



अंटार्कटिका में भारतीय कछ

मैत्री की जलवायु -अंटार्कटिका

सतीश एम *

विजय कुमार सोनी, सुनील कुमार पेशिन

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

अंटार्कटिका में मौसम की निगरानी

- भारत मौसम विज्ञान विभाग द्वारा अंटार्कटिका में पहला कछ 1981-82 में दक्षिण गंगोत्री ($70^{\circ}05'S$, $12^{\circ}00'E$) में सुरु हुआ जो 1989 तक चला
- ओजोन मैप के लिए 1987-88 में डॉबसन स्पेक्ट्रोफोटोमीटर लगाया गया



अंटार्टिका में मौसम की निगरानी

भारत मौसम विज्ञान विभाग द्वारा अंटार्टिका में दूसरा कछ 1990 में मैत्री (70°45'S, 11°44'E) में शुरू किया गया

- ब्रेवर स्पेक्ट्रोफोटोमीटर(1997-2007)
- ब्रेवर स्पेक्ट्रोफोटोमीटर के द्वारा निगरानी 1999 में शुरू किया गया तथा इसके द्वारा टोटल कलुमुनर ओजोन , UV-B, SO₂ का कालुमुनर कंसंट्रेशन, NO₂ का कालुमुनर कंसंट्रेशन 2007 तक.



अंटार्कटिका में मौसम की निगरानी

भारत मौसम विज्ञान विभाग द्वारा अंटार्कटिका में तीसरा कछ 2014 में भारती (69°24'28"S, 76°11'14"E) में शुरू किया गया .

- ग्लोबल रेडिएशन और UV-A रेडिएशन माप.
- रेडियोसॉन्डे के द्वारा वर्टिकल ओजोन का माप.

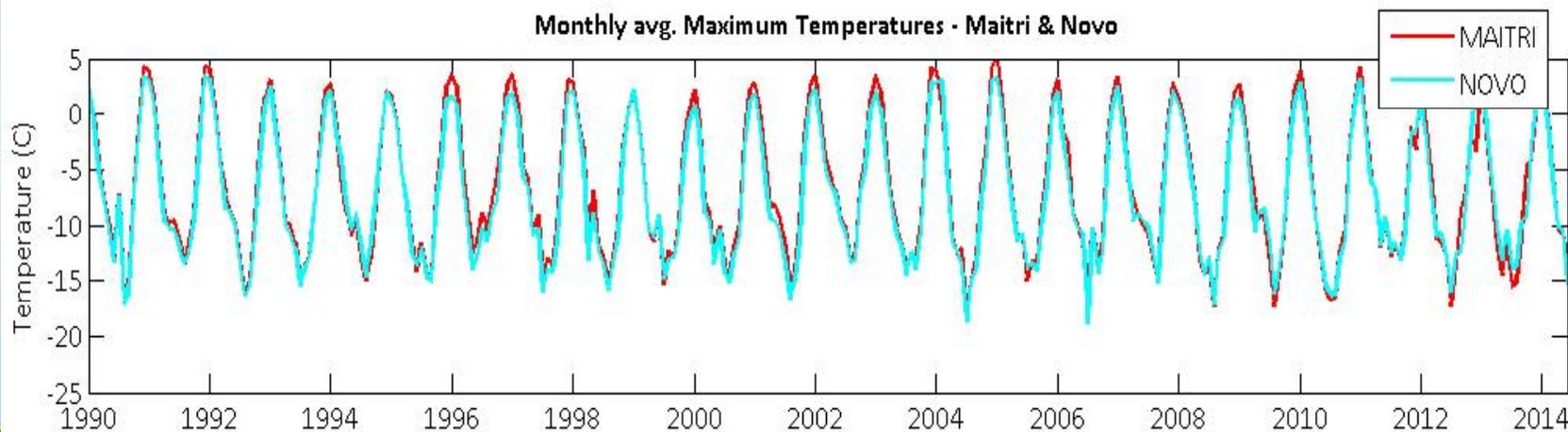
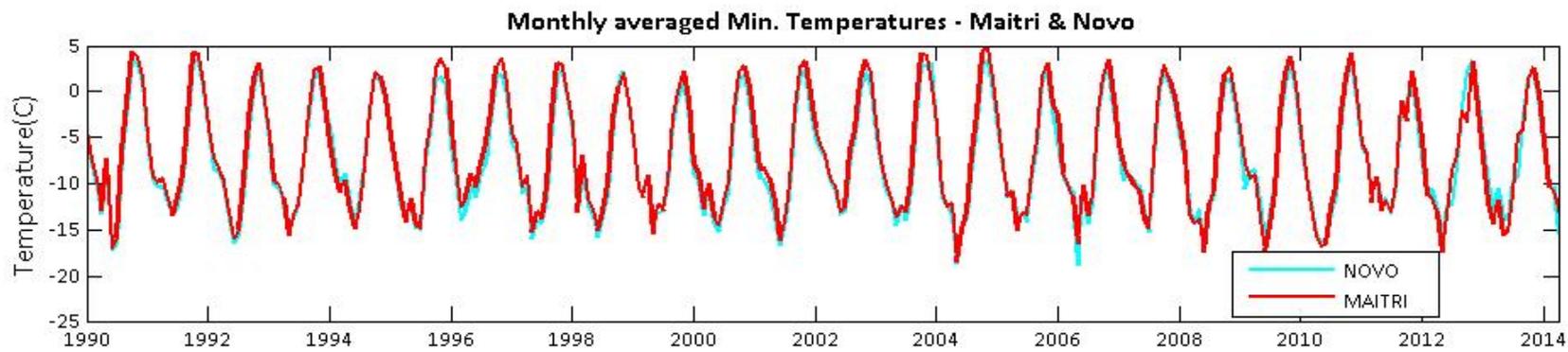
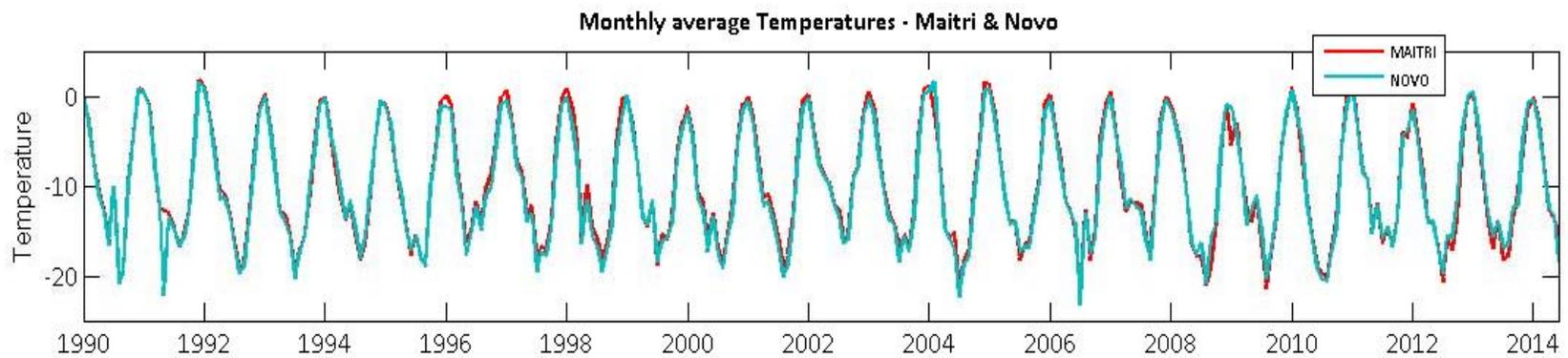


ANTARCTICA

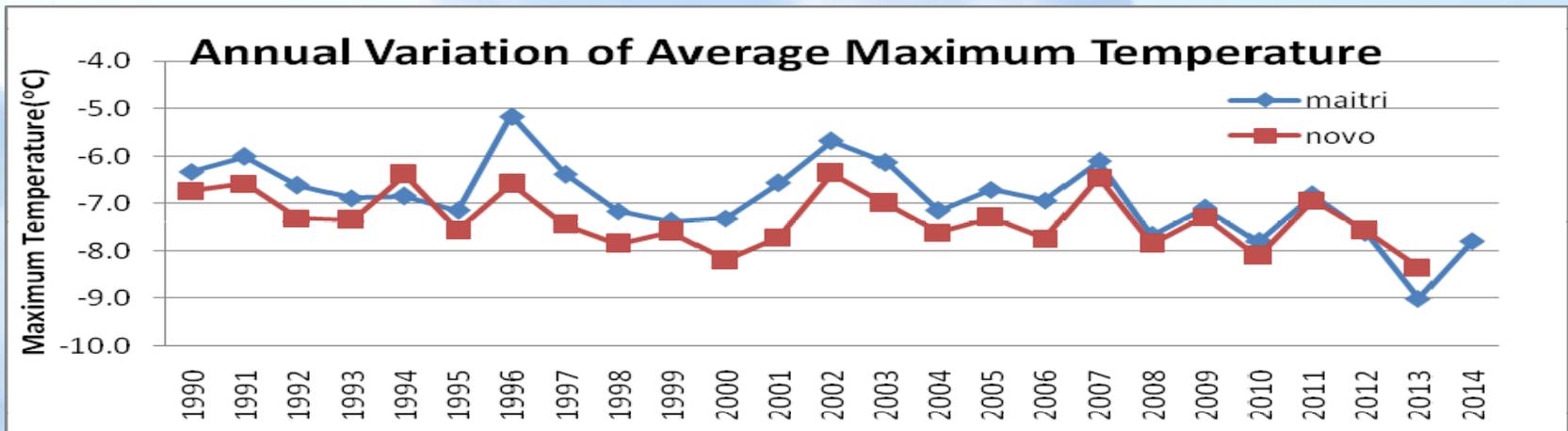
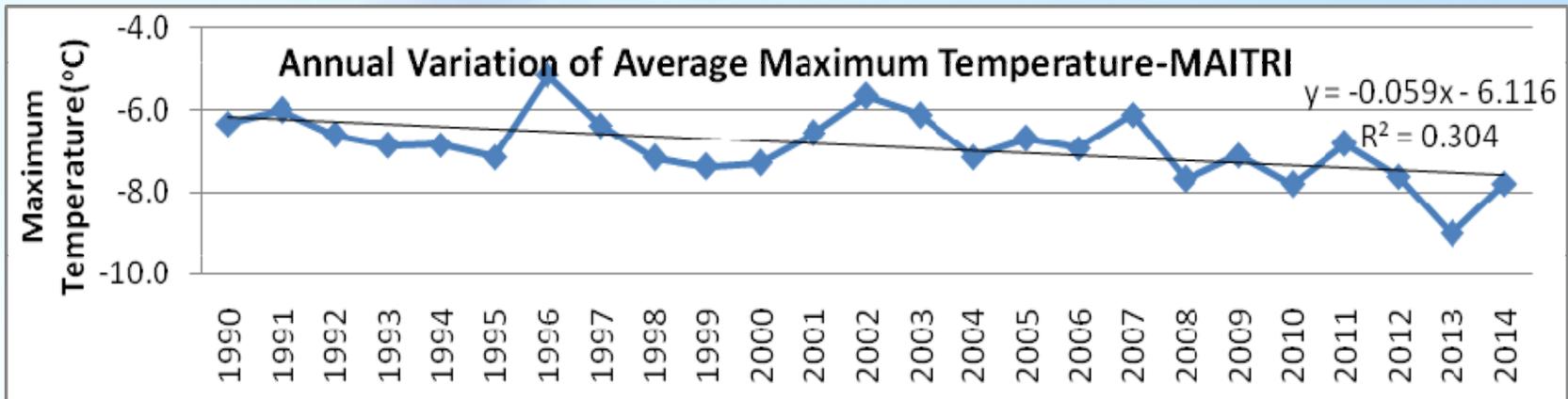


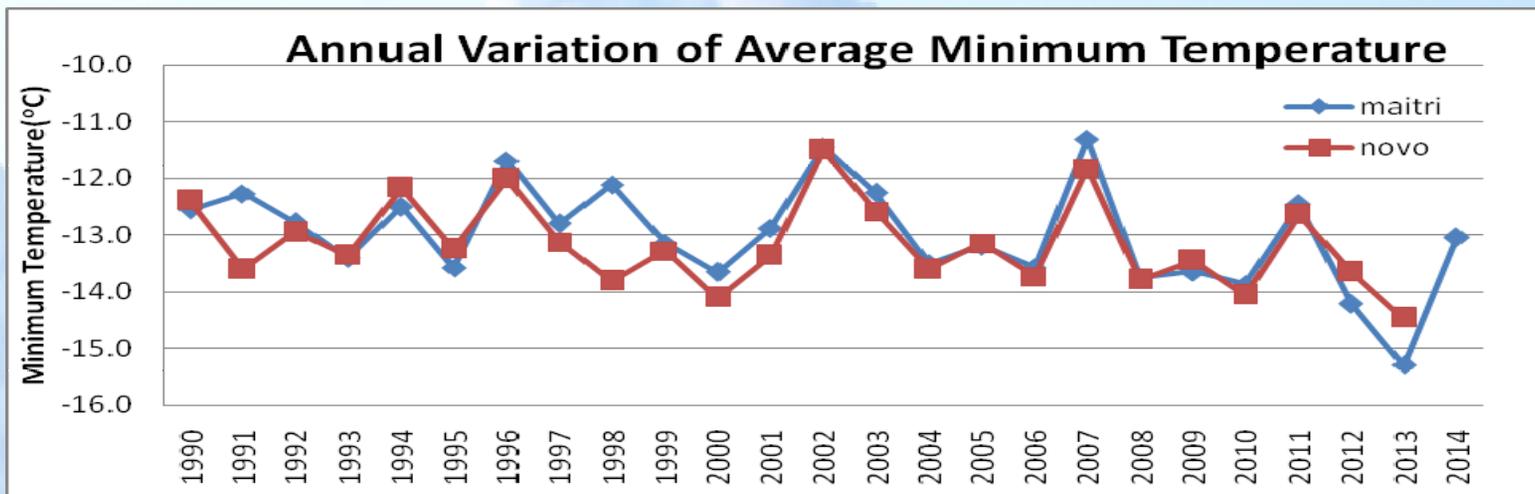
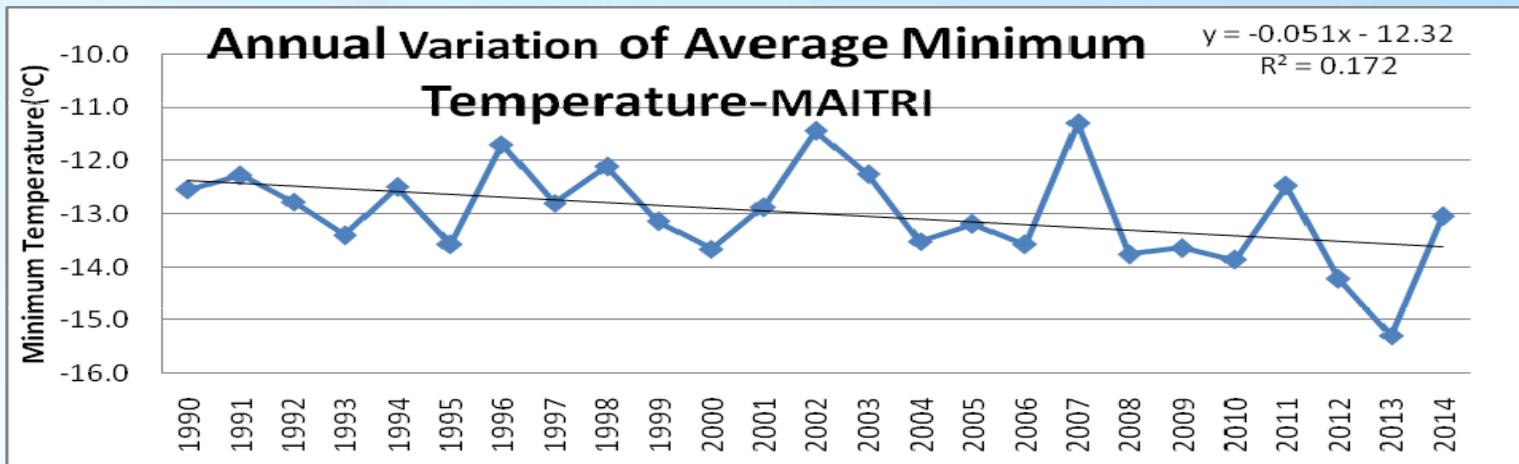
भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



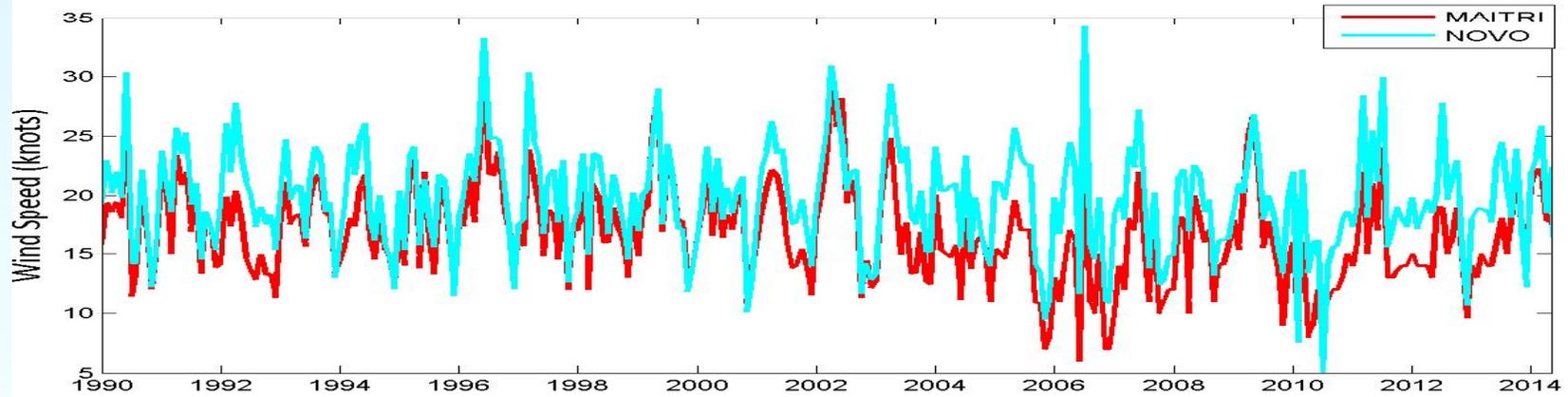


मैत्री-अंटार्कटिका के तापमान में वार्षिक विविधता

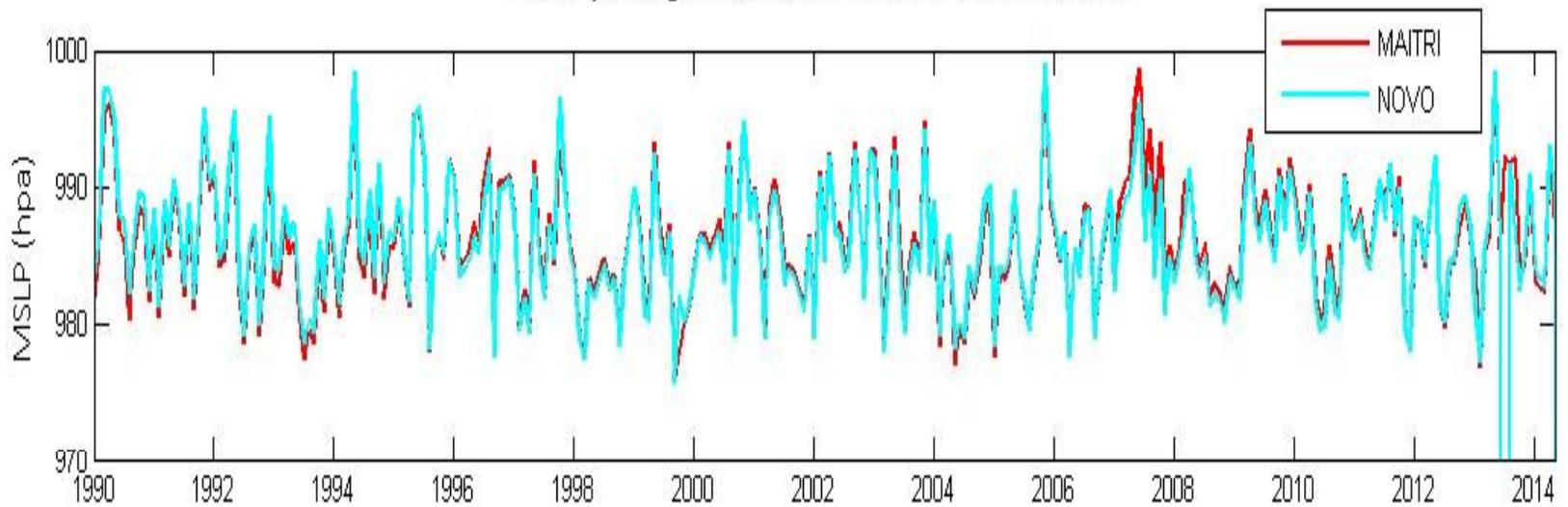




Monthly averaged Wind Speed - Maitri & Novo



Monthly averaged Mean Sea Level Pressure- Maitri & Novo



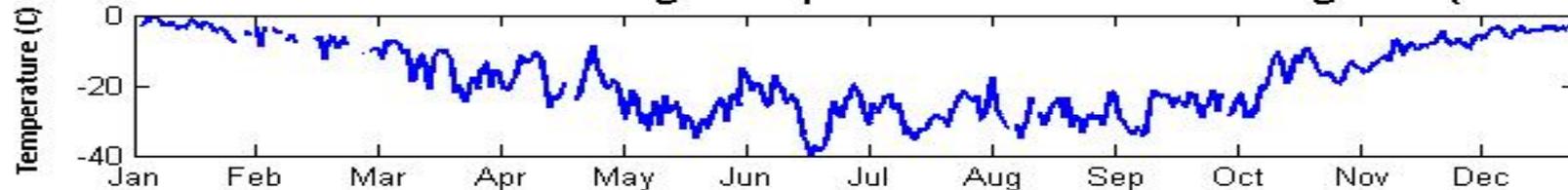
मैत्री की जलवायु

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Temperature (°C)	-0.02	-2.77	-7.60	-11.81	-13.63	-14.18	-16.81	-17.52	-16.53	-12.11	-5.47	-0.65
Avg. Temperature (°C)(min)	-2.67	-5.53	-10.47	-14.77	-16.56	-17.35	-19.98	-20.79	-19.75	-15.49	-8.38	-3.46
Avg. Temperature (°C)(max)	3.05	-0.05	-4.65	-8.72	-10.63	-11.19	-13.60	-14.27	-12.75	-8.64	-2.51	1.89
Wind Speed(knots)	12.83	15.88	16.88	18.17	18.84	19.13	18.17	17.75	16.07	16.17	16.19	13.53
Sea level pressure(hPa)	987.56	985.84	984.30	985.23	986.91	989.64	986.02	984.68	986.24	983.72	986.01	986.63

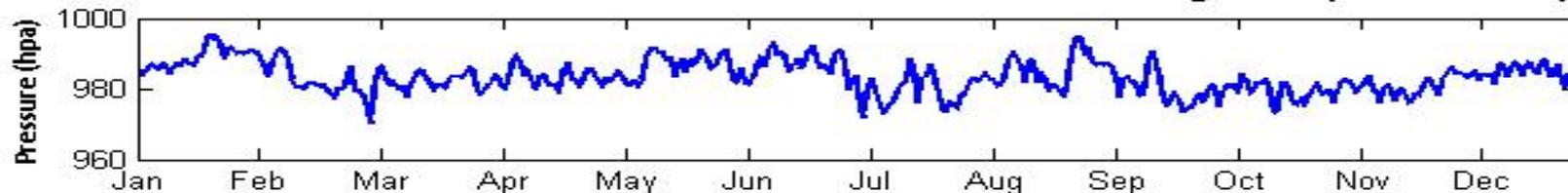


दक्षिण गंगोत्री की दैनिक साधारण तापमान, दाब और वायु गति (1984-1989)

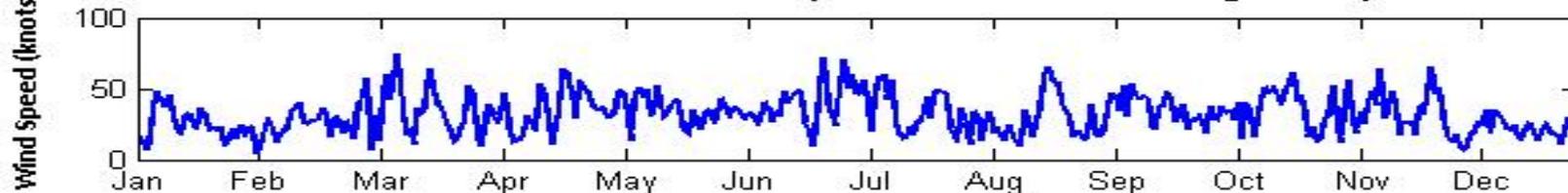
Observed Normal Values of Average Temperatures at Dakshin Gangotri - (1984-1989)



Observed Normal Values of Pressure at Dakshin Gangotri - (1984-1989)

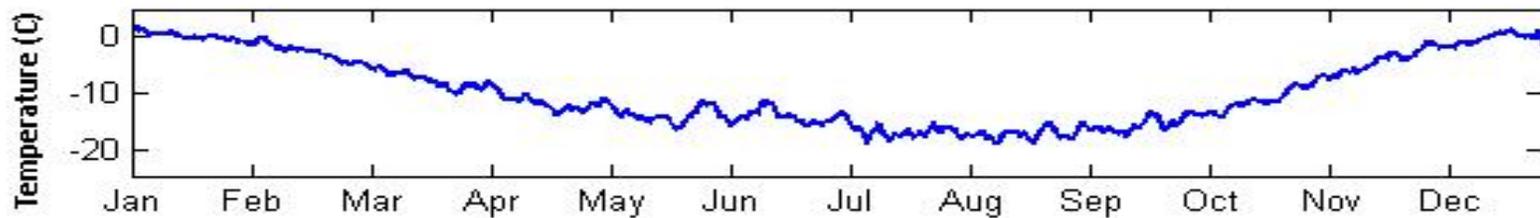


Observed Normal Values of Wind Speed at Dakshin Gangotri - (1984-1989)

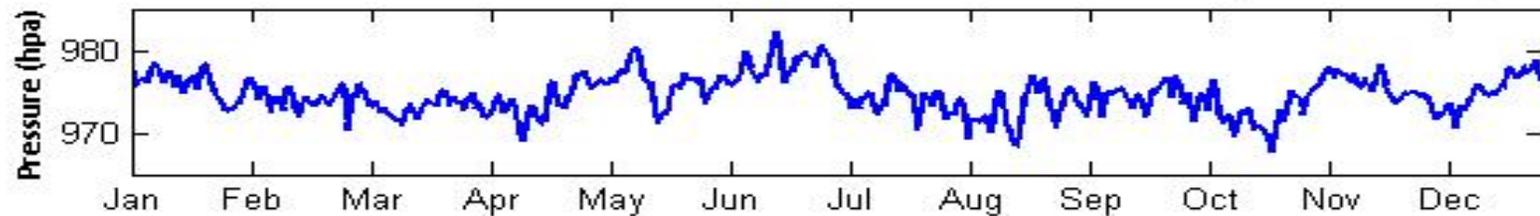


मैत्री की दैनिक साधारण तापमान, दाब और वायु गति 1990-2014

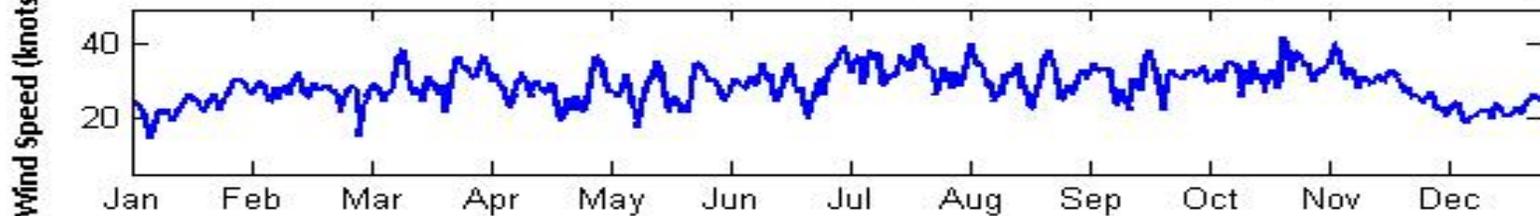
Observed Normal Values of Average Temperature at Maitri - (1990-2014)



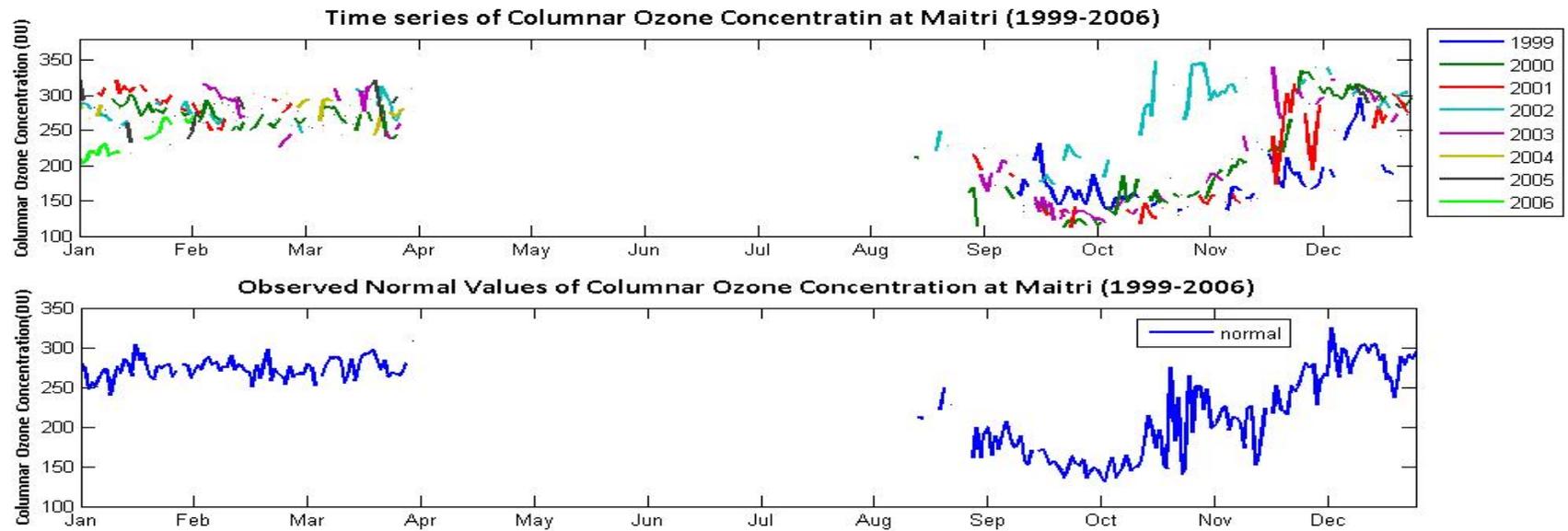
Observed Normal Values of Pressure at Maitri - (1990-2014)



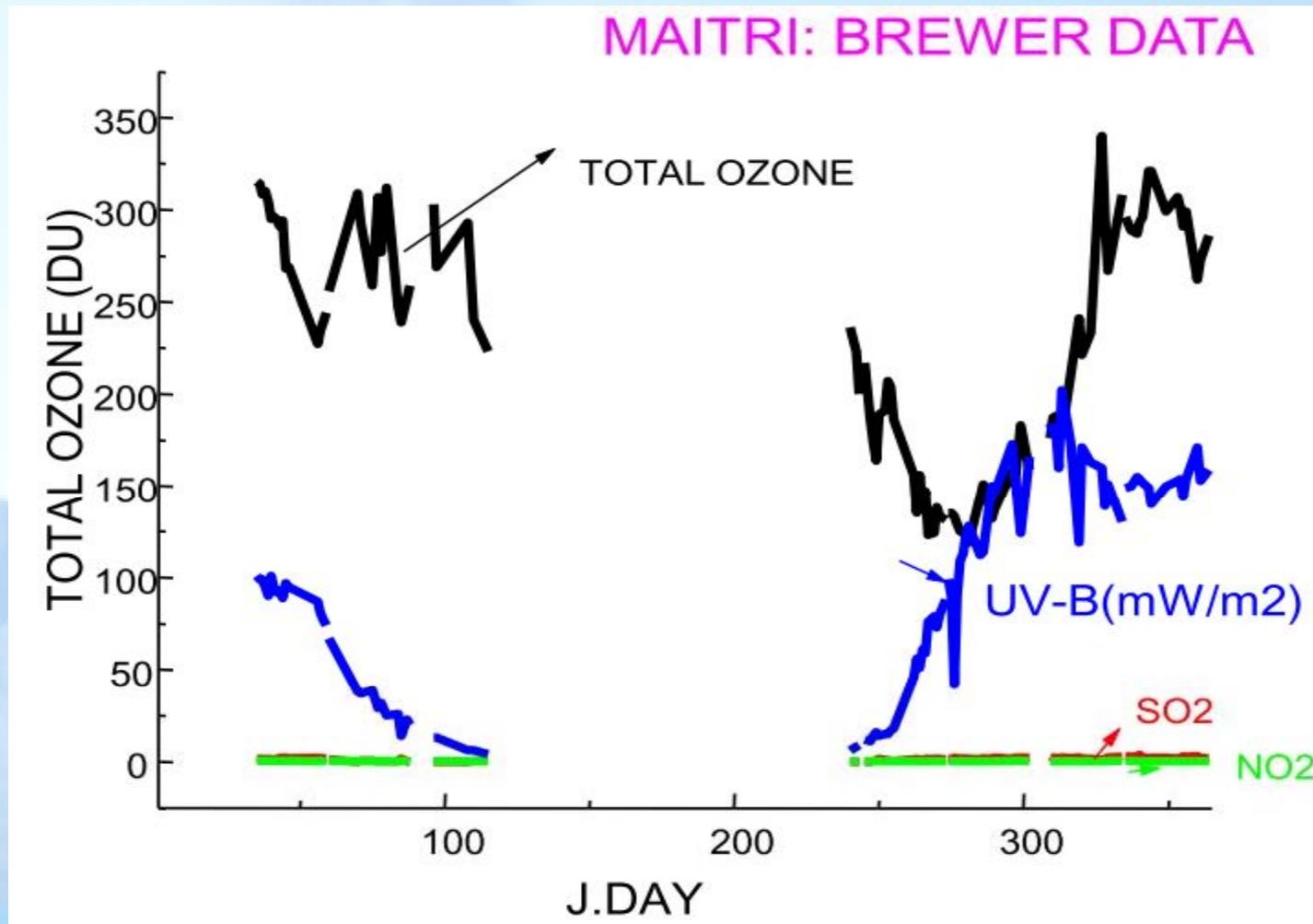
Observed Normal Values of Wind Speed at Maitri - (1990-2014)



ओजोन माप

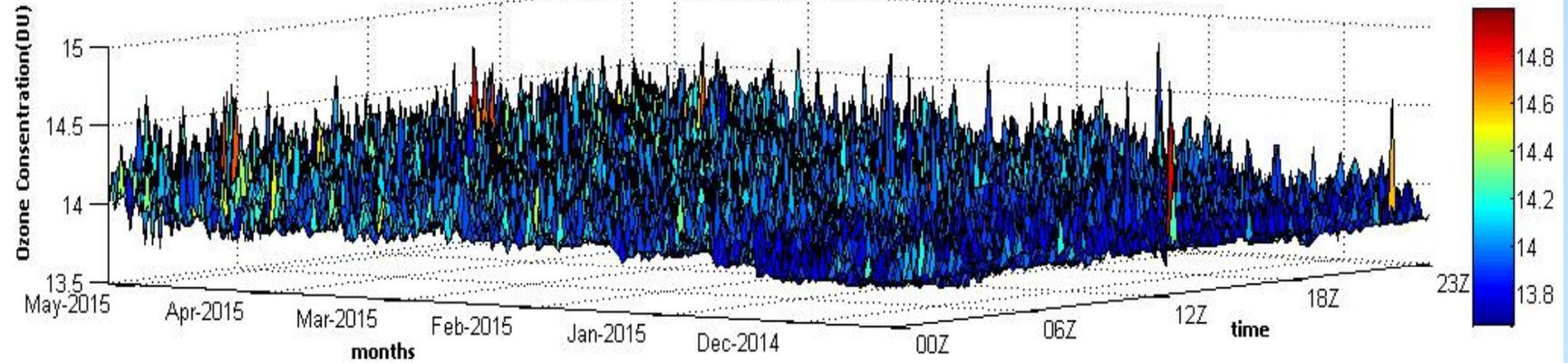


ब्रेवर स्पेक्ट्रोफोटोमीटर

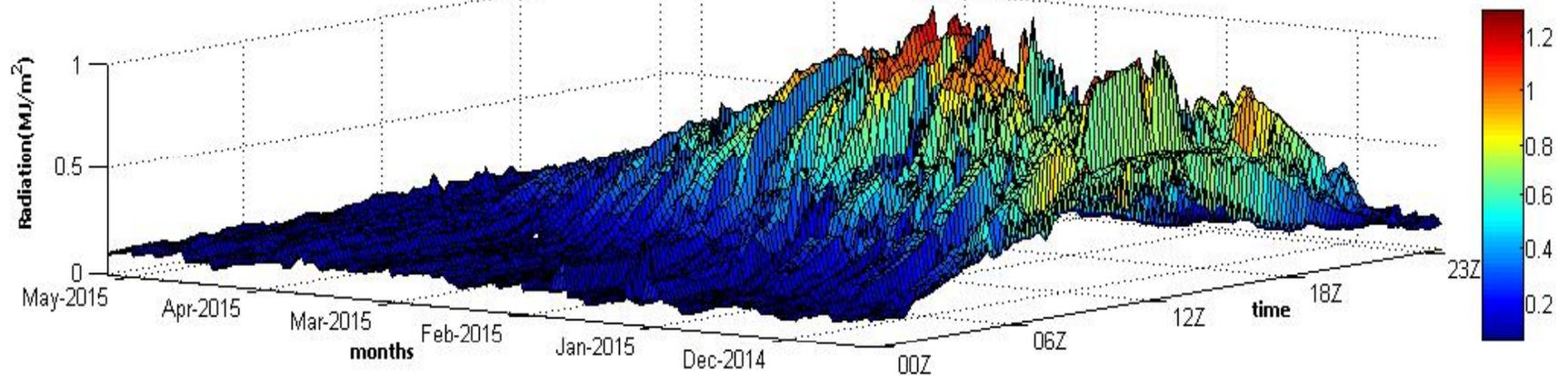


सतह ओजोन माप (मैत्री)

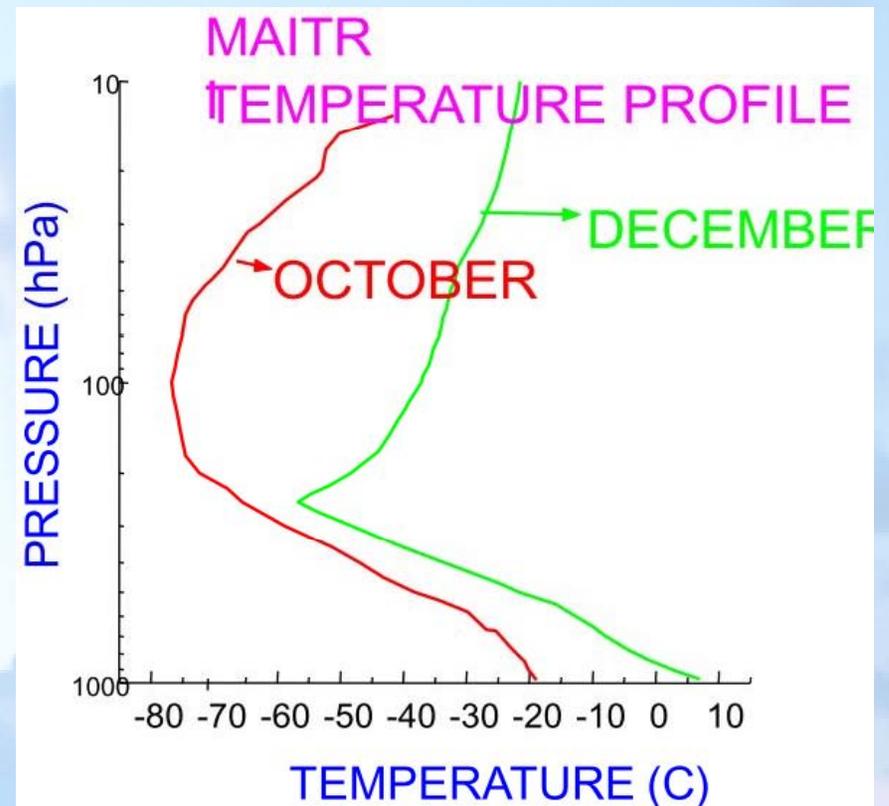
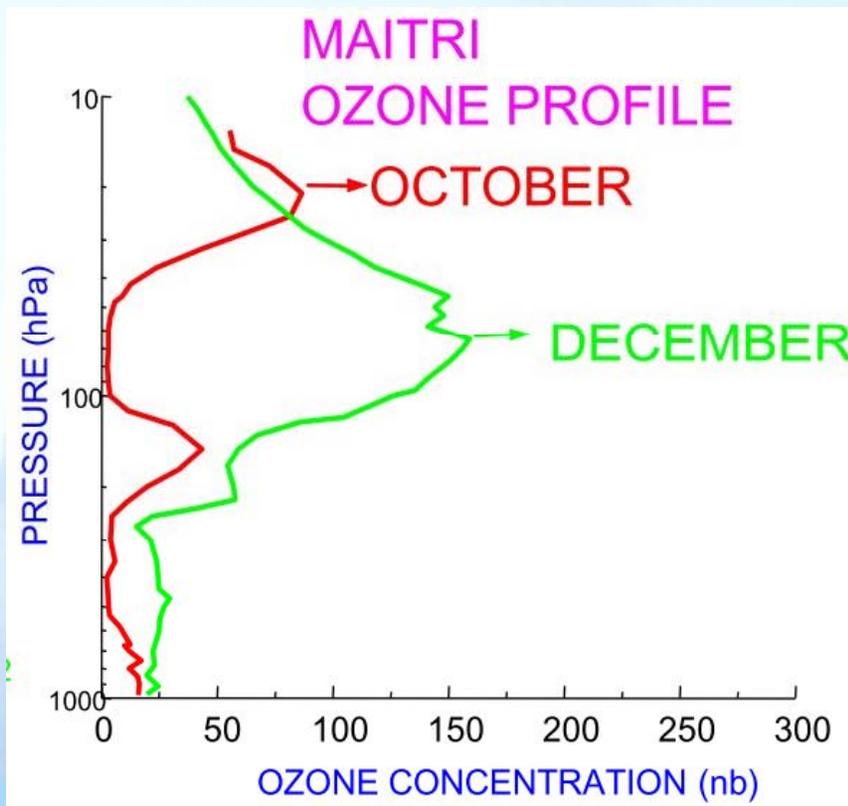
Diurnal Variation of Surface Ozone Concentration - MAITRI



Diurnal Variation of Global Radiation - MAITRI



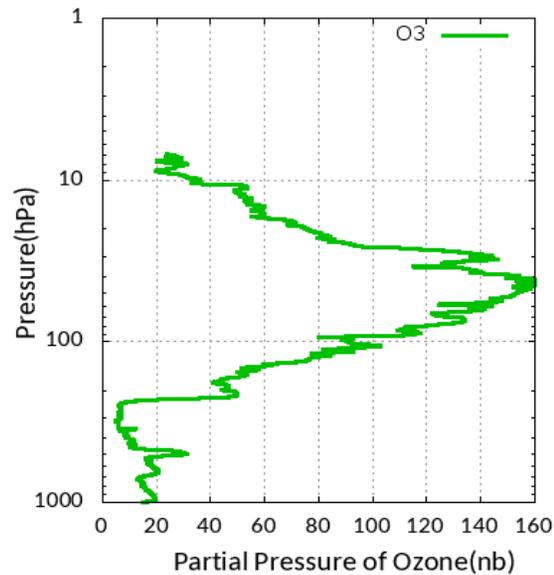
वर्तिकल ओजोन प्रोफाइल माप- मैत्री



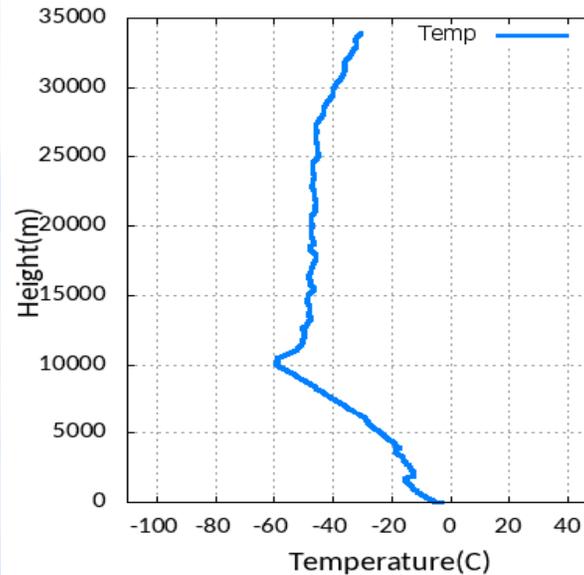
वर्टीकल ओजोन प्रोफाइल माप- भारती



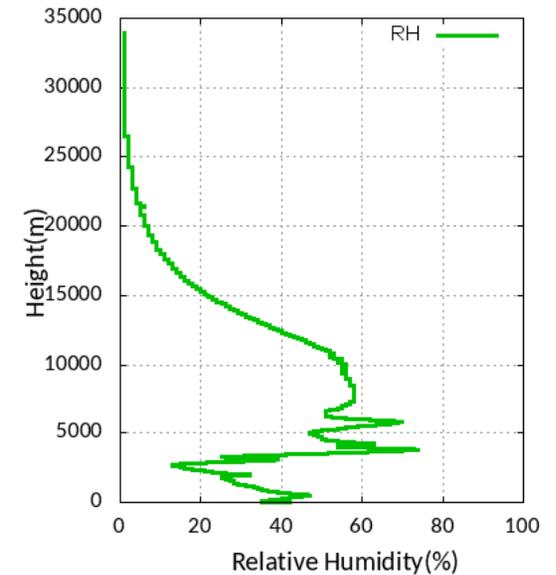
V.profile of Ozone Conc._20160225



V.profile of Temp._20160225

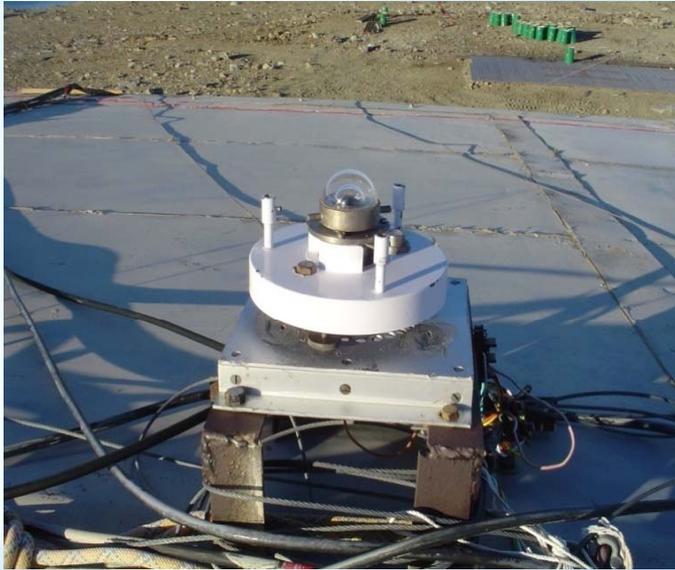


V.profile of R.Humidity_20160225

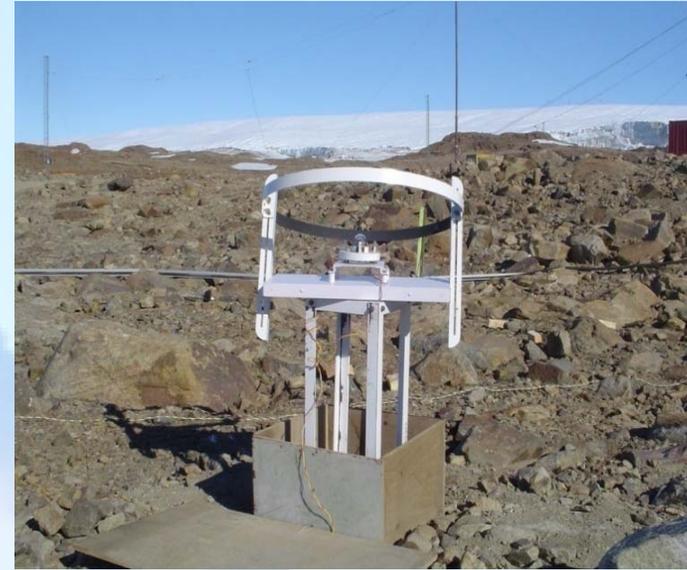


रेडिएशन का माप

पयरनोमेटर



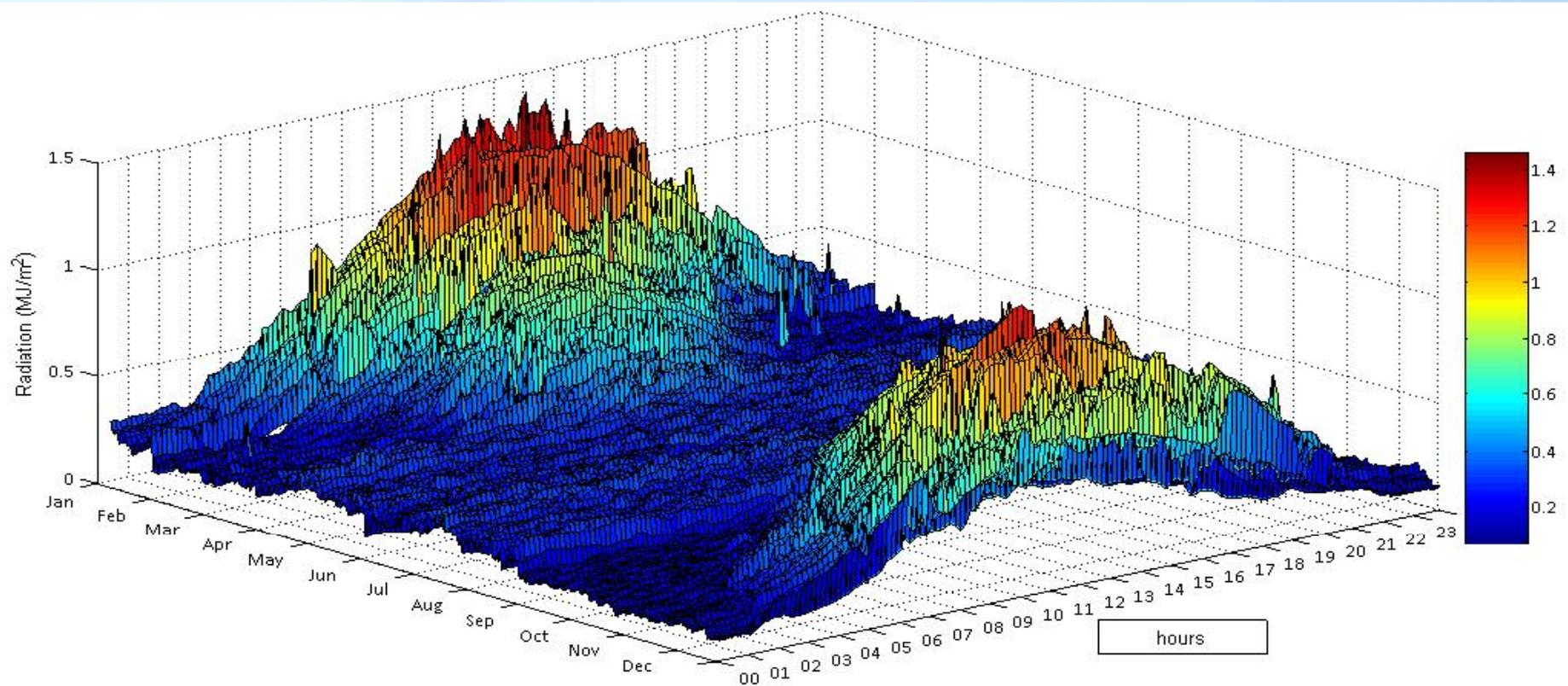
ग्लोबल रेडिएशन



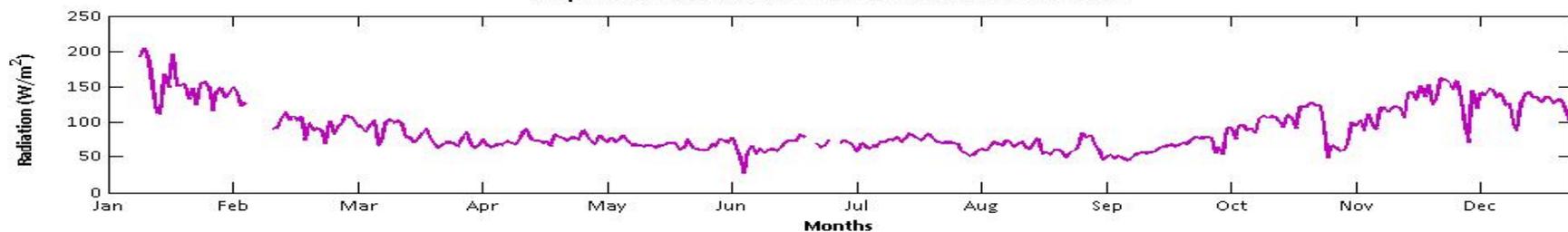
डिफ्यूज रेडिएशन



अंटार्कटिका में रेडिएशन की निगरानी



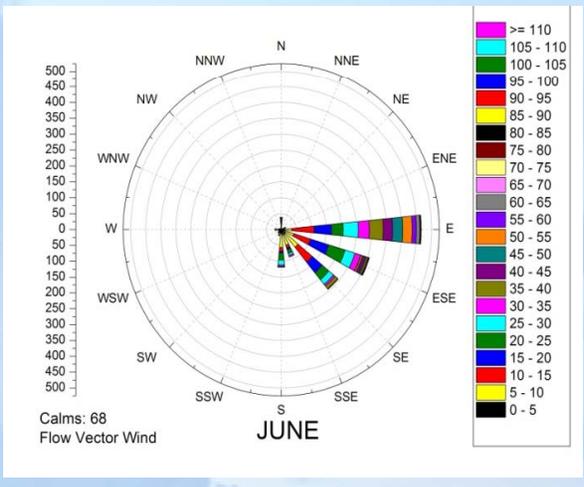
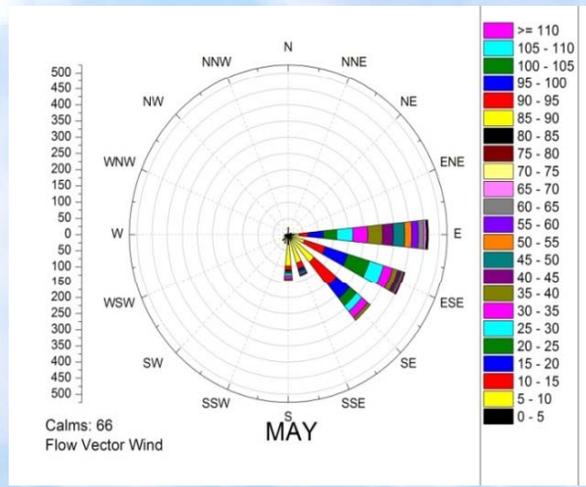
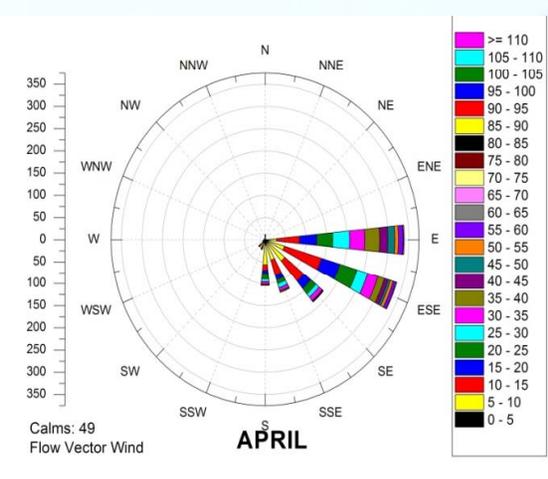
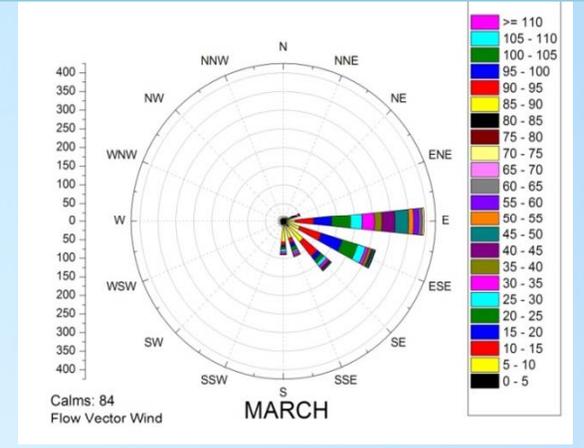
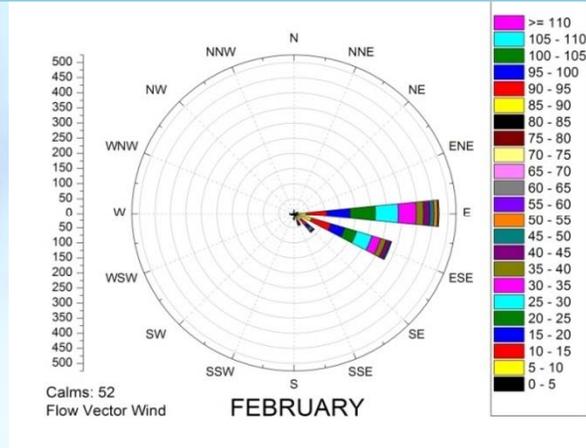
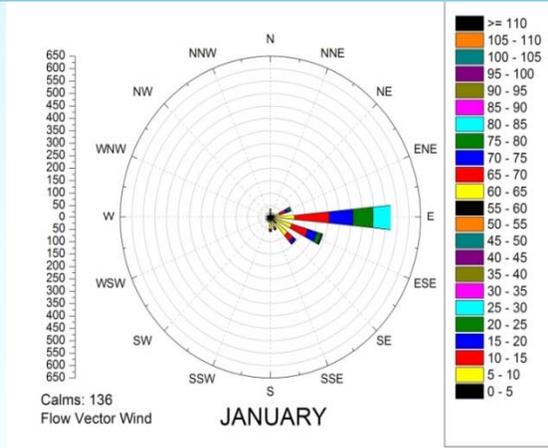
Day-wise Net Global Radiation at Maitri-2014



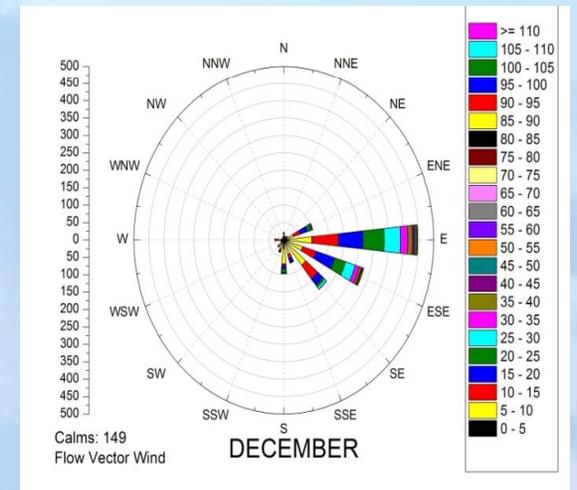
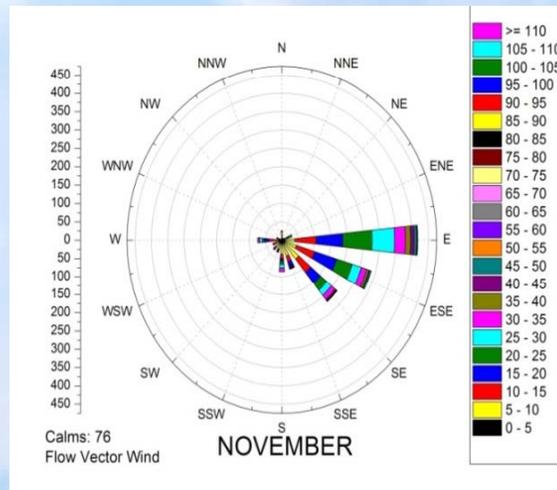
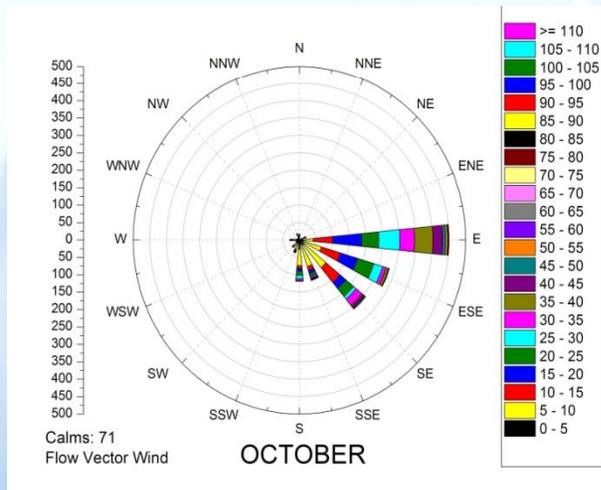
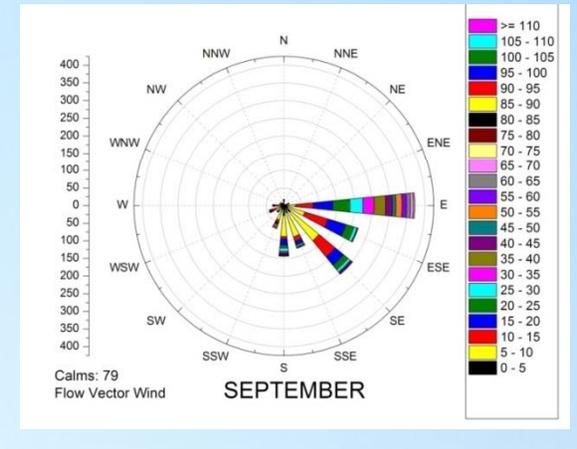
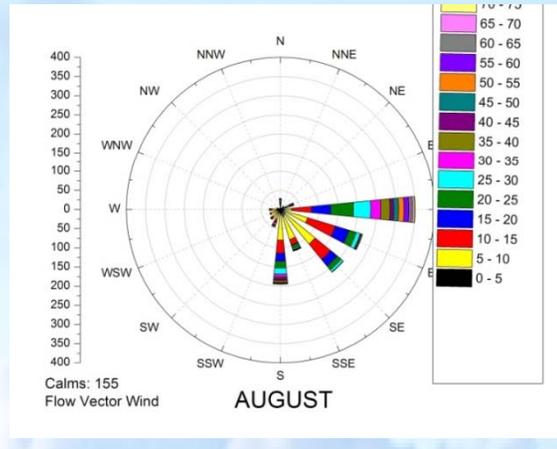
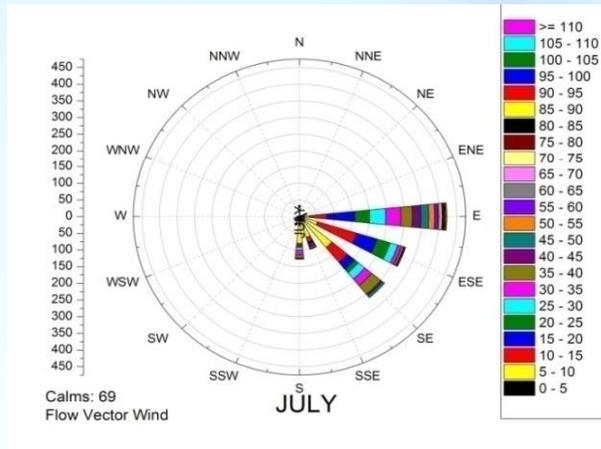
भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



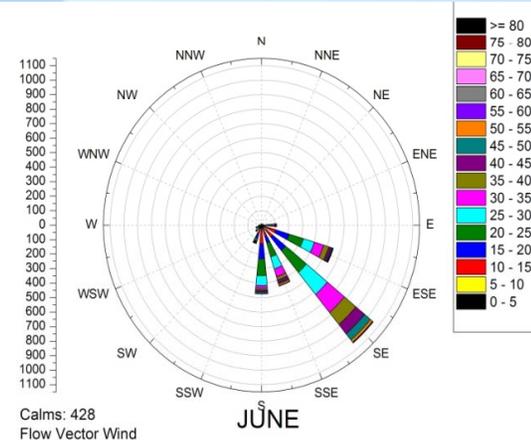
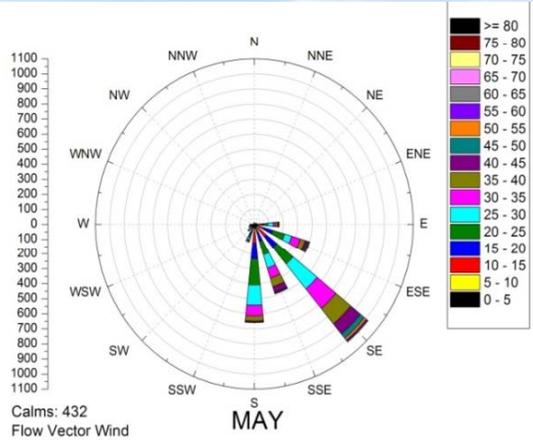
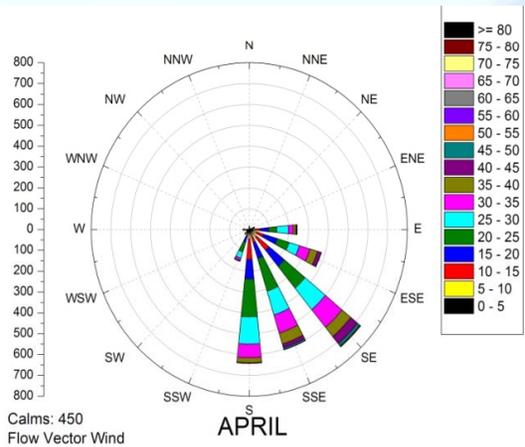
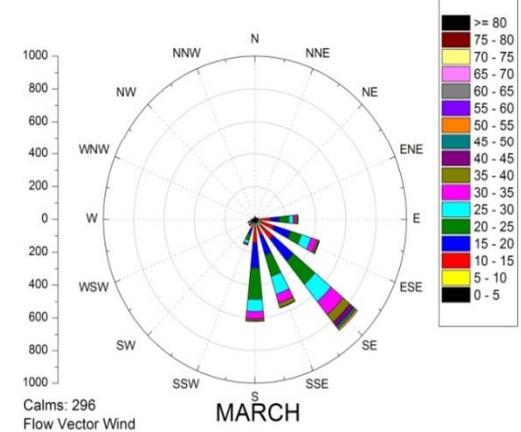
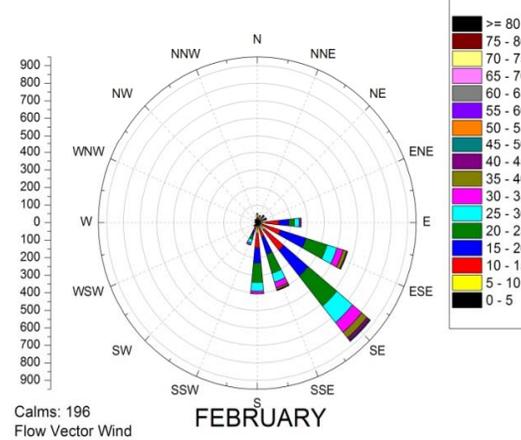
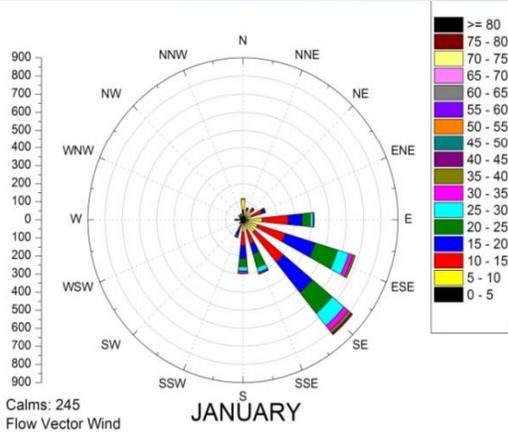
वायु गति - दक्षिण गंगोत्री



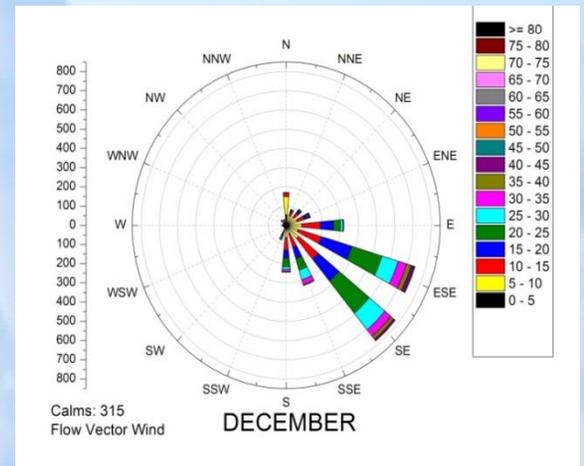
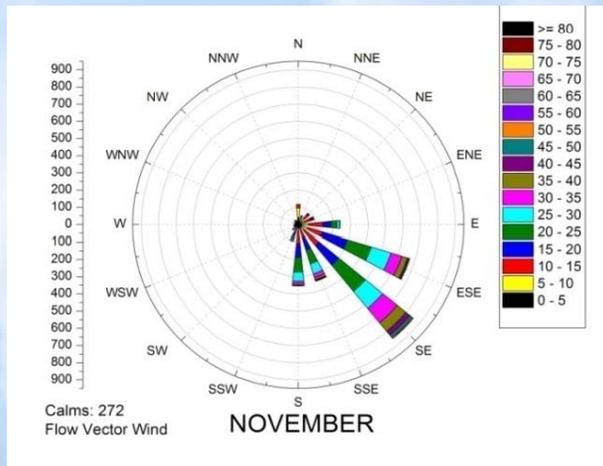
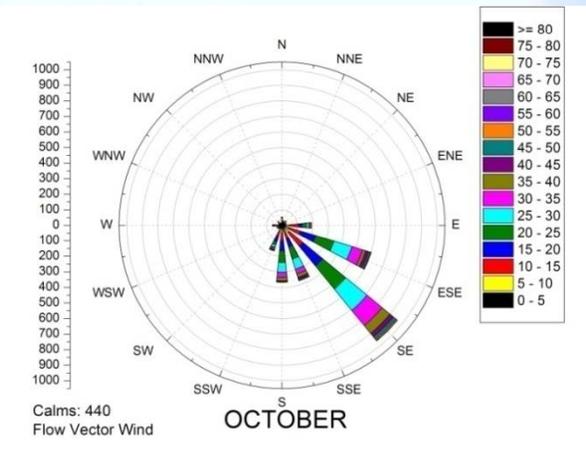
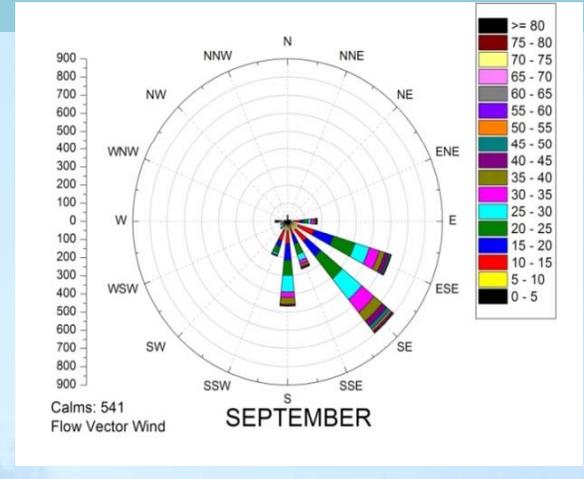
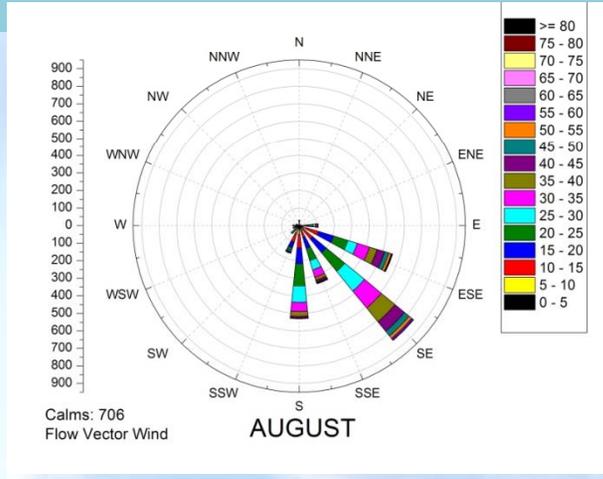
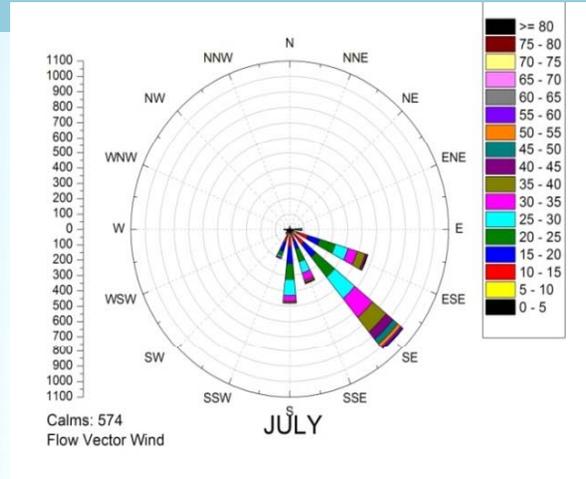
वायु गति - दक्षिण गंगोत्री



वायु गति - मैत्री

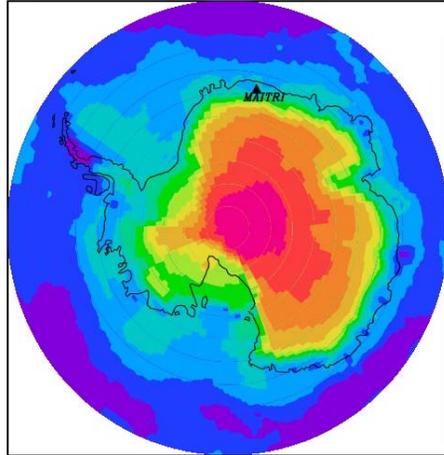


वायु गति - मैत्री

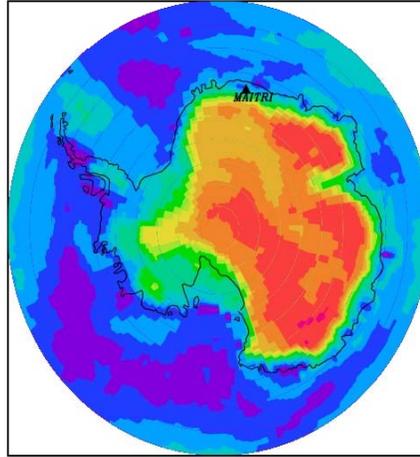


NASA/GEWEX SRB आकड़ा

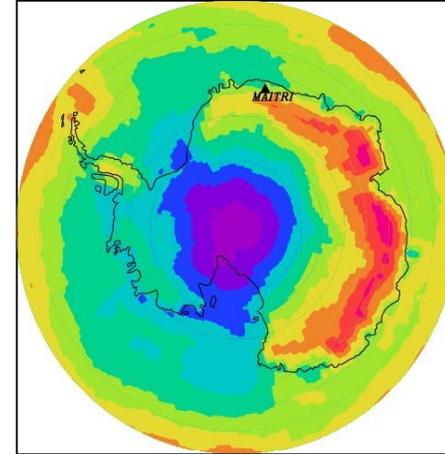
Avg. Jan Radiation(W/m^2)-(1984-2007)



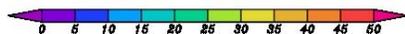
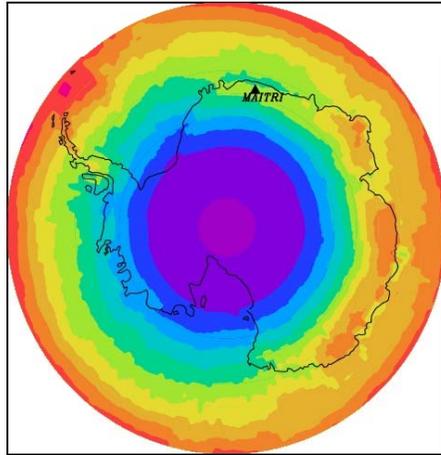
Avg. Feb Radiation(W/m^2)-(1984-2007)



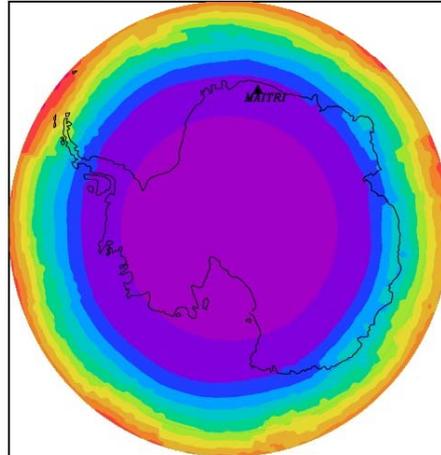
Avg. Mar Radiation(W/m^2)-(1984-2007)



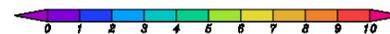
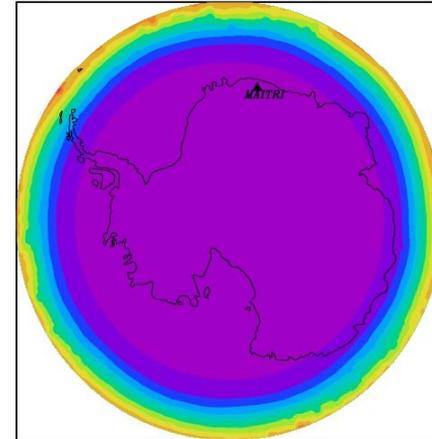
Avg. Apr Radiation(W/m^2)-(1984-2007)



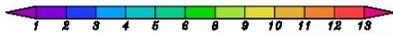
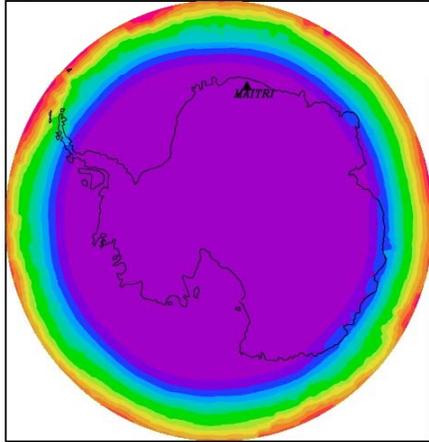
Avg. May Radiation(W/m^2)-(1984-2007)



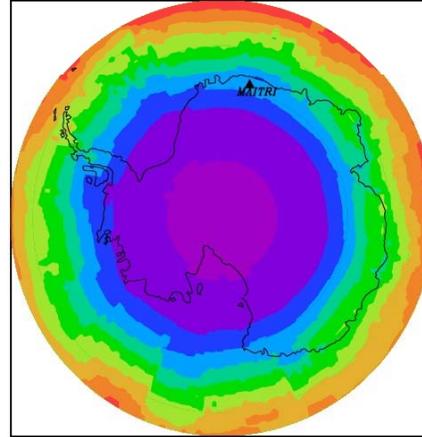
Avg. Jun Radiation(W/m^2)-(1984-2007)



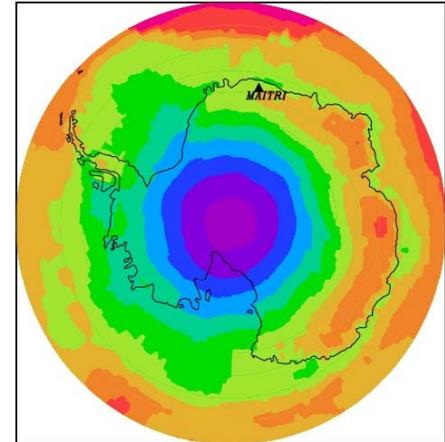
Avg. Jul Radiation(W/m^2)-(1984-2007)



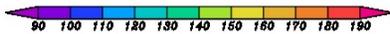
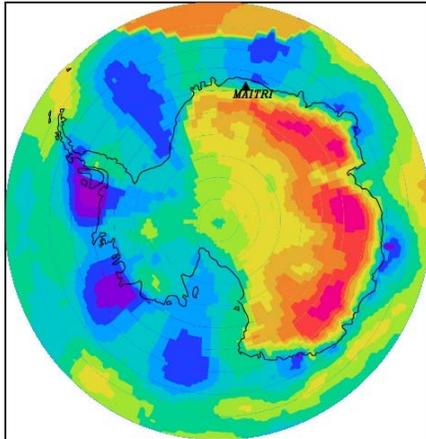
Avg. Aug Radiation(W/m^2)-(1984-2007)



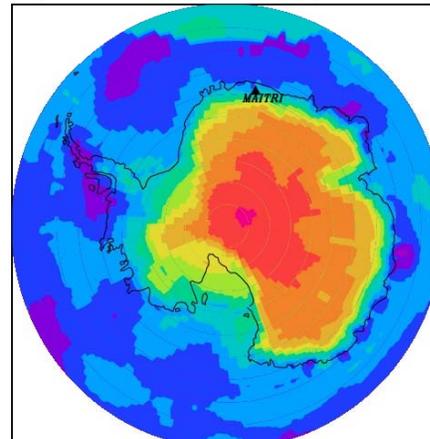
Avg. Sep Radiation(W/m^2)-(1984-2007)



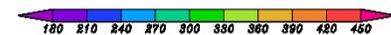
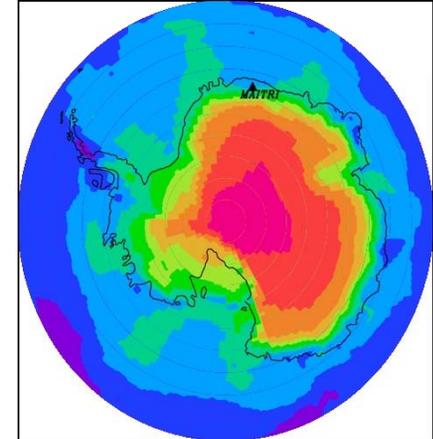
Avg. Oct Radiation(W/m^2)-(1984-2007)



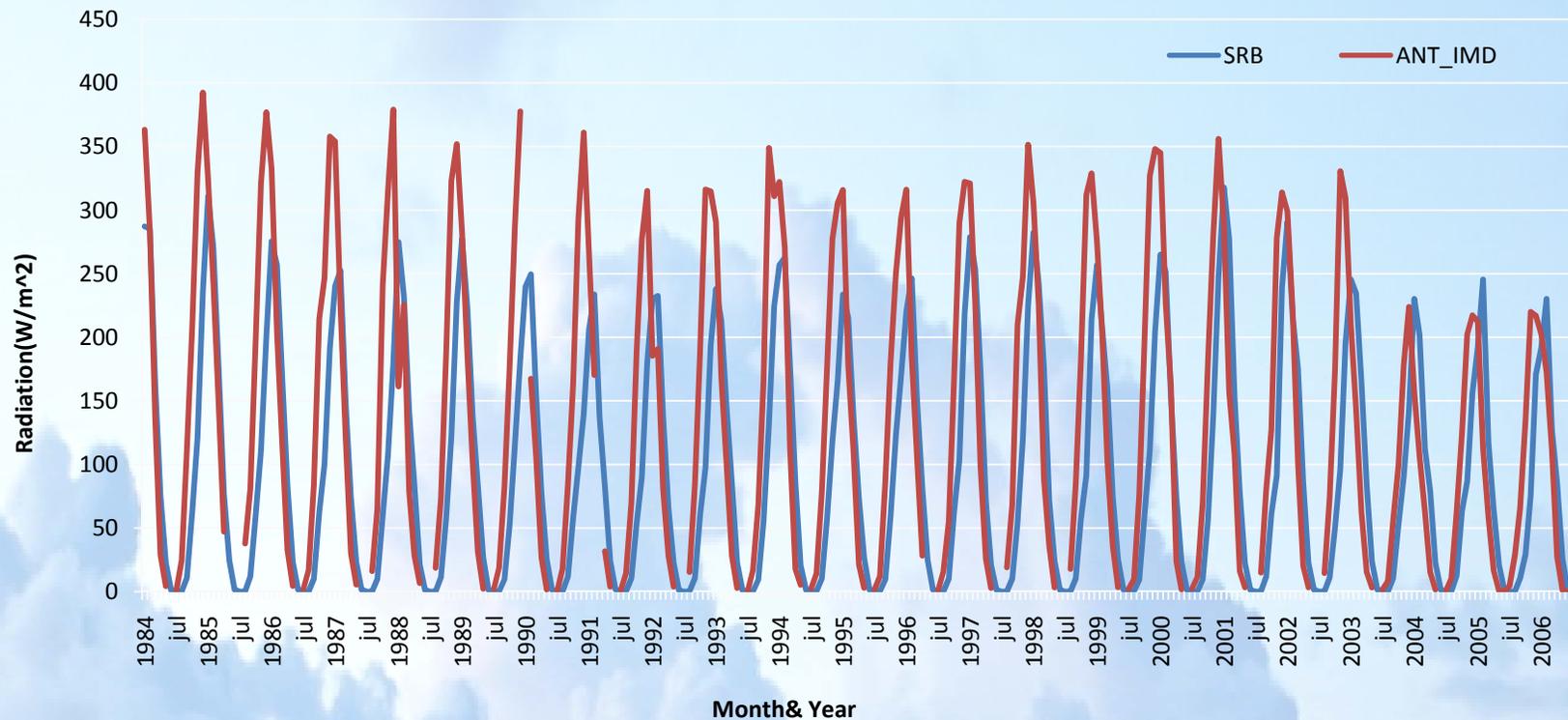
Avg. Nov Radiation(W/m^2)-(1984-2007)



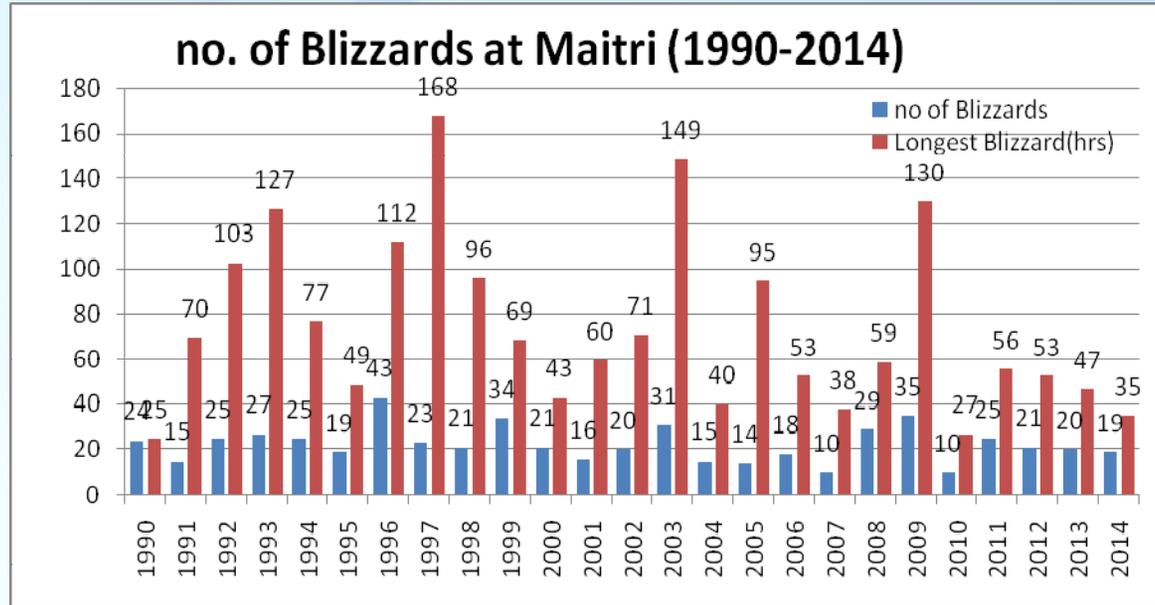
Avg. Dec Radiation(W/m^2)-(1984-2007)



सतह रेडिएशन का तुलना



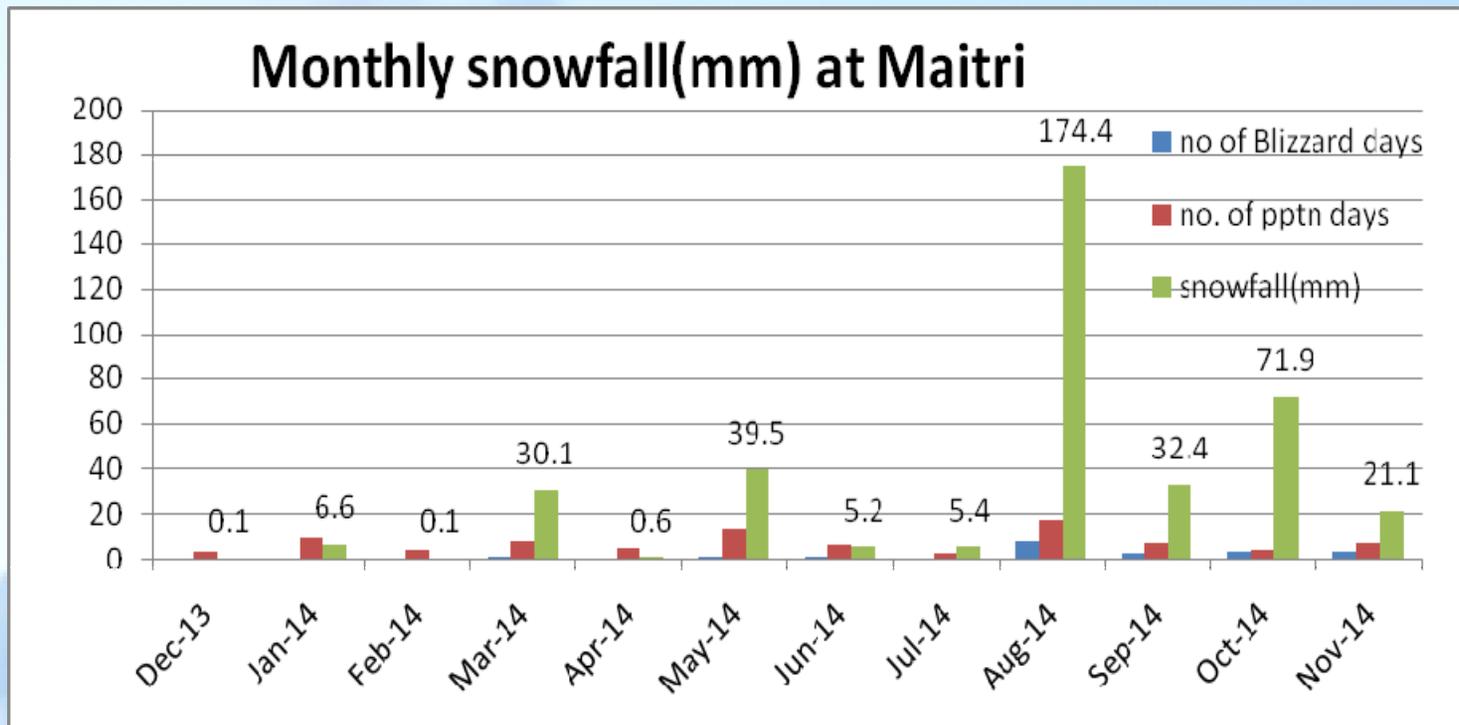
बर्फीले तूफान



- ❖ सबसे अधिक 35 बर्फीले तूफान 2009 में आया
- ❖ सबसे लम्बी अवधी की बर्फीले तूफान 1997, 2003 & 2009 में आया .



बर्फ माप - 2014.



❖ सबसे अधिक बर्फ अगस्त और अक्टूबर में पड़ा.



SUMMARY

- ❖ मैत्री का तापमान घाट रहा है .
- ❖ सबसे अधिक सोलर रेडिशन 34 MJ/sq.m दिसंबर में होता है तथा मिनिमम जून में 0 होता है.



धन्यवाद

