

Phytosociological Research Center

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Worldwide Bioclimatic Classification System

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(Adapted to Synoptical Table 30/08/2017)

PIONERSKAYA (ANTARCTICA TERR.)

Altitude: 2700 m.

Latitude: 69°44'S Longitude: 95°30'E

Temperature observation period.: 1991-1994 (4)

Rainfall observation period....: 1992-1994 (3)

| (C/mm) | Ti | Mi | mi | M'i | m'i | Pi | Epi |
|--------|--------|--------|--------|--------|--------|-------|------|
| Jan. | -23.89 | -19.44 | -28.33 | -14.44 | -35.00 | 45.0 | 0.00 |
| Feb. | -32.50 | -27.78 | -37.22 | -16.67 | -47.78 | 29.0 | 0.00 |
| Mar. | -39.17 | -36.11 | -42.22 | -23.33 | -52.78 | 64.0 | 0.00 |
| Apr. | -40.28 | -37.78 | -42.78 | -22.78 | -53.33 | 195.1 | 0.00 |
| May. | -43.61 | -41.11 | -46.11 | -17.22 | -56.67 | 67.1 | 0.00 |
| Jun. | -46.95 | -45.00 | -48.89 | -26.67 | -59.44 | 85.1 | 0.00 |
| Jul. | -48.62 | -46.67 | -50.56 | -25.56 | -63.89 | 103.1 | 0.00 |
| Aug. | -49.17 | -47.22 | -51.11 | -27.22 | -66.67 | 114.1 | 0.00 |
| Sep. | -45.00 | -42.22 | -47.78 | -23.33 | -62.78 | 117.1 | 0.00 |
| Oct. | -40.28 | -36.67 | -43.89 | -21.11 | -58.33 | 61.0 | 0.00 |
| Nov. | -32.22 | -27.22 | -37.22 | -18.33 | -43.89 | 36.1 | 0.00 |
| Dec. | -23.61 | -19.44 | -27.78 | -13.33 | -36.67 | 49.0 | 0.00 |
| Year | -38.77 | -35.56 | -41.99 | -20.83 | -53.10 | 966 | 0.00 |

BIOCLIMATIC INDICES AND DIAGNOSIS

| | |
|--|-------|
| Thermicity index.....(It): | -1371 |
| Compensated thermicity index.....(Itc): | -1288 |
| Simple continentality index.....(Ic): | 25.6 |
| Diurnality index.....(Id): | 10.0 |
| Annual ombrothermic index.....(Io): | No |
| Monthly estival ombrothermic index.....(Ios1): | No |
| Bimonthly estival ombrothermic index.....(Ios2): | No |
| Three monthly estival ombrothermic index.....(Ios3): | No |
| Four monthly estival ombrothermic index.....(Ios4): | No |
| Annual ombro-evaporation index.....(Ioe): | No |
| Annual positive temperature.....(Tp): | 0 |
| Annual negative temperature.....(Tn): | 4653 |
| Estival temperature.....(Ts): | 0 |
| Positive precipitation.....(Pp): | 0 |

| N. of | P>4T | P:2T-4T | PT-2T | P<T | T<0 |
|--------|------|---------|-------|-----|-----|
| Months | 0 | 0 | 0 | 0 | 12 |

Latitudinal Belt...: Low polar

Continentality.....: Continental - High Subcontinental

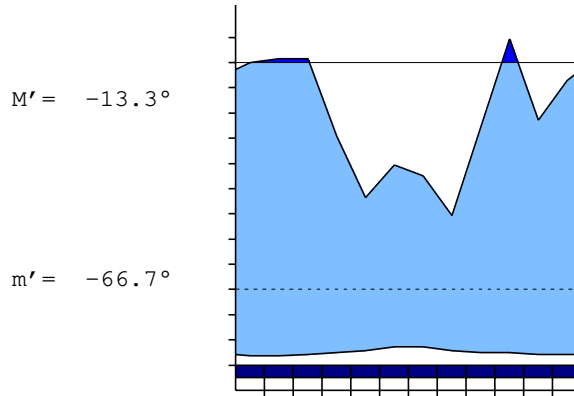
Bioclimate.....: Polar Hypergelid

Bioclimatic Belt...: Upper Hypergelid High-Snowy

PIONERSKAYA (ANTARCTICA TERR.)

2700 m

P= 966 69° 44'S 95° 30'E 4/3 y.
 T= -38.8° Ic= 25.6 Tp= 0 Tn= 4653
 m= -51.1° M= -47.2° Itc= -1288 Io=9999.9



Polar Hypergelid
 Upper Hypergelid High-Snowy

WATER INDEX CARD PIONERSKAYA (ANTARCTICA TERR.)
 Altitude: 2700 m. Latitude: 69° 44'S

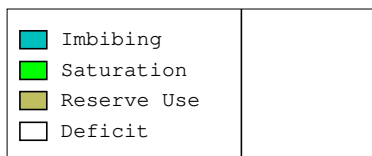
| (C/mm) | T | PE | P | VR | R | RE | DF | SP | DR | HC |
|--------|-------|----|-----|----|-----|----|----|-----|-----|----|
| Jul. | -48.6 | 0 | 103 | 0 | 100 | 0 | 0 | 103 | 97 | * |
| Aug. | -49.2 | 0 | 114 | 0 | 100 | 0 | 0 | 114 | 105 | * |
| Sep. | -45.0 | 0 | 117 | 0 | 100 | 0 | 0 | 117 | 111 | * |
| Oct. | -40.3 | 0 | 61 | 0 | 100 | 0 | 0 | 61 | 86 | * |
| Nov. | -32.2 | 0 | 36 | 0 | 100 | 0 | 0 | 36 | 61 | * |
| Dec. | -23.6 | 0 | 49 | 0 | 100 | 0 | 0 | 49 | 55 | * |
| Jan. | -23.9 | 0 | 45 | 0 | 100 | 0 | 0 | 45 | 50 | * |
| Feb. | -32.5 | 0 | 29 | 0 | 100 | 0 | 0 | 29 | 40 | * |
| Mar. | -39.2 | 0 | 64 | 0 | 100 | 0 | 0 | 64 | 52 | * |
| Apr. | -40.3 | 0 | 195 | 0 | 100 | 0 | 0 | 195 | 123 | * |
| May. | -43.6 | 0 | 67 | 0 | 100 | 0 | 0 | 67 | 95 | * |
| Jun. | -47.0 | 0 | 85 | 0 | 100 | 0 | 0 | 85 | 90 | * |
| Year | -38.8 | 0 | 966 | * | * | 0 | 0 | 966 | 966 | * |

R = Reserve VR = Variation of the reserve RE = Real evapotranspiration
 DR = Drainage HC = Humidity coefficient DF = Deficit SP = Superavit

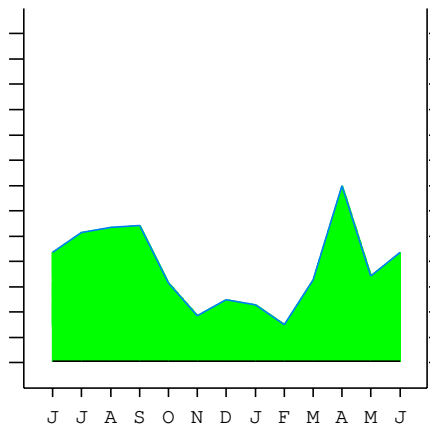
PIONERSKAYA (ANTARCTICA TERR.)

69°44'S 95°30'E 2700 m 4/3 y.

T= -38.8 Ic= 25.6 Polar Hypergelid
 m= -51.1 Tp= 0 Upper Hypergelid
 M= -47.2 Tn= 4653 High-Snowy
 M' = -13.3 Itc= -1288
 m' = -66.7 Io=9999.9
 P= 966 mm ———
 PE= 0 mm ———



All over the year,
 there is no hydric deficit



PIONERSKAYA (ANTARCTICA TERR.)

Latitude: 69°44'S Longitude: 95°30'E Altitude: 2700 m

SUMMARY OF RIVAS-MARTINEZ CLASSIFICATION

Continentality Index [C2b]
+ Type: C. Continental
+ Subtype: 2. Subcontinental
+ Variant: b. High
Thermic types [C2.D11]
+ Latitudinal zone: C. Cold
+ Latitudinal belt: 2. Low polar
+ Thermic type: D. Gelid
+ Thermic subtype: 11.Ultrageid
Bioclimatic types [E4.6.5]
+ Macrobioclimate: E. Polar
+ Bioclimate: 4. Hypergelid
+ Bioclimatic variant .:
+ Thermic type.....: 6. Upper Hypergelid
+ Thermic subtype.....:
+ Ombrothermic type ...: 5. High-Snowy
+ Ombrothermic subtype :
Bioclimatic Classification

PIONERSKAYA (ANTARCTICA TERR.)

Latitude: 69°44'S Longitude: 95°30'E Altitude: 2700 m

PRECIPITATION PARAMETERS

Warmest semester of the year.....(Pss): 284
Coldest semester of the year.....(Psw): 682
Warmest four months period of the year.....(Pcm1): 159
Following warmest four months period.....(Pcm2): 411
Positive precipitation dryest 3 months.....(Ppd): 0
Positive precipitation dryest 2 months.....(Ppd2): 0
Positive precipitation dryest 1 month.....(Ppd1): 0
Positive precipitation warmest 3 months.....(Pps): 0
Positive precipitation warmest 2 months.....(Pps2): 0
Positive precipitation warmest 1 month.....(Pps1): 0
Positive precipitation coldest 3 months.....(Ppw): 0
Positive precipitation coldest 2 months.....(Ppw2): 0
Positive precipitation coldest 1 month.....(Ppw1): 0

| Seasons | Winter Tr1-W | Spring Tr2-P | Summer Tr3-S | Automn Tr4-F |
|----------|-----------------|-----------------|-----------------|-----------------|
| Rainfall | 302 | 214 | 123 | 326 |

Seasonal rainfall rhythms: F > W > P > S

PIONERSKAYA (ANTARCTICA TERR.)

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TEMPERATURE PARAMETERS

Average warmest month [T].....(Tmax): -23.6
Average coldest month [T].....(Tmin): -49.2
Maximum temp. warmest month [M].....(Tmmax): -19.4
Minimum temp. coldest month [m].....(Tmmin): -51.1
Absolute Max.temp. warmest month [M'].....(Tamax): -13.3
Absolute Min.temp. coldest month [m'].....(Tamin): -66.7
First warmest contrasted month [M].....(Tcmax): -27.2 (11)
First coldest contrasted month [m].....(Tcmin): -37.2 (11)
Estival temperature.....(Ts): 0
Positive temperature dryest 3 months.....(Tpd): 0
Positive temperature dryest 2 months.....(Tpd2): 0
Positive temperature dryest 1 month.....(Tpd1): 0
Positive temperature warmest 3 months.....(Tps): 0
Positive temperature warmest 2 months.....(Tps2): 0
Positive temperature warmest 1 month.....(Tps1): 0
Positive temperature coldest 3 months.....(Tpw): 0
Positive temperature coldest 2 months.....(Tpw2): 0
Positive temperature coldest 1 month.....(Tpw1): 0

PIONERSKAYA (ANTARCTICA TERR.)

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SEASONAL PARAMETERS

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Warmest semester...(Sms) | o | o | o | | | | | | | o | o | o |
| Dryest semester....(Smd) | o | o | o | | | | | | | o | o | o |
| Warmest 4 months...(Cm1) | o | o | | | | | | | | | o | o |
| Dryest 4 months....(Cmd) | o | o | | | | | | | | | o | o |
| Vegetation Activity(Pav) | | | | | | | | | | | | |
| Ultragelid...[M' <=0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |
| Hypergelid...[M <=0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |
| Gelid.....[T <=0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |
| Subgelid.....[m <=0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |
| Pregelid.....[m' <=0] (Pf) | o | o | o | o | o | o | o | o | o | o | o | o |
| Agelid.....[m' > 0] (Pf) | | | | | | | | | | | | |
| HiperAgelid..[all>0] (Pf) | | | | | | | | | | | | |

PIONERSKAYA (ANTARCTICA TERR.)

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OMBROTHERMIC PARAMETERS

Annual aridity index.[PE/P].....(Iar): 0.00
 Mediterranean index of January.....(Im1): 0.00
 Mediterranean index of January & February.....(Im2): 0.00
 Mediterranean index of December to February...(Im3): 0.00

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|------------|--------------|------|------|--------|------|------|---------------|------|------|--------|------|------|
| Pp(x10) | * | * | * | * | * | * | * | * | * | * | * | * |
| Tp | * | * | * | * | * | * | * | * | * | * | * | * |
| Io (Iom) | * | * | * | * | * | * | * | * | * | * | * | * |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp(x10)/Tp | */* | | | */* | | | */* | | | */* | | |
| Io (Iot) | * | | | * | | | * | | | * | | |
| Semesters | December-May | | | | | | June-November | | | | | |
| Pp(x10)/Tp | */* | | | | | | */* | | | | | |
| Io (Iosm) | * | | | | | | * | | | | | |

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Aridity Value Index (AVI)

[10xPP/TP=IO]: 0/0=9999.90 **There is No Yearly Aridity**

| Months | Dec. | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. |
|----------------|--------|------|------|--------|------|------|--------|------|------|--------|------|------|
| Pp [P*10] | * | * | * | * | * | * | * | * | * | * | * | * |
| Tp [T*10] | * | * | * | * | * | * | * | * | * | * | * | * |
| Iom [Pp/Tp] | !! | !! | !! | !! | !! | !! | !! | !! | !! | !! | !! | !! |
| Avm [200-Iom] | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** | *** |
| Seasons | Summer | | | Autumn | | | Winter | | | Spring | | |
| Pp / Tp | * / * | | | * / * | | | * / * | | | * / * | | |
| Iot [Pp/Tp] | ** | | | ** | | | ** | | | ** | | |
| Avs E[Avm<200] | *** | | | *** | | | *** | | | *** | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
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BIOCLIMATIC INDICES I

CI of Supan (1884) [Tmax-Tmin](Sp): 25.56
 CI of Gorezinski (1920) [1.7*Sp/sin(Lat)-20.4]: 25.92
 CI of Conrad (1946) [1.7*Sp/sin(Lat+10)-14]: 30.16
 + Oceanic (20<CI<40)
 CI of Currey (1974) [CI=Sp/(1+Lat/3)]: 1.05
 + Oceanic (0.6<CI<1.1)
 Rainfall Index of Lang (1925) [R=P/T]: -24.91
 +
 Aridity Index of Martonne (1926) [Ia=P/(T+10)]: -33.56
 +
 I of Emberger (1930) [Q=100*P/(Tmax²-Tmin²)]: -43.22
 +
 I of Dantin & Revenga (1940) [DR=100*T/P]: -4.02
 +
 Aridity Index of UNEP [I=P/PE]: 0.00
 + Hyperarid (0.05>Im)
 Potential Erosion I of Fournier (1960) [K=Pi²/P].....: 39.42
 + Very low (K<60)

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BIOCLIMATIC INDICES II

Bioclimatic classification of Gaussen & Bagnouls (1957)
 + Climate: C. Gelid
 + Region: 12. Criomeric (Gelid)
 + Thermic type: 11. Ultragelid

| Thornthwaite (1948) | | | | | | | | | | | | |
|---|------|------|------|------|------|------------------------------------|------|------|------|------|------|------|
| | Jan. | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| P-E ratio | 0.38 | 0.23 | 0.56 | 1.92 | 0.59 | 0.77 | 0.95 | 1.06 | 1.09 | 0.53 | 0.30 | 0.41 |
| T-E ratio | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Precipitation-effectiveness: 87.78 | | | | | | Temperature-efficiency: 0.00 | | | | | | |
| Moisture Index [MI=100*(P-PE)/PE]: 0.00 | | | | | | | | | | | 0.00 | |
| + C2.Subhumid humid (0<MI<20) | | | | | | | | | | | | |
| Index of dryness [DI=100*d/PE]: 0.00 | | | | | | | | | | | 0.00 | |
| + No deficit (0<DI<16.7) | | | | | | | | | | | | |
| Index of humidity [HI=100*s/PE]: 0.00 | | | | | | | | | | | 0.00 | |
| + No surplus (0<HI<10) | | | | | | | | | | | | |
| Potential Evapotranspiration PE: 0.00 | | | | | | | | | | | 0.00 | |
| + Ice climate (PE<142) | | | | | | | | | | | | |

