A small white twin-engine propeller aircraft is parked on a snowy field. The aircraft is viewed from a low angle, showing its wings and landing gear. The background features a vast, flat, snow-covered landscape with distant mountains under a clear sky. The text is overlaid on the image in a white, sans-serif font.

# Cold Weather Altimeter Adjustment

Survey Results

August 2018



# Executive Summary

- Overall 23% of pilots surveyed indicated that they are not familiar with cold temperature restricted airport correction procedures.
- A majority of pilots surveyed (71%) indicated that they never or almost never use the cold temperature procedures. Typical comments communicated that they rarely use the procedures because extreme cold typically occurs in high [barometric] pressure conditions with excellent visibility. One third of Alaska respondents said they used them, but fewer than 10% of pilots from any other state indicated that they frequently used the correction procedures.
- Pilots most likely to fly in very cold temperatures in IMC conditions are more familiar with the procedures. Nearly 90% of Alaska, 75% of Colorado, and 70% of Minnesota pilots were familiar with the correction procedures. Alaska pilots who fly more than 50 hours annually IFR were most familiar with the procedures.
- 75% of pilots used instrument approach charts, and 22% used NOTAMS to identify cold temperature restricted airports. However, about half of the pilot respondents had never used the procedures and 31% said they almost never use the procedures.
- 25% of pilots are not at all familiar with the snowflake symbol used on approach charts to indicate airports that have cold temperature restrictions.
- Half of the pilots surveyed were moderately to extremely familiar with the snowflake symbol on instrument approach charts. 25% said they were not at all familiar with the snowflake symbol.
- 83% said they preferred the All Segments Method over the NTAP method to determine which segments required a correction.
- For the 17% that selected the NTAP method, a follow-up question was provided, nearly 9 in 10 said they would like to see NTAP segments identified on their approach charts.
- Open-ended comments from pilots indicate that they would like more education on these correction procedures.

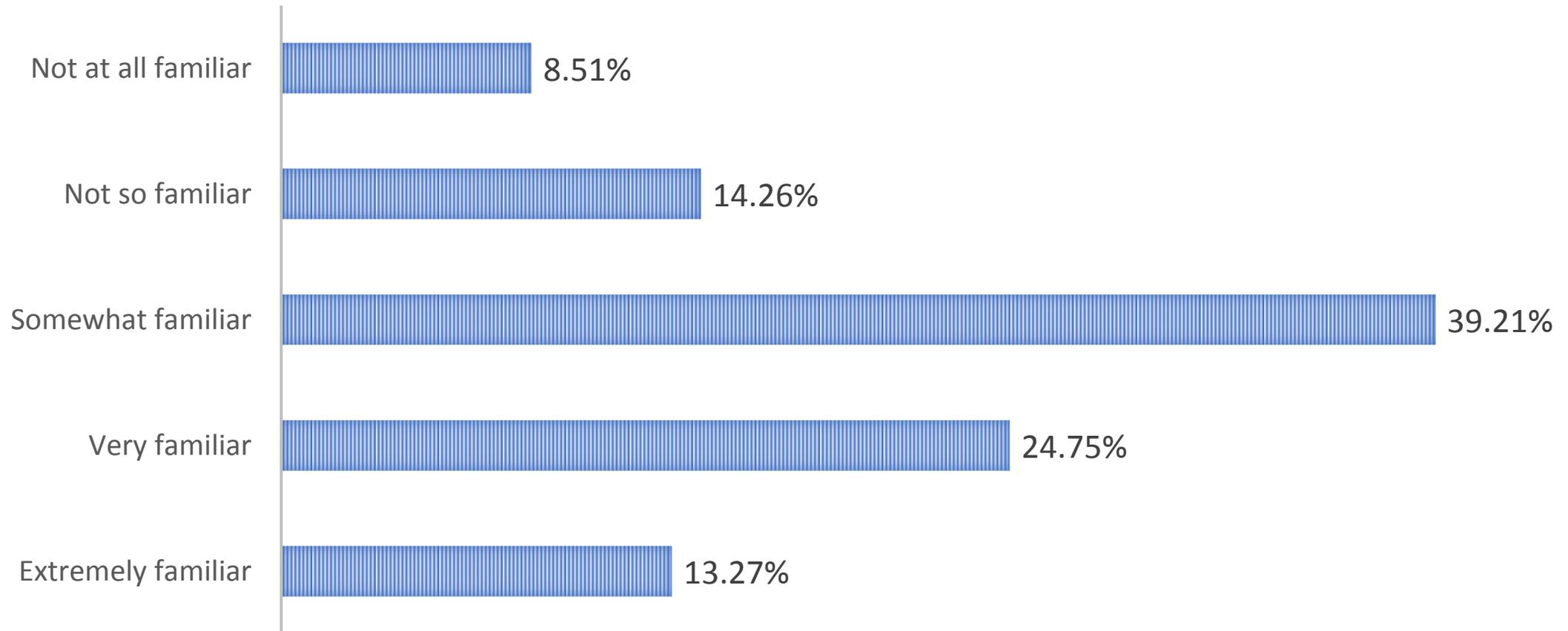


# Methodology

- AOPA Member pilots in all states that border Canada, and Colorado. Non-AOPA members were included in Colorado and Alaska samples. Total sample size 26,349. Total response 1,018 pilots responded for a margin of error  $\pm 3.08$  at 95% confidence interval. That means that if we exercised this survey 100 more time, 95% of the results would be within 3%  $\pm$  these results.
- 55% of the pilots surveyed are instrument rated and current, 24% are instrument rated but not current, and 21% are not instrument rated. We restricted the survey to instrument rated pilots both current and not current.

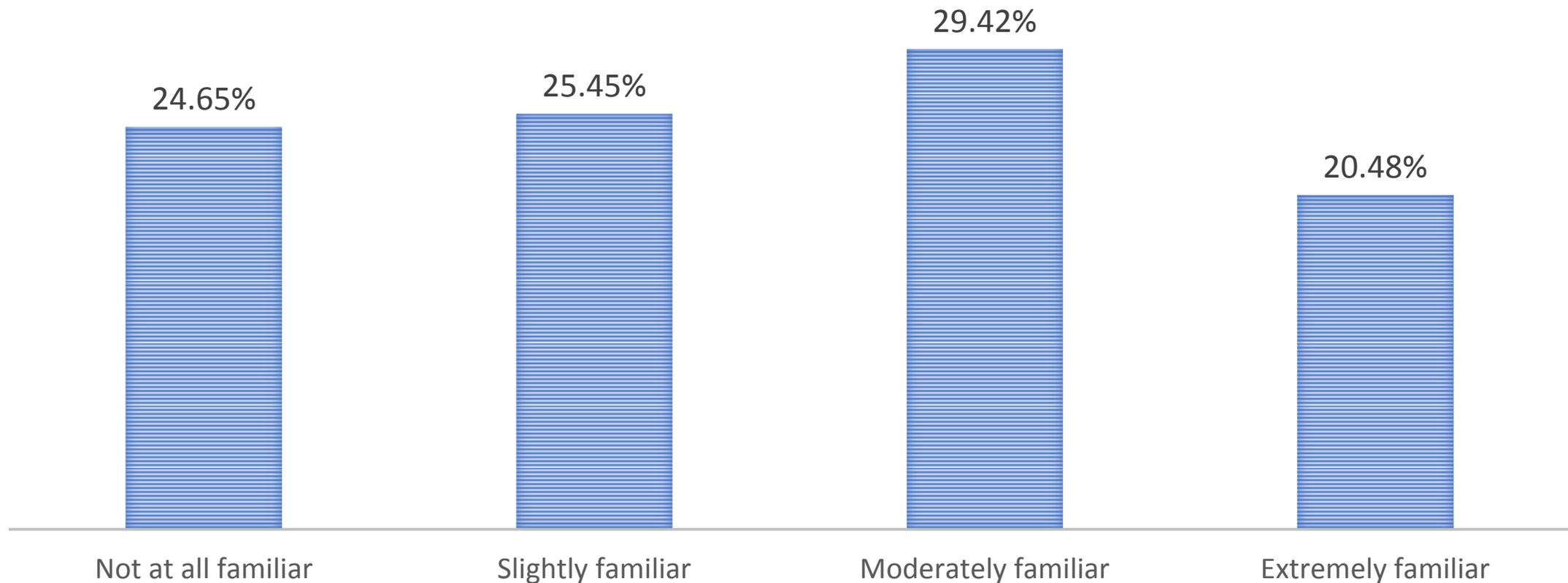


# Are you familiar with Cold Temperature Restricted Airport correction procedures?



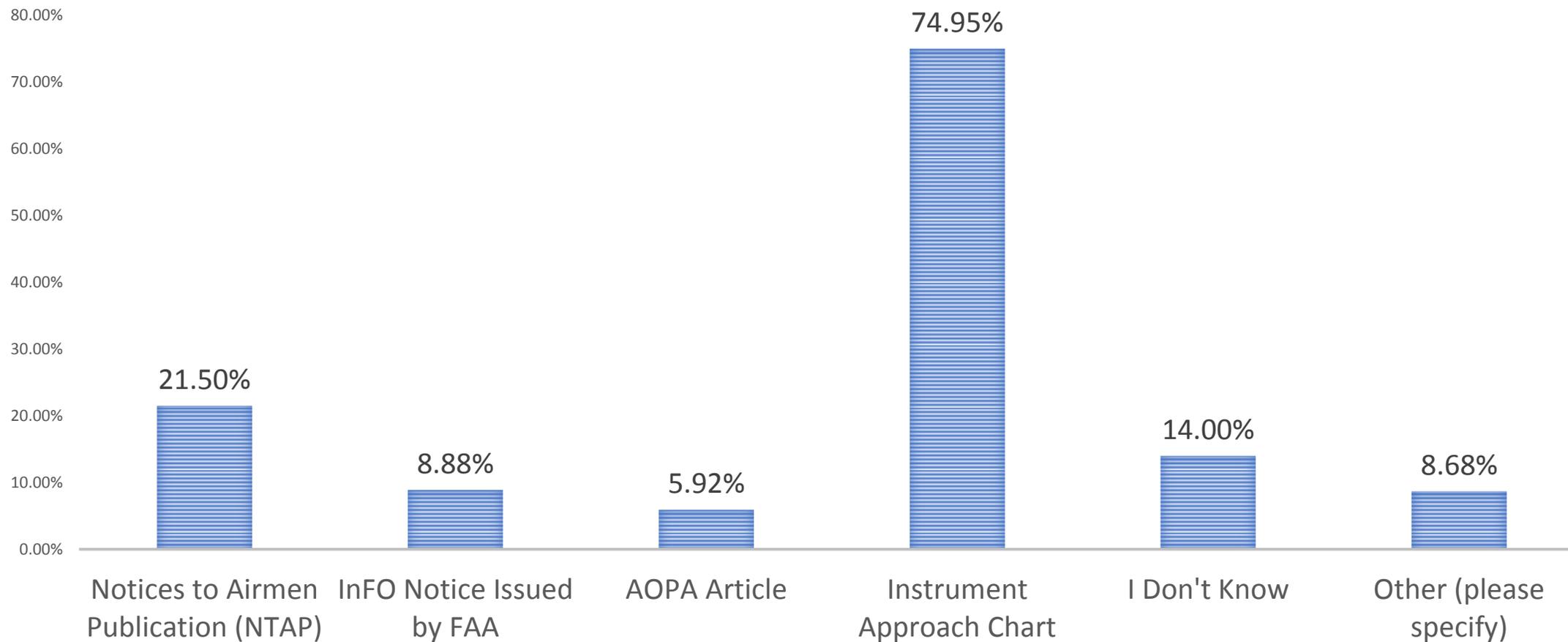


# Are you familiar with the snowflake symbol found on instrument approach charts?





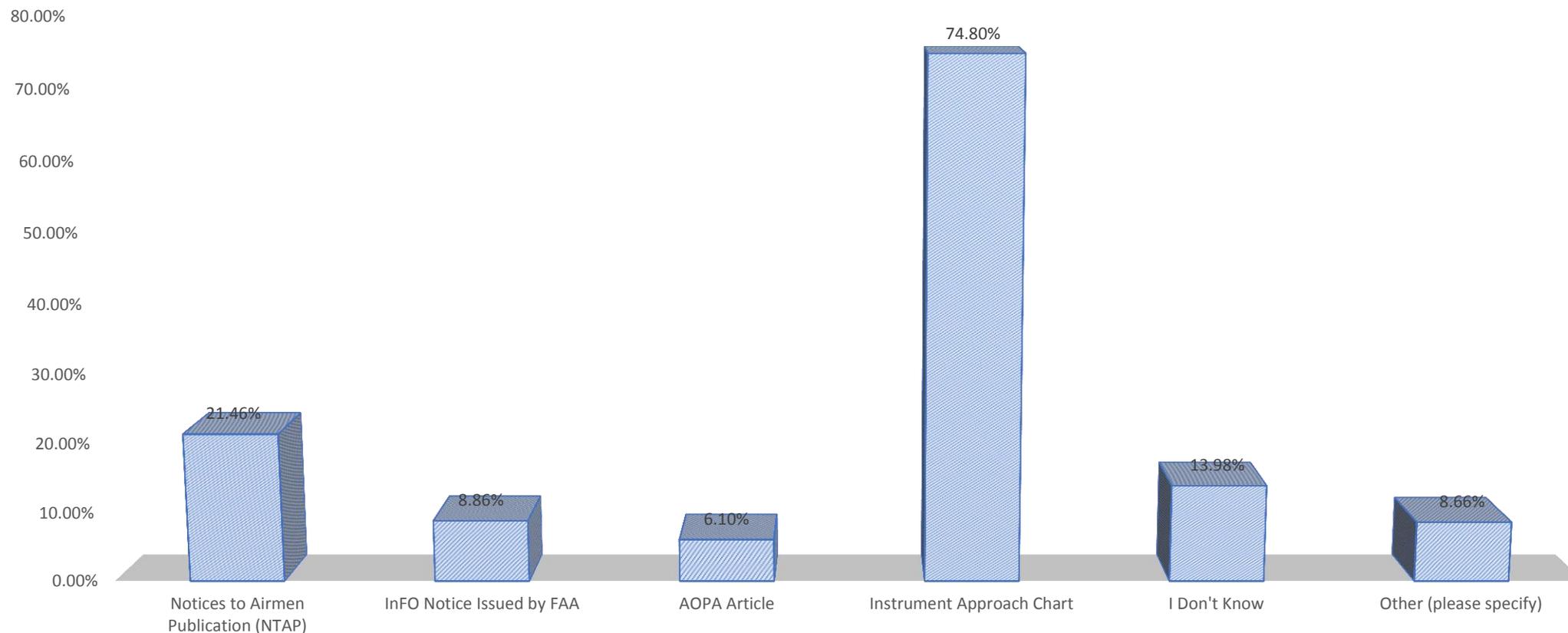
# What resource(s) do you use to identify Cold Temperature Restricted Airports? (select all that apply)





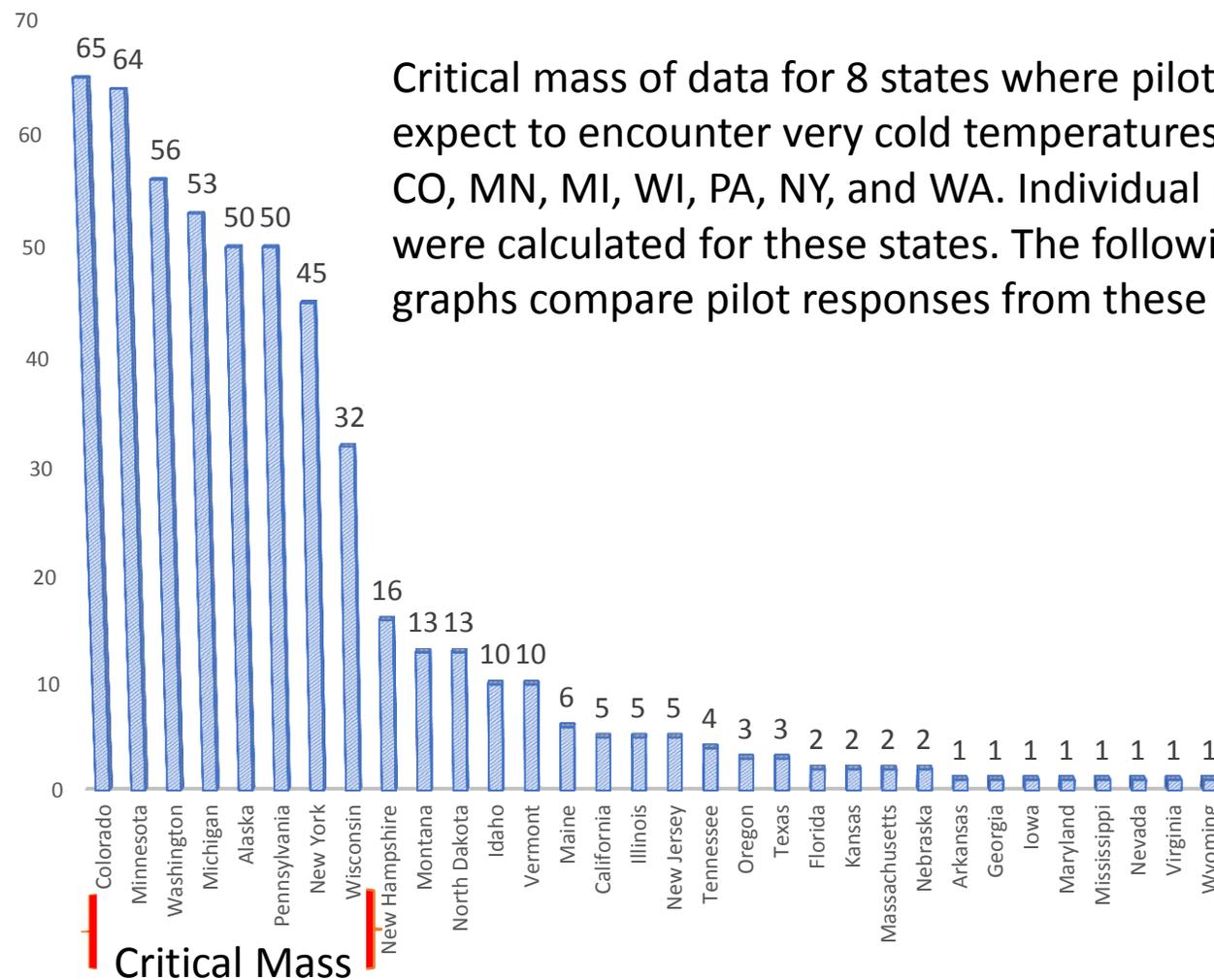
# What resource(s) do you use to identify Cold Temperature Restricted Airports? (select all that apply)

(N=508)





What state do you most often fly over?



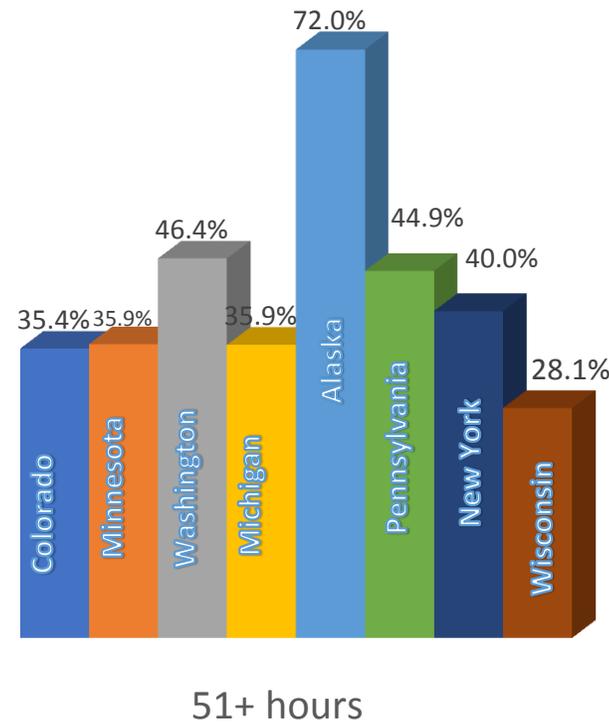
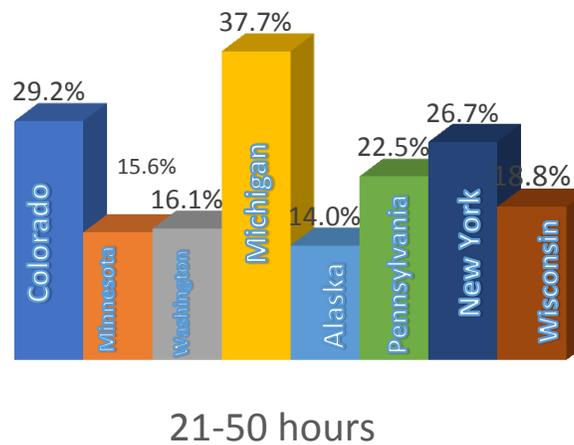
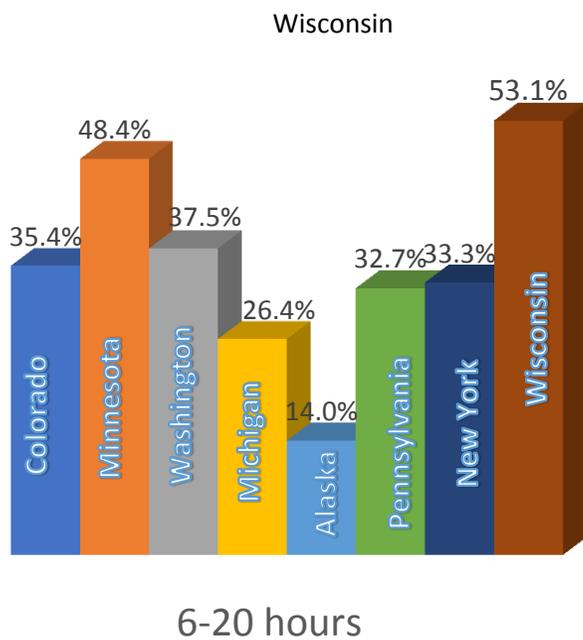
Critical mass of data for 8 states where pilots can expect to encounter very cold temperatures: AK, CO, MN, MI, WI, PA, NY, and WA. Individual results were calculated for these states. The following graphs compare pilot responses from these states.



# On average, how many hours do you fly IFR per year?

Alaska pilots reported the highest number of hours flying IFR

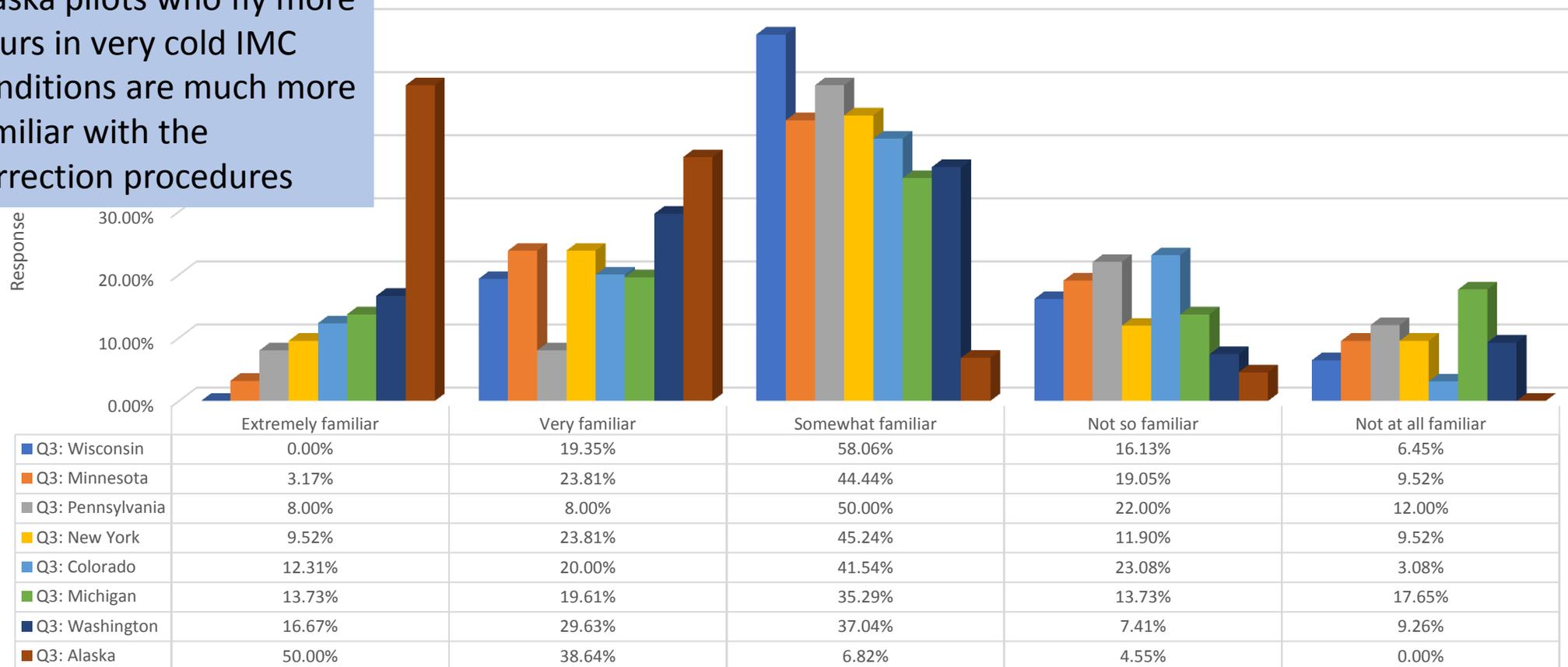
■ CO ■ MN ■ WA ■ MI ■ AK ■ PA ■ NY ■ WI





# Are you familiar with Cold Temperature Restricted Airport correction procedures?

Alaska pilots who fly more hours in very cold IMC conditions are much more familiar with the correction procedures

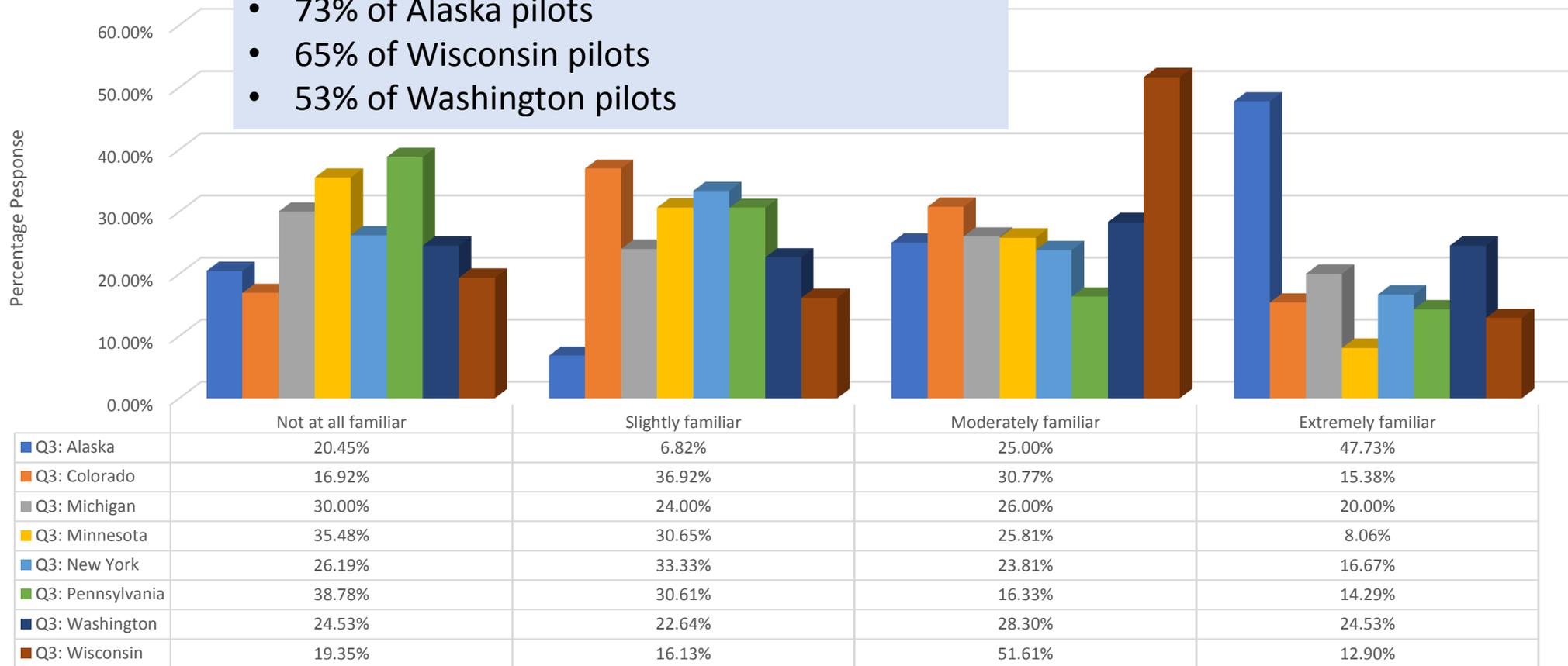




# Are you familiar with the snowflake symbol found on instrument approach charts?

Who is most familiar with the snowflake symbol?

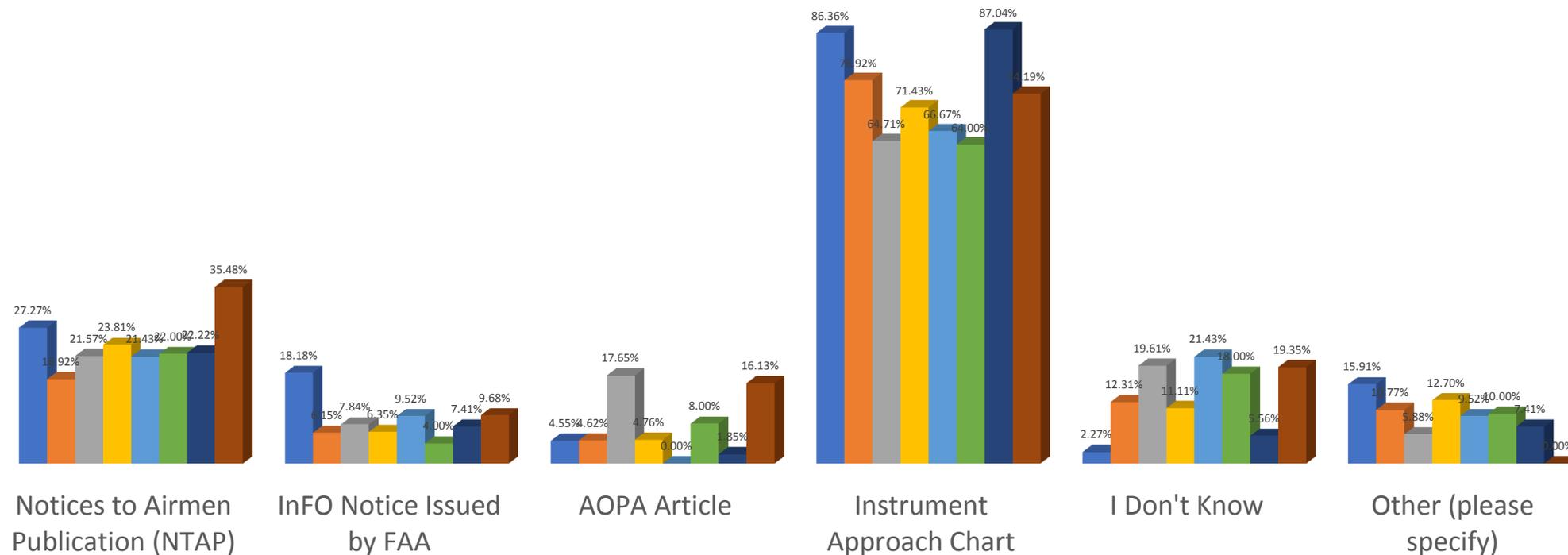
- 73% of Alaska pilots
- 65% of Wisconsin pilots
- 53% of Washington pilots





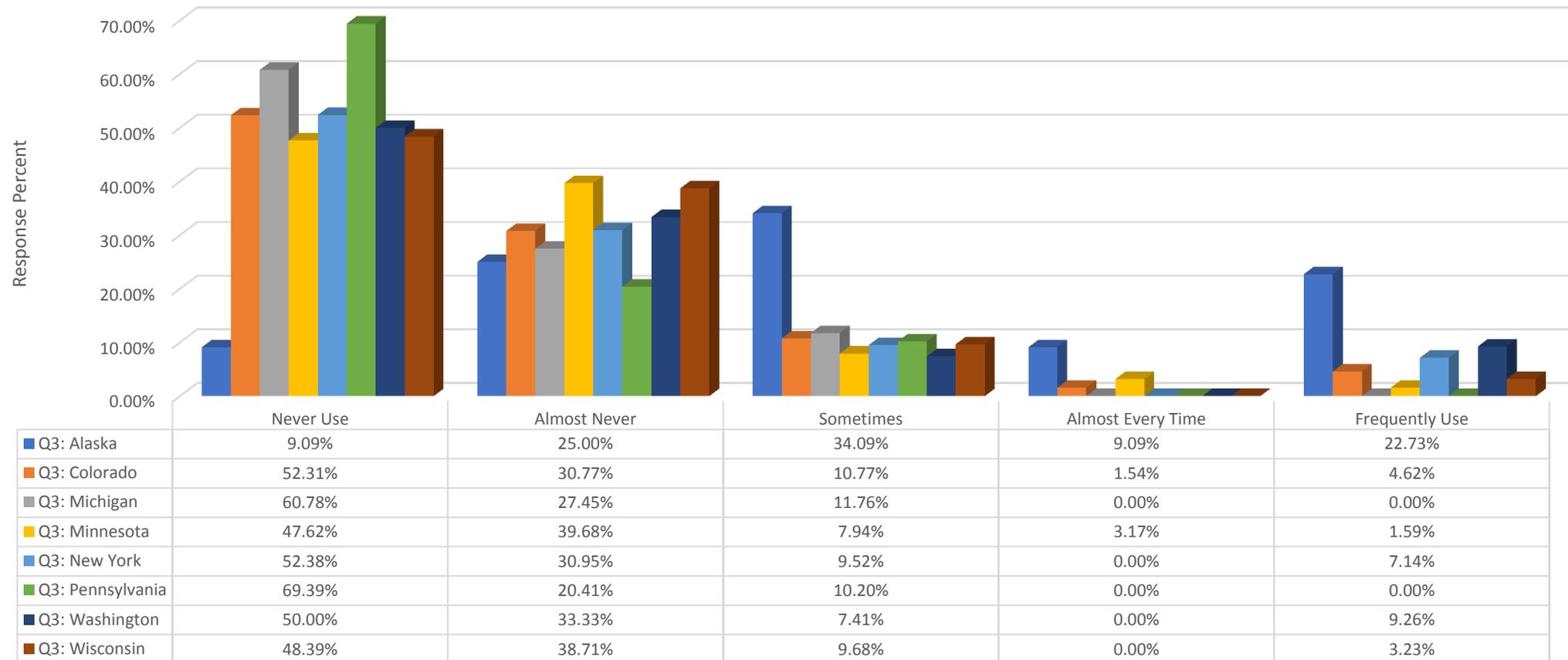
# What resource(s) do you use to identify Cold Temperature Restricted Airports? (select all that apply)

■ Q3: Alaska      ■ Q3: Colorado      ■ Q3: Michigan      ■ Q3: Minnesota  
■ Q3: New York      ■ Q3: Pennsylvania      ■ Q3: Washington      ■ Q3: Wisconsin



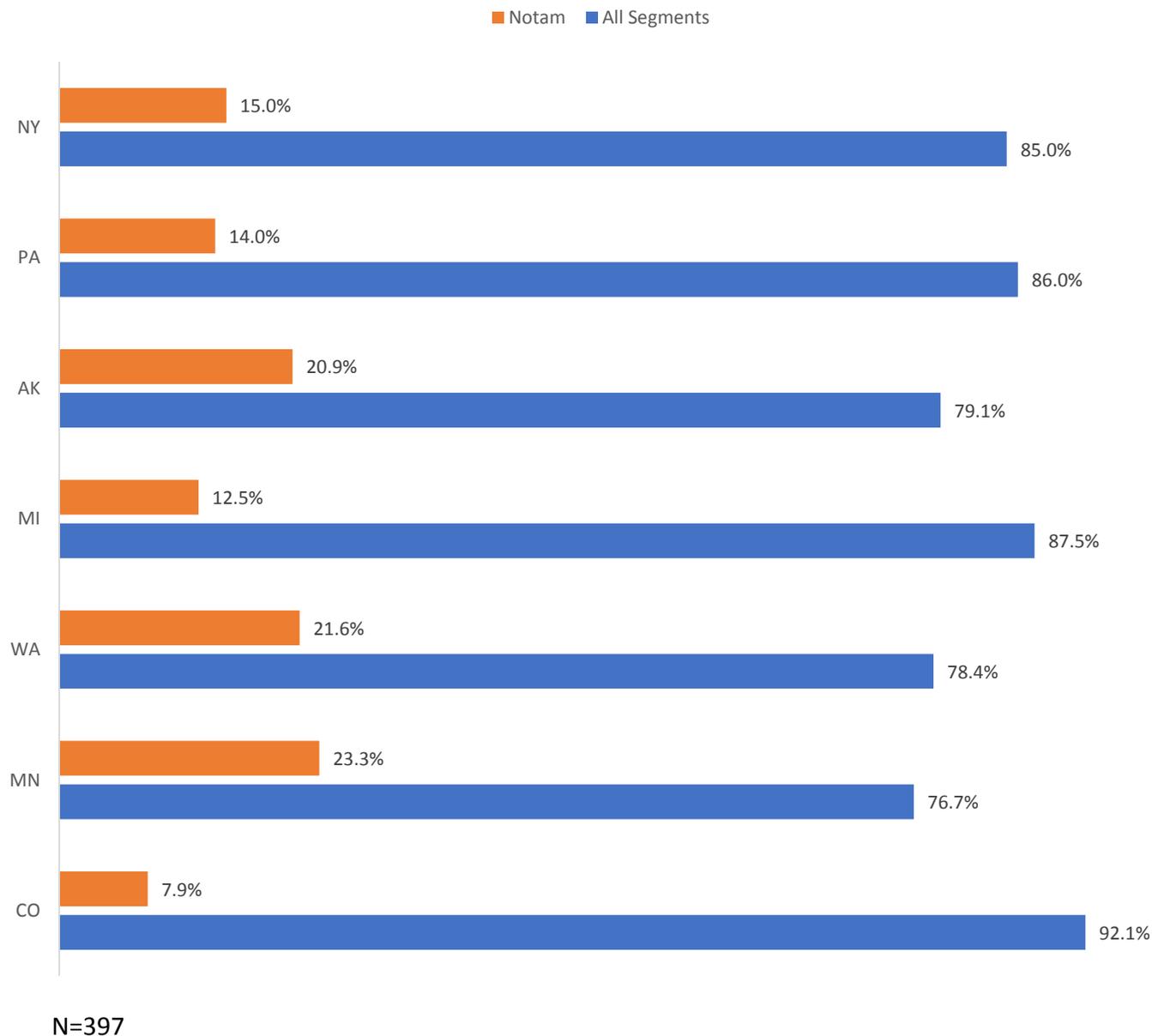


# How often have you applied Cold Temperature Restricted Airport correction procedures?



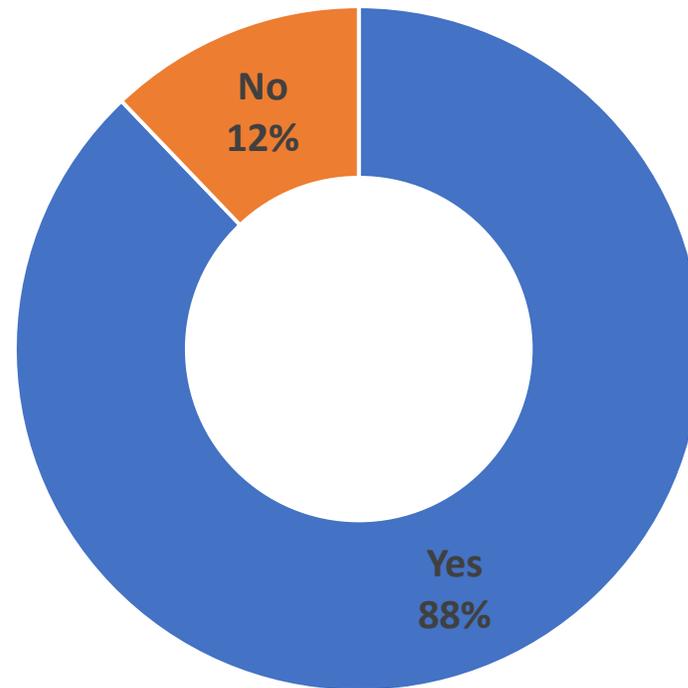


There are two methods available to make temperature corrections for an approach: All Segments Method: Pilots may correct all altitudes from the Initial Approach Fix altitude to the missed approach final holding altitude. Based on the “snowflake” icon on the approach chart, corrections are computed to all segments of the approach. Notices to Airmen Publication (NTAP) Segments Method: Pilots may correct only the required segments indicated in this NTAP’s restricted airports list. Using this method requires referencing the NTAP restricted airports list to determine which segments require a correction. Calculations will be made based on the altitude of final approach segments and missed approach final holding altitude. Which correction method do you prefer?





The answer was an overwhelming YES to NTAP segments identified on approach charts (if pilot chose NTAP segments as preferred choice(17%))



Would you like to see NTAP segments identified on your approach chart? (see chart prototype with NTAP segments)