

Basic Met Course

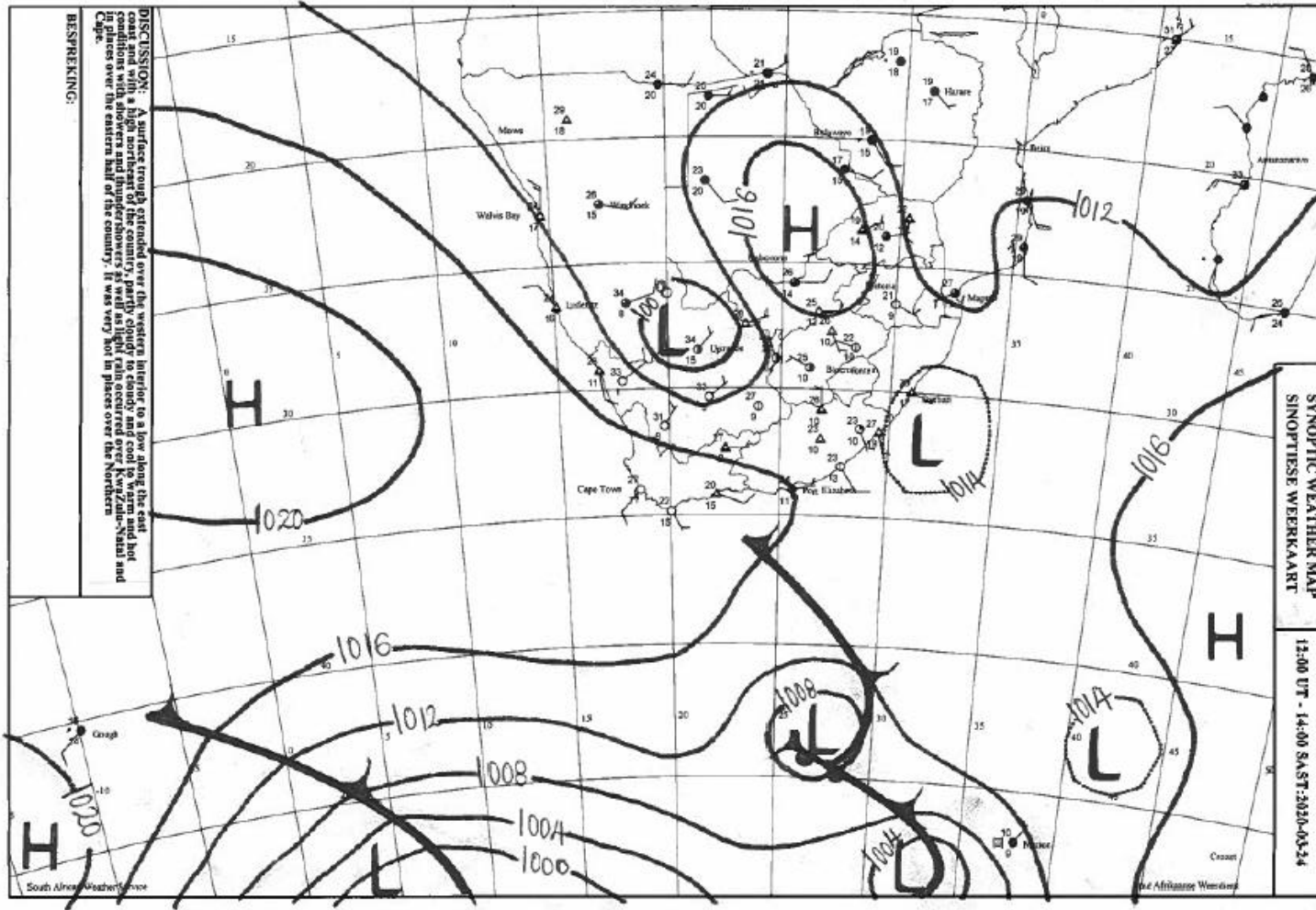
Weather Systems affecting Southern Africa during the Autumn months (March, April & May)

Southern Africa



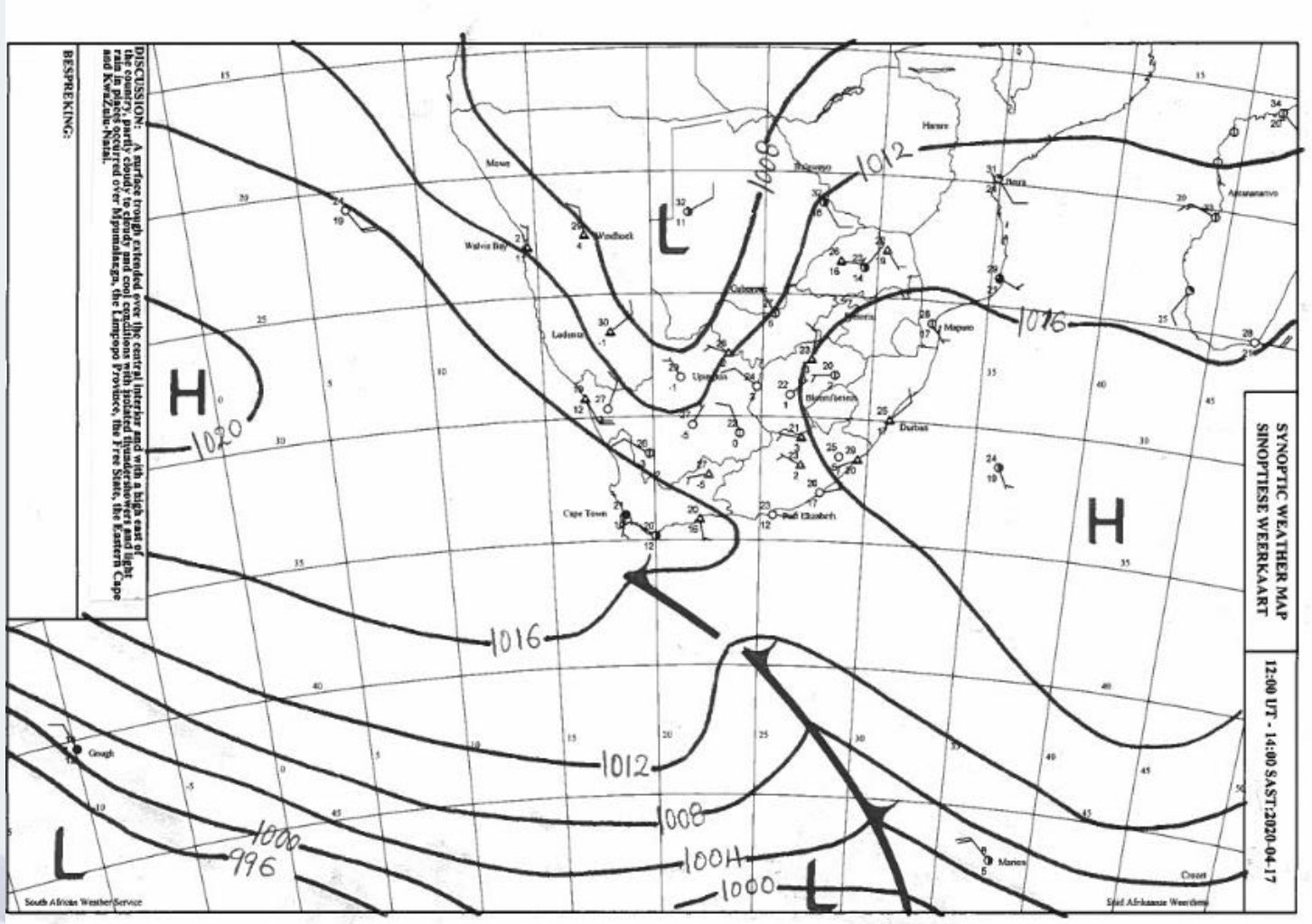
**South African
Weather Service**

Typical Flow for March

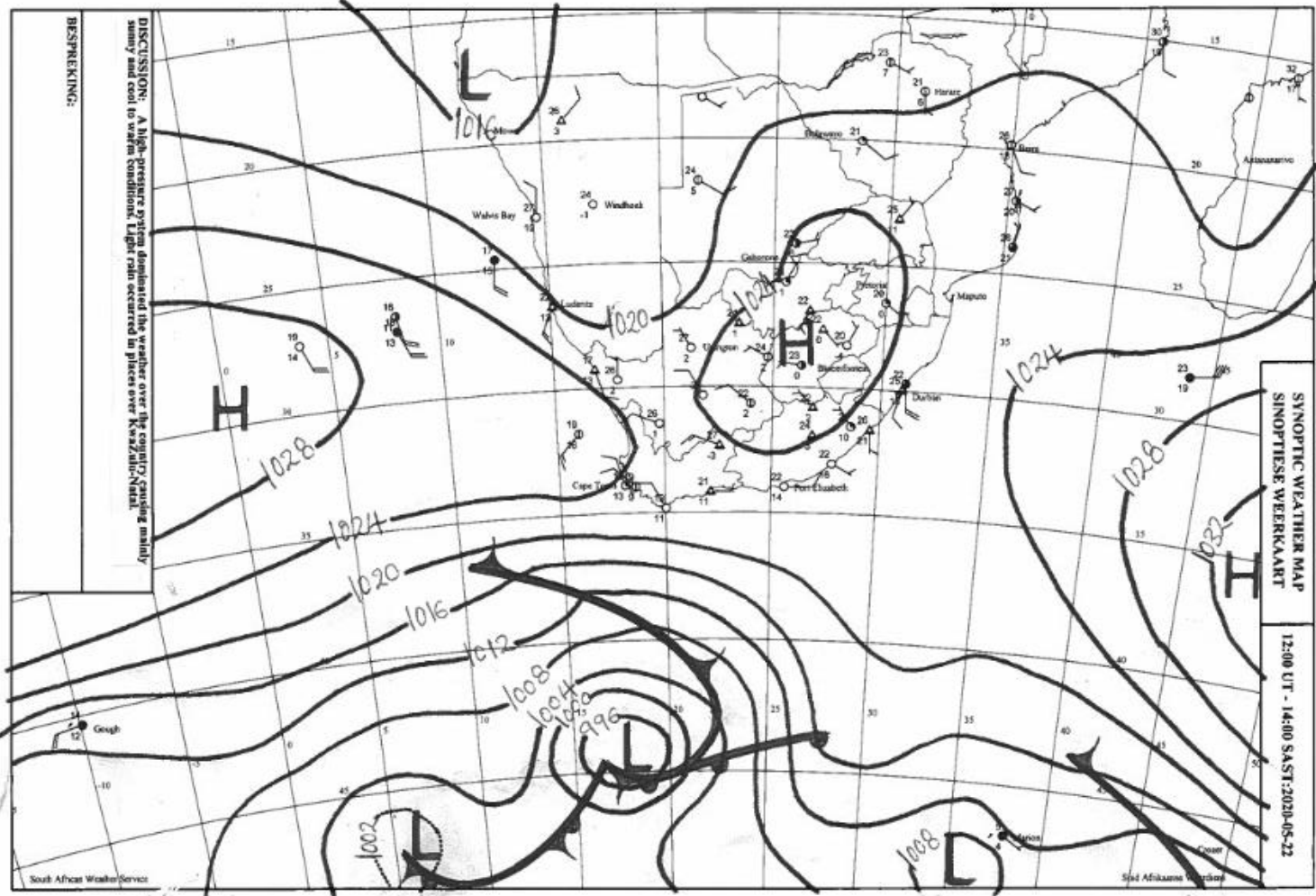


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Typical Flow for April

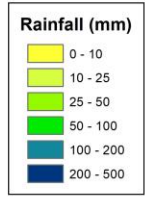
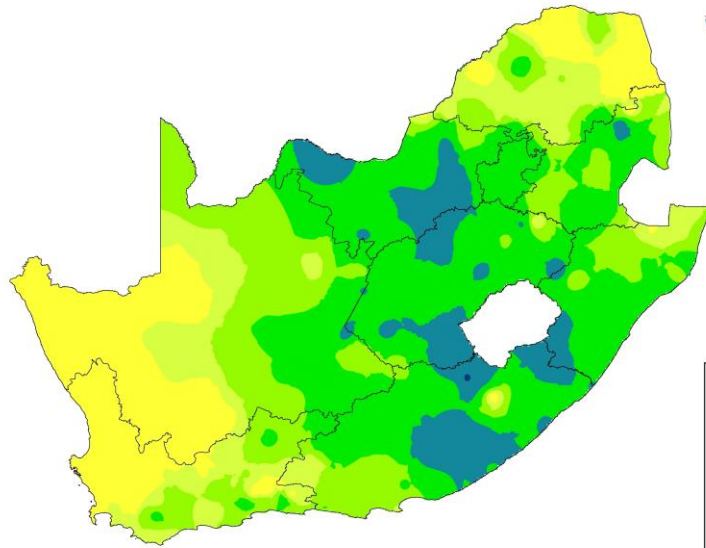


Typical Flow for May



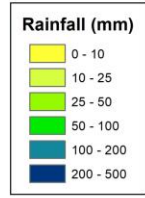
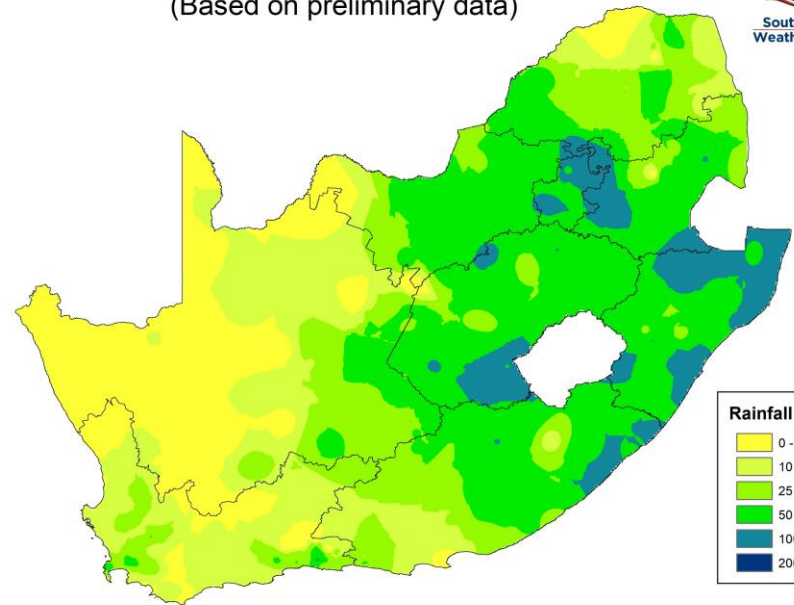
Rainfall (mm) for March 2020

(Based on preliminary data)



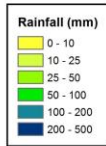
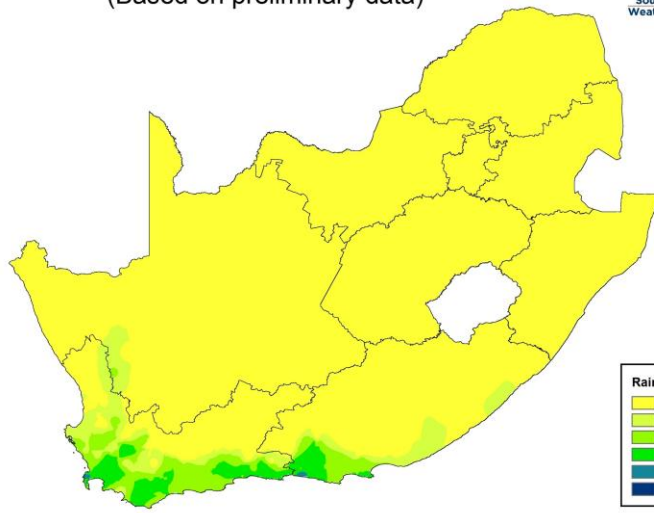
Rainfall (mm) for April 2020

(Based on preliminary data)



Rainfall (mm) for May 2020

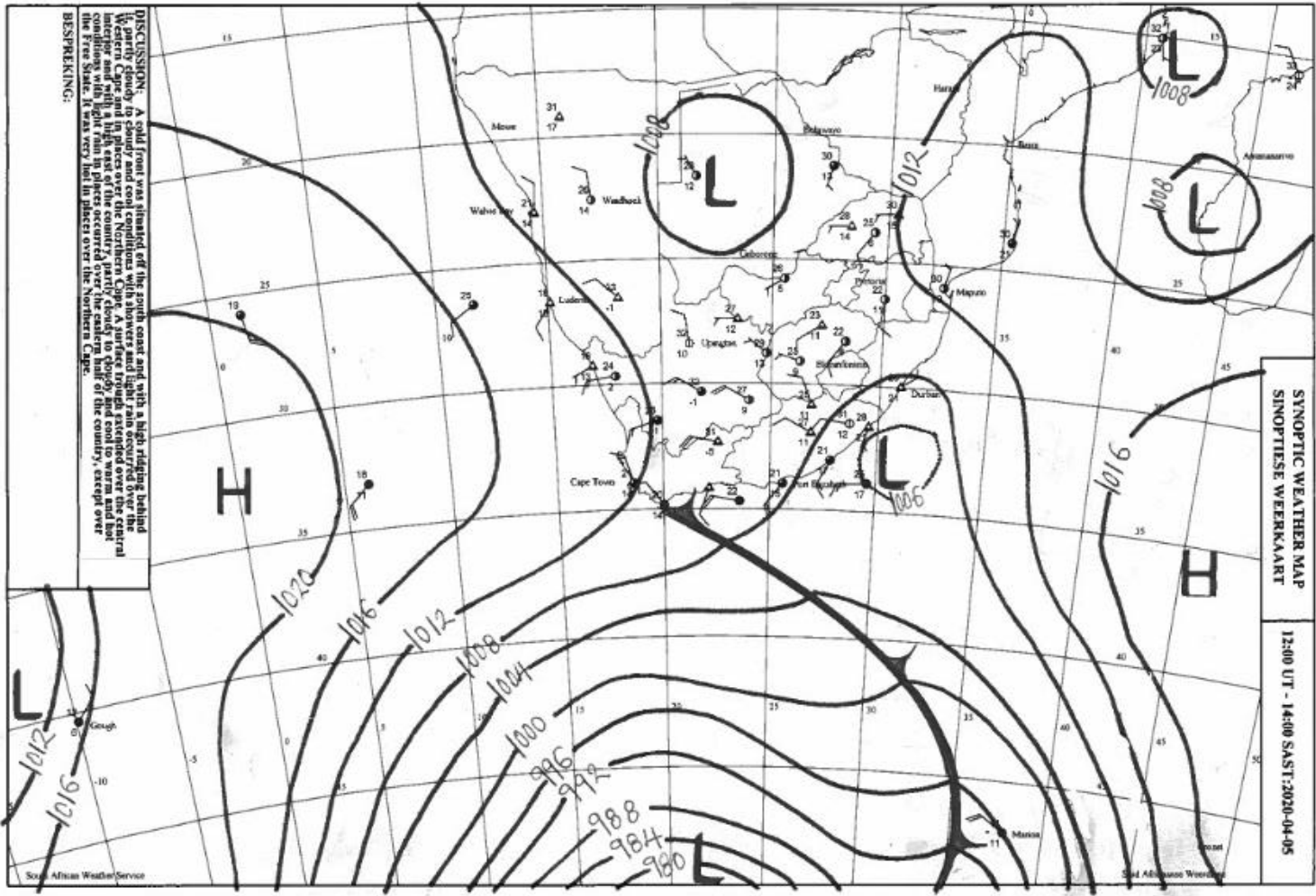
(Based on preliminary data)



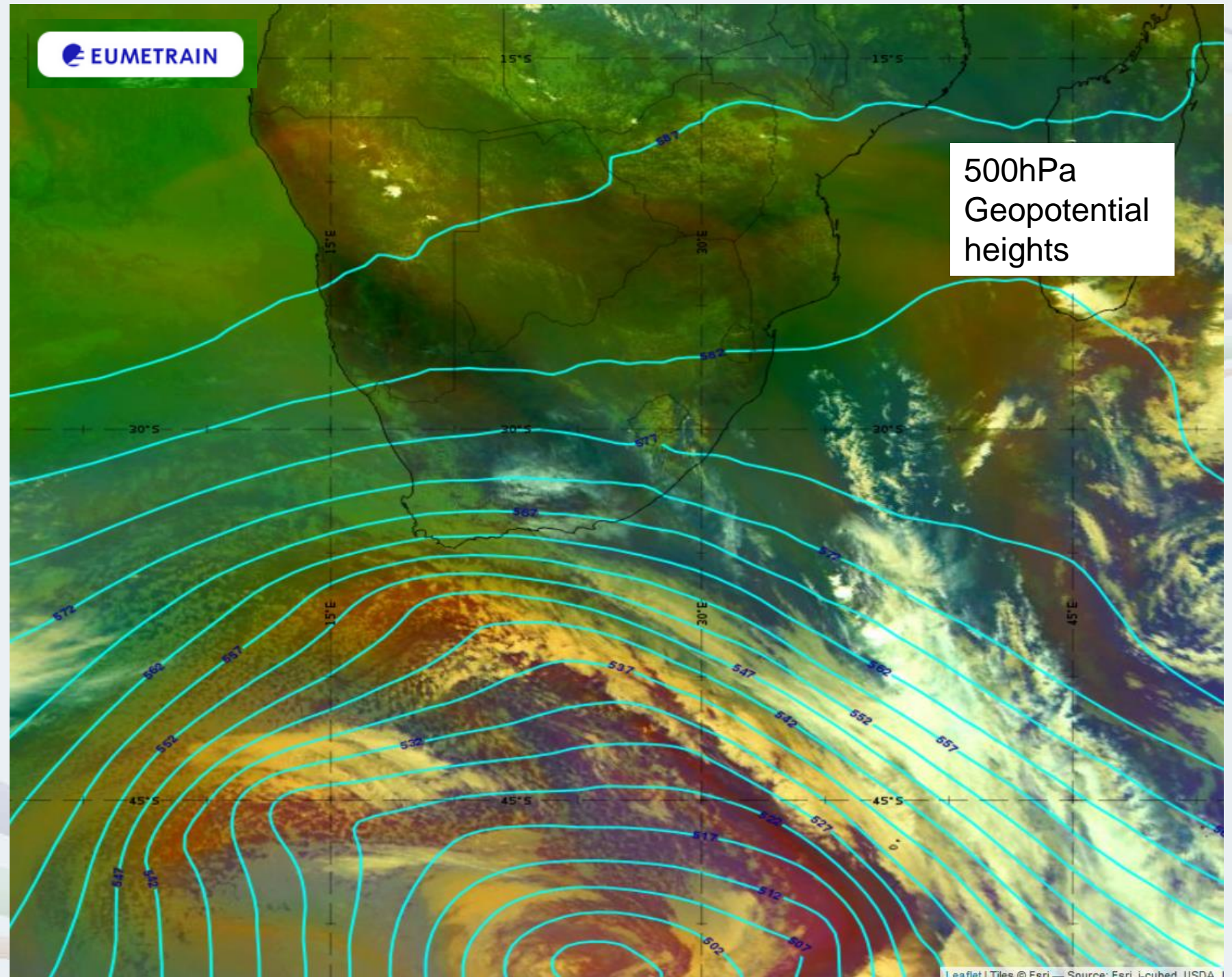
Commonly occurring weather systems

- Surface and upper troughs
- Cold Fronts
- Cut Off Lows
- Dominant high pressure
- ITCZ
- Tropical Cyclones

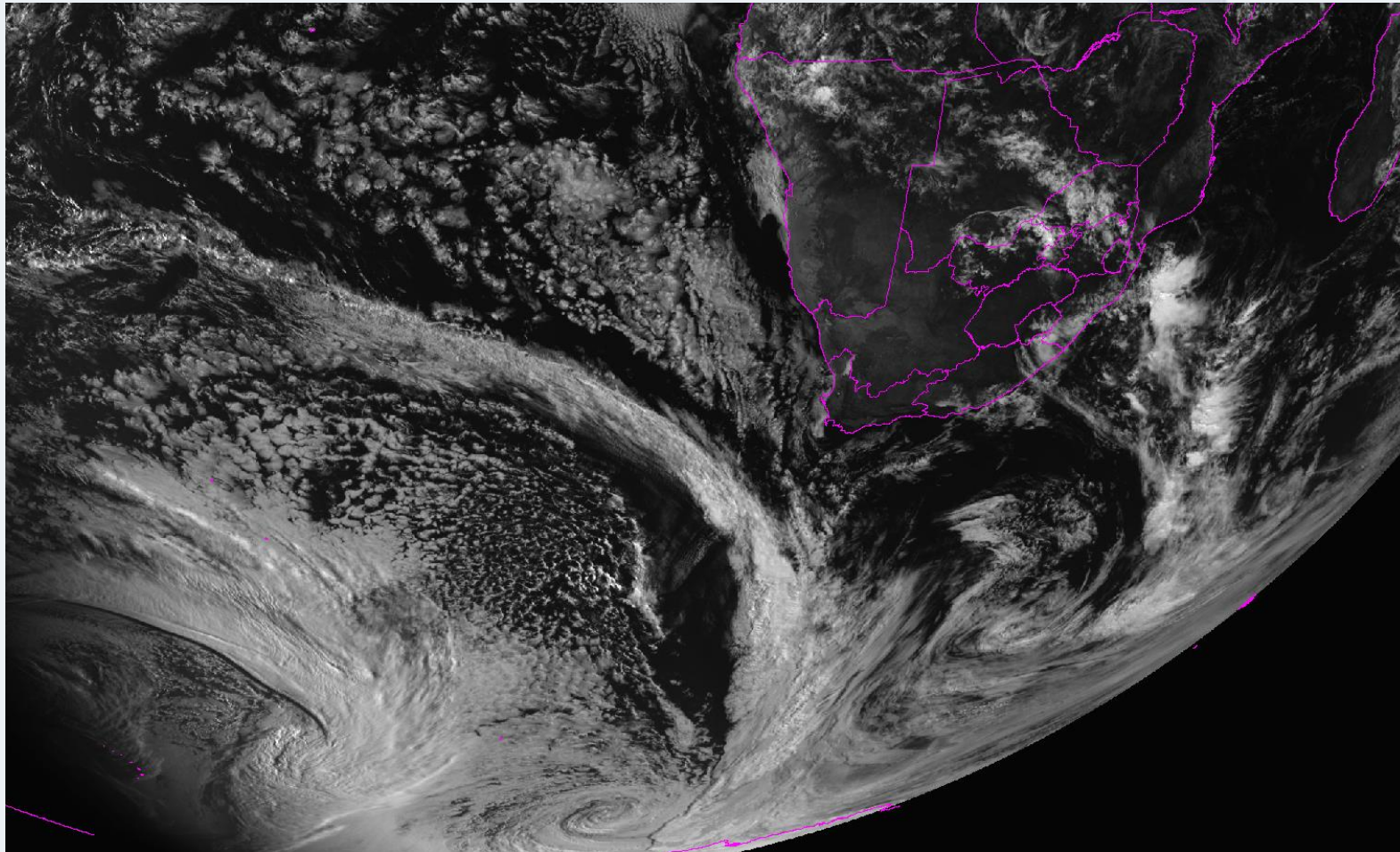
Surface and upper troughs



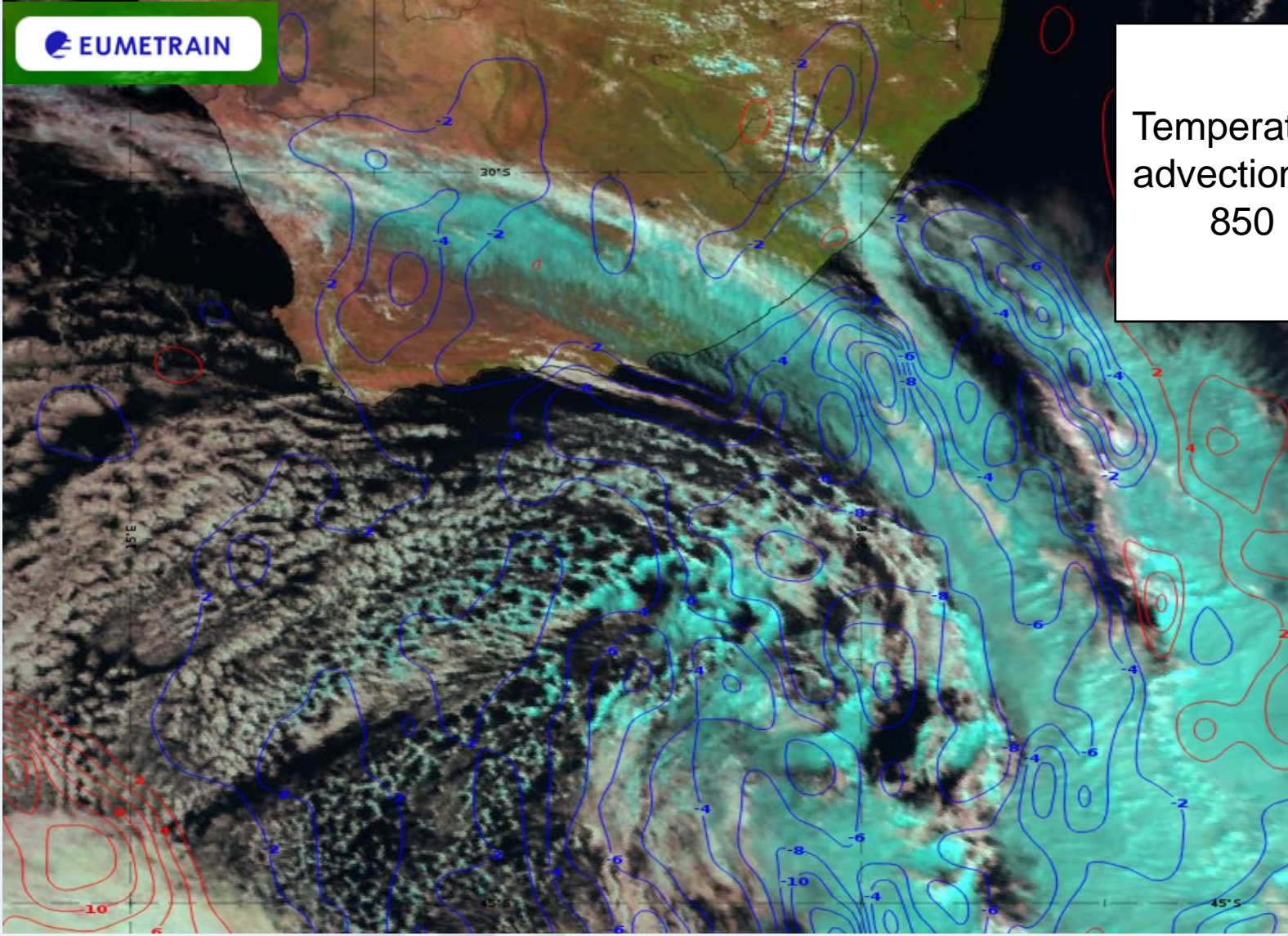
500hPa
Geopotential
heights



Cold fronts



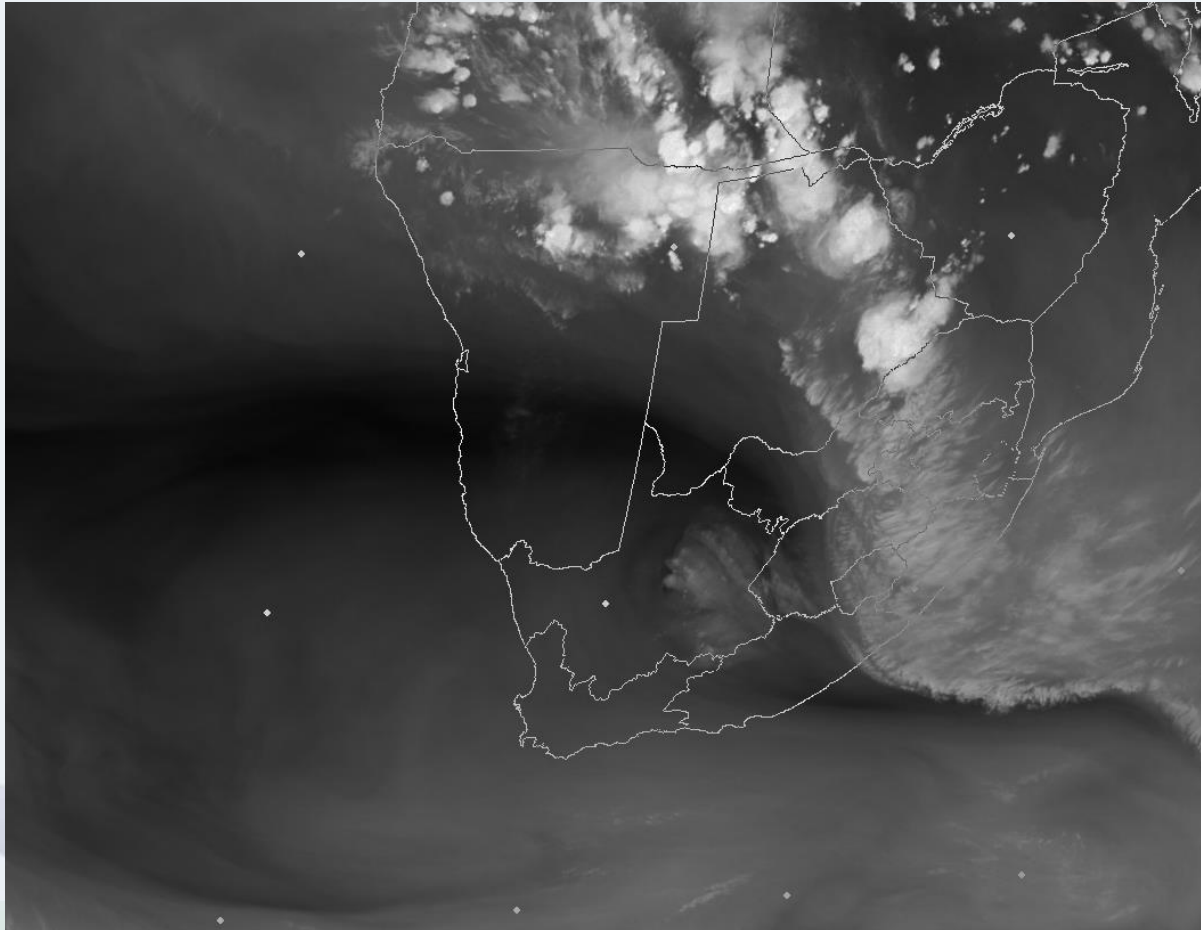
Temperature
advection @
850

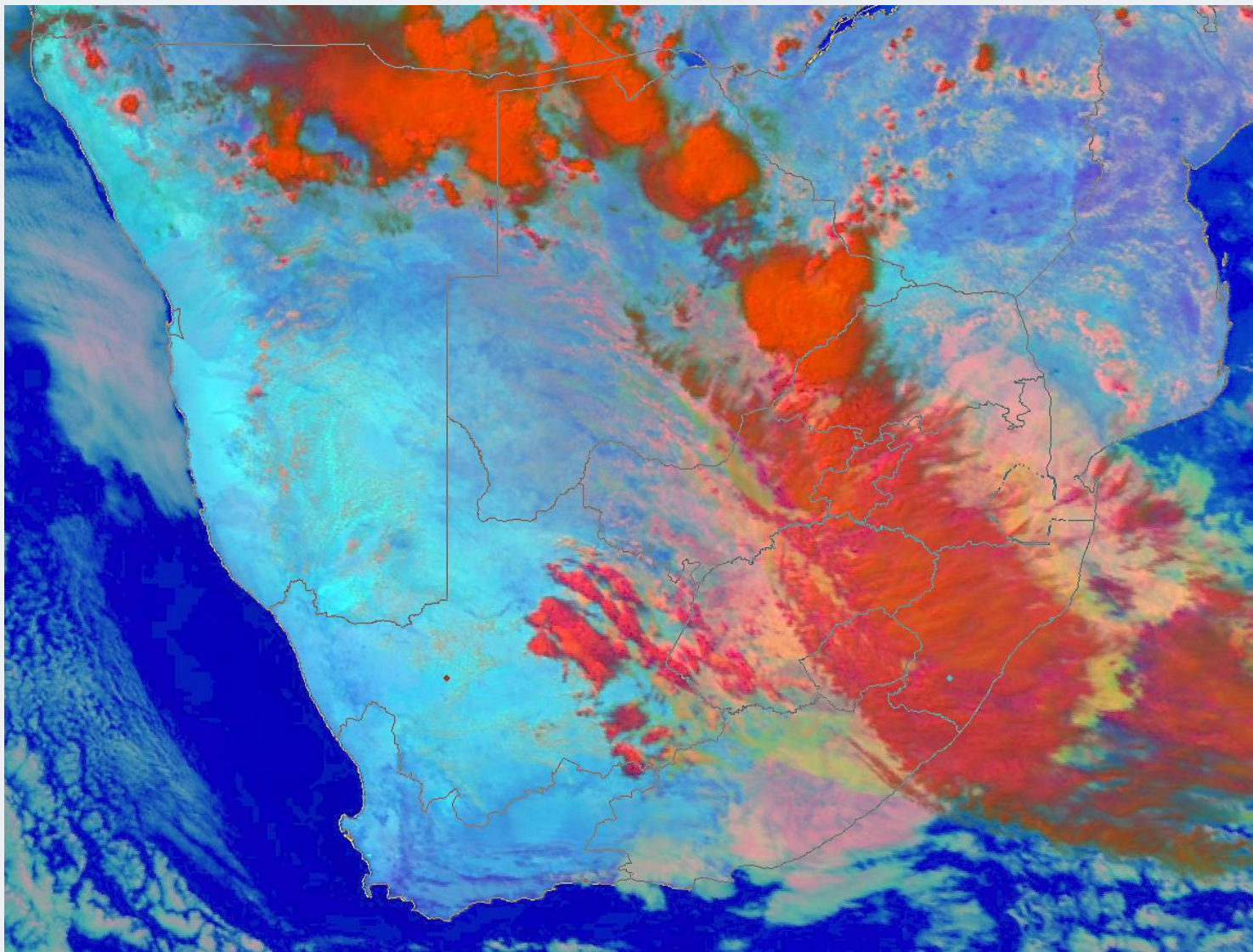


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Cut off lows

- http://www.eumetrain.org/satmanu/CM4SH/S_Africa/COL/print.htm





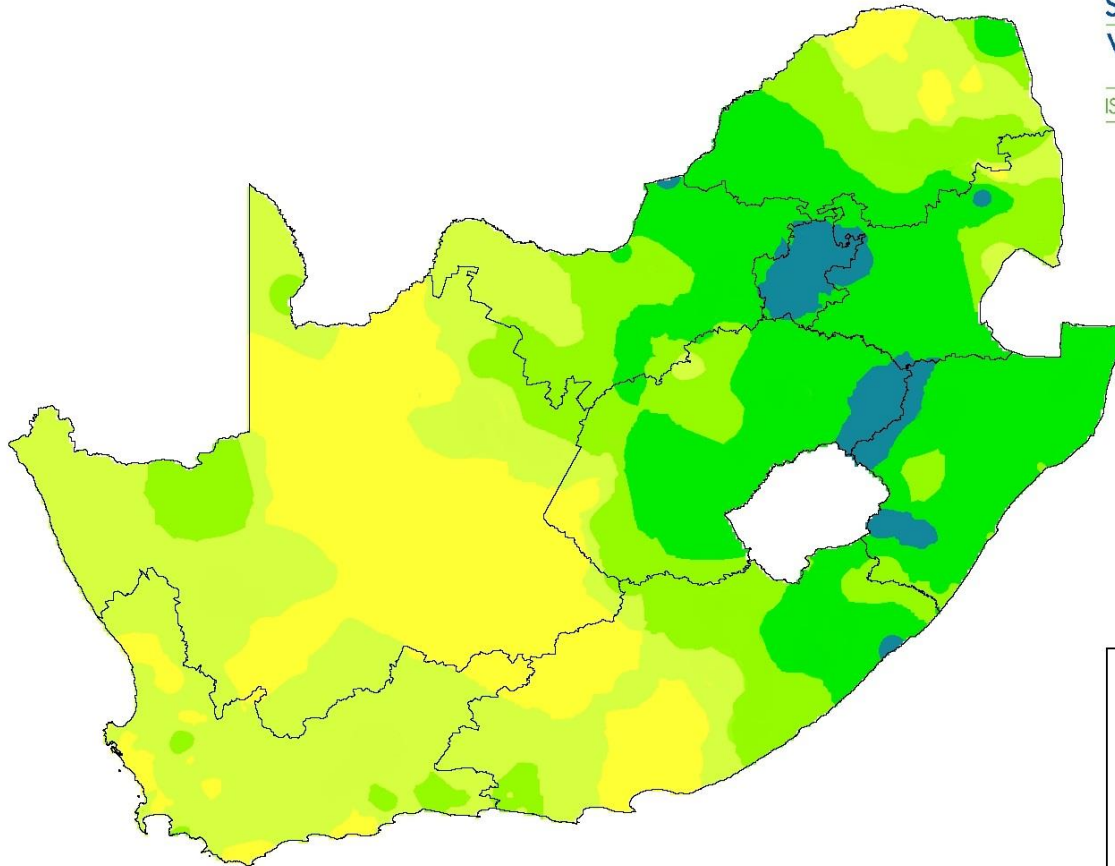
Rainfall (mm) for 21-31 March 2018

(Based on preliminary data)



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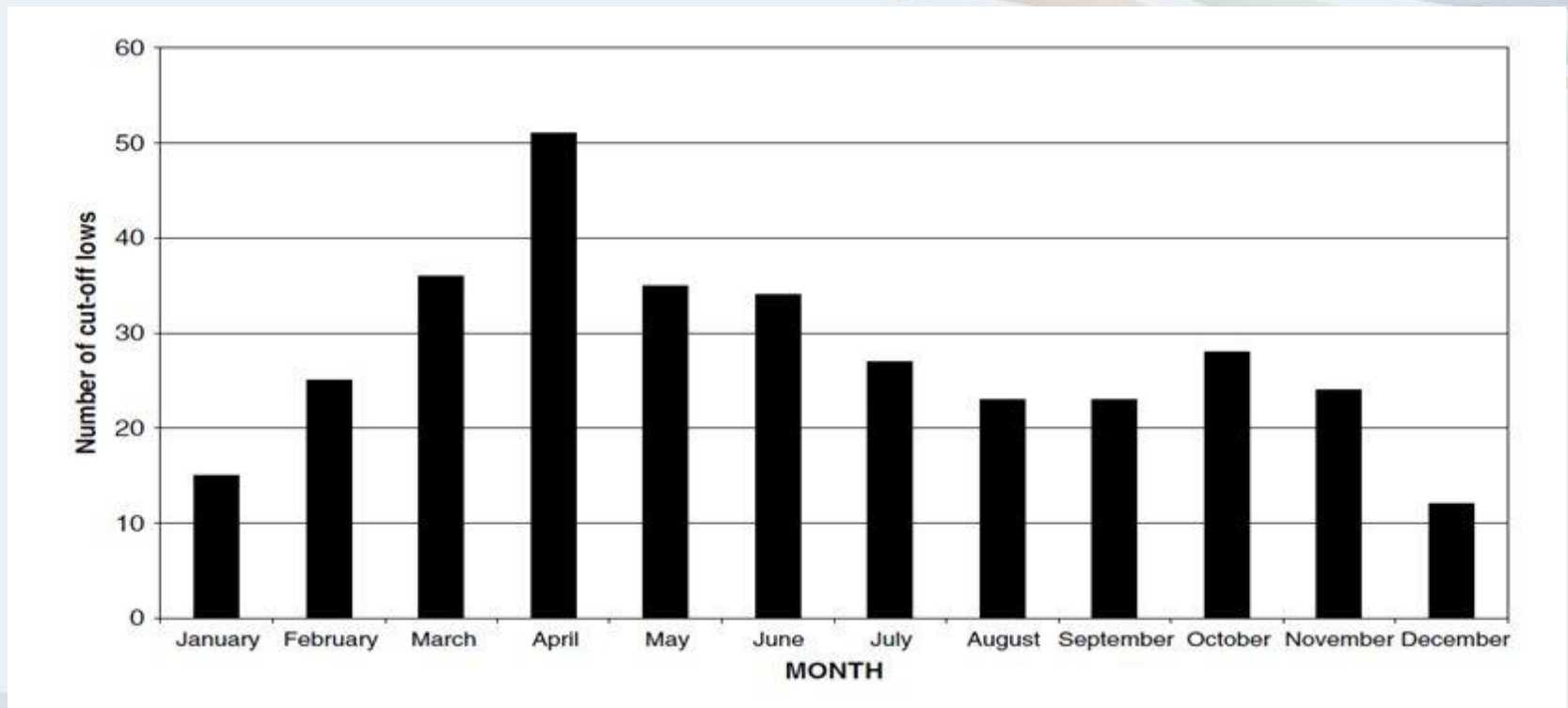
Rainfall (mm)

0 - 10
10 - 25
25 - 50
50 - 100
100 - 200
200 - 500

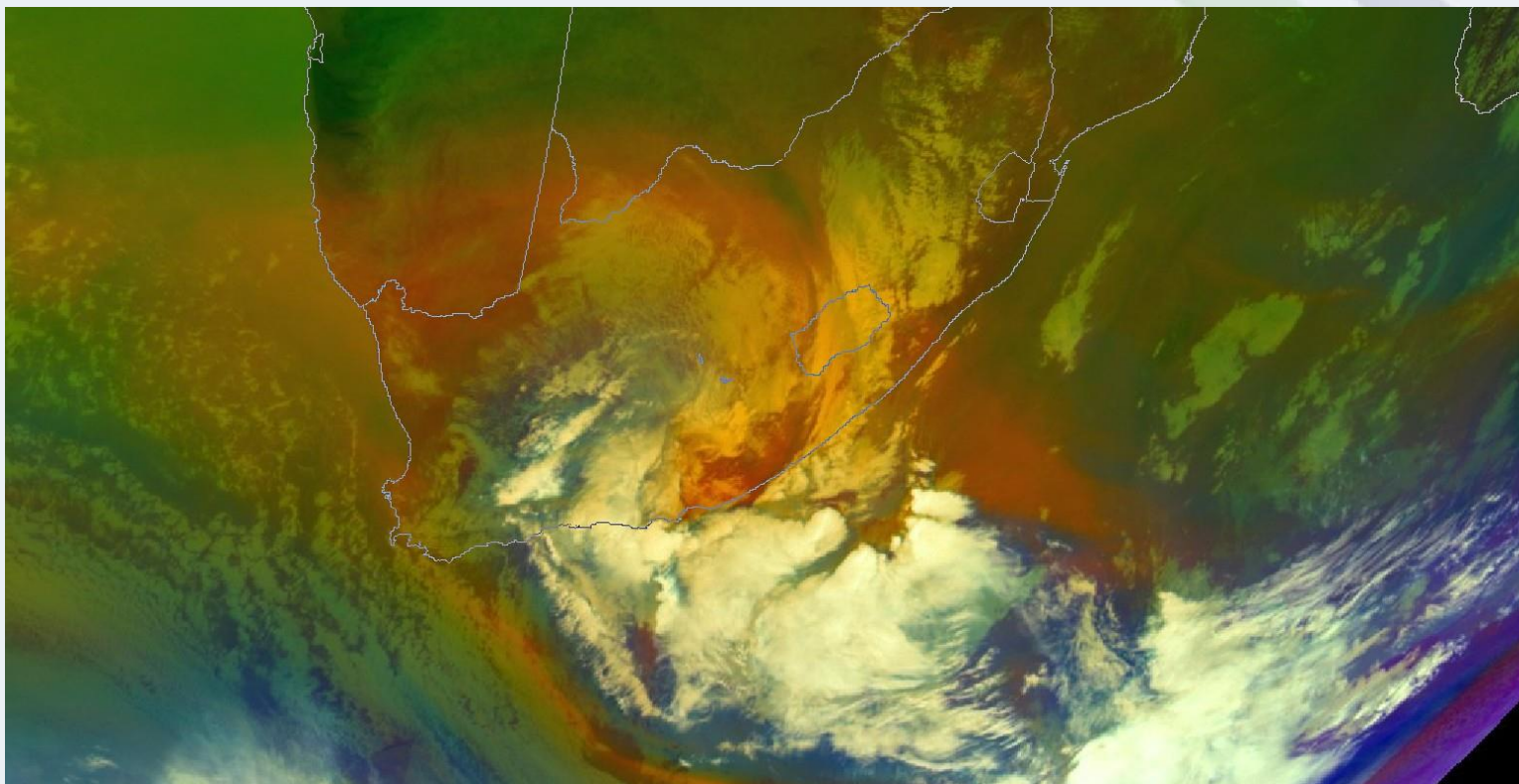


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Frequency of occurrence over South Africa



Example

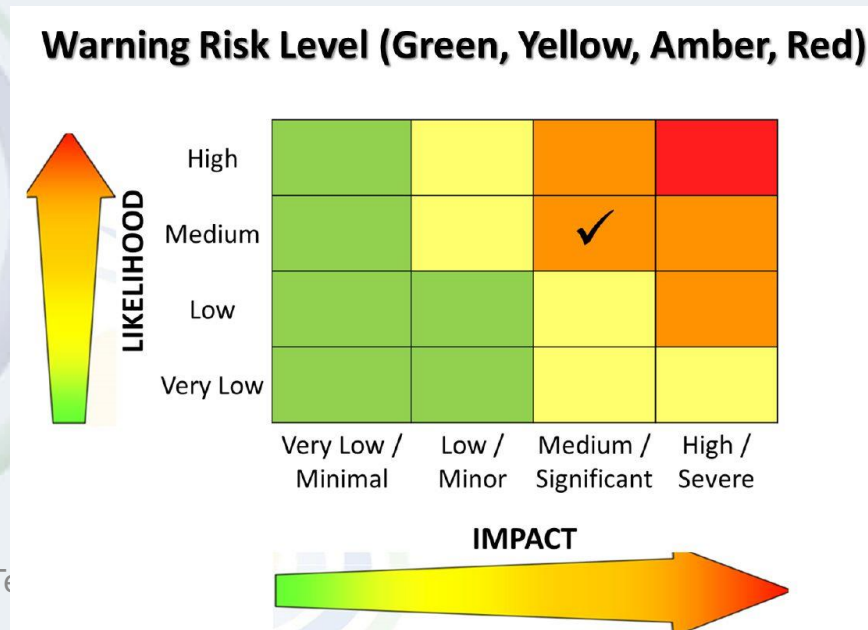


Why are they important? What will the weather “be”?

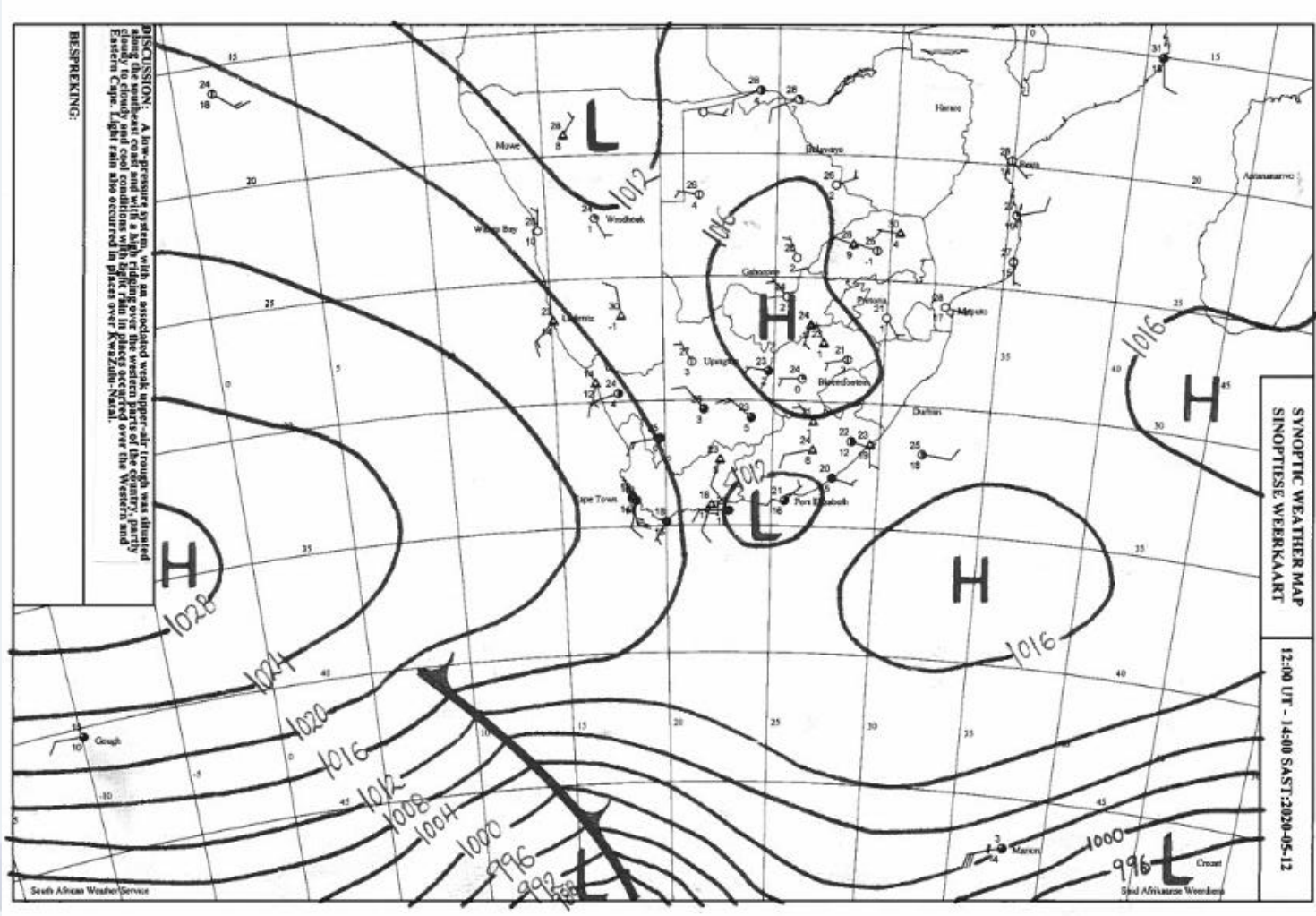
Parameter	Description
Precipitation	<ul style="list-style-type: none">• Heavy rainfall; exceeding 50mm at a given station over a 24 hour period.• Snowfall
Temperature	<ul style="list-style-type: none">• Very cold conditions, maximum temperatures of 10° C or below
Wind (incl. gusts)	<ul style="list-style-type: none">• Gale force winds exceeding 17m/s
Other relevant information	<ul style="list-style-type: none">• Very rough seas, total sea in excess of 4-6m.

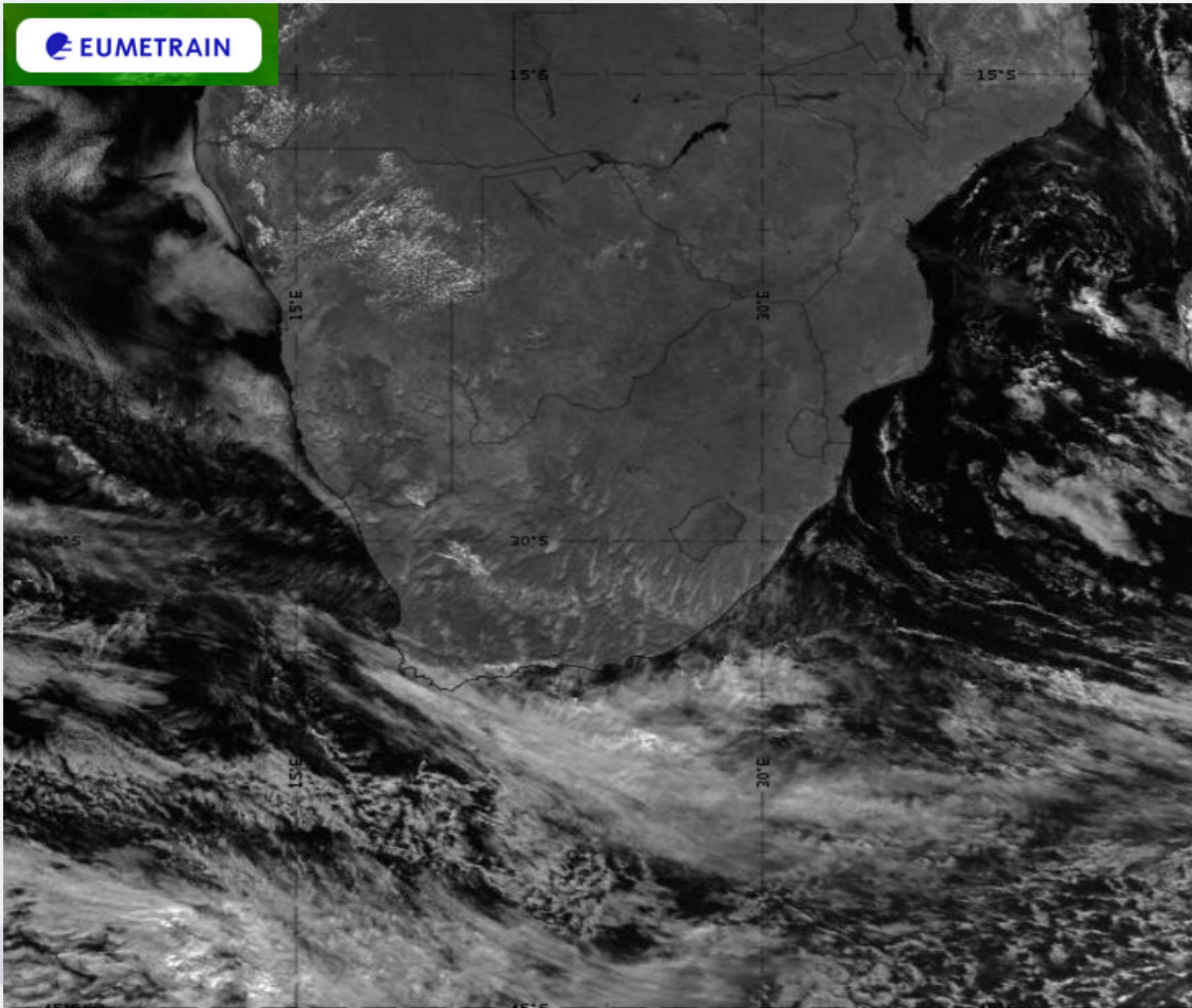
What will the weather “do”? Impact based weather forecasting

- Rainfall impacts
- Wind impacts
- Snow impacts
- Severe Thunderstorm impacts
- Marine impacts



Dominant high pressure





ITCZ



Tropical Cyclones

2017 - 2018 : TRACKS (PNG IMAGE) / KMZ (Google Earth)

Depression Nr	Name	from	to	Maximum Intensity
1	AVA	2017-12-30	2018-01-09	Tropical Cyclone
2	IRVING	2018-01-05	2018-01-11	Tropical Cyclone
3	BERGUITTA	2018-01-10	2018-01-24	Intense Tropical Cyclone
5	CEBILE	2018-01-25	2018-02-09	Intense Tropical Cyclone
6	DUMAZILE	2018-03-01	2018-03-10	Intense Tropical Cyclone
7	ELIAKIM	2018-03-13	2018-03-22	Severe Tropical Storm
8	FAKIR	2018-04-20	2018-04-26	Tropical Cyclone
9	FLAMBOYAN	2018-04-27	2018-05-04	Severe Tropical Storm

2016 - 2017 : TRACKS (PNG IMAGE) / KMZ (Google Earth)

Depression Nr	Name	from	to	Maximum Intensity
1	ABELA	2016-07-12	2016-07-20	Severe Tropical Storm
2	BRANSBY	2016-10-03	2016-10-07	Subtropical Depression
4	CARLOS	2017-02-02	2017-02-15	Tropical Cyclone
5	DINEO	2017-02-11	2017-02-17	Tropical Cyclone
6	ENAWO	2017-03-02	2017-03-11	Intense Tropical Cyclone
7	FERNANDO	2017-03-05	2017-03-16	Moderate Tropical Storm

2015 - 2016 : TRACKS (PNG IMAGE) / KMZ (Google Earth)

Depression Nr	Name	from	to	Maximum Intensity
1	ANNABELLE	2015-11-18	2015-11-27	Severe Tropical Storm
2	BOHALE	2015-12-07	2015-12-16	Moderate Tropical Storm
3	CORENTIN	2016-01-19	2016-01-31	Severe Tropical Storm
4	DAYA	2016-02-07	2016-02-13	Moderate Tropical Storm
5	LIRIAH	2016-02-11	2016-02-25	Intense Tropical Cyclone
6	EMERAUDE	2016-03-14	2016-03-23	Intense Tropical Cyclone
7	0720152016	2016-03-27	2016-03-30	Moderate Tropical Storm
8	FANTALA	2016-04-10	2016-04-26	Very Intense Tropical Cyclone



2018 - 2019 : TRACKS (PNG IMAGE) / KMZ (Google Earth)

▲ Depression Nr	◆ Name	◆ from	◆ to	◆ Maximum Intensity
1	0120182019	2018-09-13	2018-09-19	Moderate Tropical Storm
2	ALCIDE	2018-11-05	2018-11-14	Intense Tropical Cyclone
3	BOUCHRA	2018-11-09	2018-11-22	Severe Tropical Storm
4	KENANGA	2018-12-14	2018-12-26	Intense Tropical Cyclone
5	CILIDA	2018-12-16	2018-12-28	Intense Tropical Cyclone
6	DESMOND	2019-01-17	2019-01-22	Moderate Tropical Storm
7	EKETSANG	2019-01-22	2019-01-26	Moderate Tropical Storm
8	FUNANI	2019-02-03	2019-02-10	Intense Tropical Cyclone
9	GELENA	2019-02-04	2019-02-16	Intense Tropical Cyclone
10	HALFH	2019-02-28	2019-03-10	Intense Tropical Cyclone
11	IDAI	2019-03-04	2019-03-16	Intense Tropical Cyclone
12	SAVANNAH	2019-03-13	2019-03-22	Intense Tropical Cyclone
13	JOANINHA	2019-03-21	2019-04-04	Intense Tropical Cyclone
14	KENNETH	2019-04-21	2019-04-28	Intense Tropical Cyclone
15	LORNA	2019-04-21	2019-04-30	Tropical Cyclone

2019 - 2020 : TRACKS (PNG IMAGE) / KMZ (Google Earth)

▲ Depression Nr	◆ Name	◆ from	◆ to	◆ Maximum Intensity
2	BELNA	2019-12-02	2019-12-11	Tropical Cyclone
3	AMBALI	2019-12-03	2019-12-09	Very Intense Tropical Cyclone
4	CALVINIA	2019-12-27	2020-01-03	Tropical Cyclone
6	DIANE	2020-01-22	2020-01-29	Remnant Low
7	ESAMI	2020-01-22	2020-01-26	Moderate Tropical Storm
8	FRANCISCO	2020-02-03	2020-02-15	Moderate Tropical Storm
9	GABEKILE	2020-02-13	2020-02-23	Intense Tropical Cyclone
10	HEROLD	2020-03-12	2020-03-21	Intense Tropical Cyclone
11	IRONDRO	2020-04-01	2020-04-06	Intense Tropical Cyclone
12	JERUTO	2020-04-13	2020-04-18	Moderate Tropical Storm



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Thank you