



Pre-Flight Pilot Safety – planning for The Next Hour





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Opening



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Welcome

PANELISTS



Ari Levien

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Lauren Smith

Weather SA



Caroline Koll

Essential Pilot

Agenda

- Speaker Session: Ari Levien – MayDay-SA
- Speaker Session: Caroline Koll – The Essential Pilot
- Speaker Session: Lauren Smith – Weather SA
- Q&A
- Closing

Moderator





Ari Levien

MAYDAY SA

mayday-sa





Safety First Aviators

MAYDAY-SA

Preflight Yourself

24 February 2022

Presented by Ari Levien



PLEASE - SAVE and SHARE

- Phone: **012 333 6000** (ask for MAYDAY)
- Website: www.mayday-sa.org.za
- Follow us on FaceBook: Mayday-SA
- Email: maydaysouthafrica@gmail.com

WHY?

- “The most dangerous part of a vehicle is the nut at the controls!”
- Humans are not good at self-diagnosis / self-awareness
- Physical and/or emotional distractions can be debilitating



WHEN?

- Start before travelling to departure point
- Reassess on arrival
- Any time things change / new info available
- If you realise you missed something!



HOW? – **CHECKLISTS!** (of course!)

- IMSAFE
- PAVE
- Personal minimums (written)
- Remember your pax!



1. IMSAFE

- **I**LLNESS
- **M**EDICATION
- **S**TRESS
- **A**LCOHOL
- **F**ATIGUE
- **E**MOTION/**E**ATING
- Check with passengers – sinus/blocked ears, illness, etc.
- Scuba considerations pilot & pax



2. *PAVE*

- **P**ilot/Passengers
- **A**ircraft
- **E**nvironment
- **E**xternal Pressures



TAKE AWAYS

- Preflight the pilot, crew & passengers BEFORE the aircraft!
- **GIVE YOURSELF OPTIONS**
- Build in relief valves – extra time / fuel
- Manage expectations
- Be realistic
- Re-frame
- Ask yourself: *“If I switch to plan B now, will it make a difference in a year?”*
- Don’t be too proud to ask for a second opinion!



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Caroline Koll

ESSENTIAL PILOT



A ground crew member wearing a dark blue uniform, a bright yellow safety vest, safety glasses, and a headset is inspecting the underside of an airplane wing. The person is standing on an airfield, looking up at the wing with their hands raised. The background shows a blurred airport tarmac and another aircraft. The text "THE UNEXPECTED PRE-FLIGHT" is overlaid in large, bold, black letters across the center of the image.

THE UNEXPECTED PRE-FLIGHT

CAROLINE KOLL



**Inadequate
Pre-Flight
INSPECTIONS**

‘Inadequate pre-flight inspection’ is a probable cause of many fatal accidents.



The most common direct causes:

- **Fuel contamination**, usually with water, which typically leads to power loss after takeoff and a subsequent stall-spin.
- **Improperly latched** baggage doors.
- Pitot covers, control locks and foam air-intake plugs left in place.
- Oil filler or fuel tank **caps unsecured**.
- Failure to remove **chocks** or ladders.

The key to a good pre-flight is understanding **what** you are checking, and **why you are checking it**.

You need to develop a sense of what is **normal**, and **abnormal**, what is **airworthy**, and what is not.



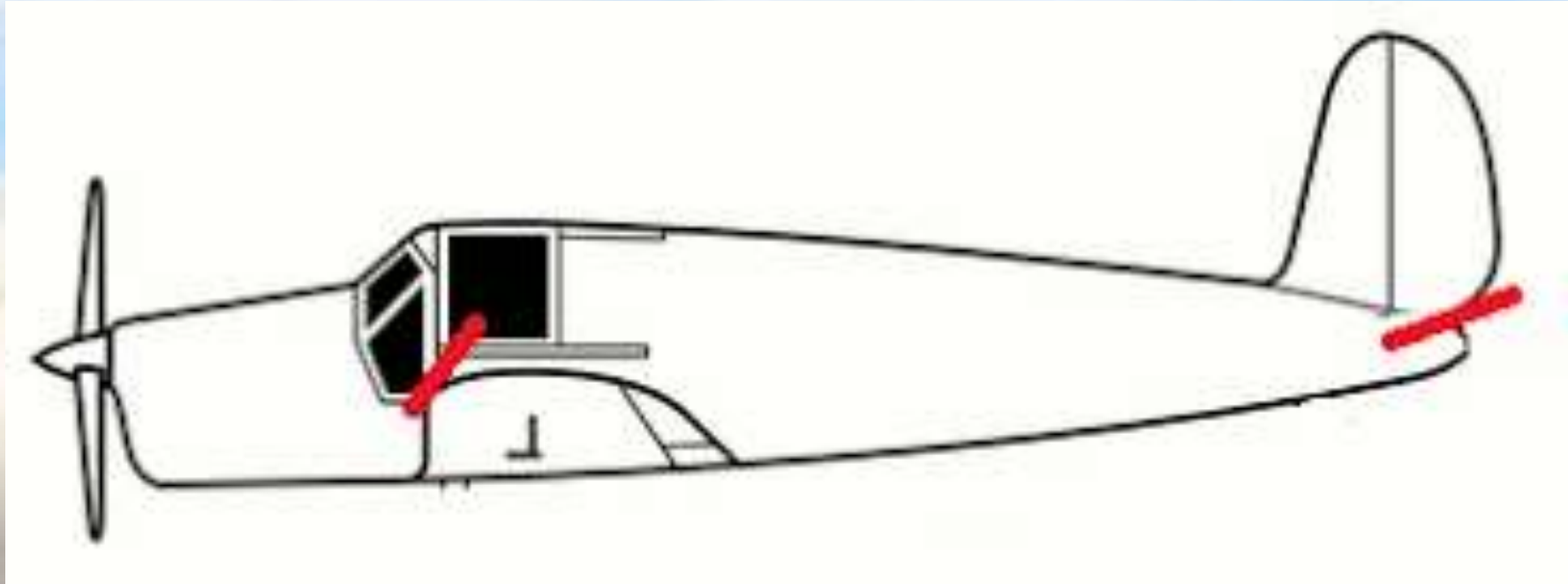
A perspective view of a road stretching into the distance under a blue sky with wispy clouds. The road is dark asphalt with a white dashed line down the center and yellow solid lines on the sides. The sky is a vibrant blue with soft, white clouds. The overall scene is bright and clear.

**What ARE YOU
CHECKING?**

Test Controls: Check that the control surface reacts *correctly* to the control input.



Test Controls: Check that the control surface reacts *correctly* to the control input.



Magnetos: We are checking that the magneto **grounding wires are still connected**. If not connected, then there will be no drop in RPM.



Pitot tube: Check for **blockage** and **security**

Blockage will affect:

- Airspeed indicator



Static port: Check for **blockage**

Blockage will affect:

- Airspeed Indicator
- Altimeter
- Vertical Speed Indicator



A perspective view of a road stretching into the distance under a vast, blue sky with wispy clouds. The road is flanked by a white line on the left and a yellow line on the right. The overall atmosphere is bright and open.

DON'T BE A ROBOT!

Often, the pre-flight is done as a **pre-determined routine**, with **expected results**.

Instead, the pilot should become a **detective**, and look for the **unexpected**.



Nature - Lookout for **eyes** staring back at you...



Nature - 'I found a small light **green tree frog** climbing out of the faring between the wing strut and fuselage of a Cessna 172.'

I don't know how many flights he had taken...



Engine cowling flaps – You looked inside, but did you close it up again?



Plugs – You removed the plugs, but do you ever **count** them, and **look inside** the air intakes?



Farings – Do you touch these, and feel for cracks or security?



Chafing – Keep your eyes out for any chafing that could damage pipes, tubing or other components.



Seats – How sure are you that the seat is secure, and won't slide back on take-off?



The Underbelly – Have you checked the plates, rivets and screws?



Tools – Can be left in the engine compartment or windshield by maintenance.



Tow bars – Nope you won't necessarily hear it!



Aircraft that are in frequent use are *assumed* to be in working order.

The fact that they have recently flown, *seems* in itself to prove their readiness to fly again.

THINK AGAIN!





Want to brush up your skills?

5% discount

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Shamir +27647566356

info@jhbfflying.co.za



Lauren Smith

Weather SA

SAFETY FIRST AVIATOR CAMPAIGN 2022



The Next Hour



Pre-Flight Preparation



- Meteorological Briefing
- Determining forecast and actual weather conditions for the route planned.
- *En-route* weather comprises of:
 - Forecast winds
 - Temperatures at cruising levels
 - Forecast of *en-route* weather conditions, especially clouds
 - Associated turbulence and/or icing

Meteorological Briefing



Location:

WX @ Take-off

WX @ Landing

Weather Pattern:

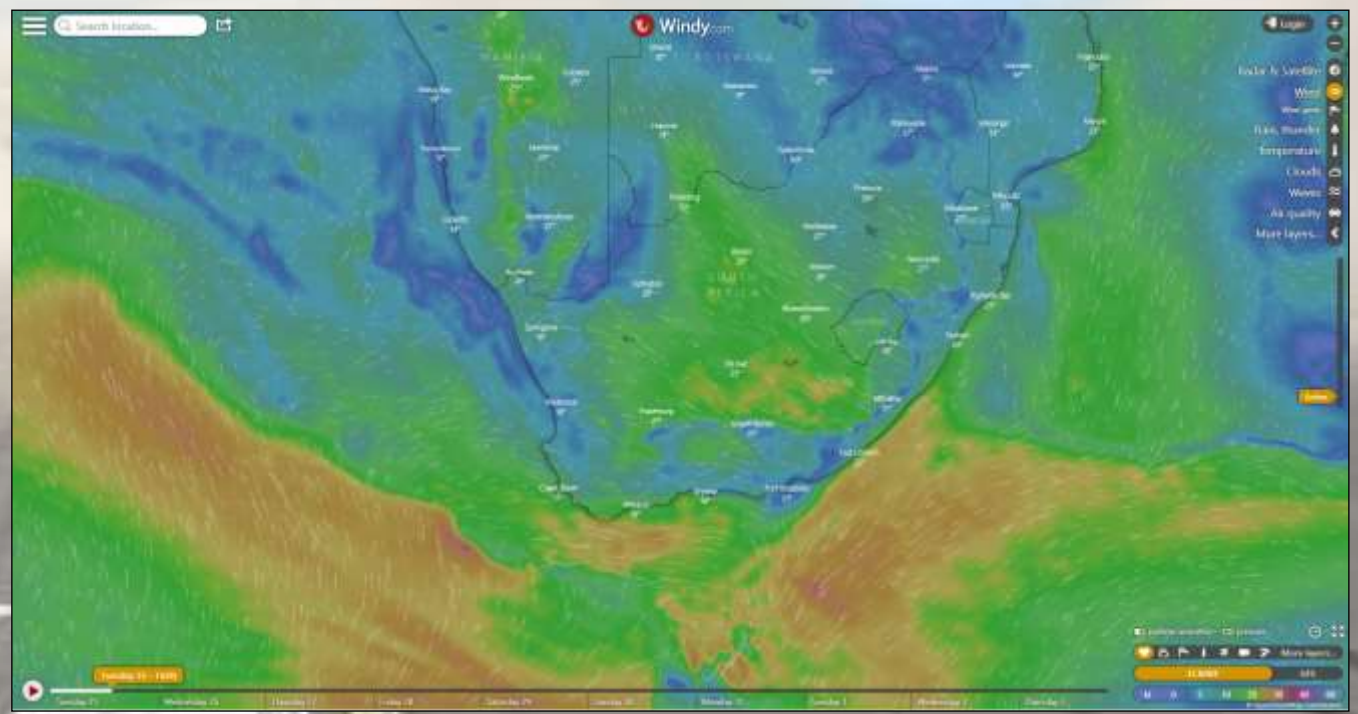
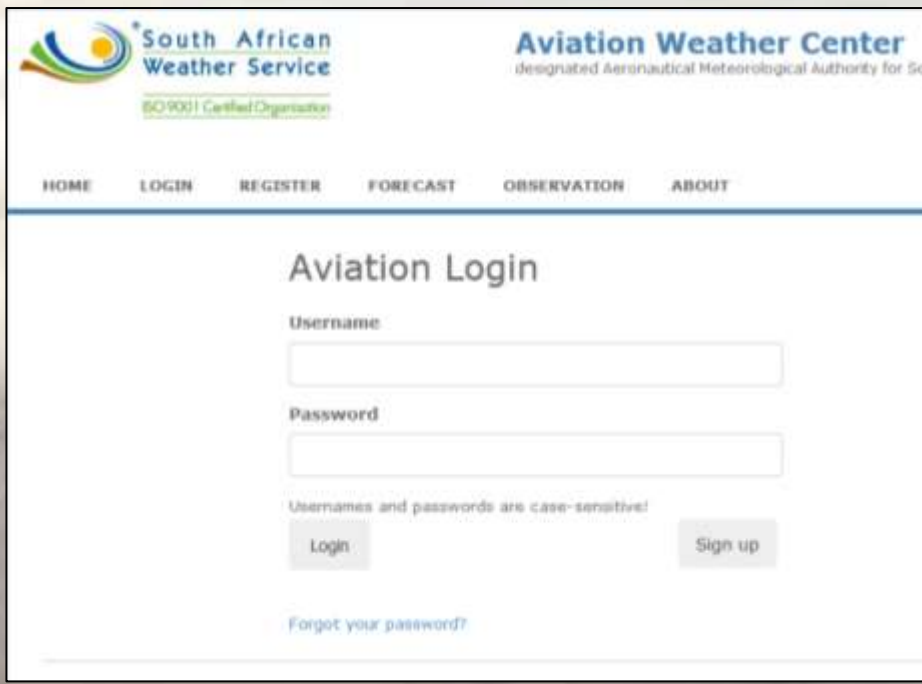
- Locate the high pressure and low-pressure regions effecting SA (synoptic analysis - pressure map)
- Identify any cold fronts and coast lows (Satellite imagery)

Hazardous weather @ Take-off and landing:

- Any low clouds and precipitation (Phone the WX office any time)
- What type of other clouds are within the vicinity – help planning ahead (Satellite imagery)
- The actual time of the day plays a roll, not only the season and month.
- Consider looking region that could be susceptible to strong surface wind speeds - A tight pressure gradient could be considered a good clue as to where such a region could occur.

Aviation Website & Other Models

- **Aviation Website** - What is available for you
How interpret the given information
- **WindyTV** - ECMWF & GFS



Aviation Website: <https://aviation.weathersa.co.za>

Search

HOME **FORECAST** OBSERVATION DOMESTIC FLIGHT BRIEFING INTERNATIONAL

AEROSPORT

- Colour Coded TAF
- Colour Coded SIGMET/AIRMET
- Colour Coded Warnings
- SIGMET/AIRMET
- Take-off Data
- TAF
- Recent TAFs
- TAF Accuracy
- Trends
- WAFS Harmonized GRID Products
- Warnings

Map View Webcams Graphical SIGMET <http://sacoronavirus.co.za/>

Western Cape

FACT 091340Z 0912/1018 19012KT 9999 SCT035
 TX20/0912Z TN13/1005Z
 FM091700 16018KT 9999 SCT015 BKN020
 FM100800 16015KT 9999 FEW035=
 FAGG 091220Z 0912/1012 24008KT 9999 FEW010 SCT015 BKN020
 TX20/0912Z TN12/1006Z
[TEMPO](#) 0912/0915 [BKN](#)012
 PROB40 [TEMPO](#) 1003/1012 4000 -RA [BKN](#)006=

Aerodrome Warning

WARNING FOR FACT - 20200909 06:00
 FAGG CNL AD WRNG 2 090600/090700 =

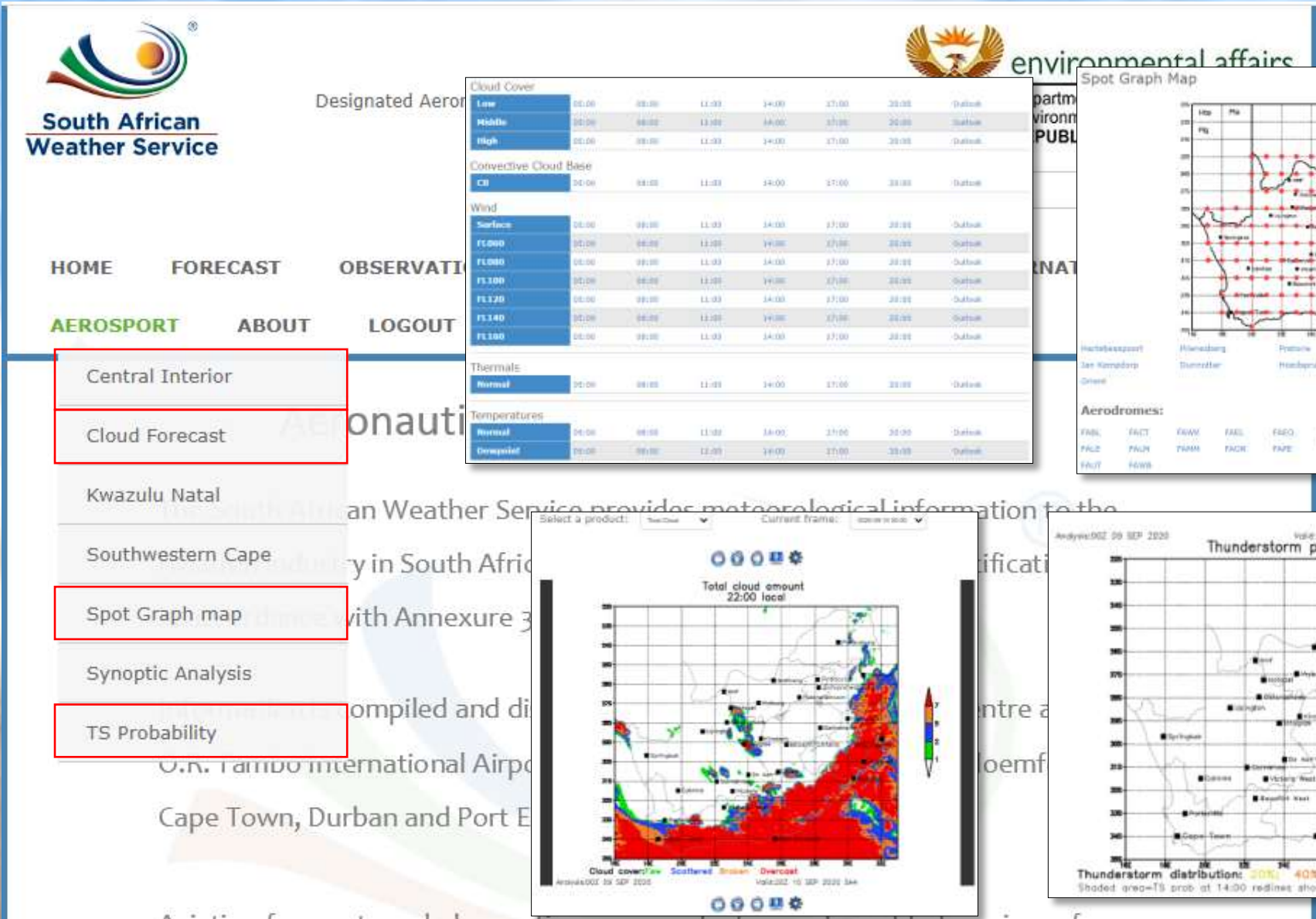
Take-off Parameters

FACT FALA FAOR FALE FAPE FABL

CCCC: **FAOR**
 Issued at **2020/09/09 13:10Z**
 TAKE-OFF DATA O.R. TAMBO INTERNATIONAL AIRPORT

TIME	TEMP	QNH	QAN
13Z	26	1027	19012KT
14Z	26	1027	19012KT
15Z	25	1027	19012KT
16Z	23	1028	VRB03KT
17Z	20	1028	VRB03KT
18Z	18	1029	VRB03KT
19Z	17	1029	VRB03KT
20Z	16	1029	VRB03KT
21Z	15	1029	VRB03KT
22Z	15	1028	04007KT

Aviation Website: <https://aviation.weathersa.co.za>



South African Weather Service

Designated Aerodromes

environmental affairs

Department of Environmental Affairs

Public Information

HOME FORECAST OBSERVATIONS

AEROSPORT ABOUT LOGOUT

- Central Interior
- Cloud Forecast
- Kwazulu Natal
- Southwestern Cape
- Spot Graph map
- Synoptic Analysis
- TS Probability

South African Weather Service provides meteorological information to the aviation community in South Africa with Annexure 3 to the Civil Aviation Regulations. The information is compiled and disseminated to the following aerodromes: O.R. Tambo International Airport, Cape Town, Durban and Port Elizabeth.

Cloud Cover

Low	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
Middle	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
High	00:00	05:00	11:00	14:00	17:00	20:00	Outlook

Convective Cloud Base

CB	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
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Wind

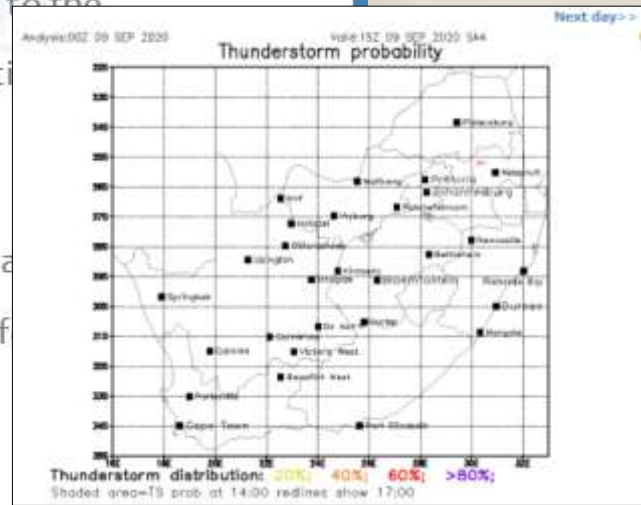
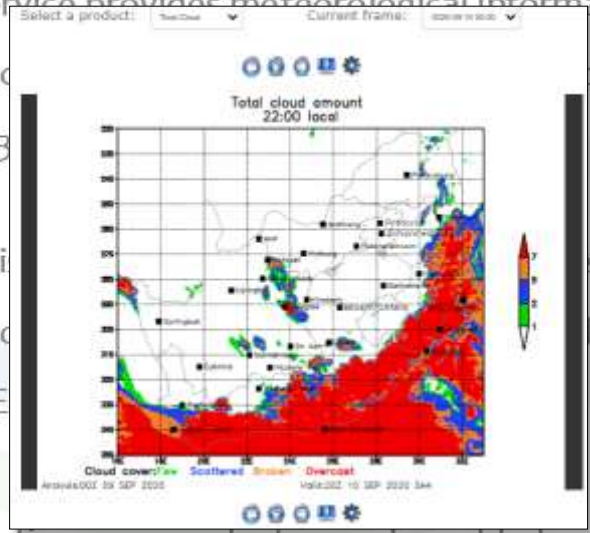
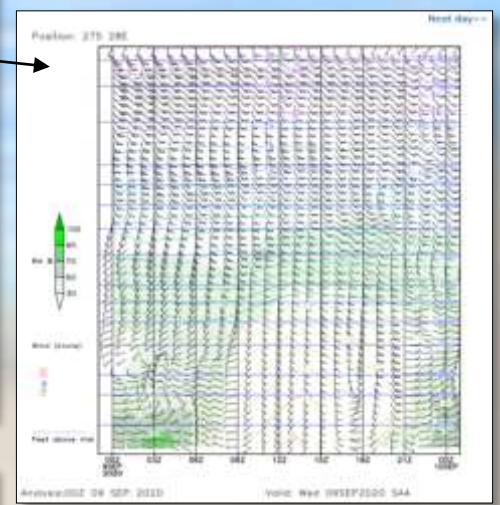
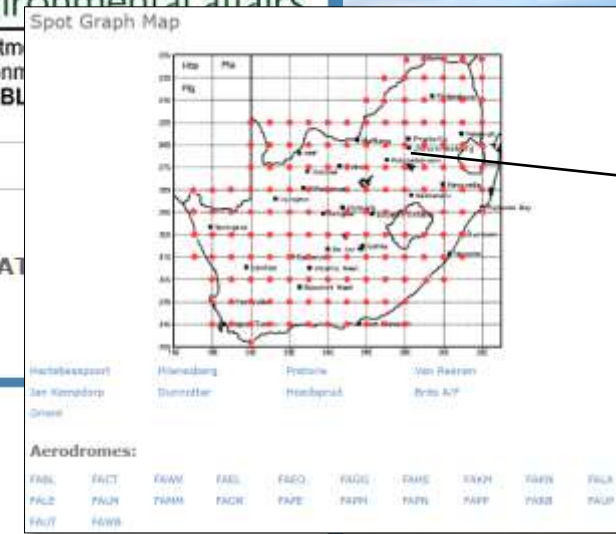
Surface	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
FL000	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
FL060	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
FL120	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
FL180	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
FL240	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
FL300	00:00	05:00	11:00	14:00	17:00	20:00	Outlook

Thermals

Normal	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
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Temperatures

Normal	00:00	05:00	11:00	14:00	17:00	20:00	Outlook
Downcast	00:00	05:00	11:00	14:00	17:00	20:00	Outlook



Aviation Website: <https://aviation.weathersa.co.za>

- Forecast Winds**
Winds are available from 12 to 48 hours in advance.
- Block Format** FL010 to FL240
12 18 24 30 36 42 48
- Block Format** FL210 to FL450
12 18 24 30 36 42 48
- Barb Format** FL010 to FL150
12 18 24 30 36 42 48
- Barb Format** FL150 to FL450
12 18 24 30 36 42 48
- Barb Format** All level scroll
12 18 24 30 36 42 48

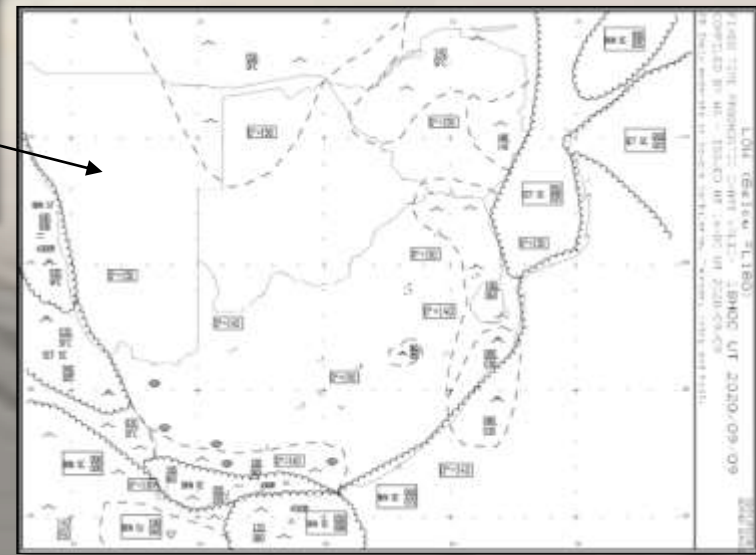
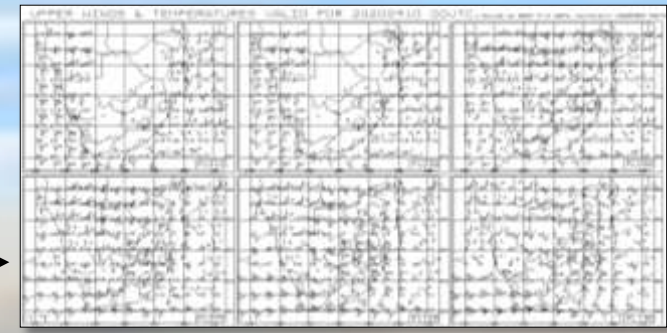
Meteorological Authority for South Africa

DOMESTIC FLIGHT BRIEF

- Flight Document
- Hourly Charts
- ICAO Locations
- Low Level Wind Profiles
- METAR Maps
- QNH Chart
- SIGWX Charts**
- Take-off Data
- Warnings
- Wind Charts**

Services

- Significant Weather Charts**
 - Low level (surface to FL180)
most recent: A4-size images 00:00 03:00 06:00 09:00 12:00 15:00 18:00 21:00
 - High level (above to FL180)
most recent: A4-size images 00:00 03:00 06:00 09:00 12:00 15:00 18:00 21:00
 - Additional Low (surface to FL100)
most recent: A4-size images 00:00 03:00 06:00 09:00 12:00 15:00 18:00 21:00



Information is compiled and distributed by the Weather Centre at O.R. Tambo International Airport, Cape Town, Durban and Port Elizabeth.

Weather Centre at Bloemfontein,

Aviation Website & Contact details

- Aviation Website -
<https://aviation.weathersa.co.za/#home>
- FACT: 064 798 6994
- FAPE: 066 186 4870
- FALE: 032 436 3818
- FABL: 063 095 5103
- DRR: 012 367 6025

**THANK YOU
FOR YOUR
TIME**



• **The Next Hour**



Q&A



Pre-Flight Pilot Safety – planning for The Next Hour