

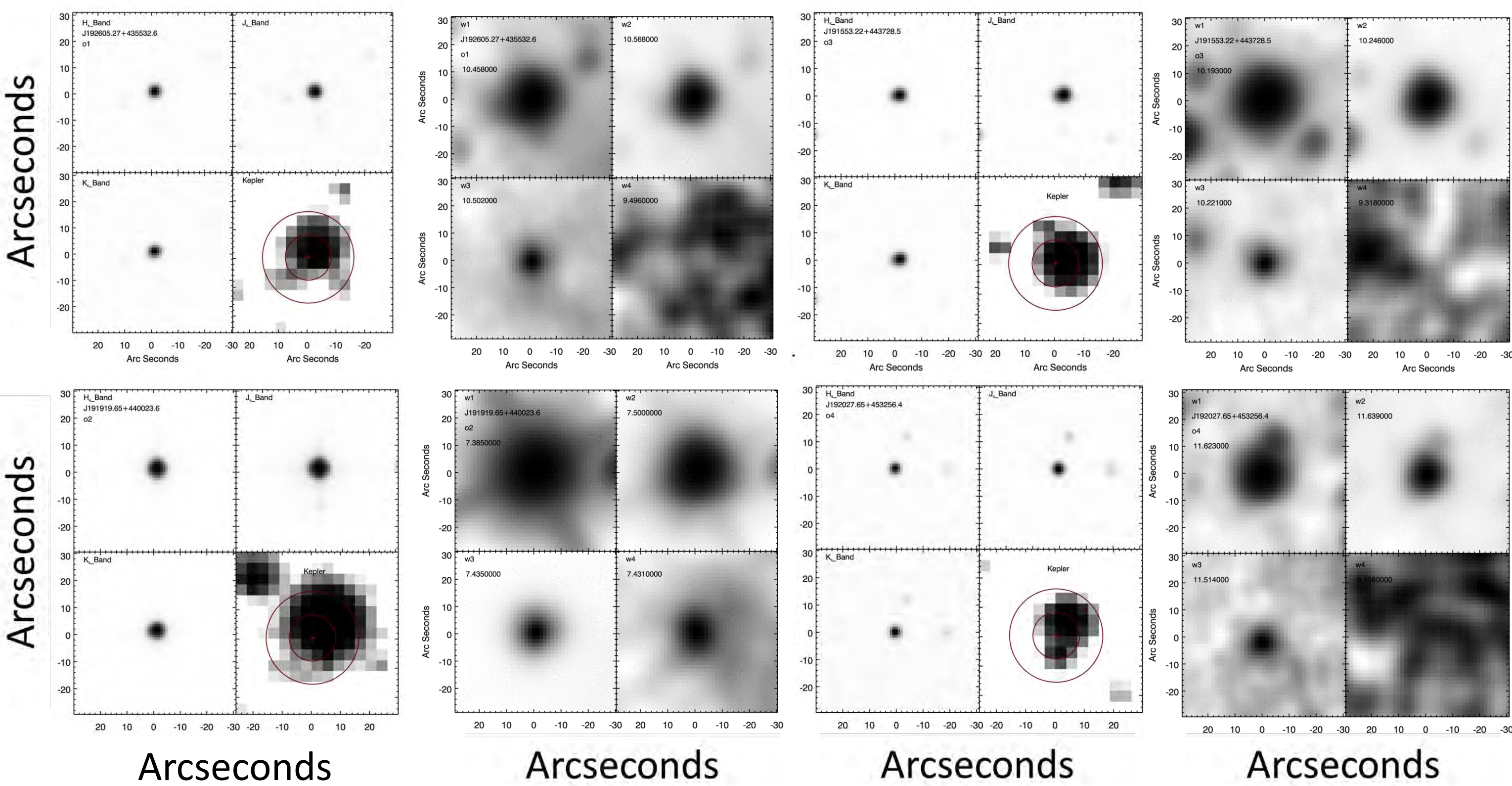


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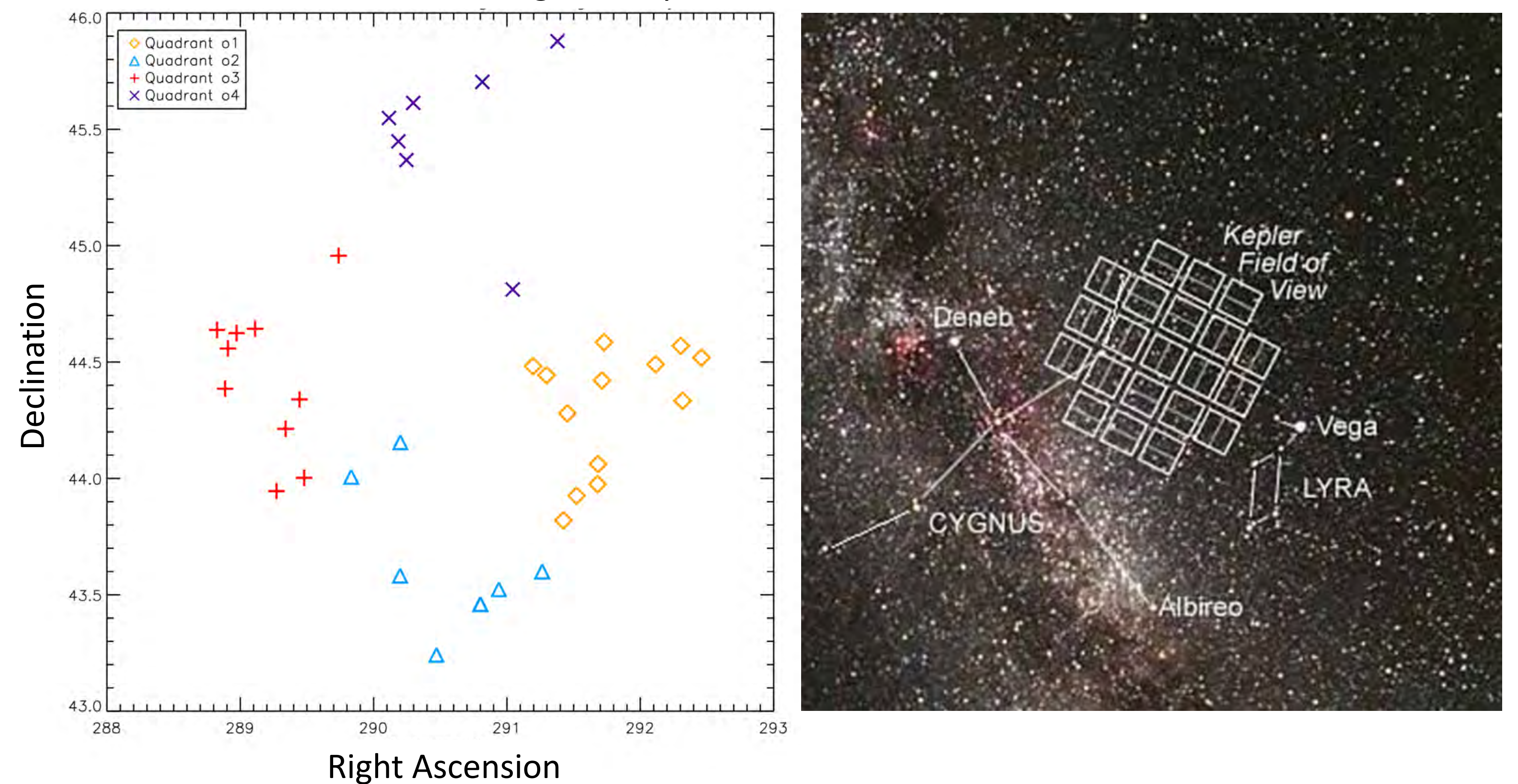
Overview & Goals

- Understand how stellar pulsation and dust production interact as dying stars eject their envelopes and enrich the interstellar medium with new fusion products and dust.
- Utilize the monthly, 116 square-degree, Full Frame Images (FFIs) from the 4+ year Kepler mission to conduct a uniform census of long-period variables (LPVs, primarily Miras and semiregular variables) in the Milky Way disk.
 - Determine their period, pulsation mode, and amplitude measured with the same instrument for the 4+ year mission

Sample LPV Candidates from each Quadrant of Region K (innermost) 2MASS and WISE Thumbnails



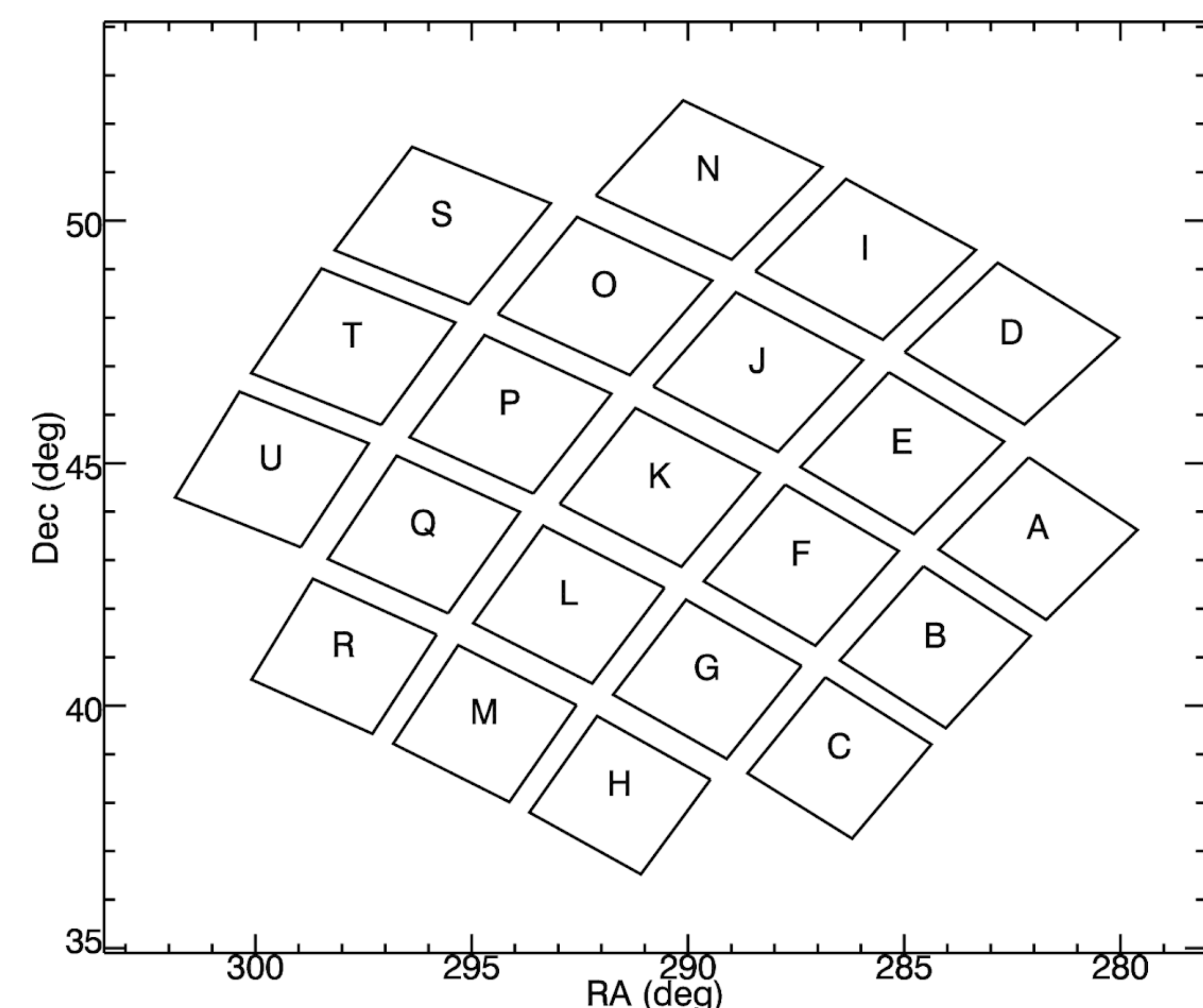
Locations of LPV Candidates in Region K, by Quadrant



Matching Region with Panel Rotation

Locate Known Star for Each Quadrant for all 52 epochs → Track Correlating Panel → Reorganize Fits Data For Rotation → Collect All Unique Stars in Region

Kepler Region Label and Location



Sample Data from Region K (innermost)

Output	Star Name	RA (degrees)	Dec (degrees)	Amp (counts)	Period (days)	Mean Mag
o1	J192605.27+435532.6	291.5220	43.9257	1172	398	13.00
o2	J191919.65+440023.6	289.8320	44.0067	114390	355	9.74
o3	J191553.22+443728.5	288.9720	44.6245	3180	355	11.74
o4	J192027.65+453256.4	290.1150	45.5488	1079	191	12.91

Sample Region to Panel Data from Region O

Date	OQ1	OQ2	OQ3	OQ4
2010-05-20	59	58	57	60
2010-06-23	59	58	57	60
2010-07-22	67	66	65	68
2010-08-22	67	66	65	69
2010-09-22	67	66	65	68
2010-10-23	27	26	25	28

ACKNOWLEDGMENTS and AFFILIATIONS

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