QAE Dataset Ingestion Rule: To retain quantile symmetrical integrity, all Q-Band Counts, within a set of 5 Q-Bands, must be equal to or have a maximum variance of 1 within the Weak → Peak distribution — this confirms the dataset has adequate resolution to process into QAE Report charts

✓ Pass: — 365 = 73,73,73,73,73 — 251 = 50,51,50,50,50 — 304 = 61,61,61,60,61 —
✗ Fail: — 366 = 71,73,75,74,73 — 257 = 50,52,53,51,51 — 323 = 63,65,66,64,65 —

QAE _Cheat-Sheet_V1.7

QAE System Orientation

The Standard QAE Report is a static, fixed-layout digital display panel composed of two PDF pages: the Leading Edge Page and the Seasonal Back-Stitch Page. All charts and tables present color-coded Q-Bands and aggregated Q-Band Counts across various fixed timeframes to reveal patterns.

Both pages share the same header structure: a logo, buttons and a miniguide, followed by three primary containers — Metadata, Primary Baseline Lens, and Reaction Lens details — then the Newest Historical Activity container, which is critical for the operational value of the Leading Edge Page and allows the Seasonal Back-Stitch Page to function as a complete independent page when separated for use in Decade Packs.

- The **Leading Edge Page** puts Q-Bands into daily indexed timeframe-based barcharts.
- The **Seasonal Back-Stitch Page** puts Q-Bands into monthly indexed containers with the Newest month always locked to the right side, allowing it to tile into Decade Packs. The three primary upper Baseline Lens (BL) charts — Monthly Trajectory, Monthly Dispersion, and Monthly Proportion — all derive from the same underlying data-table, presenting identical information through three distinct viewports; the same applies to the lower Reaction Lens (RL).

Dual Lens Classifications - *Symbols & Lens Q-Band Colors*

QAE has Dual-Lens Processing — A **Purple M1 Baseline (◯_BL_M1)** measures absolute environmental state, and a **Blue M2 Reaction (△_RL_M2)** measures response velocity and reaction intensity. Both operate in a bounded one-year envelope, both use reverse chronology, and QAE ignores inactive days — see participation in metadata.

◯_BL M1 Baseline Lens

Symbol: ◯_BL_M1
Mechanic: The Quintile cut-off values establish the ◯_BL_M1 Baseline Q-Bands. The cut-off values are shown in the Primary Baseline Container. This represents the absolute environmental state of the M1 metrics within the original dataset

△_RL M2 Reaction Lens

Symbol: △_RL_M2
Mechanic: The Quintile cut-off values establish the △_RL_M2 Reaction Q-Bands. The cut-off values are shown in the Primary Reaction Container. This represents the reaction intensity relative to the prior active state (t-1) of the M2 metrics within the original dataset

Baseline ◯_BL_M1	Reaction △_RL_M2
Weak	Weak
Moderate	Moderate
Median	Median
Strong	Strong
Peak	Peak

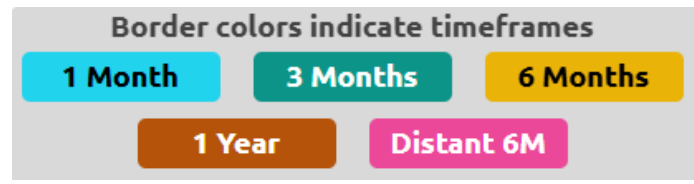
Time Orientation

- **Report Timeframes:** Temporal ranges for Q-Band Counts. 10 days | 1 month | 3 months | 6 months | 1 year | Distant 6 months | The 12 calendar months
- **Time:** Time exists in the historical context to create an initial Newest Date and then look backwards precisely one-year calendar year to lock that complete one-year only
- **Timezone:** UTC offset to timezone lock the dataset
- **Active Day:** Both metrics are present in the daily observation. These are used in Lens Classifications
- **Inactive Day:** Both metrics are not present in the daily observation. These are not used in Lens Classifications
- **Disqualified Days:** When the daily observation has 1 metric present and 1 metric missing. These are invalid not allowed.
- **Participation:** A percentage of Active Days in comparison the yearly day count of 365/366 shown in the metadata containe

Badges and Borders

Badges and Borders are critical containers which make up the QAE Report. They tell the User precisely what they are looking at. There are 2 types of Badges and a Border:

- **Left Badge**: A colored lens type badge that shows the lens and metric ID, this located on the top left of containers. The Dual Lens Classifications above show the left side badge
- **Right Badge**: A colored timeframe badge located on the top right of containers shown below indicating the timeframe duration
- **Border**: The Border color always matches the Right Badge timeframe color



Q-Bands

- **Q-Bands:** The QAE computation creates quintile binning for time-series data ranges. These are ranked within the closed one-year envelope and divided into five symmetric 20% quintile intervals, then labelled: Weak | Moderate | Median | Strong | Peak. This applies to both lenses and lens colors. Individual Q-Bands will be one of the gradient colors blue or purple.
- **Q-Band Counts:** Individual Q-Band observations are aggregated into fixed Report Timeframe counts. These form the basis of the ordinal geometry.

◯_BL_M1	Position	△_RL_M2
Moderate	First Active Date	Weak ▼
Weak	2nd Active Date	Weak ▲
Weak	3rd	Weak ▲
Weak	4th	Moderate ▲
Weak	5th	Weak ▼
Weak	6th	Median ▲
Moderate	7th	Strong ▼
Median	8th	Moderate ▼
Median	9th	Strong ▲
Strong	10th	Moderate ▲

Directional Polarity

Exclusively in the M2 Reaction Lens the Metric Reshaper creates and isolates Directional Polarity before Ordinal Ranking. **The mathematical sign (+ or -) is isolated in △_RL_M2 pipeline as a binary.** These are reserved as overlays to show direction, plus it facilitates Directional Polarity Counts which show Directional Bias.

- **Directional Polarity Indicators:** Direction (up/down or higher/lower) are **displayed as ▲ ▼ Arrows in M2 Q-Bands, plus charts use Directional Polarity Counts having Green for a positive move and Red for a negative move**
- **Decoupling to an Overlay:** Directional Polarity never contaminates the quantile output in the ordinal geometry