 inches)
- Peak gust at PTSP at: 38.5 mph at 2326 hrs MST March 9, 2022 (DOY 68)

**Storm Wind Rose (Putney Study Plot data):**



# 2021/2022 WINTER STORM #10



## Storm Summary Statistics:

Storm precip began between 2000-2100 hrs MST March 13, 2022 (DOY 72)

Storm precipitation ended: 1100 hrs MST March 14, 2022 (DOY 73)

Storm duration = 16 hours

Storm total water content at SASP = 13 mm (0.5 inches)

Mean precip intensity: 0.81 mm/hr

Max precip intensity: 3 mm/hour, March 14 at 2300 (DOY 73)

Max gain in snow depth at SASP = 17.2 cm (6.8 inches)

Max gain in snow depth at SBSP (wind affected) = 6.6 cm (2.6 inches)

Peak gust at PTSP at: 42.6 mph at 0149 hrs MST March 13, 2022 (DOY 73)

## Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 16

No. of missing hours: 0

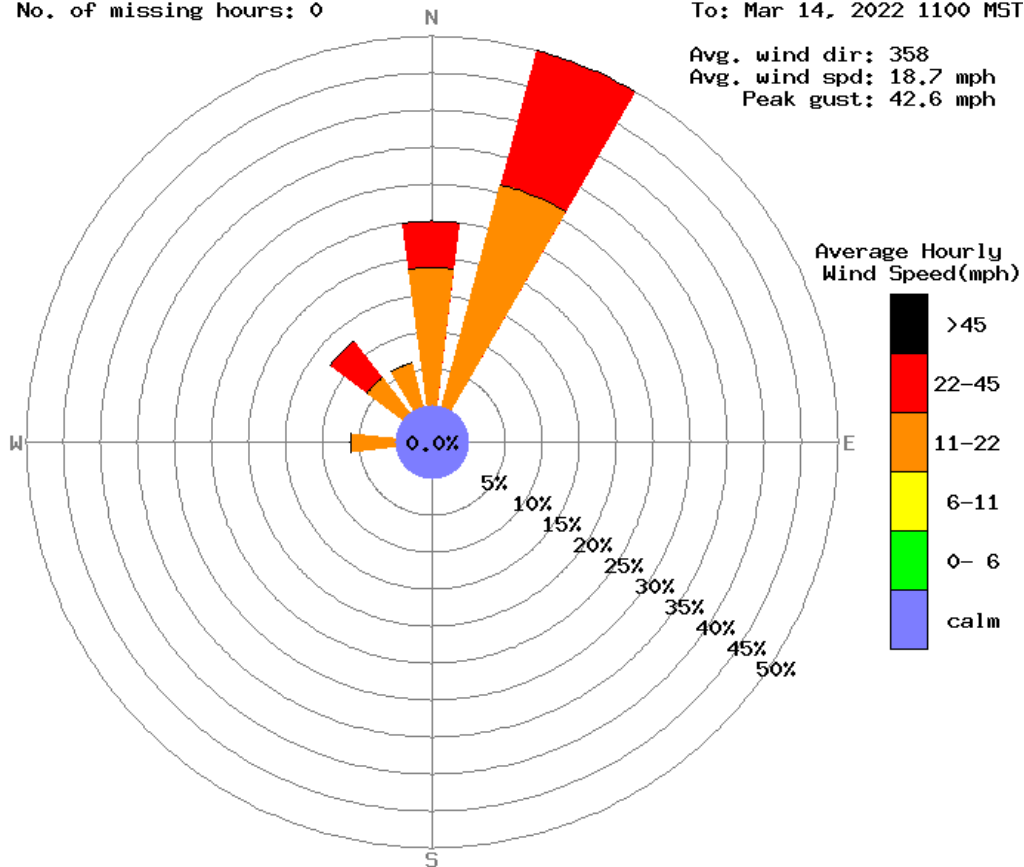
From hour ending: Mar 13, 2022 2000 MST

To: Mar 14, 2022 1100 MST

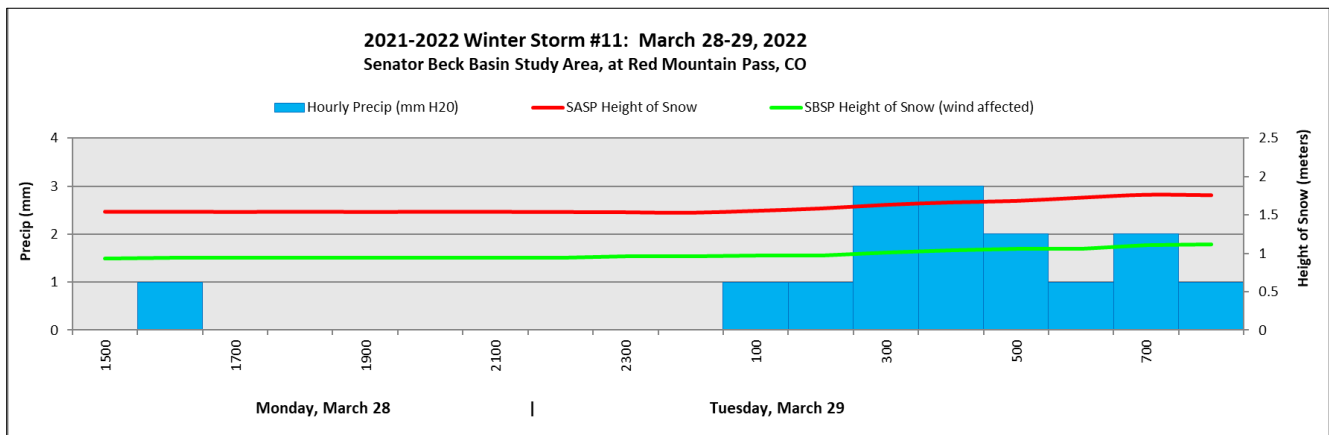
Avg. wind dir: 358

Avg. wind spd: 18.7 mph

Peak gust: 42.6 mph



# 2021/2022 WINTER STORM #11



## Storm Summary Statistics:

**Storm precip began** between 1500-1600 hrs MST March 28, 2022 (DOY 87)

**Storm precipitation ended:** 0800 hrs MST March 29, 2022 (DOY 88)

**Storm duration** = 18 hours

**Storm total water content at SASP** = 15 mm (0.6 inches)

**Mean precip intensity:** 0.83 mm/hr

**Max precip intensity:** 3 mm/hour, March 29 from 0300-0400 hours

**Max gain in snow depth at SASP** = 21.1 cm (8.3 inches)

**Max gain in snow depth at SBSP** (wind affected) = 17.6 cm (6.9 inches)

**Peak gust at PTSP at:** 53.4 mph at 1925 hrs MST March 29, 2022 (DOY 88)

## Storm Wind Rose (Putney Study Plot data):

CSAS Putney Study Plot 12,323 ft.

No. of hours: 18

No. of missing hours: 0

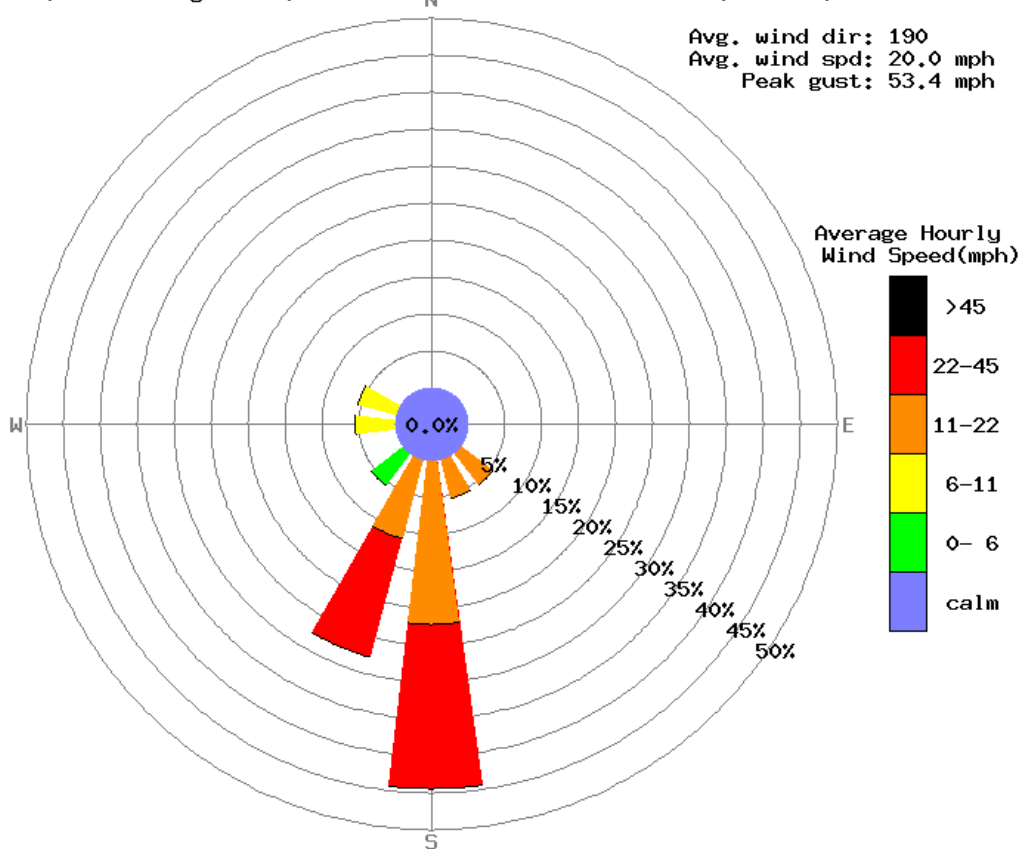
From hour ending: Mar 28, 2022 1500 MST

To: Mar 29, 2022 0800 MST

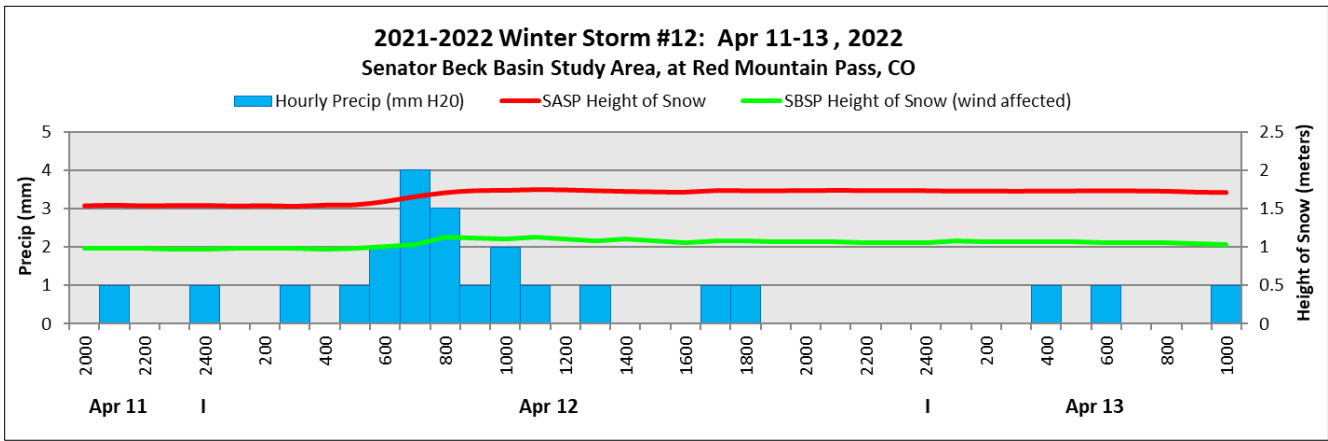
Avg. wind dir: 190

Avg. wind spd: 20.0 mph

Peak gust: 53.4 mph



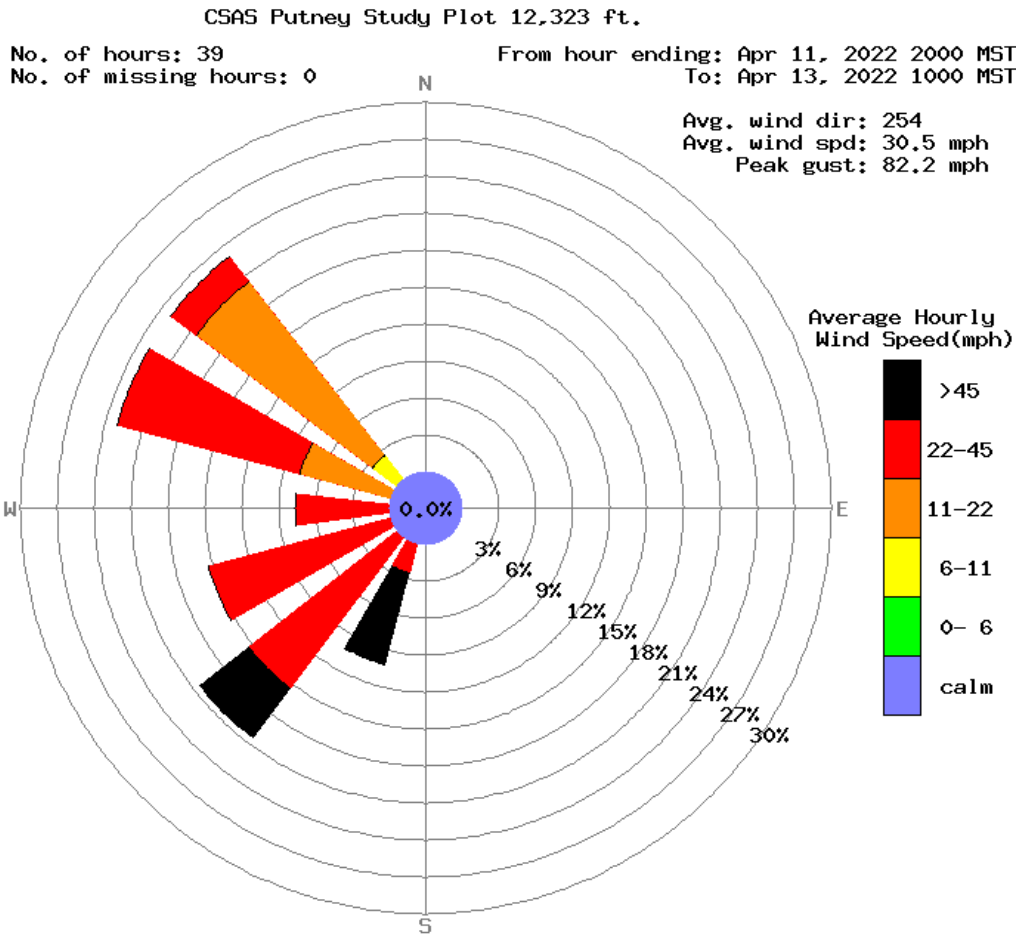
# 2021/2022 WINTER STORM #12



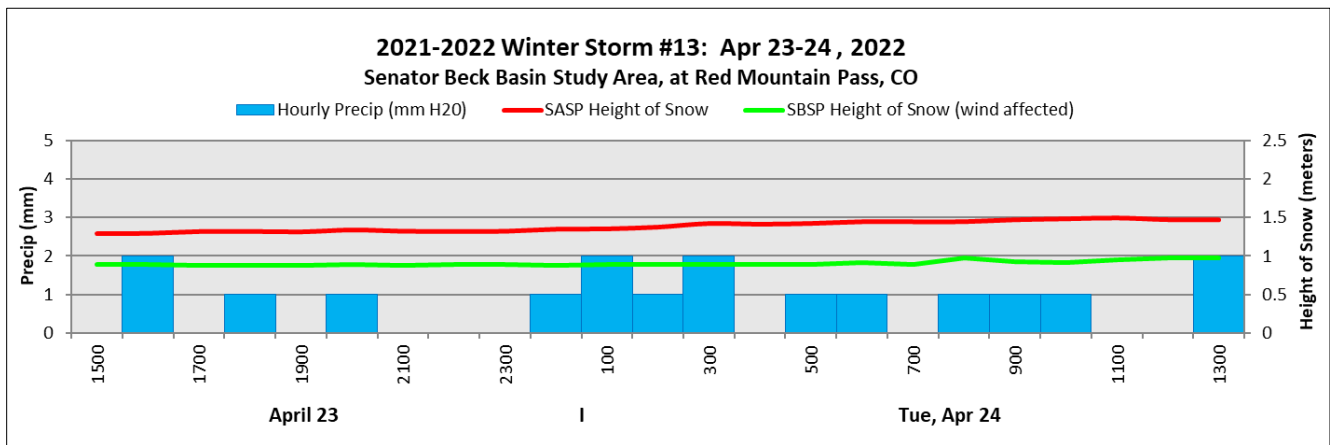
**Storm Summary Statistics:**

- Storm precip began** between 2000-2100 hrs MST April 11, 2022 (DOY 101)
- Storm precipitation ended:** 1000 hrs MST April 13, 2022 (DOY 103)
- Storm duration** = 39 hours
- Storm total water content at SASP** = 23 mm (0.9 inches)
- Mean precip intensity:** 0.59 mm/hr
- Max precip intensity:** 4 mm/hour, April 12 from 0700 hours
- Max gain in snow depth at SASP** = 16.6 cm (6.5 inches)
- Max gain in snow depth at SBSP** (wind affected) = 4.7 cm (1.9 inches)
- Peak gust at PTSP at:** 82.2 mph at 2053 hrs MST April 11, 2022 (DOY 101)

**Storm Wind Rose (Putney Study Plot data):**



# 2021/2022 WINTER STORM #13



**Storm Summary Statistics:**

Storm precip began between 1500-1600 hrs MST April 23, 2022 (DOY 112)  
 Storm precipitation ended: 1300 hrs MST April 24, 2022 (DOY 113)  
 Storm duration = 23 hours  
 Storm total water content at SASP = 17 mm (0.7 inches)  
 Mean precip intensity: 0.74 mm/hr  
 Max precip intensity: 2 mm/hour  
 Max gain in snow depth at SASP = 16.6 cm (6.5 inches)  
 Max gain in snow depth at SBSP (wind affected) = 4.7 cm (1.9 inches)  
 Peak gust at PTSP at: 63.8 mph at 1545 hrs MST April 23, 2022 (DOY 112)

**Storm Wind Rose (Putney Study Plot data):**

