

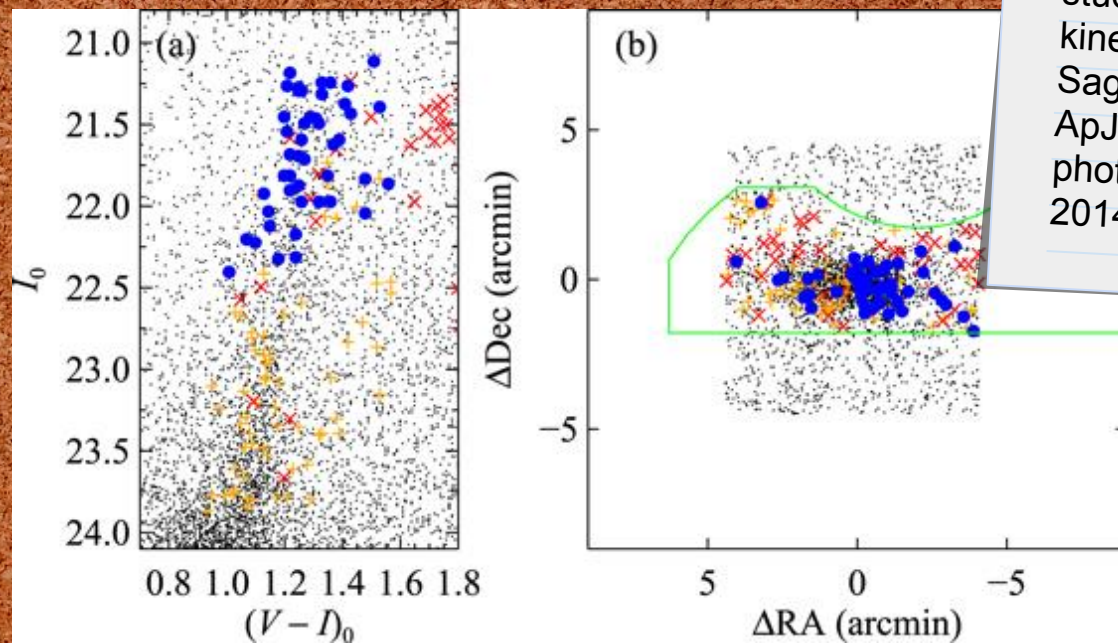
Stellar populations
(and something
more ...) by EVH



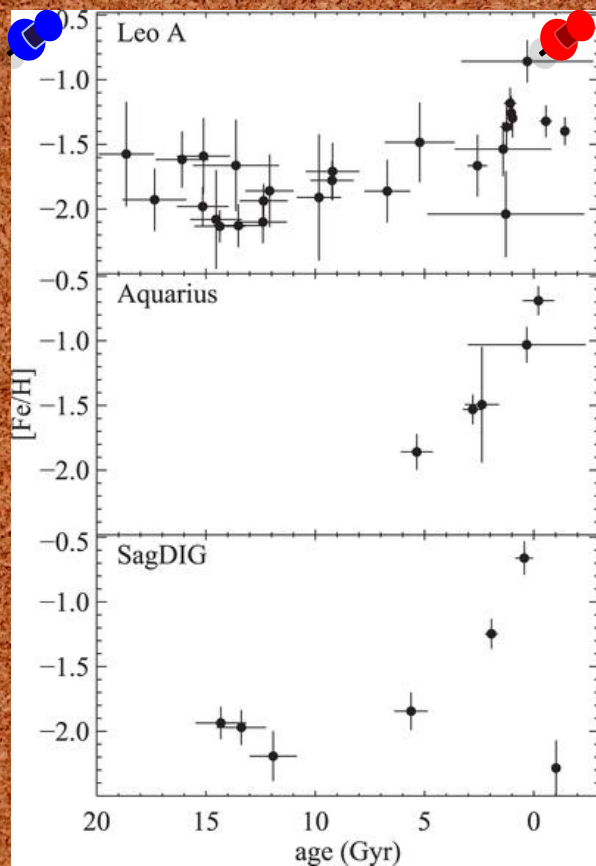
the dwarf irregular
galaxy NGC 6822
(from our VST
Omegacam Local
Group Survey)

Local Group Omegacam Survey ...

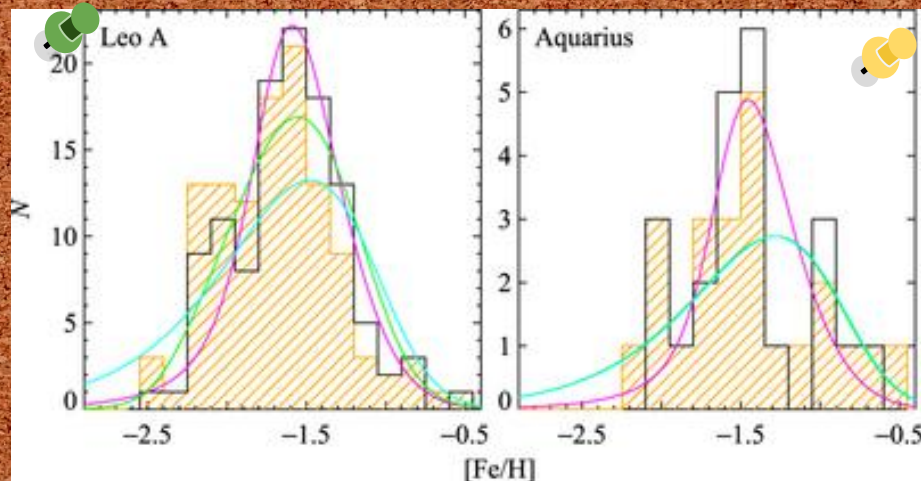
Galaxy	RA, DEC	μ_0	R [']	Type	LV [10 ⁶]	Np/ band	Band	Exp[h]	Exec
NGC6822	19 44 56, -14 48 06	23.45	>36	LG Irr	94.4	3	ugr	18	16
WLM	00 01 58, -15 27 48	24.83	3.3	LG Irr	50.2	1	ugr	6	6
IC1613	01 04 54, +02 08 00	24.22	11	M31/LG Irr	63.6	1	ugr	6	6
Phoenix	01 51 06, -44 26 42	23.24	10.6	MW/LG dT	0.9	1	ugr	6	6
Sculptor	01 00 09, -33 42 30	19.54	76.5	MW dSph	2.15	20	ugr	60	4
Fornax	02 39 59, -34 27 00	20.70	71.1	MW dSph	15.5	16	ugr	48	14
Carina	06 41 37, -50 58 00	20.03	28.8	MW dSph	0.43	15	ugr	45	27
Sextans	10 13 03, -01 36 54	19.67	160.0	MW dSph	0.50	20	ugr	60	5
Sagittarius	18 55 19, -30 32 43	16.90	?	MW dSph	?	16	ugr	48	10
Bootes I	14 00 04, +14 30 42	19.10	12.6	MW UFD	3.0 10 ⁻²	1	ugr	6	0
Bootes II	13 58 08, +12 50 54	18.12	4.2	MW UFD	1.0 10 ⁻²	1	ugr	6	0
Segue I	10 07 03, +16 04 25	16.81	4.4	MW UFD	3.3 10 ⁻⁴	1	ugr	6	0
Hercules	16 31 05, +12 47 18	20.60	8.6	MW UFD	3.6 10 ⁻²	1	ugr	6	6




... using Keck spectroscopy, we studied the chemistry and kinematics of Leo A, DDO 210, and SagDIG (Kirby, Rizzi, Held, et al. ApJ 2017; based on ACS photometry by Momany et al. 2005, 2014, ApJ)

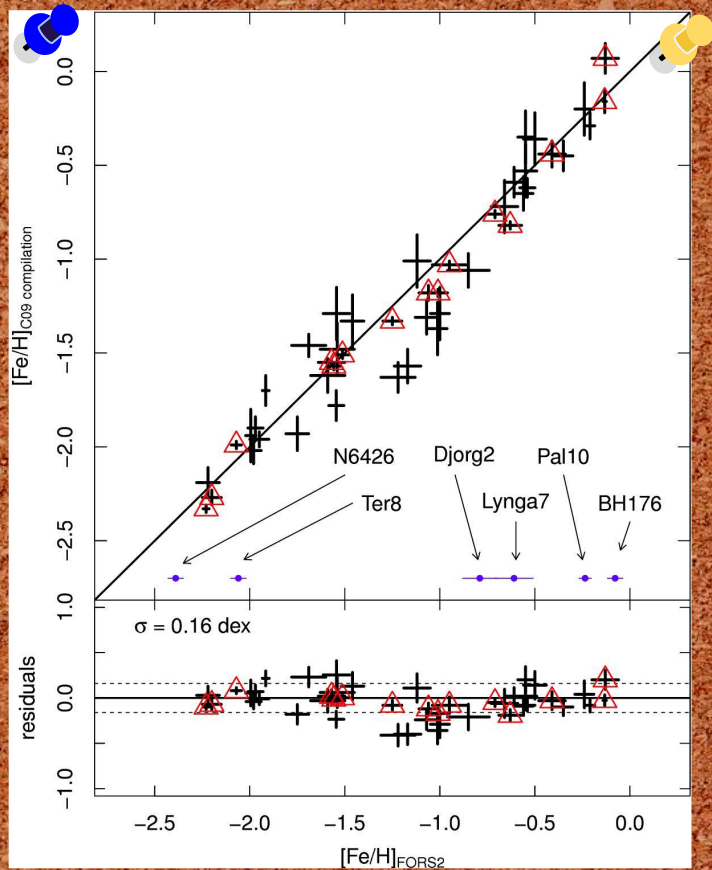


... with the main goal of finding their metallicity distributions and chemical enrichment laws ...



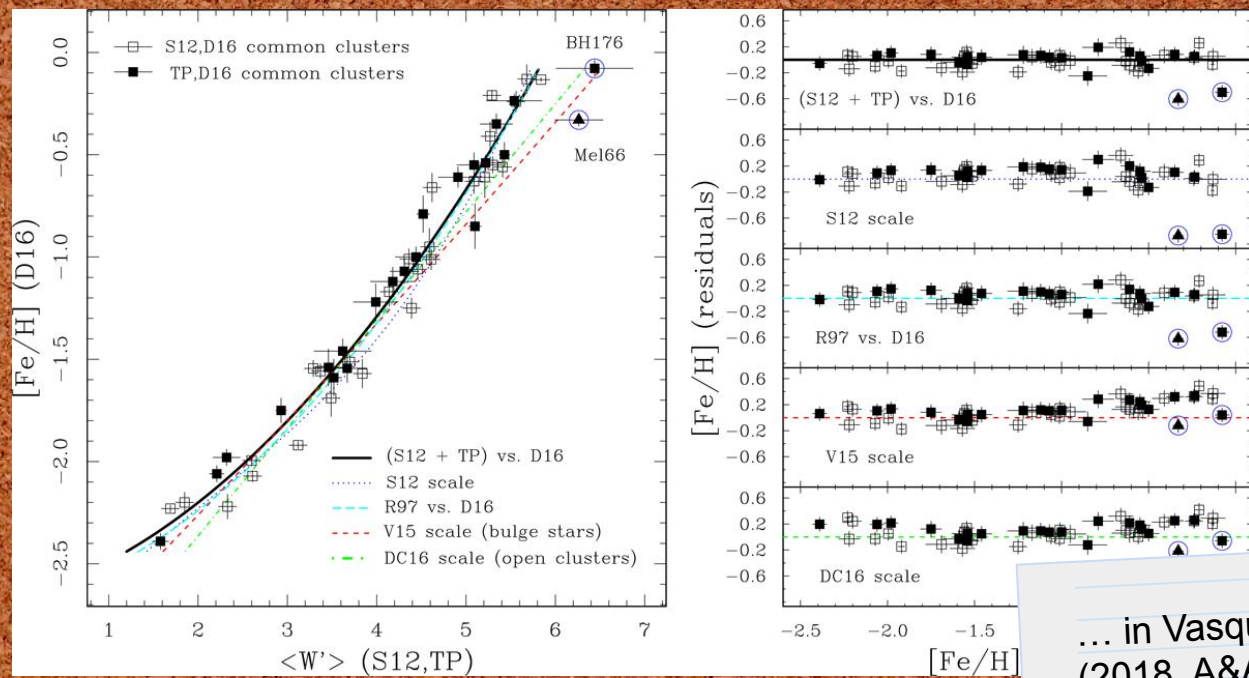


*Spectroscopic Survey of globular
clusters in the Milky Way (with:
Barbuy, Da Costa, Dias, Gullieuszik,
Momany, Ortolani, Saviane,
Vasquez) led to the largest sample
of homogeneous GC metallicities
based on spectroscopy of individual
stars*



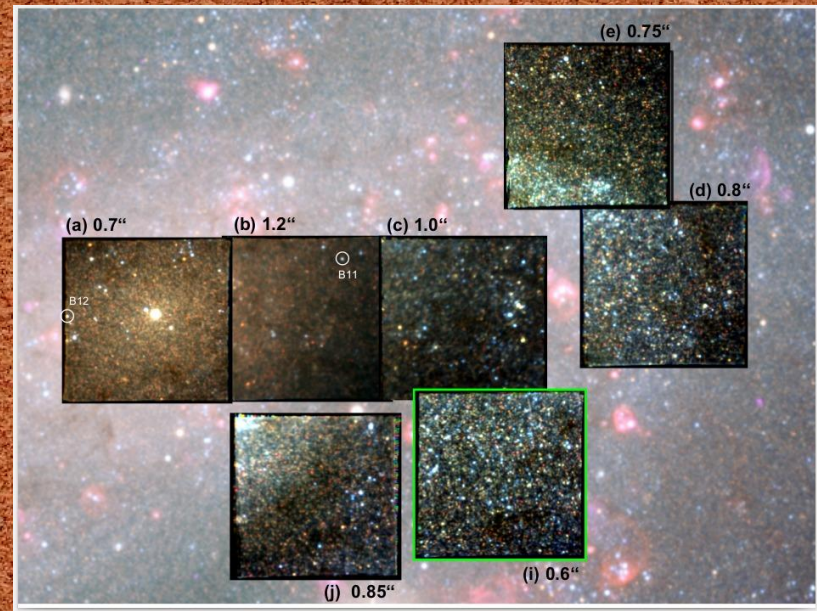
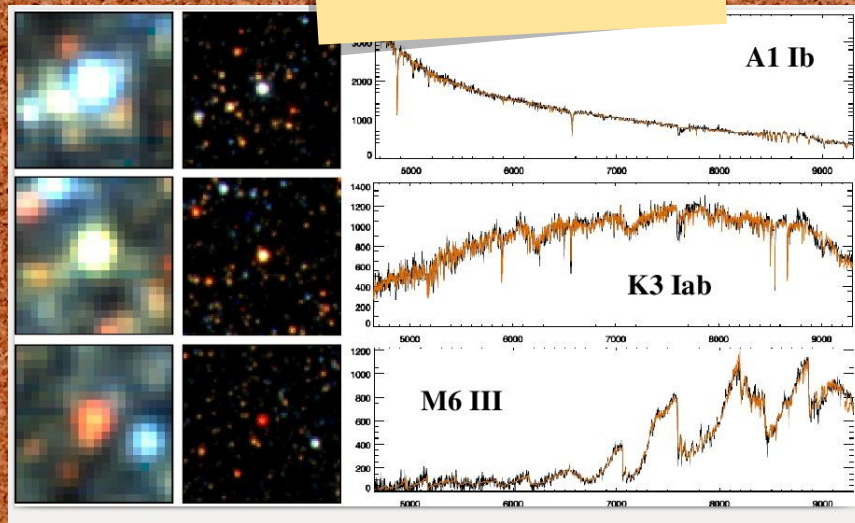
... we explored the use of the absorption lines in the green spectral region (at low intermediate resolution) as an alternative to the popular CaT method.

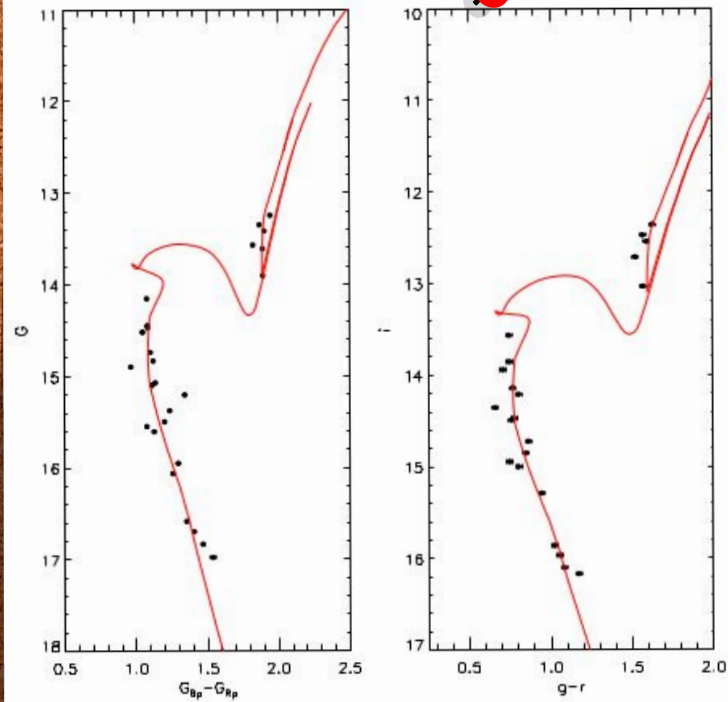
Fe and Mg abundances of 51 Milky Way globular clusters on a homogeneous scale are given by Dias et al. (2016, A&A) ...



... in Vasquez, Saviane, Held et al.
 (2018, A&A) we completed our
 survey of distant and reddened
 globular clusters in the MW
 (Ca II triplet metallicity calibration)

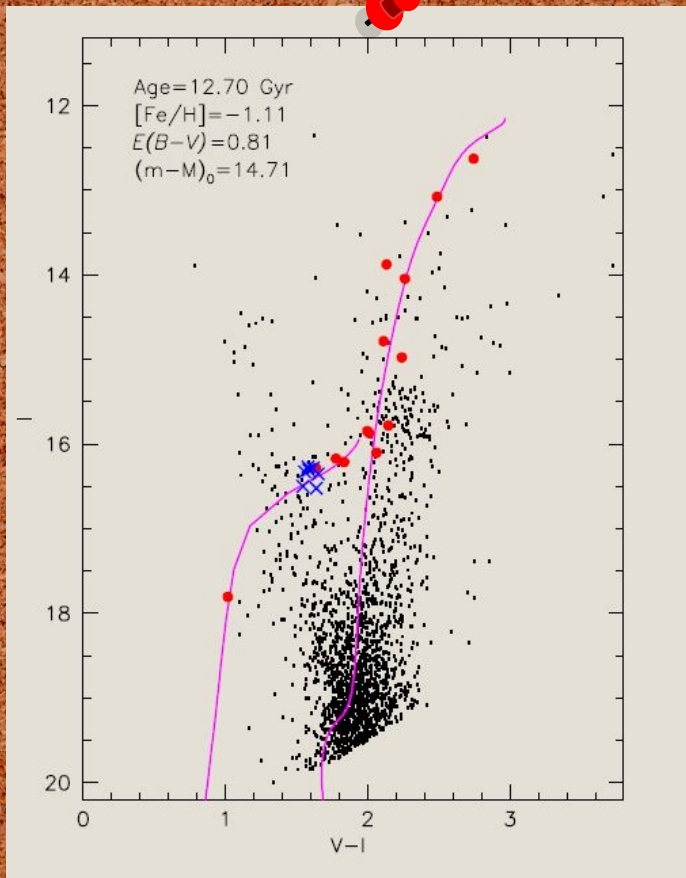
MUSE crowded
field spectroscopy
in NGC 300, by
Roth et al.
(2018)



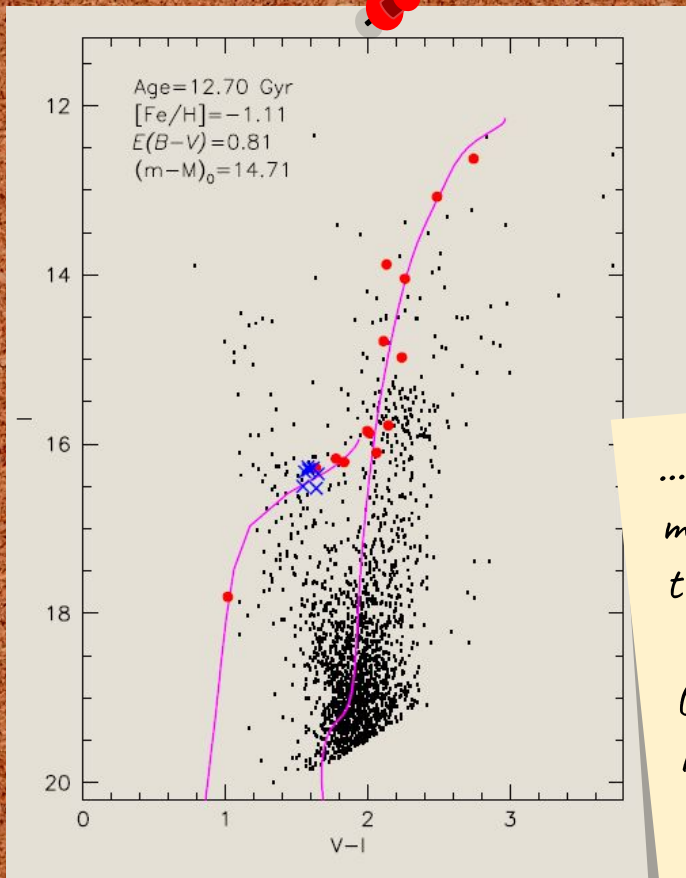


... the power of combining
astrometric information from
Gaia and multi-object
spectroscopy applied to
open clusters (here Pismis 18,
by Hatzidimitriou, Held,
Tognelli et al. 2019, A&A in
press)

... the Gaia DR2
database, an
outsider's view ...



... the highly extincted, highly contaminated globular cluster Djorg 2 towards the Galactic bulge. The cross-identification of the Gaia DR2 probable members along with HST archive imaging provided robust constraints to its age and metallicity (Ortolani, Held, Nardiello et al. 2019, A&A, accepted)



... the highly extincted, highly contaminated globular cluster Djorg 2 towards the Galactic bulge. The cross-identification of the Gaia DR2 probable members

HST archive imaging robust constraints to its metallicity (Ortolani, Diello et al. 2019, A&A,

... moral of the story ...
 modern statistical
 treatment is a must.

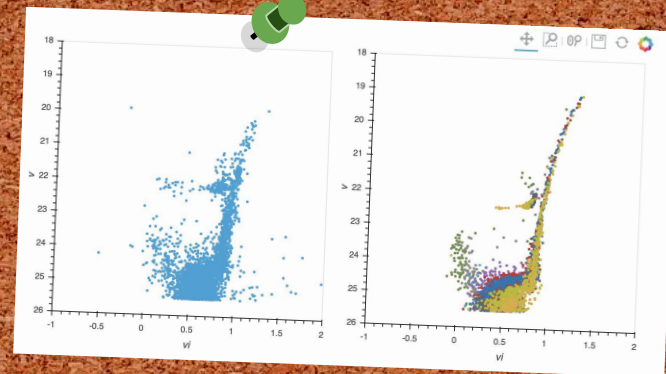
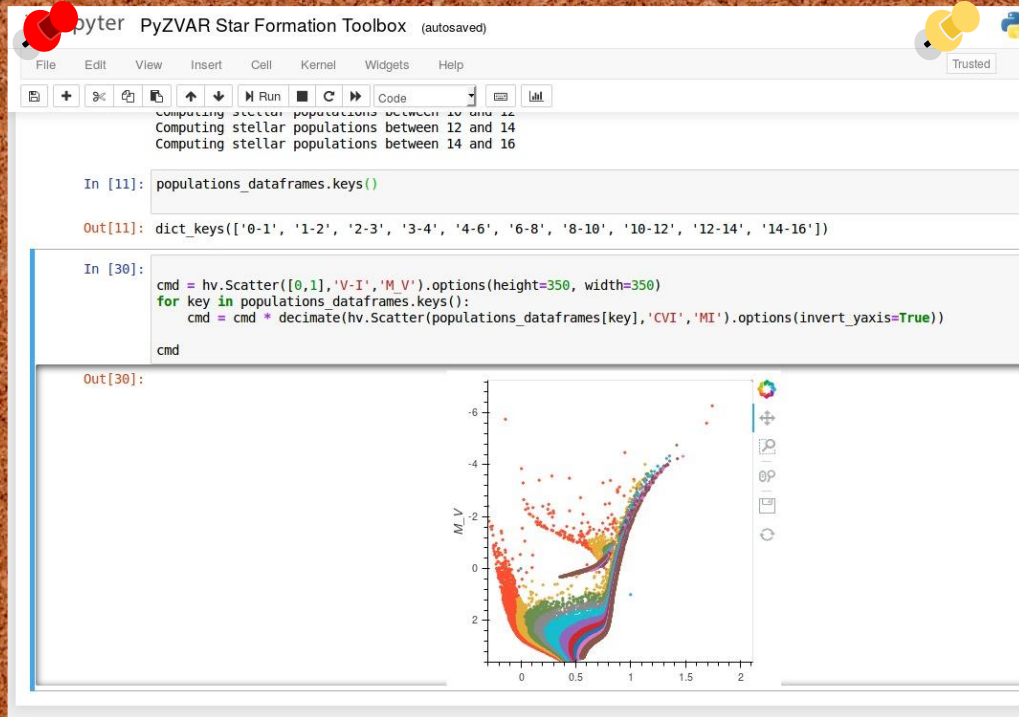
Old



and
 kind-of oldish

update your tool box !





... towards a modern
Python code for
CMD simulations ...
(with L. Rizzi, Keck
Observatory)



Photo: Alexander Mahmoud



**“The beauty of research
is that you never know
where it’s going to lead”**

Richard Roberts

1993 Nobel Prize in Physiology or Medicine



**Nobel
Prize
Series**
India 2018