

INSTRUMENT PROFICIENCY CHECK

Tiziano Bernard, CFII

Mission Objectives

- Refresh your knowledge of Instrument Flight Rules (IFR).
- Plan and execute a flight under IFR using airways.
- Pick up an IFR clearance at towered and un-towered airports.
- Execute three approaches:
 - Precision Approach (e.g., ILS or RNAV LPV if ILS N/A)
 - Non-precision approach (e.g., LNAV or LOC)
 - Circle to land
- Execute a missed approach with appropriate holding.
- Learn about updates or new approach types.

Mission Objectives... but....

- This is really about you, not about your CFII.
- Beyond IPC minimums, you can ask your CFII for ulterior training, if you so desire.
- You cannot fail an IPC. You just continue until you're proficient.
- It's your flight, not your CFII's flight.



REVIEW OF IFR

“I can’t see S%&T!” – IFR Pilot

IFR Currency

- At this time, look back in your logbook 6 months. In these past 6 months, do you have:
 - 6 approaches?
 - Holds?
 - Intercepting/tracking radials/tracks?
- If yes, you're current. If no, you're not current and you need to:
 - Fly the approaches/holds/tracks under VFR under the hood with a safety pilot
 - Get an IPC
- If you look back and more than 12 months have elapsed since you had currency, then you need an IPC.

IFR Currency – example



Logging Actual IMC (FAR 61.51)

- You can log instrument time only *when you're operating the aircraft solely by reference to instruments under actual or simulated instrument flight conditions.*
- So that is
 - Under the hood (simulated IMC) – with a safety pilot [FAR 91.109(c)]
 - Note, if you put the hood on, you NEED a safety pilot, even if you're current and under IFR.
 - In IMC conditions (actual IMC)
- What is actual IMC?
 - When you cannot “AVIATE” without looking at your instruments.
 - Ex. Above a cloud deck is NOT IMC. Even if you need your instruments to navigate, that does not count as IMC. It's IMC only if you can't tell what is up/down/etc. without looking at your instruments.

PLAN A FLIGHT UNDER IFR

“I’ll just file direct” – IFR Pilot

“NEVER!!” - Tizi

Tizi's Requirements

- Plan a flight from a towered to an untowered field (or viceversa).
 - E.g., KSAV to KARW
- Plan a second flight back home
- Don't remember how to plan a flight? I got you. Follow [this link](#).
- You will walk me through it when we meet.
- We will fly it ALL under IFR.
- When you file, if you're not current, just add in the remarks
Tiziano Bernard PIC CFII

PICKING UP A CLEARANCE

“Clearance on request, with instruments!” – IFR Pilot from the 1950s

“Looking for IFR to Miami” - IFR Pilot from the 2000s

From a Towered Airport

- Call clearance delivery and pick up your clearance
 - *Savannah clearance, Skyhawk 172MX looking for IFR to Beaufort Exec*
- Note down the full clearance (CRAFT)
 - Clearance limit: “Cleared to Beaufort”
 - Route: “as filed”
 - Altitude: “Climb and maintain 3,000, expect 6,000 ten minutes after departure”
 - Frequency: “Departure frequency 120.4”
 - Transponder: “Squark 1234”
- If you land at towered airports, your IFR flight plan is cancelled automatically by the NAS computer.

From an Un-towered Airport

- Check your EFB. There may be a phone number to call.
- Call when you're ready to go, holding short of the runway.
- Clearances will typically have
 - **Clearance Void Time**: the time after which you cannot takeoff.
 - **Call back time**: the time you need to call ATC by if you decided to not depart. If you don't call back, they may think something bad has happened.
 - **Current Time**: the time so you can sync your clock (required instrument).
- There may be instructions on initial headings upon entering controlled airspace.
- Review Departure Procedures! Don't remember? [Here's the link...](#)
- You can close an IFR flight plan in the air or on the ground by calling the number in your EFB.

EXECUTE APPROACHES

“Wait... why are you disengaging WAAS?” -IFR Pilot watching Tizi prep a failure

Review Review Review

- There's no magic to this part. Just review the procedures you intend to fly, as you should always do.
- To review component on the plates, see the lecture [in the library](#).
- To review holding procedures, see the lecture [in the library](#).
- To review clearance phraseology, see the lecture [in the library](#).
- To review circling regulations, see [this article](#).
- To review how to brief a chart, see [this article](#).
- Plan a precision, a non-precision, and a circle to land.

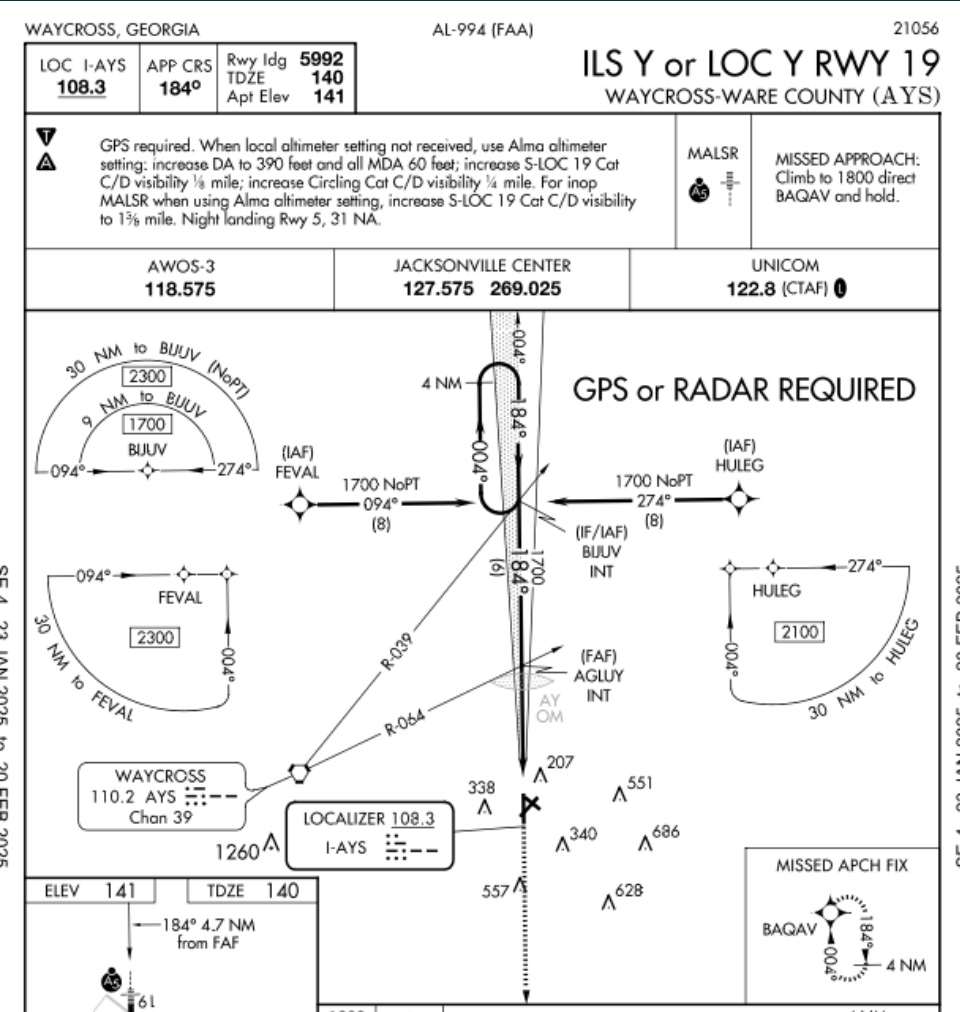
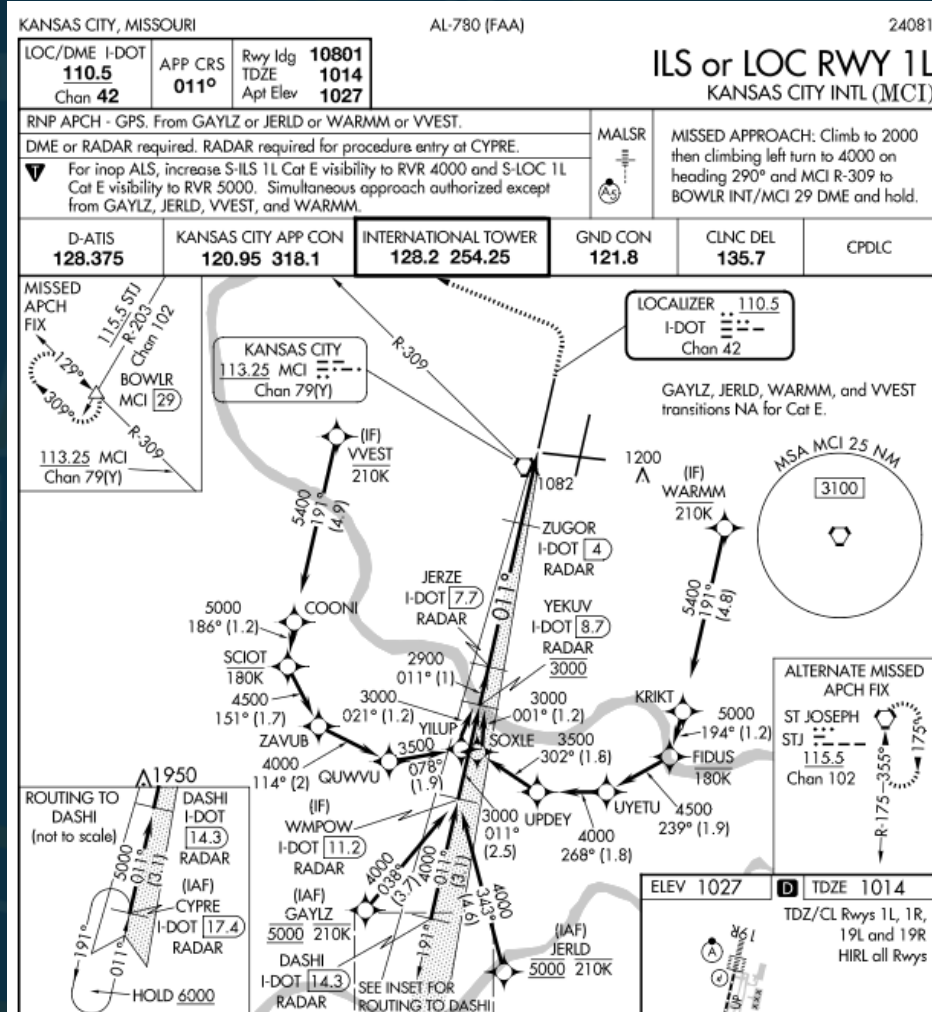
**NEW THINGS YOU MAY NOT
KNOW BUT MIGHT BE INTERESTED
IN CAUSE YOU'RE A GOOD PILOT
AND WANT TO BE READY FOR
ANYTHING.**

“Cleared for wut?” – IFR Pilot who has only flown RNAV LPVs all their life

Hybrid LOC + RNAV (1/2)

- Kansas City International Airport (KMCI) implemented a hybrid RNAV + LOC approach to the northbound ILS.
- The purpose is to provide RNAV-based waypoints to sequence aircraft alike vectors to final.
- The procedure begins as an RNAV and then becomes a localizer on the final approach course.
- The closest one to KSAV is KAYS, which has a simplified example.

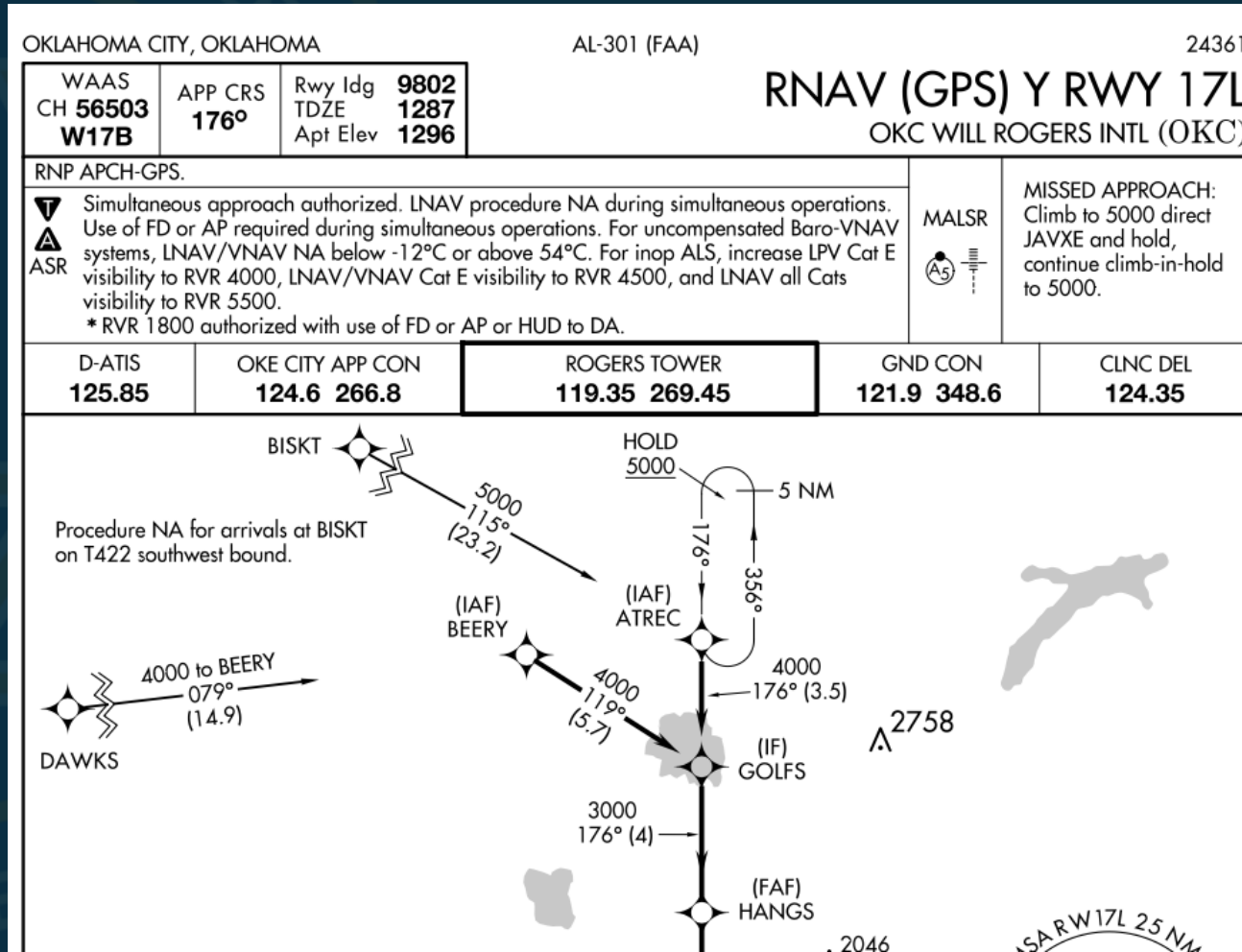
Hybrid LOC + RNAV (2/2)



Non-PT Hold at Approach Fix (1/2)

- Usually, holds published on an approach plate are Holds in Lieu of a Procedure Turn.
- You shoot the entry procedure to align you with the Final Approach Course (FAC).
- But there are a few procedures that have actually published real holds. They are not part of the procedure, but charted to facilitate ATC instructions.
- From the example (next slide) you can tell it's not a PT by the geometry of the approach (feeders, IAFs, etc.)

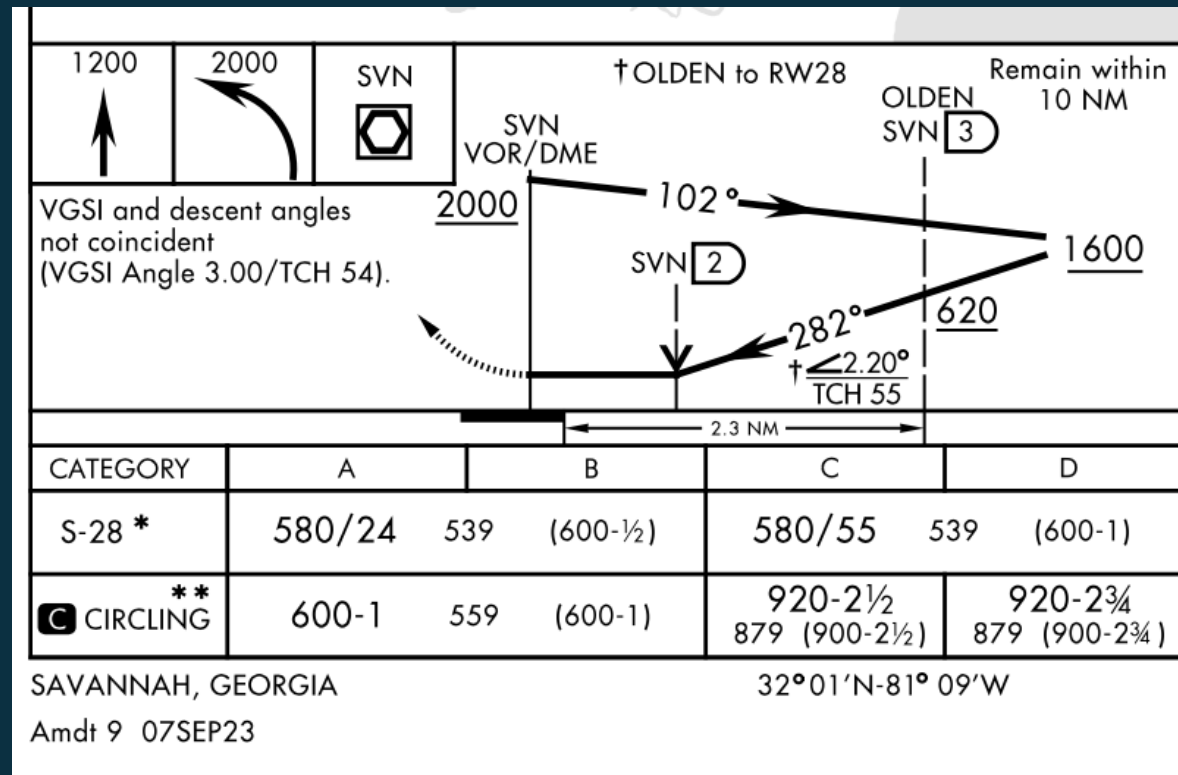
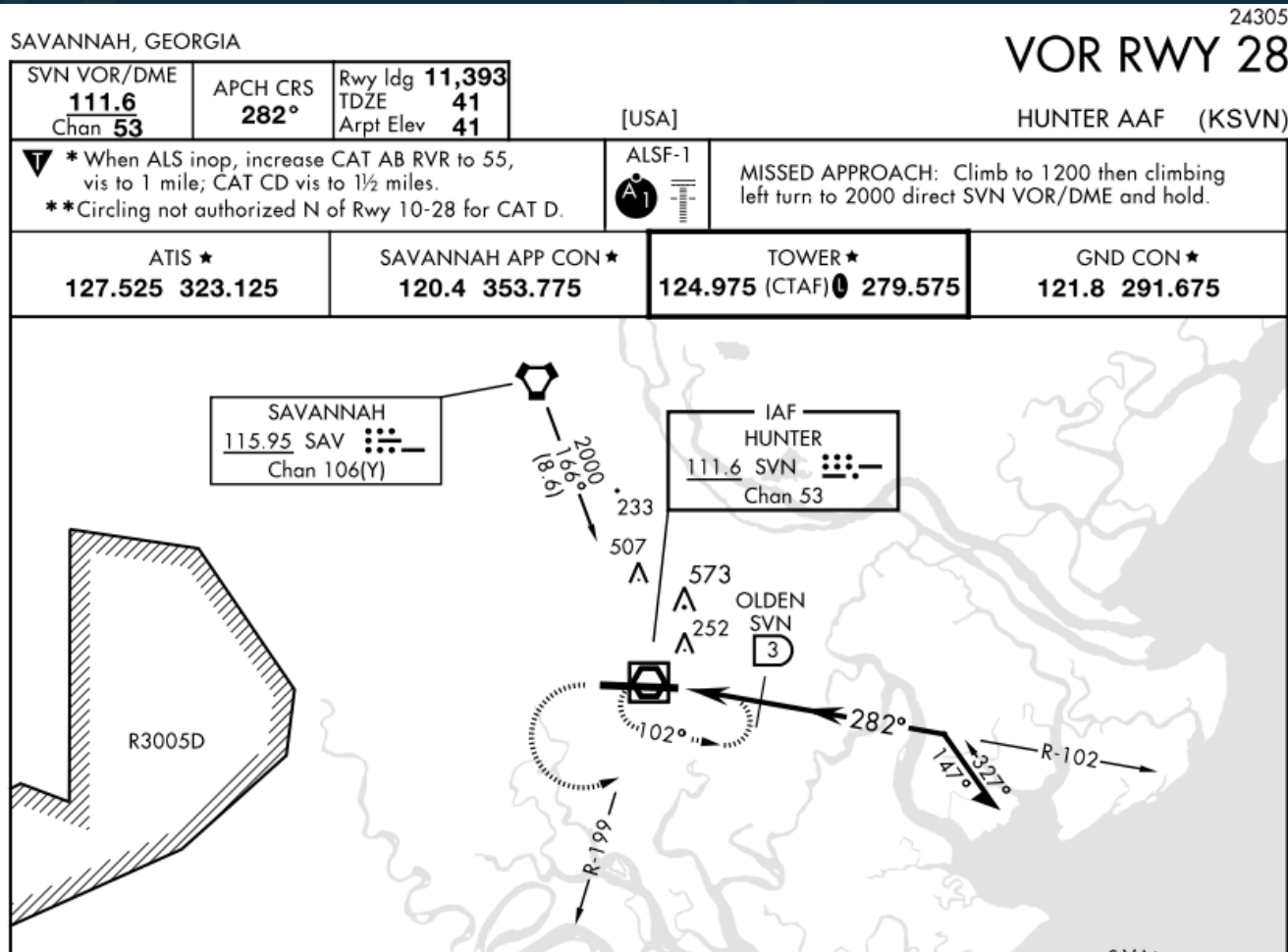
Non-PT Hold at Approach Fix (2/2)



VOR Approach without a FAF

- Some VOR approaches do not have a published FAF.
- There is still a stepdown FIX that will get you to your MDAs.
- This is rare, but still present.

VOR Approach without a FAF (2/2)

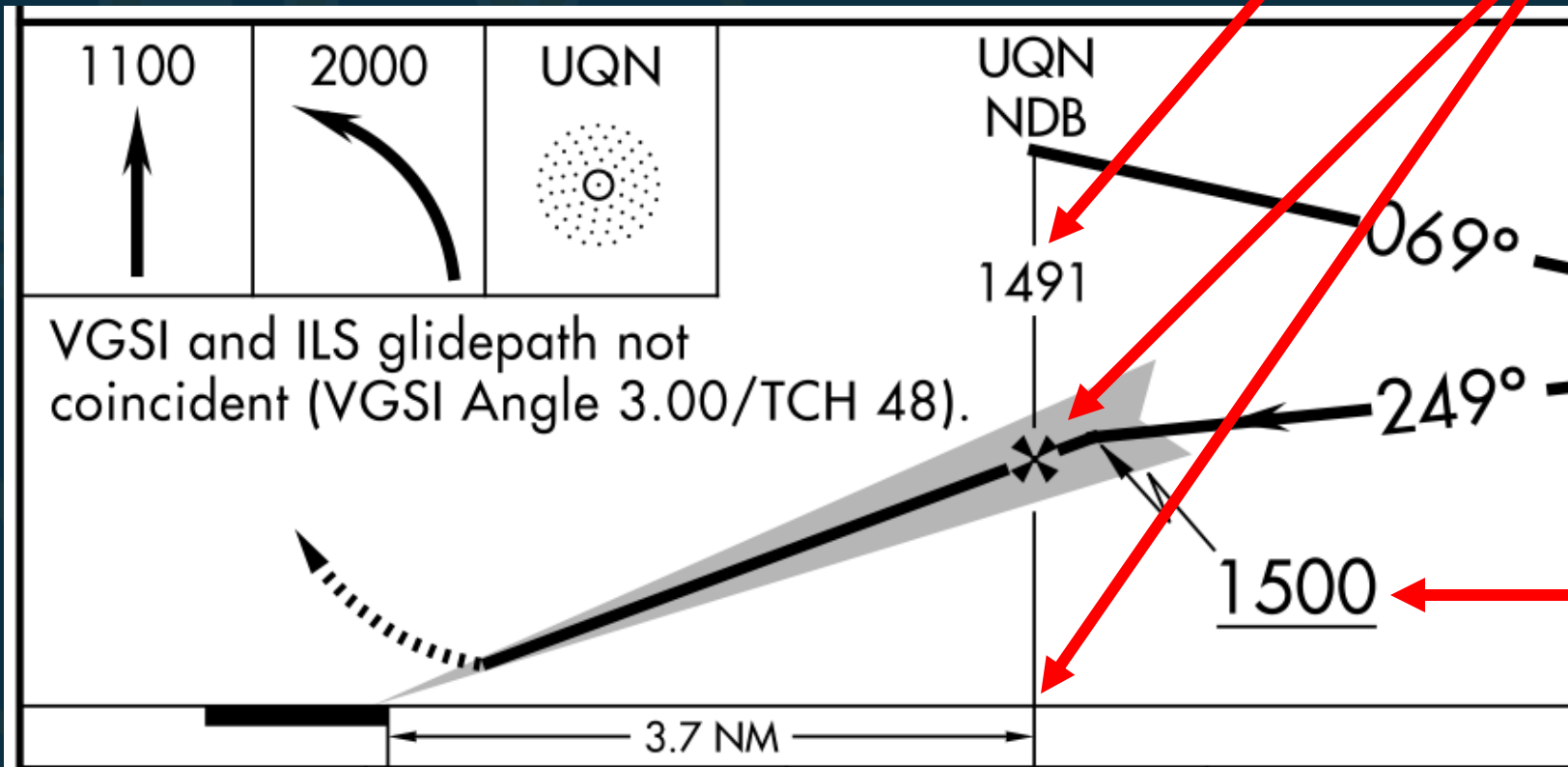


FAF vs. PFAF (1/2)

- FAF = Non-precision **F**inal **A**pproach **F**ix
- PFAF = **P**recision **F**inal **A**pproach **F**ix
- If you have a glideslope, you will reach the PFAF when you intercept the glideslope, as long as it's above the published PFAF altitude (lightning bolt? Remember?).
- If you don't have a glideslope, you will reach the FAF at a given distance from the runway.
- If you fly the glideslope, you should be at the charted altitude when you cross the non-precision FAF.

FAF vs. PFAF (2/2)

Altitude at which you should cross the FAF when you're on the glideslope



FAF

PFAF

Monitoring of 121.5

AIM 6-2-4 (d)

- Per the AIM, all pilots should monitor guard (121.5) if equipped with a spare radio.
- There existed a NOTAM (nationwide) that required pilots to monitor 121.5.
- The NOTAM is no longer in effect, so we revert back to the AIM.

INSTRUMENT PROFICIENCY CHECK

[Read the associated lesson plan on FlyWithTizi.com](https://www.flywithtizi.com)

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