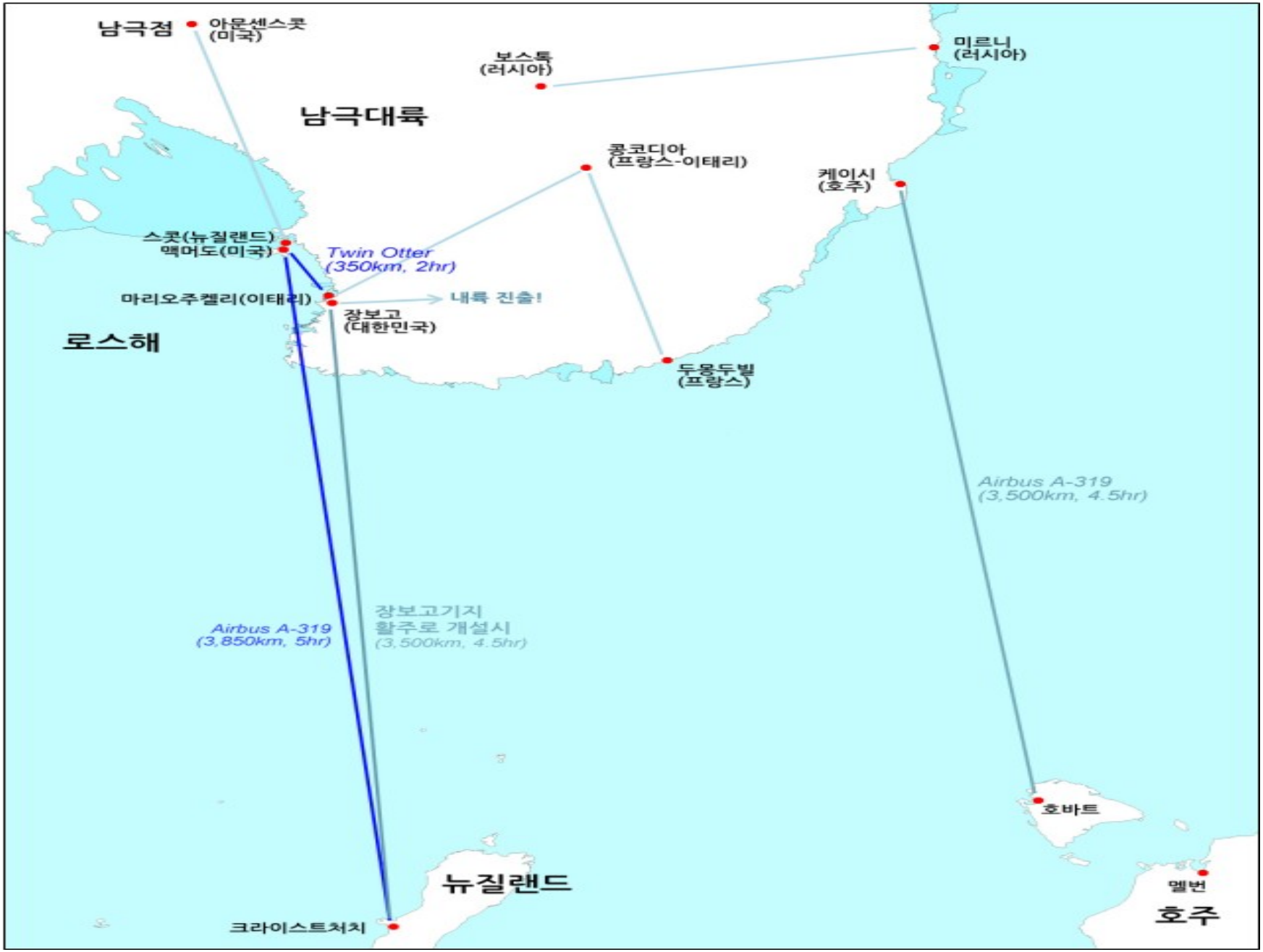
Jang Bogo Station

국가별 남극기지 위치도

- 지구상 가장 춥고 ,
- 건조하고 ,
- 바람이 센 곳

킹조지섬의 각국 기지들

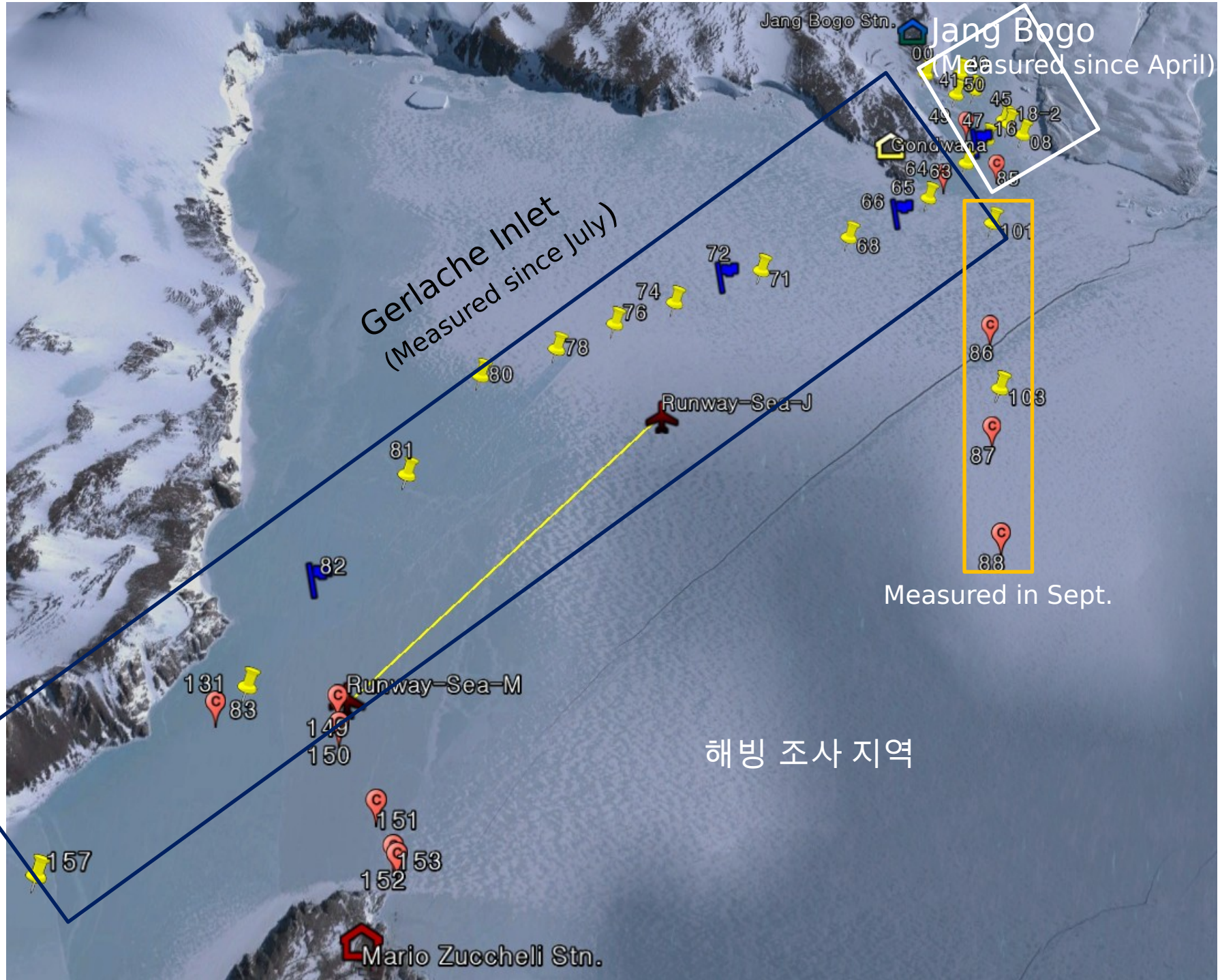
- King Sejong (대한민국)
- Great Wall (중국)
- Bellingshausen (러시아)
- Arctowski (폴랜드)
- Ferraz (브라질)
- Jubany (아르헨티나)
- Artigas (우루과이)
- Frei, Escudero (칠레)


남극점
아문센스콧
(미국)
보스톡
(러시아)
미르니
(러시아)
남극대륙
콩코디아
(프랑스-이태리)
케이시
(호주)
스콧(뉴질랜드)
맥머도(미국)
Twin Otter
(350km, 2hr)
마리오주켈리(이태리)
내륙 진출!
장보고
(대한민국)
로스해
두몽두빌
(프랑스)
Airbus A-319
(3,500km, 4.5hr)
Airbus A-319
(3,850km, 5hr)
장보고기지
활주로 개설시
(3,500km, 4.5hr)
호바트
뉴질랜드
멜번
호주
크라이스트처치

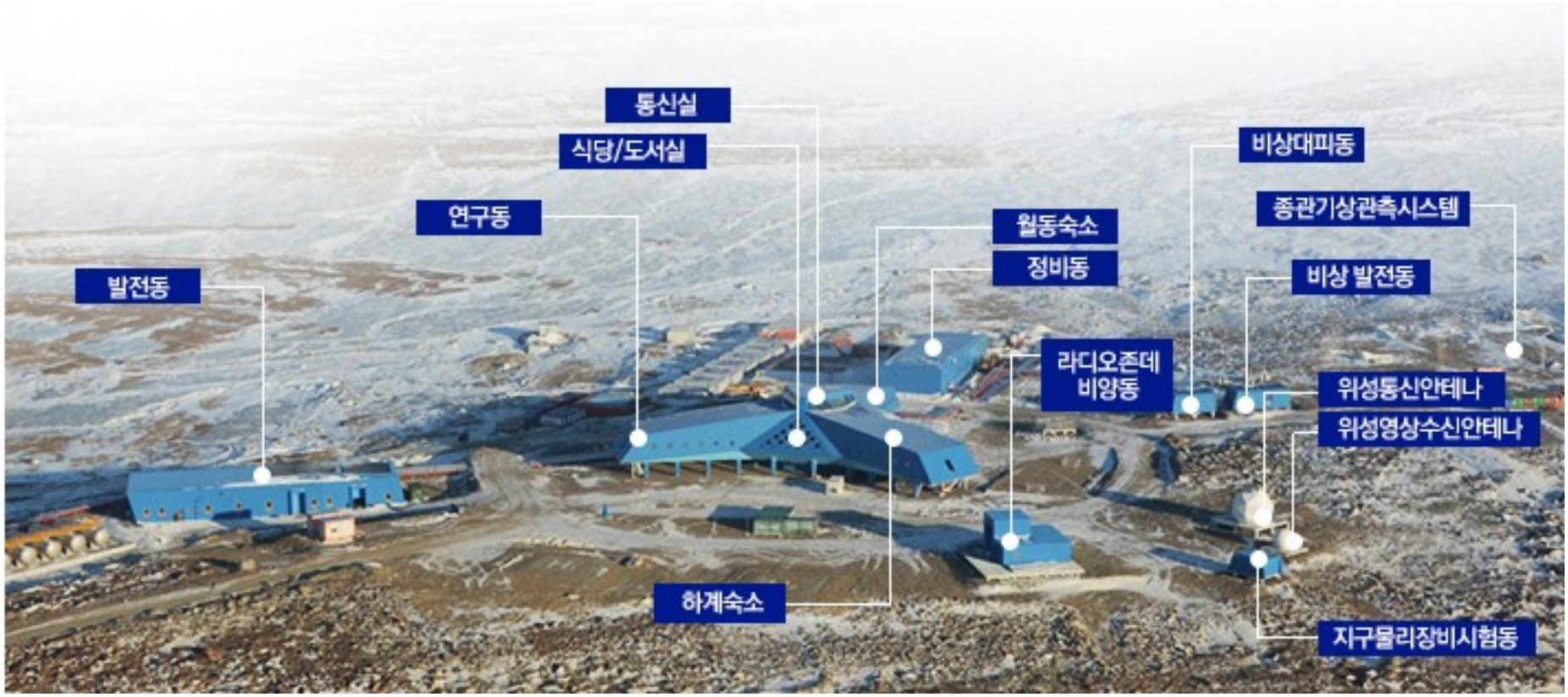

Mt Keinath
1090±
Pass
Browning Glacier
1020±
Cape Sastrugi
Mt Browning
760±
Crevasses
Snowy Pt
460±
GERLACHE
INLET
Mt Abbott
1022
NORTHERN
260±
Cape Canwe
FOOTHILLS
(December 1963)
Vegetation
Island
220±
570±
280±
Cape
Confusion
Hells Gate
Moraine
Hells Gate
390±
Evans
Cove
Inexpressible
Island
Cape Russell
67
Adélie penguin rookery
580
TERRA NOVA
BAY
ROS
300±
Shield Nunatak
Oscar Point
60±
Markham
Island
Emperor penguin rookery
273
Cape Washington
BELL GLACIER TONGUE
600
700
800
900

드라이갈스키빙설

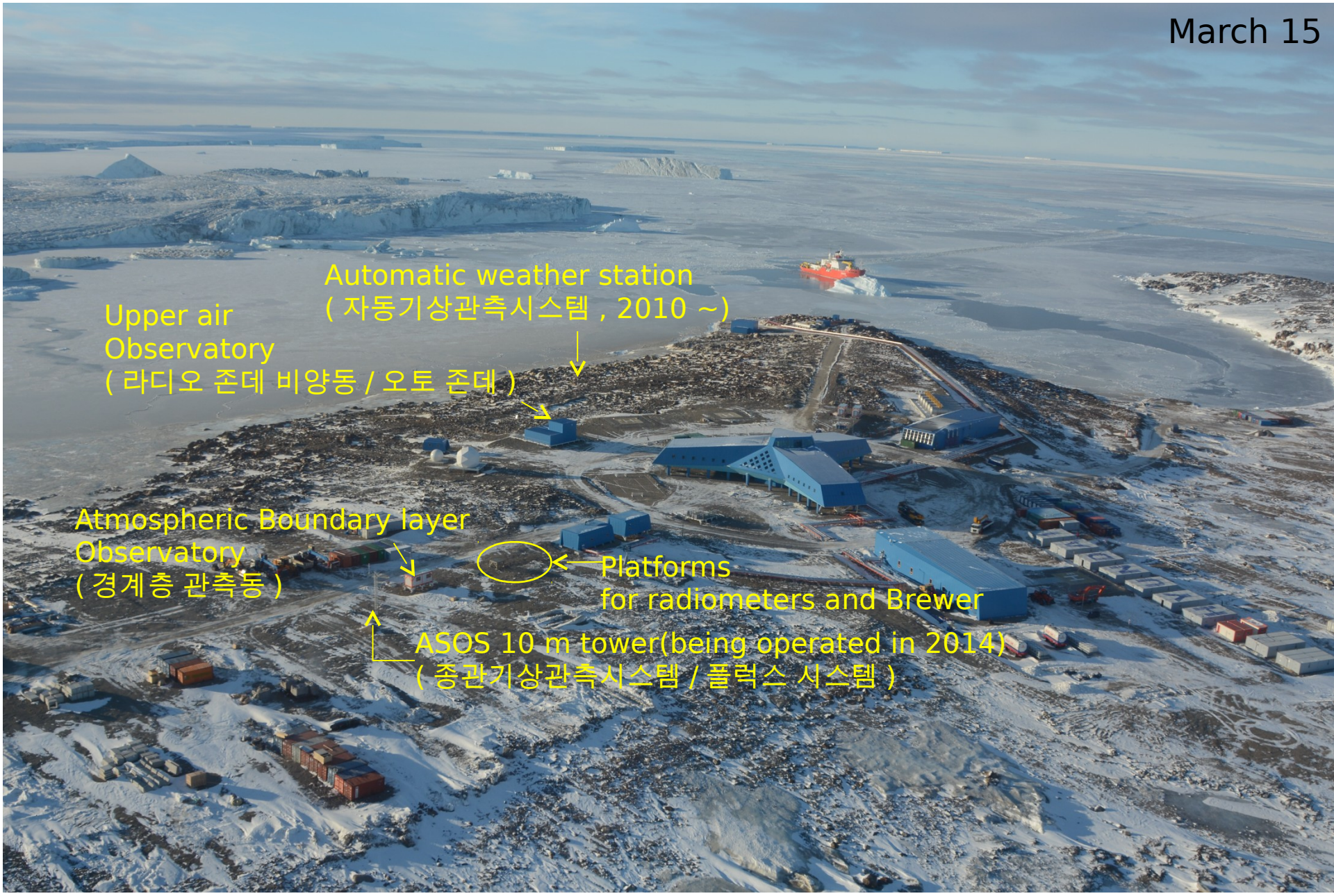
이태리 해빙활주로 2011~2014


Jang Bogo Stn.
Jang Bogo
(Measured since April)
Gondwana
Gerlache Inlet
(Measured since July)
Runway-Sea-J
Runway-Sea-M
Measured in Sept.
해빙 조사 지역
Mario Zucchelli Stn.

Jangboo Station buildings



- Maing building : 62 beds, Dining room, telecommunication, Research office
- Maintainence : Generator, Garage, Emergency building
- Research building : Radio-sonde, Satellite communication, Satellite image receiving antenna, Geophysics, Atmospheric research building etc.


March 15
Automatic weather station
(자동기상관측시스템 , 2010 ~)
Upper air
Observatory
(라디오 존데 비양동 / 오토 존데)
Atmospheric Boundary layer
Observatory
(경계층 관측동)
Platforms
for radiometers and Brewer
ASOS 10 m tower(being operated in 2014)
(종관기상관측시스템 / 플럭스 시스템)

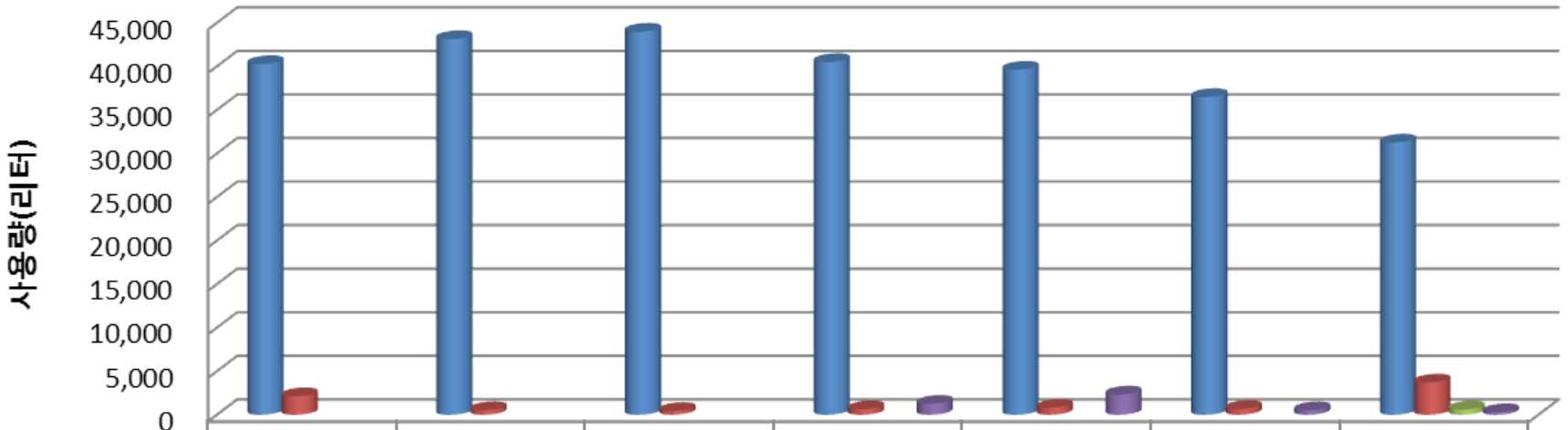
Major Facilities and Equipments

- Dry and Wet Lab for Atmospheric Science, Bio & Marine Science
- Geo & Geophysical Research Lab, Meteorite Research Lab
- Ice Core Storage & Cold Lab
- Radiosonde, etc

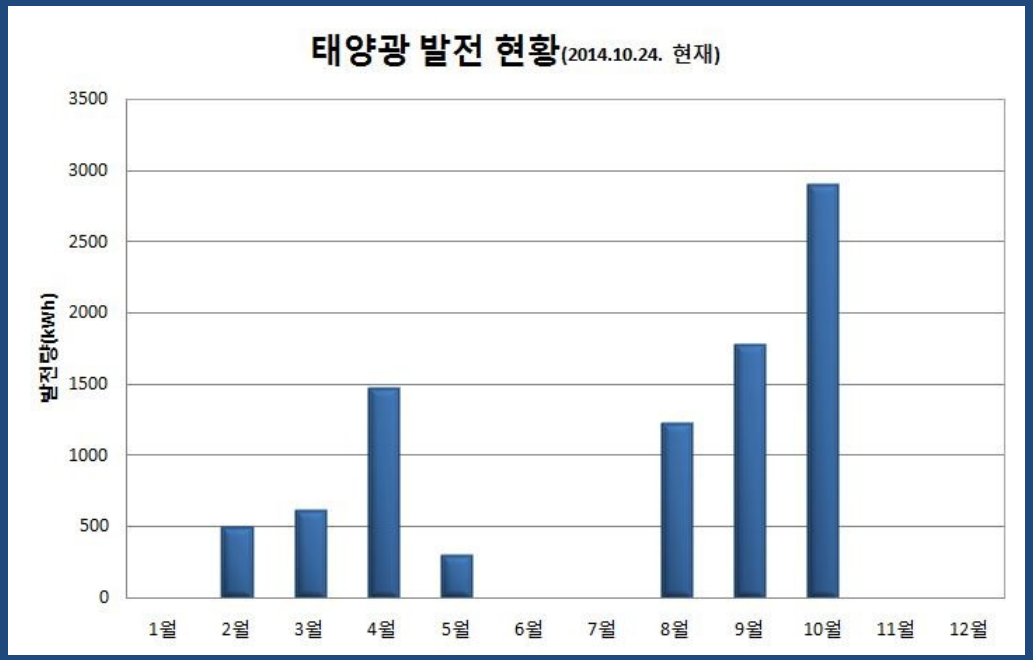
- Diesel Generator (Caterpillar 275kw, 3 in Power Plant, one in Emergency)
- Gas Tank (Antarctic MGO)
  - 110 CBM x 9 (three in pier, 6 near power plant)= 990CBM
  - Annual consumption 400 CBM expected
- Desalinating System (20ton x 2)
  - Krosys System, Daily 20 ton
- Recycling Water Treatment System, Daily 20 ton
- Waste Compactor(Can, etc), No Incinerator
- 4.8 diameter Satellite Antenna in the 8 meter dome
  - 1 Mbps, KT
  - Inmarsat
- 2 Pisten Bully, 2 Caterpillar, 50ton Crawler Crane, 25ton Hydro Crane 15ton Dump Truck, etc

Generator : 4×275kW

Diesel Consumption



	4월	5월	6월	7월	8월	9월	10월
경유 발전기	40,265	43,125	43,979	40,500	39,617	36,479	31,253
경유 중장비	2,138	529	442	632	809	673	3,703
경유 현대							613
경유 보일러				1,256	2,325	523	304



발전량 통계 보고서(2014. 10. 24. 현재)

장보고과학기지 / 용량(45kWh)

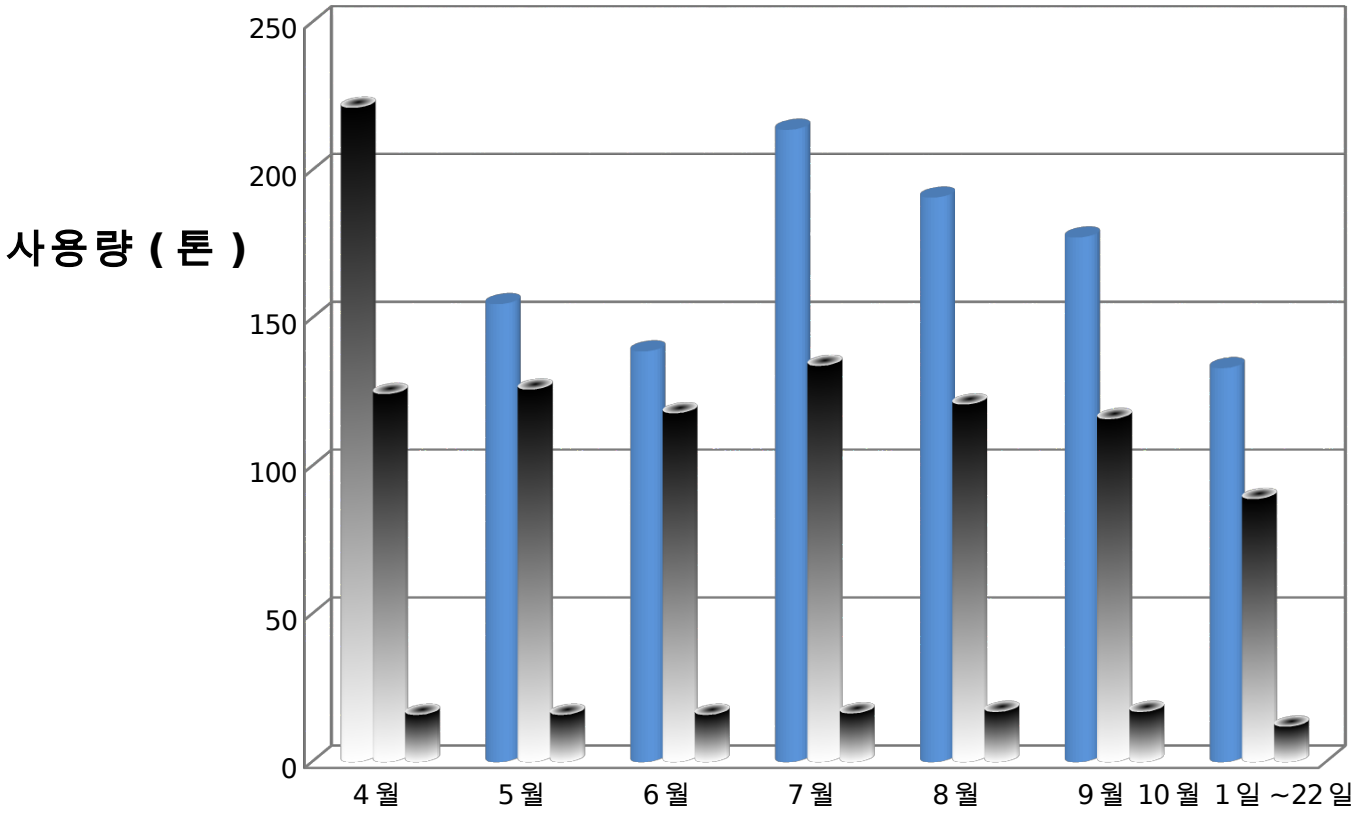
월	발전량(kWh)	비 고
1월	-	가동 전
2월	495	
3월	617	
4월	1,468	
5월	301	
6월	0	극야
7월	-	극야
8월	1,220	
9월	1,782	
10월	2,908	
11월	-	
12월	-	
평균	1,098.9	
합계	8,791	

풍력 발전 현황 (2014. 10. 24. 현재)

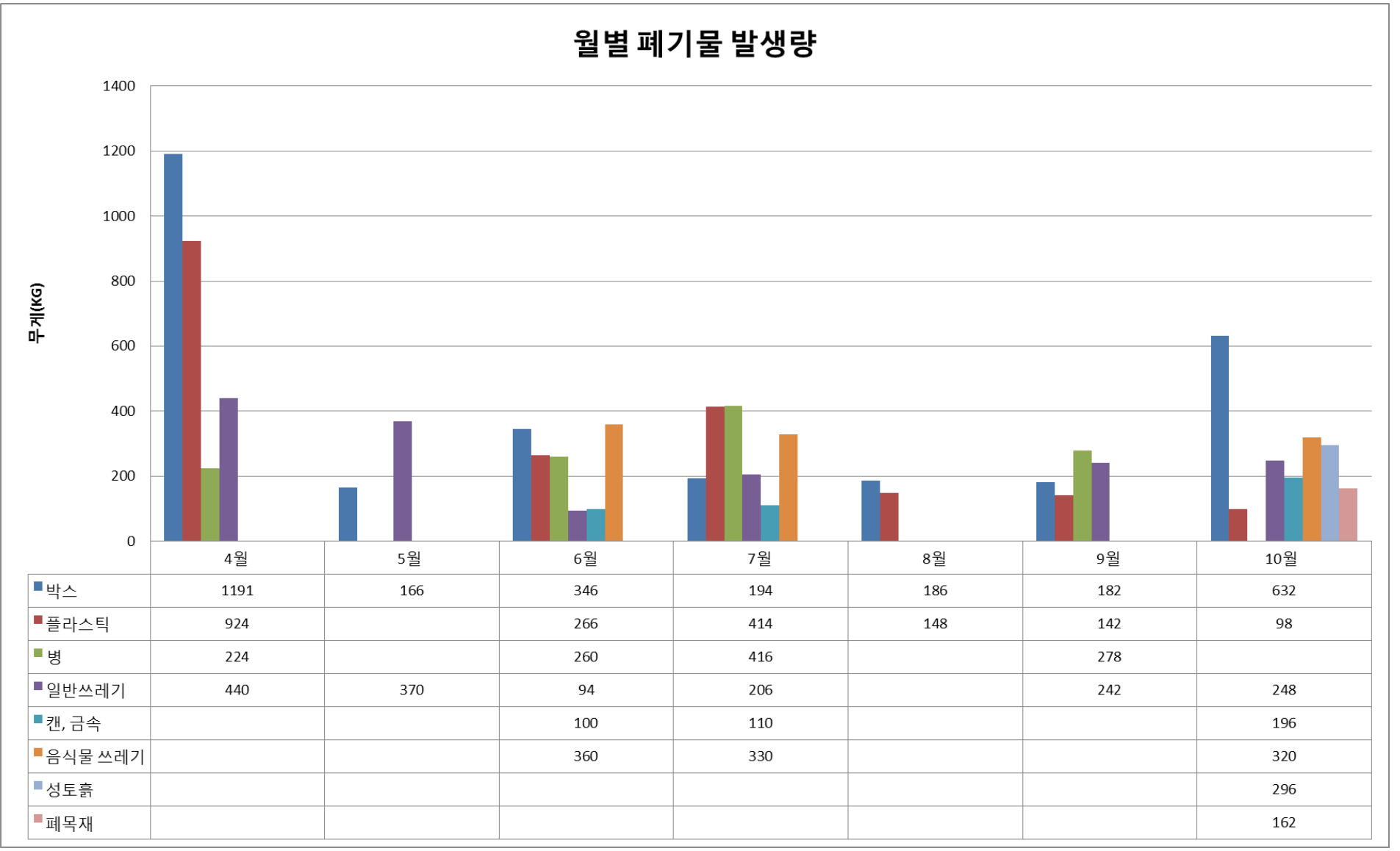
일일 생산량	0,2 kWh
총 생산량	100,2 kWh

Major Facilities

Fresh water & recycled water



Monthly wastes



	4월	5월	6월	7월	8월	9월	10월
박스	1191	166	346	194	186	182	632
플라스틱	924		266	414	148	142	98
병	224		260	416		278	
일반쓰레기	440	370	94	206		242	248
캔, 금속			100	110			196
음식물 쓰레기			360	330			320
성토흙							296
폐목재							162

Heavy machines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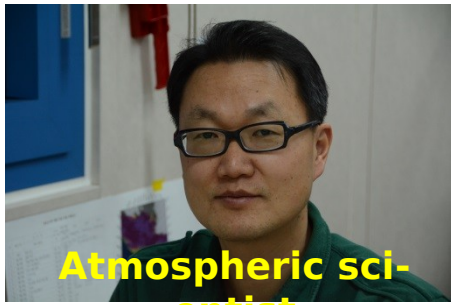
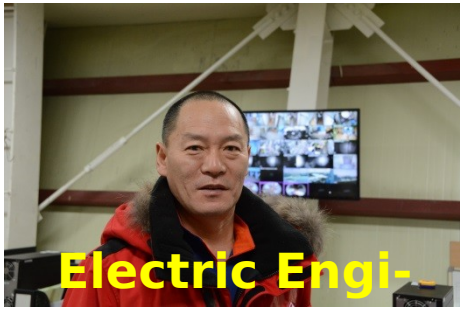
월 동 대 구 성


Station man-
ager


Atmospheric sci-
entist

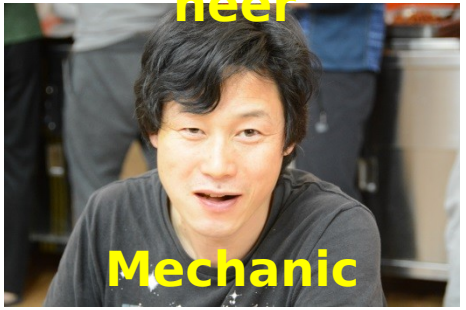

Chief Engineer


Electric Engi-
neer


Medical Doc-
tor

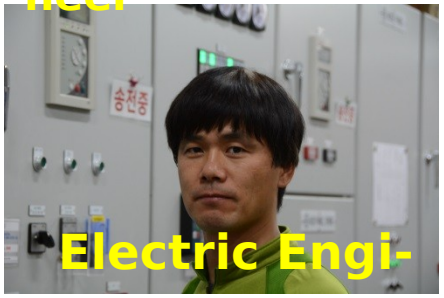

Meteorologist


Generator Engi-
neer


Mechanic


Chef


Space Scien-
tist


Electric Engi-
neer


Mechanic


Telecommunica-
tion

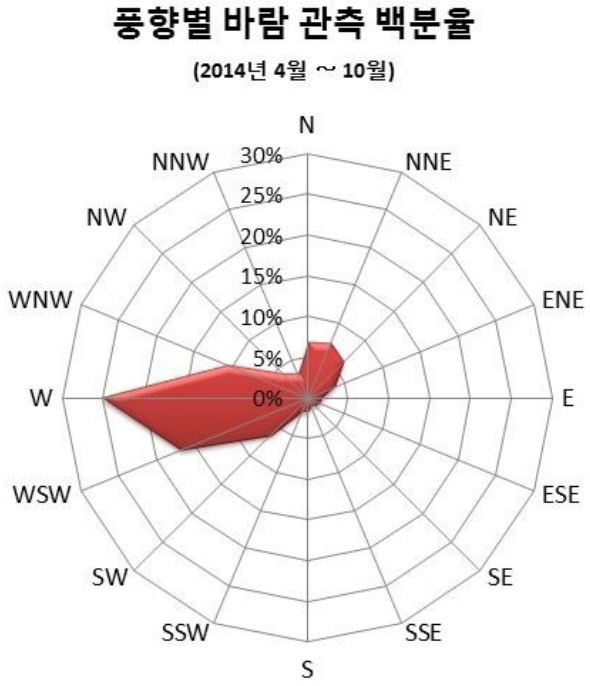

Mechenic

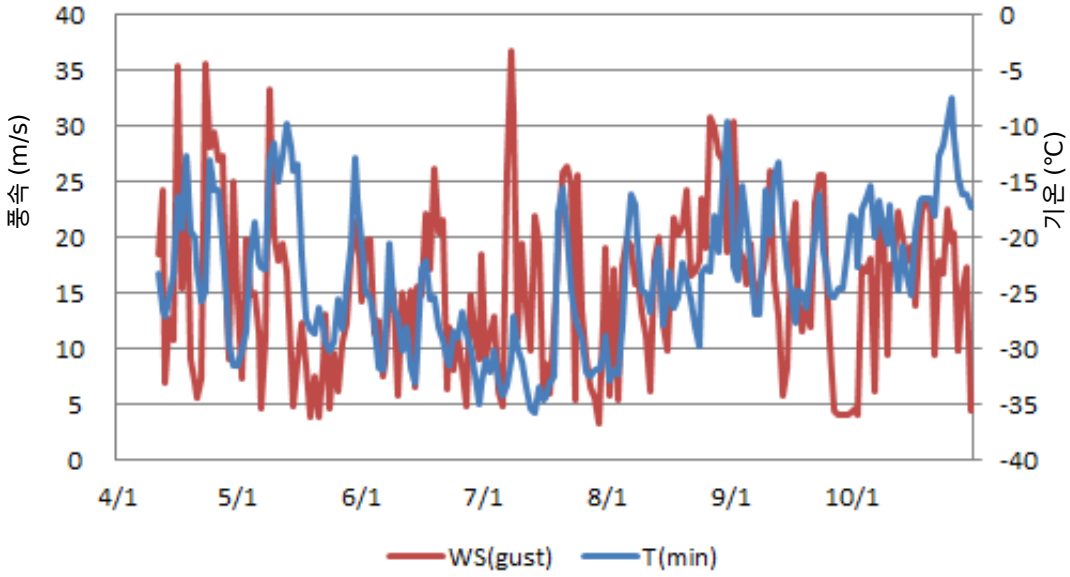

Mechanic


Safety Man-
ager

Meteological information at Jang Bogo

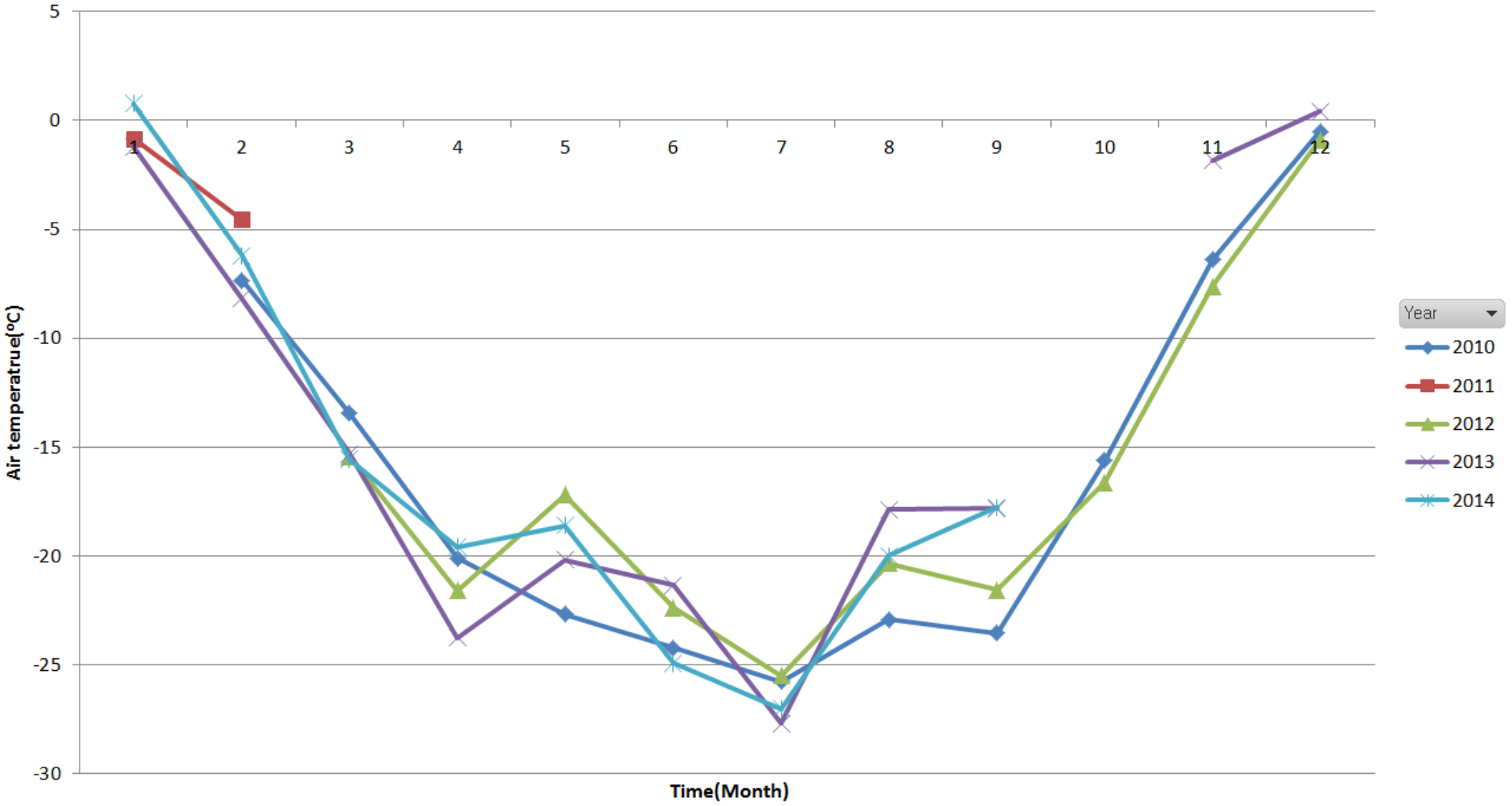
T(°C) AVG	T(°C) MAX	T(°C) MIN	WS(m/s) AVG	WS(m/s) GUST	P(hPa) AVG	P(hPa) MAX	P(hPa) MIN
-19.9	-0.4	-35.8	4.8	36.7	983.1	1007.3	953.1
	4. 24.	7. 14.		7. 8.		9. 25.	8. 30.



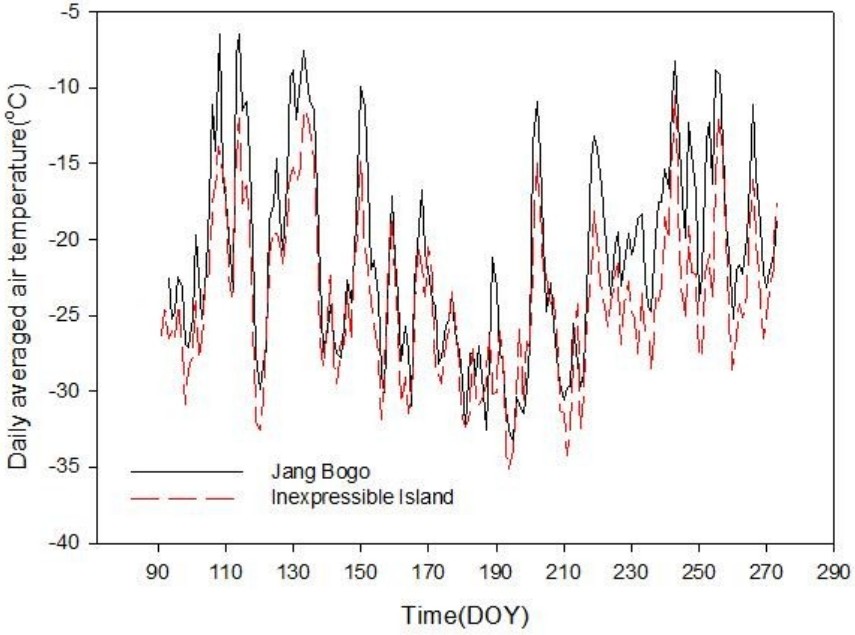


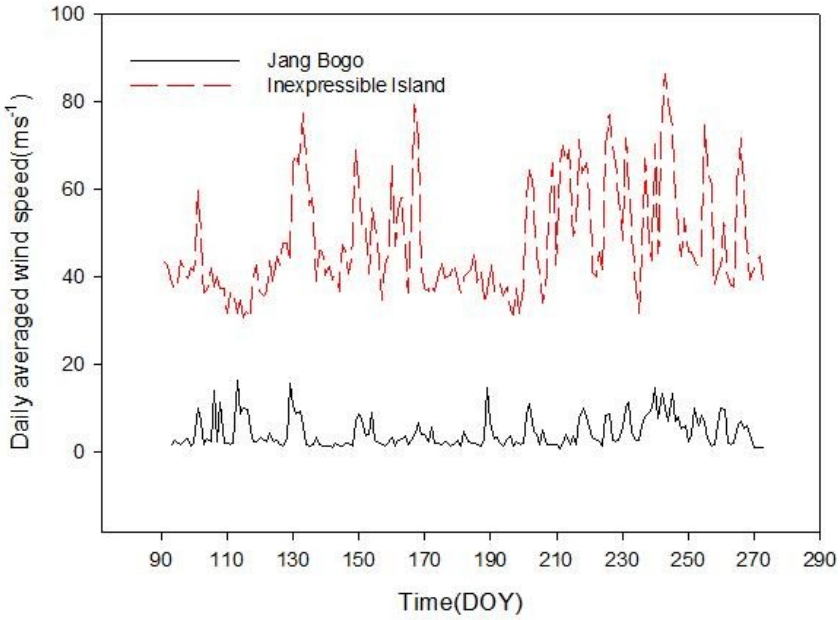
Air Temperature changes

월 평균 기온의 변동(AWS)



Comparison between Jangbogo and Inexpressible Island(4.11~9.30)





Unique Clouds at Jangbogo

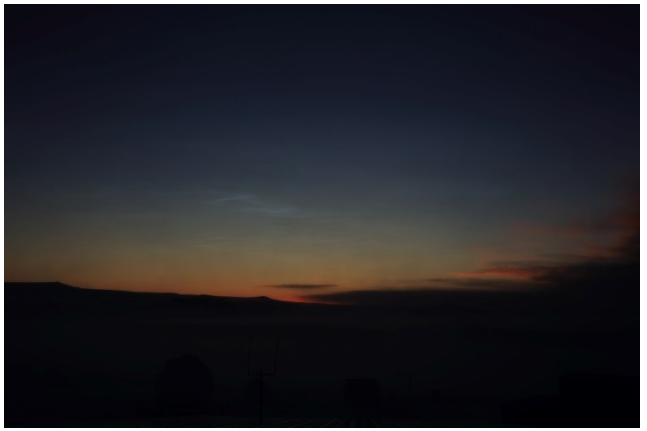
채운 (Iridescent cloud)

달코로나 (Lunar Corona)

렌즈운 (Lenticular clouds)

모자구름 (Cap clouds)

진주운 (Nacreous Clouds)



야광운 (Noctilucent Clouds)

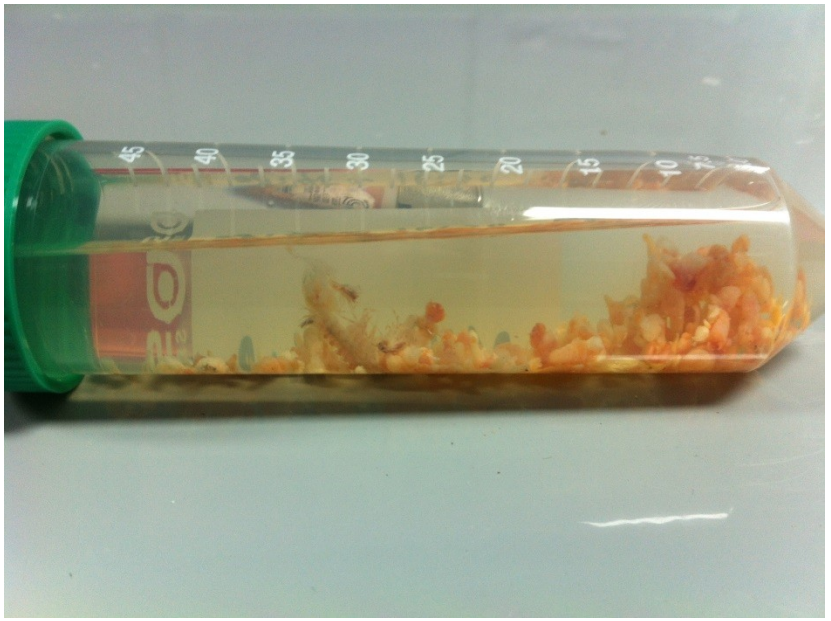
오로라

1st Overwintering Team 2014

Changsup Lee 2014

장보고기지 주변 동물

Sea Ice Change



은어알 채집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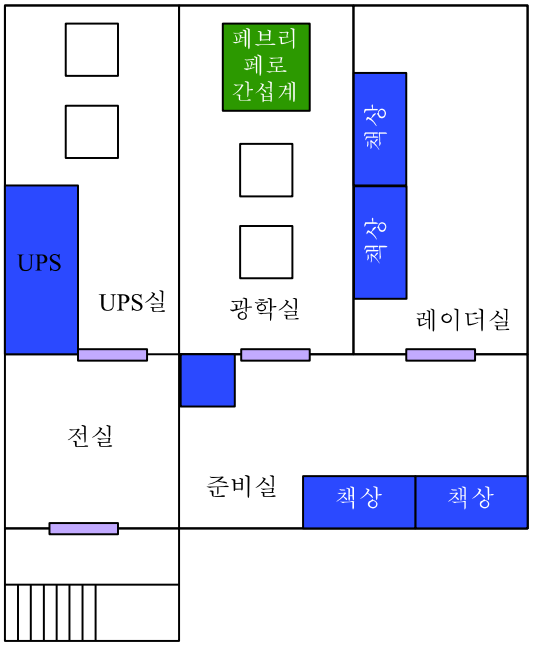
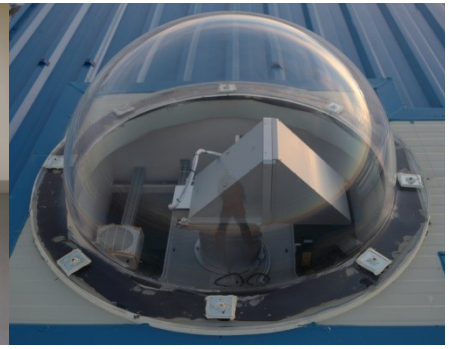
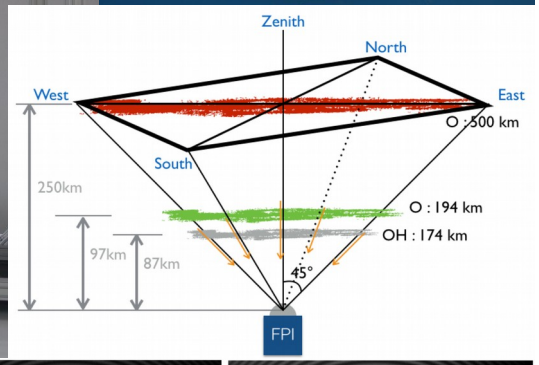
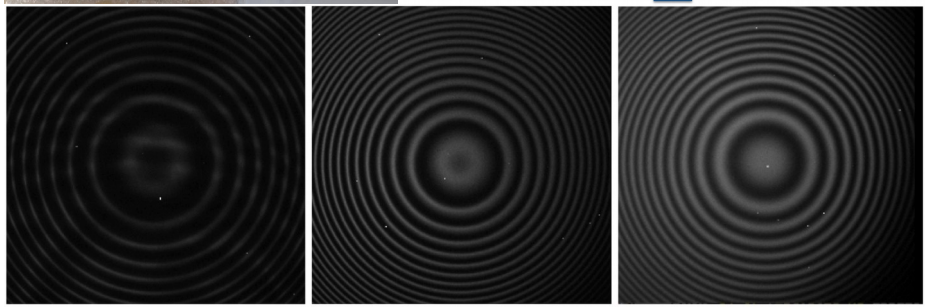
Space Science

- 우주기상관측동

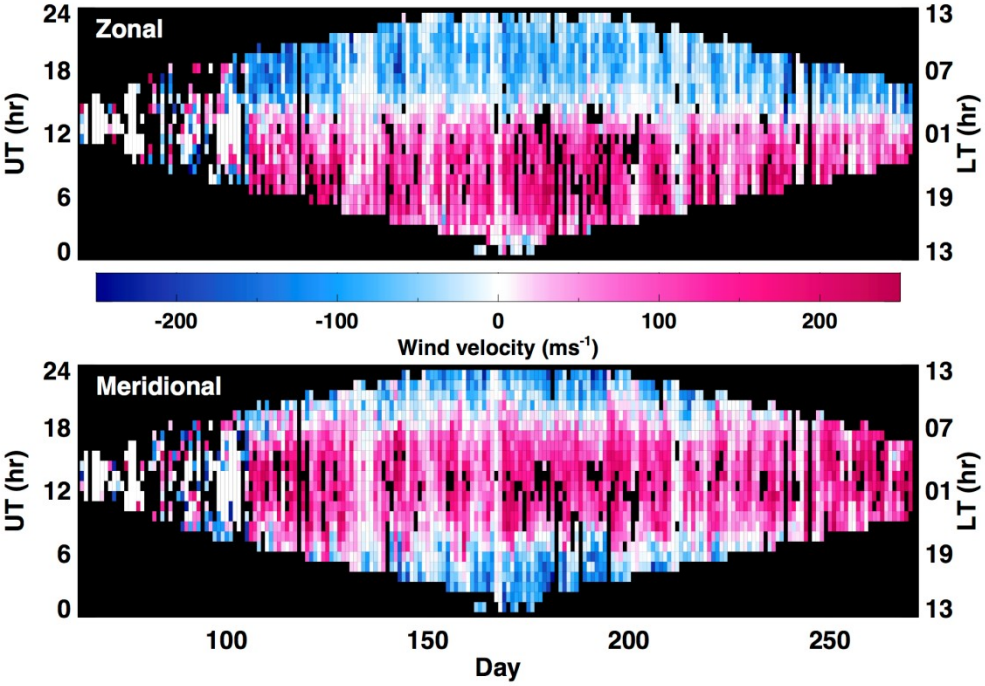




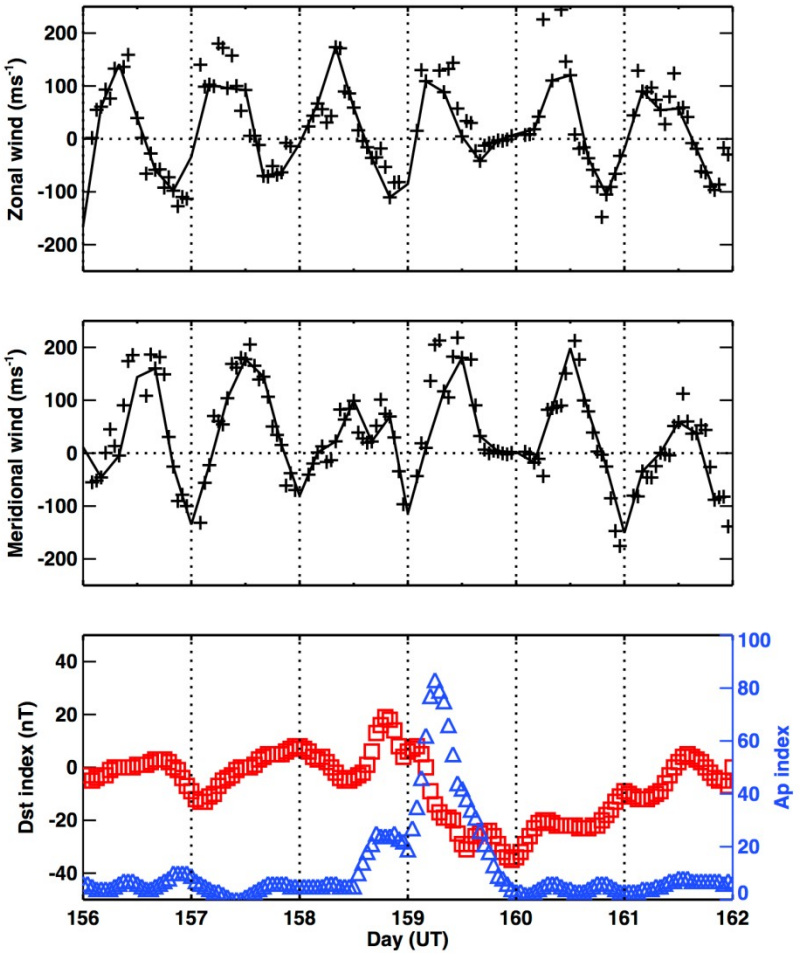




Upper atmospheric wind



FPI 로 관측된 열권 250 km 고도에서의 Zonal, Meridional wind. 붉은색 (Eastward/Northward)



지자기활동지수 (Ap/Dst index) 와 열권 바람의 관계 비교

<장보고기지의 유성과 오로라>

장보고기지 1차월동대 통신을 담당하는
이상훈대원이 2014년 8월 19일
02시 20~40분에 촬영한 것으로
유성이 대기권으로 진입하면서 나타난
불꽃과 충돌후 연기가 점차 사라지는
모습이 담겨있습니다.


Thank you!!