Flying'sCool!

Learn what Flying's all about

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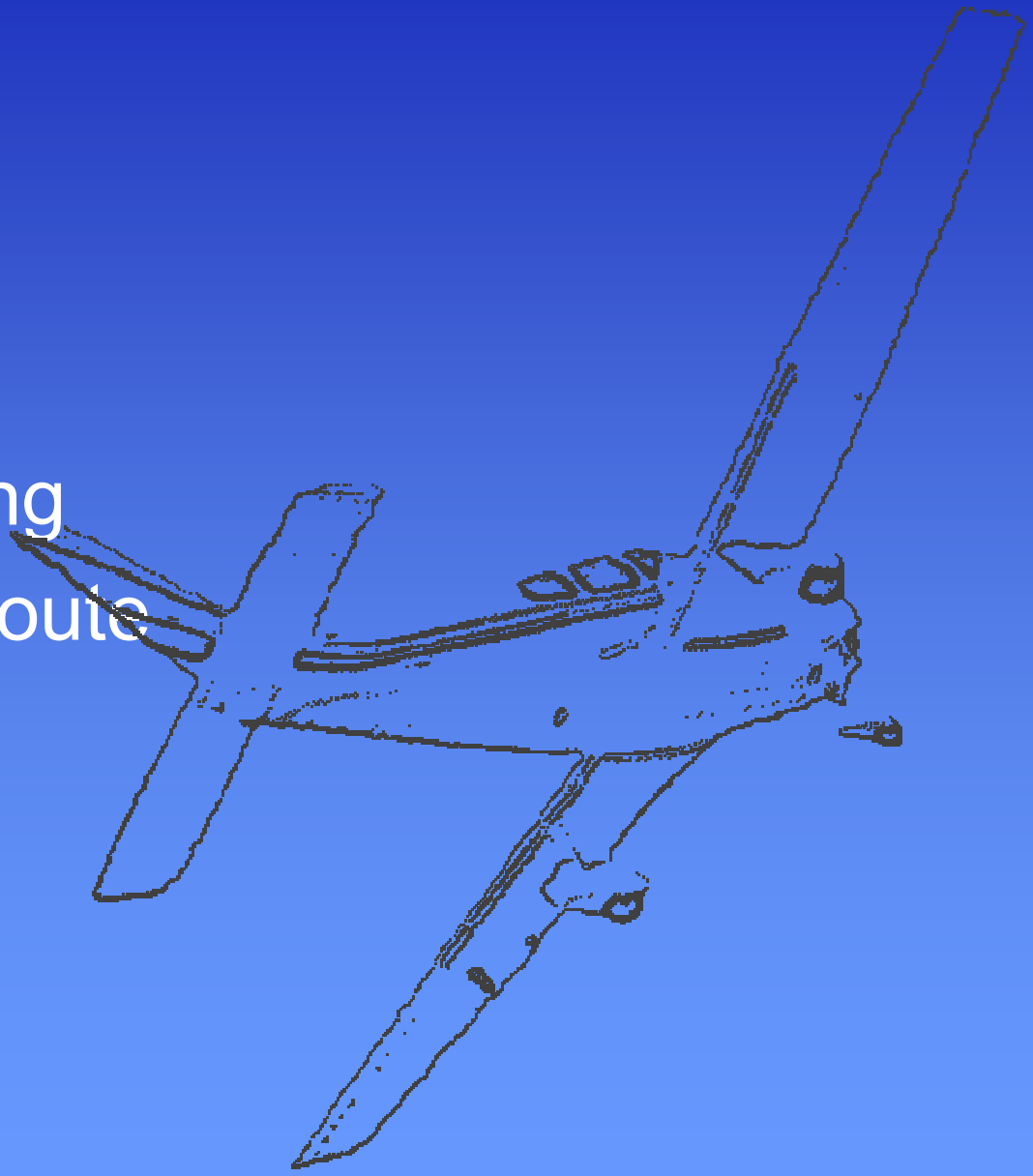
Overview

- Airspace
- Flightplanning
  - Weather Briefing
  - Planning the Route
- The Flight Plan
- Let's Fly!



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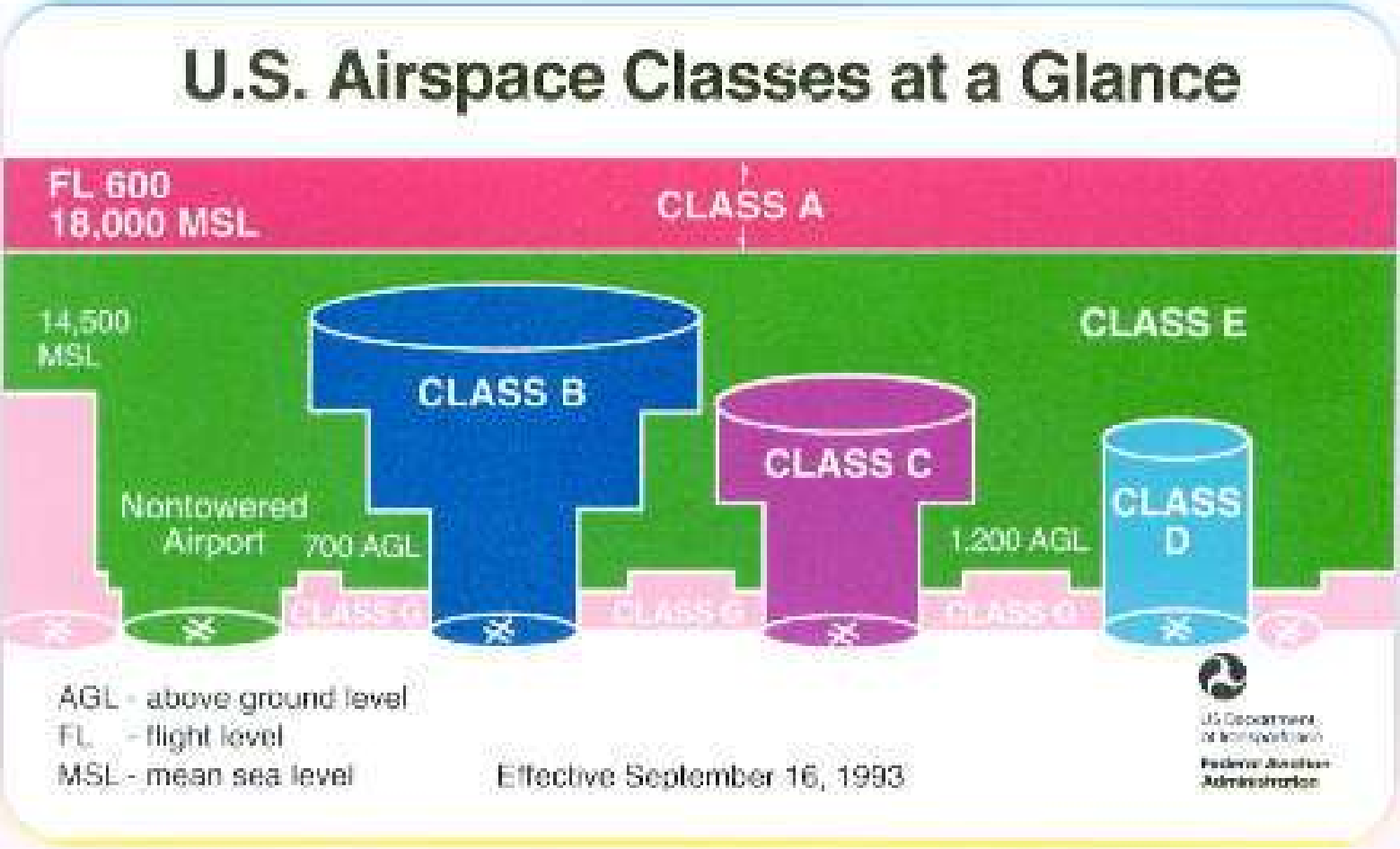
Airspace



http://www.asy.faa.gov/safety_products/airspaceclass.htm

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Flight Plan

1. Destination
   - Airport and Navaid information
   - Fuel locations and prices
2. Performance
   - Speed, Range, Weight and Balance
3. Weather Briefing, NOTAM's
4. Plan Route
   - Find route
   - Determine alternate airports

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Destination

Documents

- FAA Airport Facility Directories
- FAA Sectionals
- www.AirNav.com

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Destination

- Radio Frequencies
  - Navaids, ATIS, Tower, Ground, Approach
- Departure/Approach procedures
- Airport Layout and Services
  - Runways, Taxiways, and Parking

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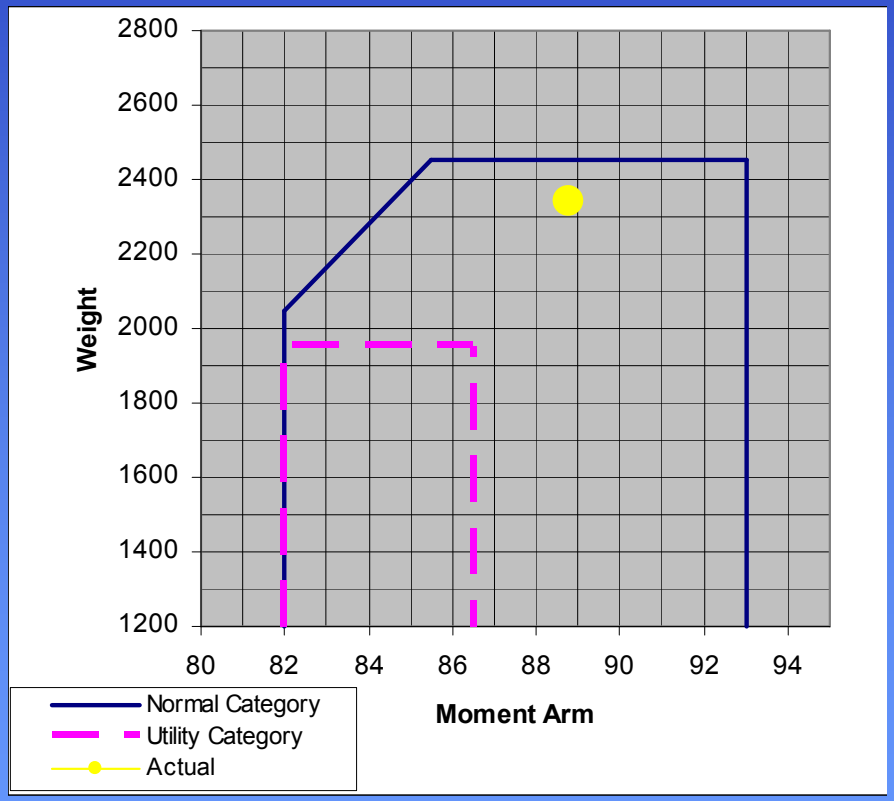
Performance

Weight and Balance

Piper Cherokee 180, 1973 N15802

	Weight	Aft Arm	Moment
Empty Weight	*1461*	*86.45*	*126297*
Oil	*15*	*27.50*	*412.5*
Pilot	220	*80.50*	*17710.0*
Passenger	180	*80.50*	*14490.0*
L. Rear Passenger	70	*118.10*	*8267.0*
R. Rear Passenger	65	*118.10*	*7676.5*
Baggage	33	*142.80*	*4712.4*
Fuel (Gallons)	50	*95.00*	*28500.0*
Totals	2344	88.77	208065



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Performance

Indicated vs. True Airspeed

- Airspeed indicator works off of dynamic pressure of incoming air
- As air is thinner at higher altitudes, introducing inaccuracy
- Add 2% for every 1000 ft above sea level to determine true airspeed from indicated airspeed
  - e.g. at 5500 ft, TAS is 11% higher than IAS

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Weather Briefing

Sources

- DUATS
- http://aviationweather.gov/
- http://www.intellicast.com/aviation
- FAA Flight Service Centers
  - 1-800-WXBRIEF

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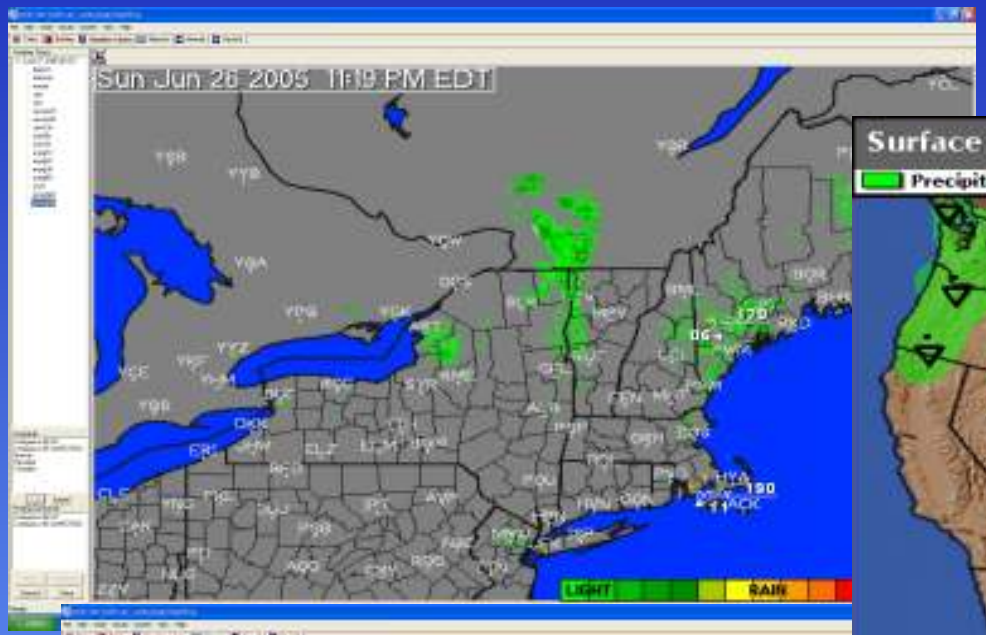
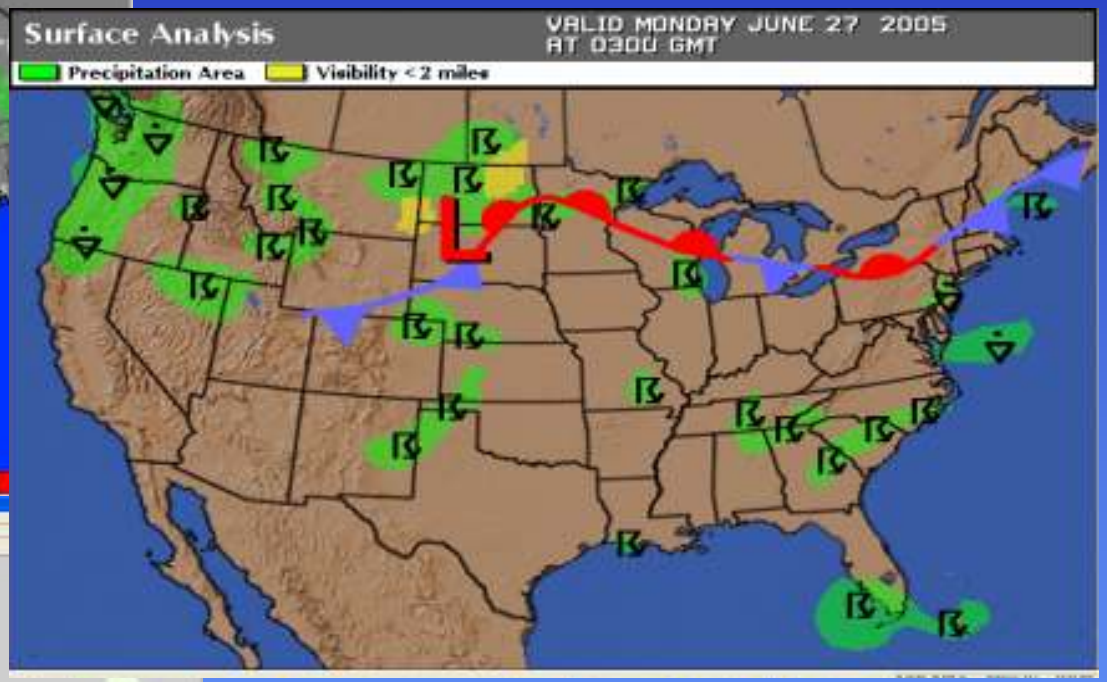
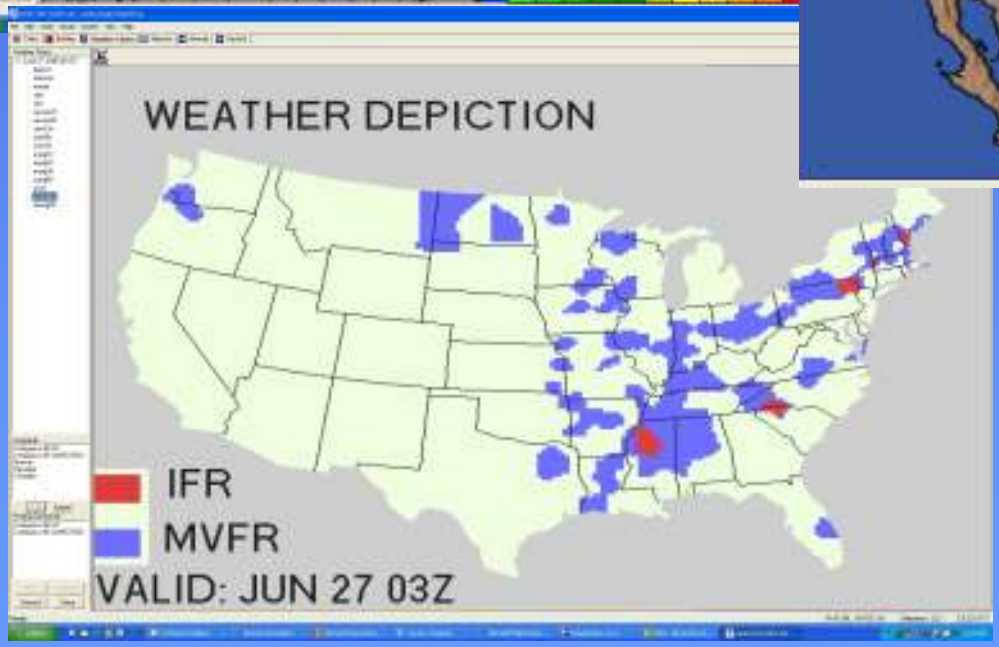
Weather Briefing

- Visibility
- Winds
  - Affect route
  - Crosswinds at takeoff and landing
  - Turbulence
- Temperature
  - Icing
  - Pressure Density
- Precipitation
- Significant Meteorolgical Info (SIGMETS)
- NOTAMs

Weather Briefing







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Plan Route

- Determine Route
- Determine True Course
- Determine Magnetic Heading
- Add Course Correction for Winds
  - Surface Winds are reported as Magnetic
  - Winds Aloft are reported as True
  - MFSF treats all winds as Magnetic

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Plan Route

KASH - MHT - KMHT

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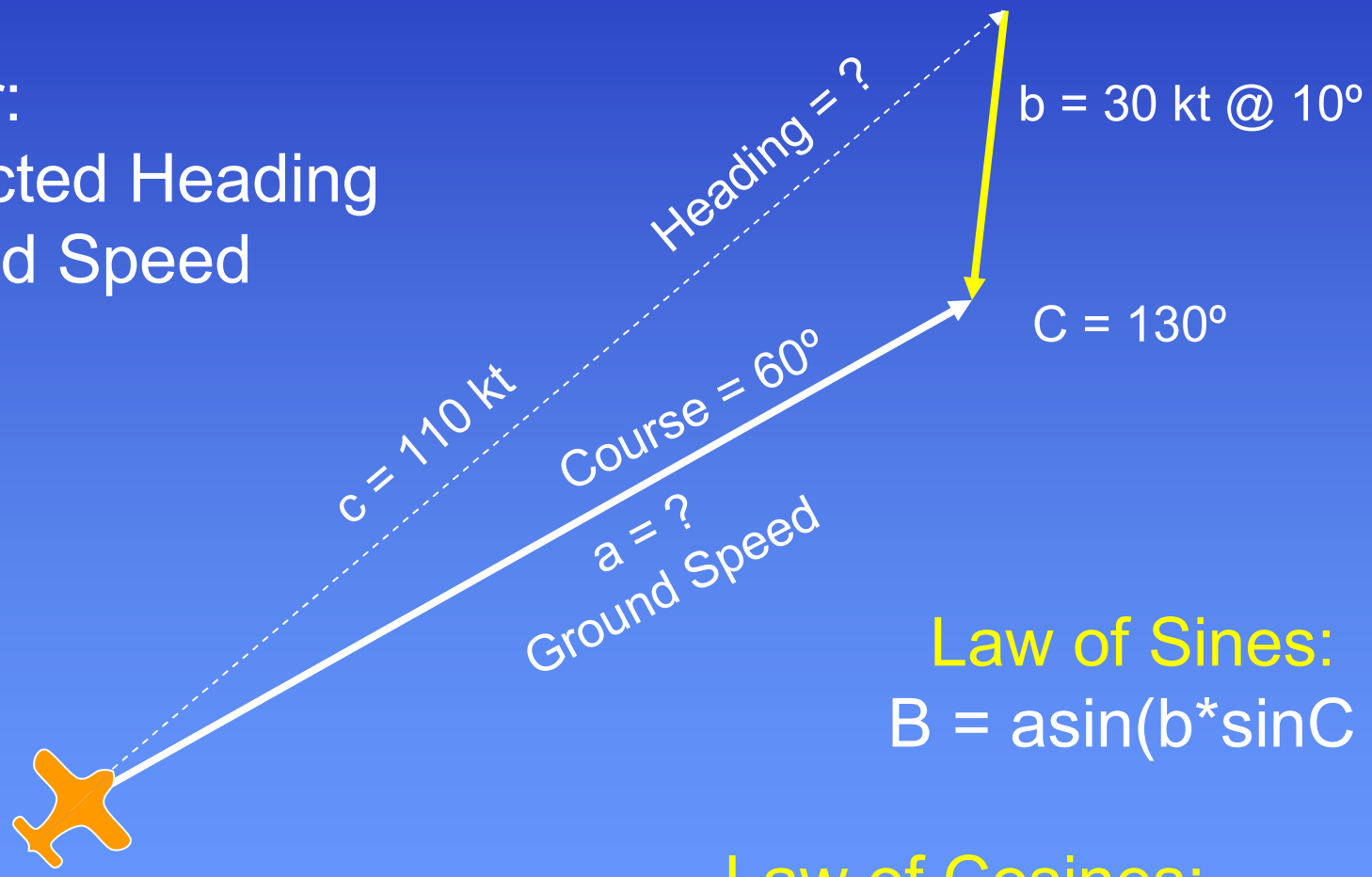
Plan Route

Wind Correction Triangle

Looking for:

- Corrected Heading
- Ground Speed



Law of Sines:

$B = \text{asin}(b * \sin C)$

Law of Cosines:

$a = (c^2 - b^2)/(c * \cos B - b * \cos C)$

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Plan Route

Segment	Alt (ft)	Dist (nm)	Course	WCA	Hdg	GS (kt)	ET (H:mm)
KASH	200						0:00
ENE D117.1	3500	56	45º	-10º	50º	103	0:33
BRNSS Int. BGRr239/73 ENEr062/41	3500	40	47º	-15º	47º	104	0:24
RKD	56	38	75º	-10º	82º	115	0:20

- Remember to use TAS at higher altitudes or quite a bit of error will be introduced in estimated flight time and wind correction angle

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Plan Route

DUATS

Ident Type/Morse Code Name or Fix/radial/dist Latitude Longitude Alt.	Route Winds Temp	Mag Crs Hdg	KTS TAS GS	Fuel Time Dist	Fuel Time Dist
1. ASH Apt. Nashua NH (Boire Field) 42:46:54 71:30:53 2	Direct 340/22 +15C	067 054	91 82	1.0 0:06 8	0:00 134 1.0
2. MHT -- .... - d114.4 Manchester 42:52:06 71:22:10 35	V106 343/21 +14C	059 050	115 103	2.7 0:27 48	0:06 126 3.7
3. ENE . -. . d117.1 Kennebunk 43:25:32 70:36:48 35	V93 342/22 +13C	062 047	115 102	2.4 0:24 0	0:33 78 6.1
5. BRNNS Int. BGRr239/73 ENEr062/41 43:54:08 69:56:42 35	Direct 340/21 +13C	092 082	115 115	1.7 0:20 38	0:57 38 7.8
6. RKD Apt. Rockland ME (Knox Count 44:03:36 69:05:57 1					1:17 0

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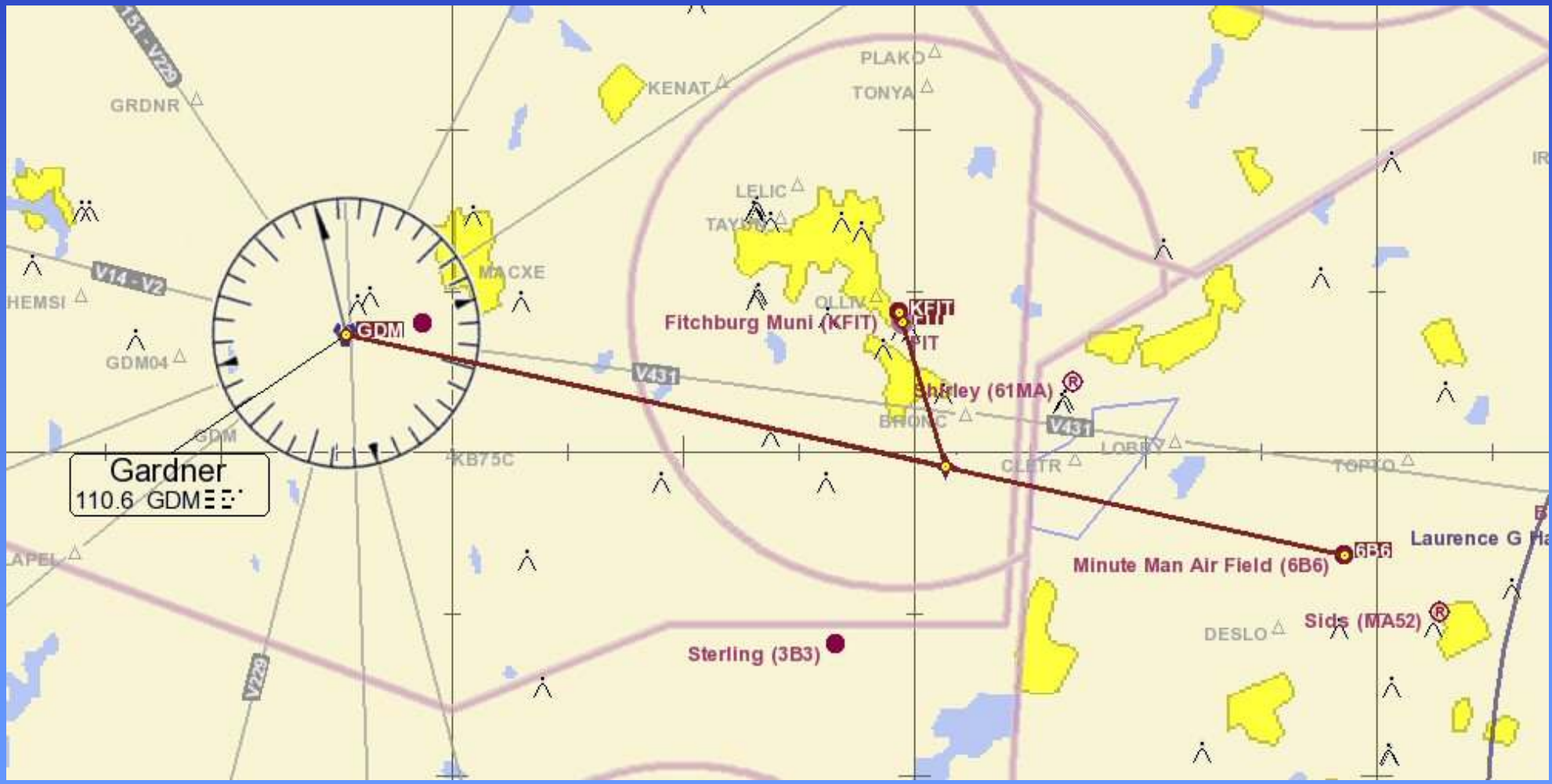
Flight Plan

6B6 – GDM – FIT - KFIT



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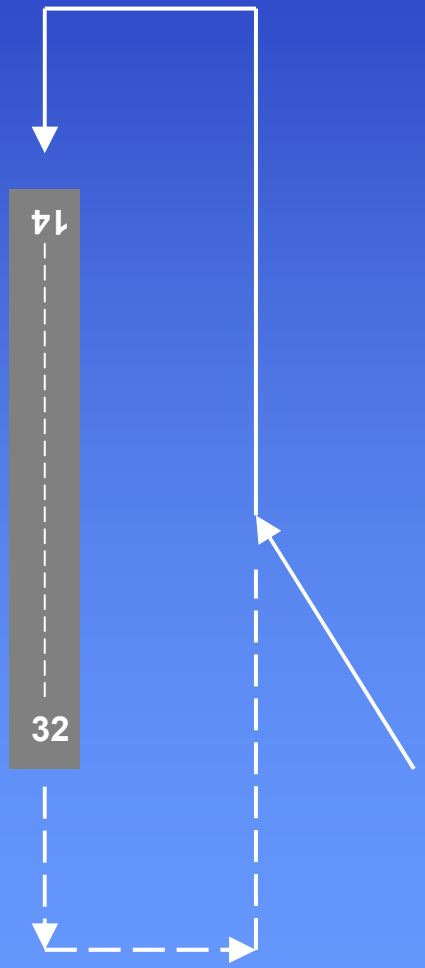
Flight Plan

Things to know ahead of time

- Runway to land at - 14
- CTAF/UNICOM – 122.7
- NDB frequency – 365
- VOR (GDM) – 110.6
- Pattern Altitude – 1350 ft
- Pattern Type - Left



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