Neuer, variabler Nebel in NGC1333

Amateure und ihre Entdeckungen
BoHeTa 2015

astroteam CERES

BoHeTa

Bochumer Herbsttagung der Amateurastronomen

Start

Nächste Tagung

Reiff-Stiftung

Tagungsort

34. BoHeTa am Sa 31.10.15 in der Ruhr-Universität Bochum

Schwerpunktthemen der BoHeTa 2015:
Kometen sowie Amateure und ihre Entdeckungen.

Tief Belichtete Galaxien (TBG)

Long exposed galaxies

home | the project | team | results | links | publications | contact | Impressum

Pointing to the Universe

Fabian Neyer

astroteam CERES

Galerie Equipment

Christian Rusch
Egon Eisenring
Rainer Späni

AVA

Astronomie.de

der Treffpunkt für Astronomie

Astronomie.de ▸ Foren ▸ Fotos, Fototechnik und Ausrüstung,

Sighard Schräbler

Sternwarte Hofheim

fotocommunity fotos models entde

Natur | Himmel & Universum | Astrofotografie

Physikalischer Verein

Gesellschaft für Bildung und Wissenschaft

Sternwarte CERES

Lage/Lichtverschmutzung
Ausrüstung

Sternwarte Antares
Gossau

Sternwarte Ceres
Urnäsch

Zürich

10.2 km

Image Landsat
© 2015 Google
© 2009 GeoBasis-DE/BKG

unser Ziel: „pretty pictures“

Hickson Group 44

vdB 126

IC5146 _ Kokonnebel

IC447

NGC 7000 _ The Great Wall

Messier 16

NGC 6914

Komet Lovejoy C/2013 R1

Messier 78 (NGC2068)

Ausrüstung

- **2010 bis 2013**

  Fornax51
  8Zoll Newton f5
  EOS 450D(a)
  MGen am Sucher
  ca. 1 Bogensekunde/Pixel

- **seit 2013**

  Fornax51 (in RA 52)
  12.5Zoll Newton f4.5
  EOS 5DMk2(a)
  OAG MGen
  ca. 1 Bogensekunde/Pixel

8Zoll, 20Da

16x8min bei ISO800

12.5Zoll, 5DMk2 mod

17x15min bei ISO320

8ZoII, 20Da

12.5ZoII, 5DMk2

8ZoII, 20Da

12.5ZoII, 5DMk2

8ZoII, 20Da

12.5ZoII, 5DMk2

NGC1333, 12.5Zoll, 43x15min

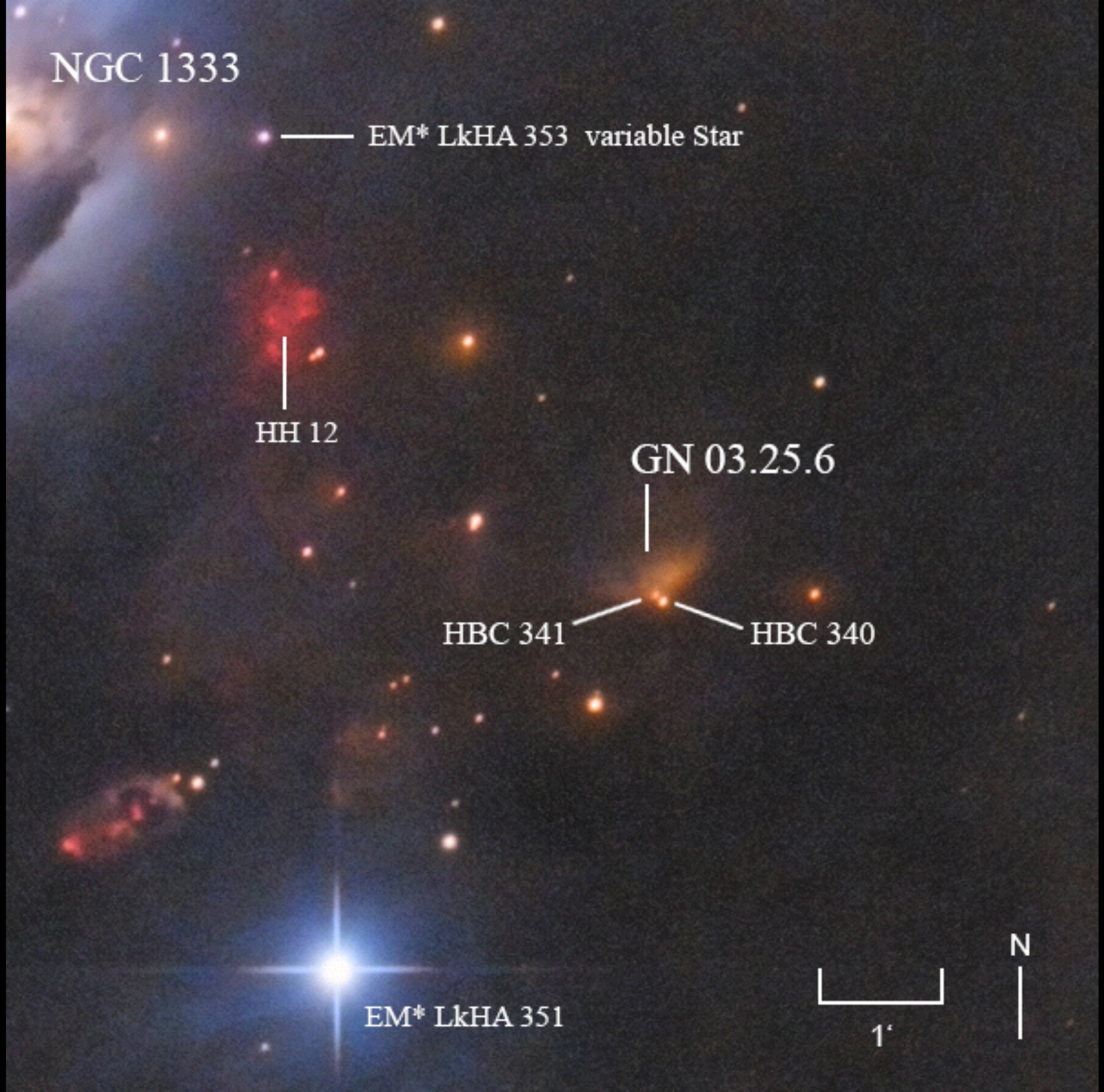
RGB 2:1 light_BINNING_1_integration | light-BINNING_1.xisf

RGB 2:1 light_BINNING_1 | light-BINNING_1.fit

light_BINNING_1

Okt. 2012

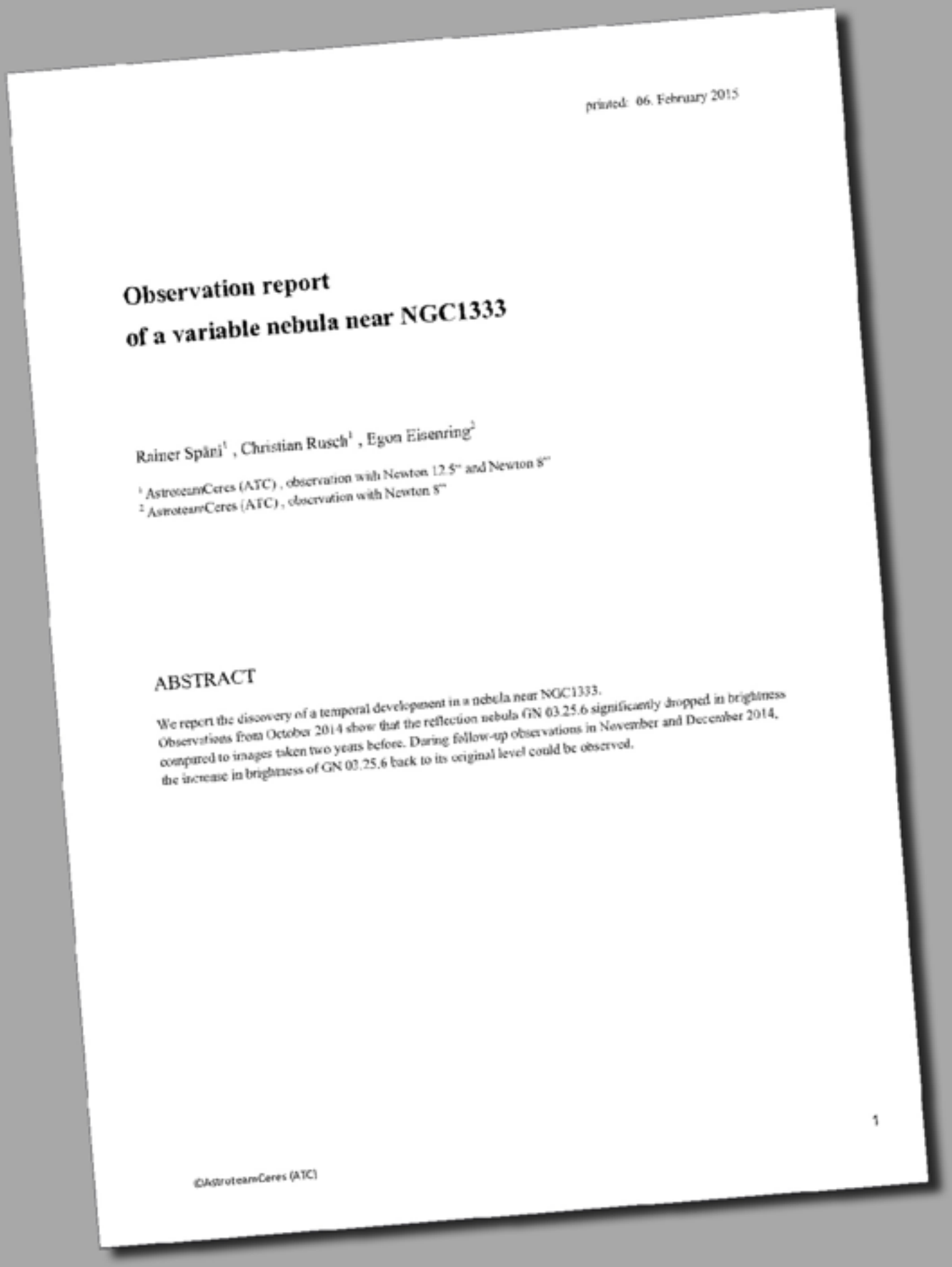
Okt. 2014


NGC 1333
EM* LkHA 353 variable Star
HH 12
GN 03.25.6
HBC 341
HBC 340
EM* LkHA 351
1'
N

erstes Bestätigungsbild

Dr. Sighard Schräbler

20141018 NGC1333-R fb log ddp



printed: 06. February 2015

Observation report
of a variable nebula near NGC1333

Rainer Spärl[1] , Christian Rusch[1] , Egon Eisenring[2]

[1] AstroteamCeres (ATC) , observation with Newton 12.5" and Newton 8"
[2] AstroteamCeres (ATC) , observation with Newton 8"

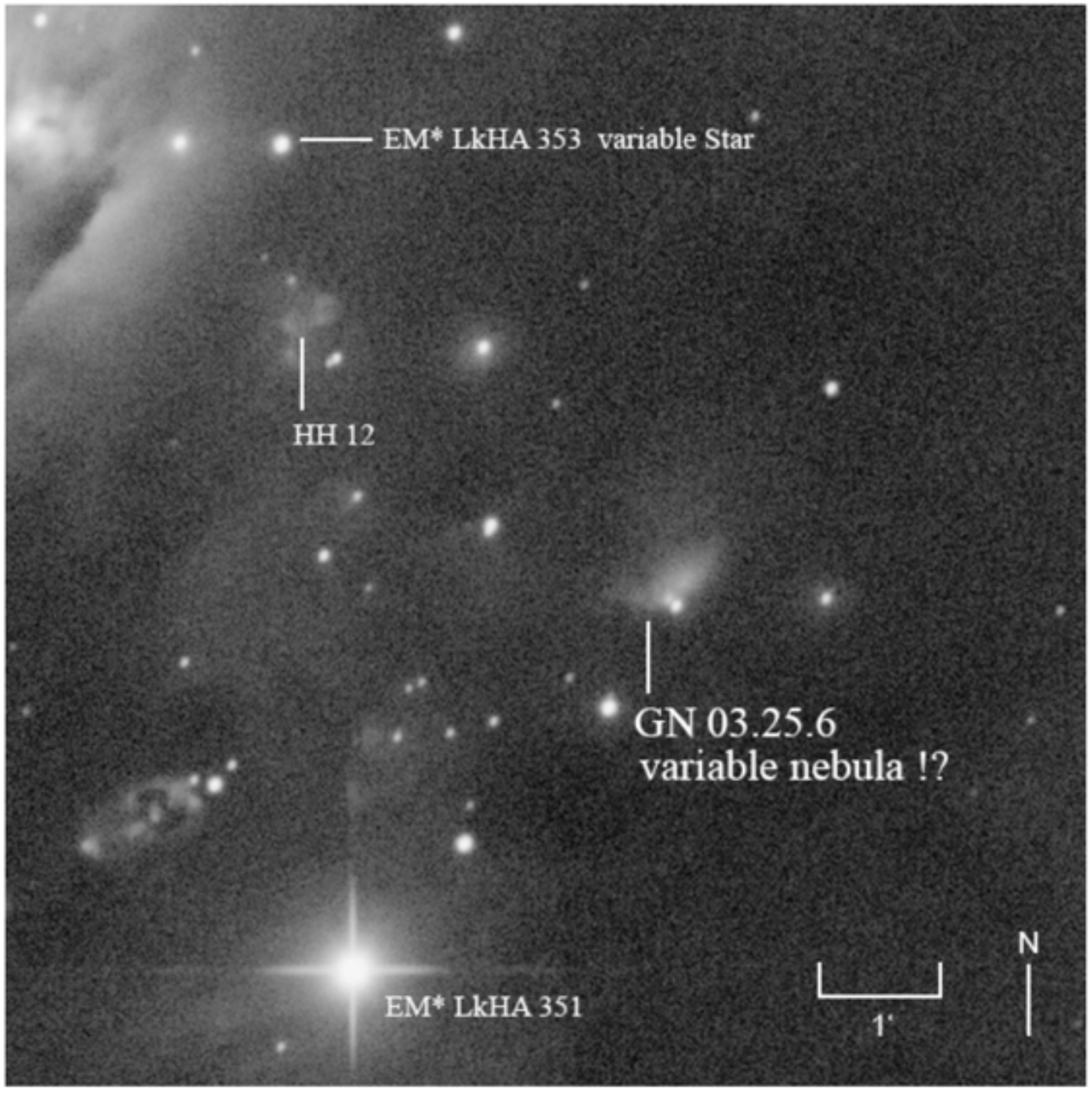
ABSTRACT

We report the discovery of a temporal development in a nebula near NGC1333.
Observations from October 2014 show that the reflection nebula GN 03.25.6 significantly dropped in brightness compared to images taken two years before. During follow-up observations in November and December 2014, the increase in brightness of GN 03.25.6 back to its original level could be observed.

Erstellen eines Beobachtungs-berichts mit allen Details in Englisch.

Wir suchen auch Profi-Astronomen die unsere Entdeckung bestätigen können.

OVERVIEW



GN 03.25.6 = RA(J2000) 03h 28m 44s DE(J2000) +31° 17.6'

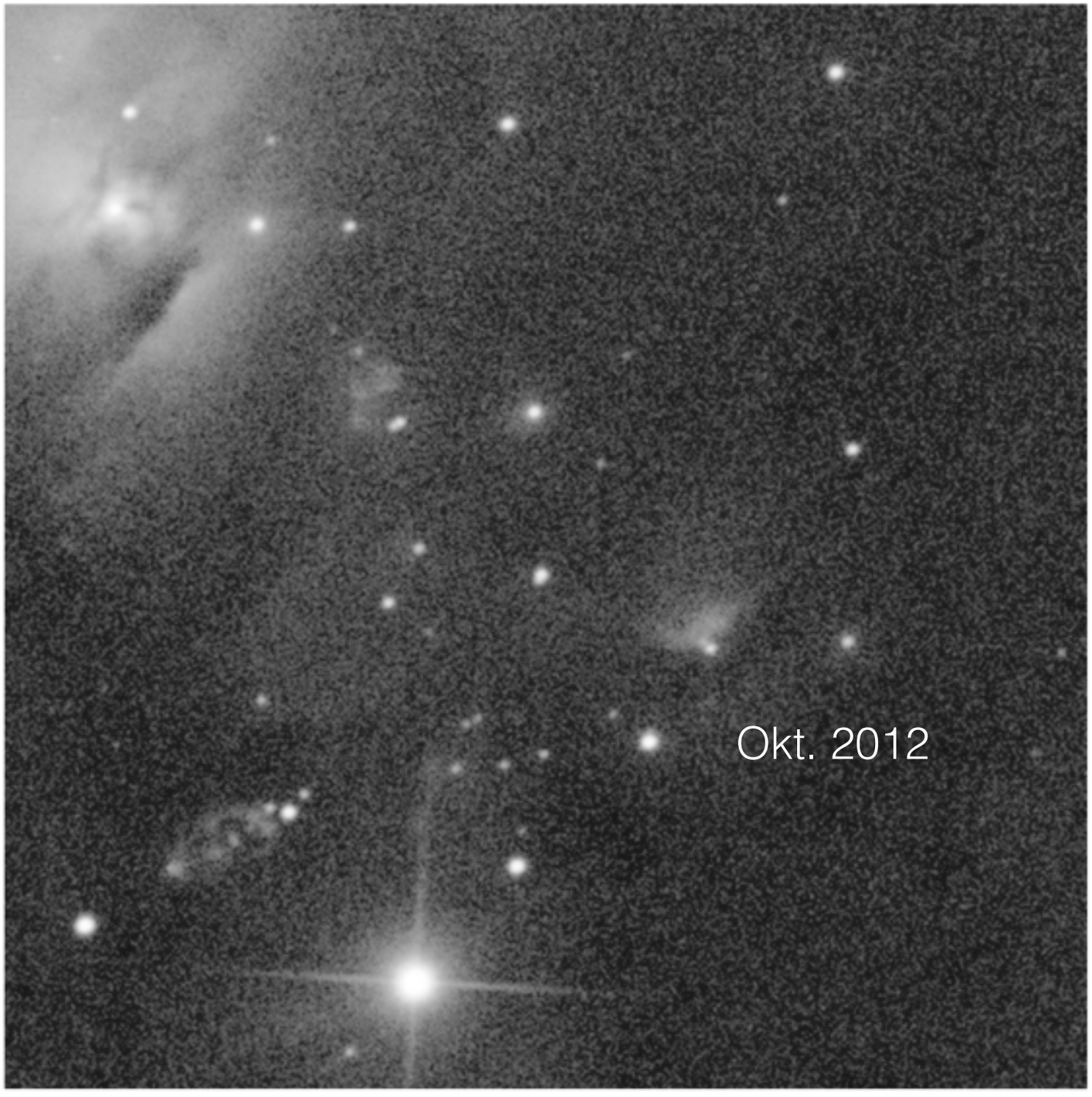


Figure 1.

First observation taken on 2012-10-20 by Rainer Späni[1] and Christian Rusch[1] .
Teleskope: Newton 8“ on the Fornax 51 , camera: Canon 450D mod.
Total exposure : 2h 36min , FWHM about 4.1” , field of view: 8.9’ x 8.9’

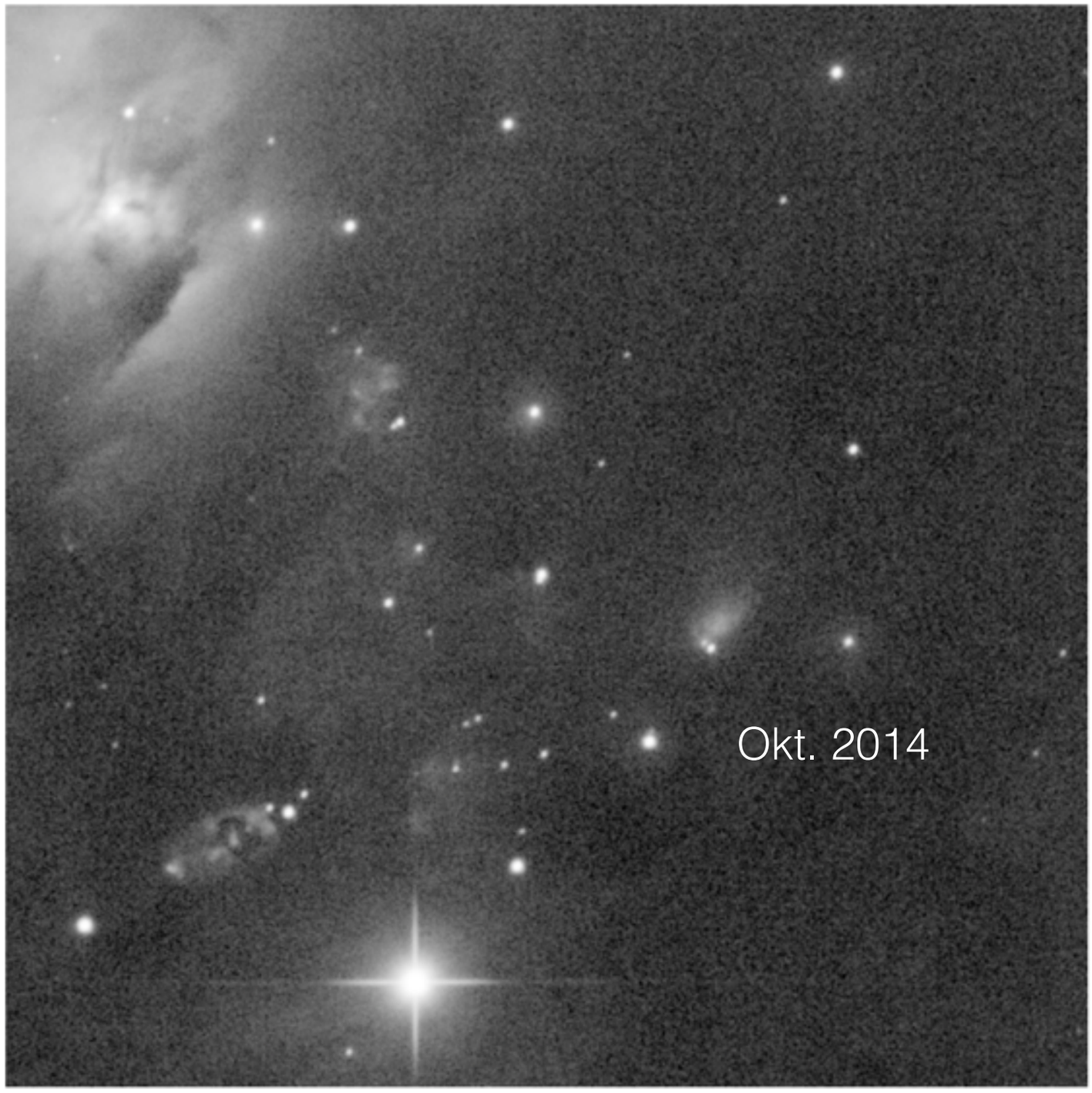


Figure 2.

Second observation taken on 2014-10-26 / 27 by Rainer Späni[1] and Christian Rusch[1] .
Teleskope: Newton 12.5“ on the Fornax 51 , camera: Canon 5DMKII mod.
Total exposure : 3h 45min , FWHM about 2.4” , field of view: 8.9’ x 8.9’

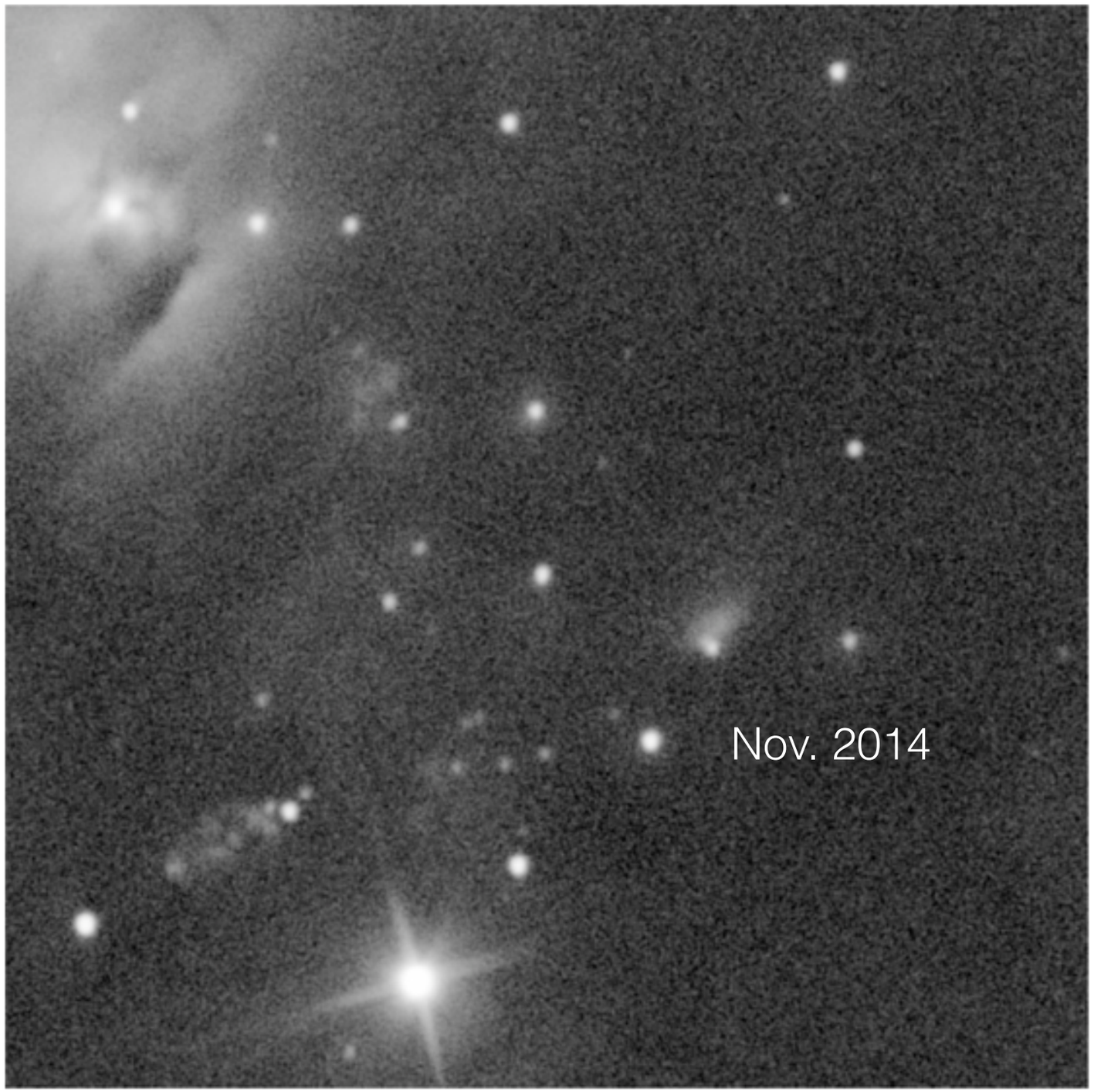


Figure 3.
Third observation taken on 2014-11-22 / 23 by Egon Eisenring[2] .
Teleskope: Newton 8“ on Losmandy G11, camera: Canon 650D mod.
Total exposure : 2h 42min , FWHM about 4.8 , field of view: 8.9’ x 8.9’

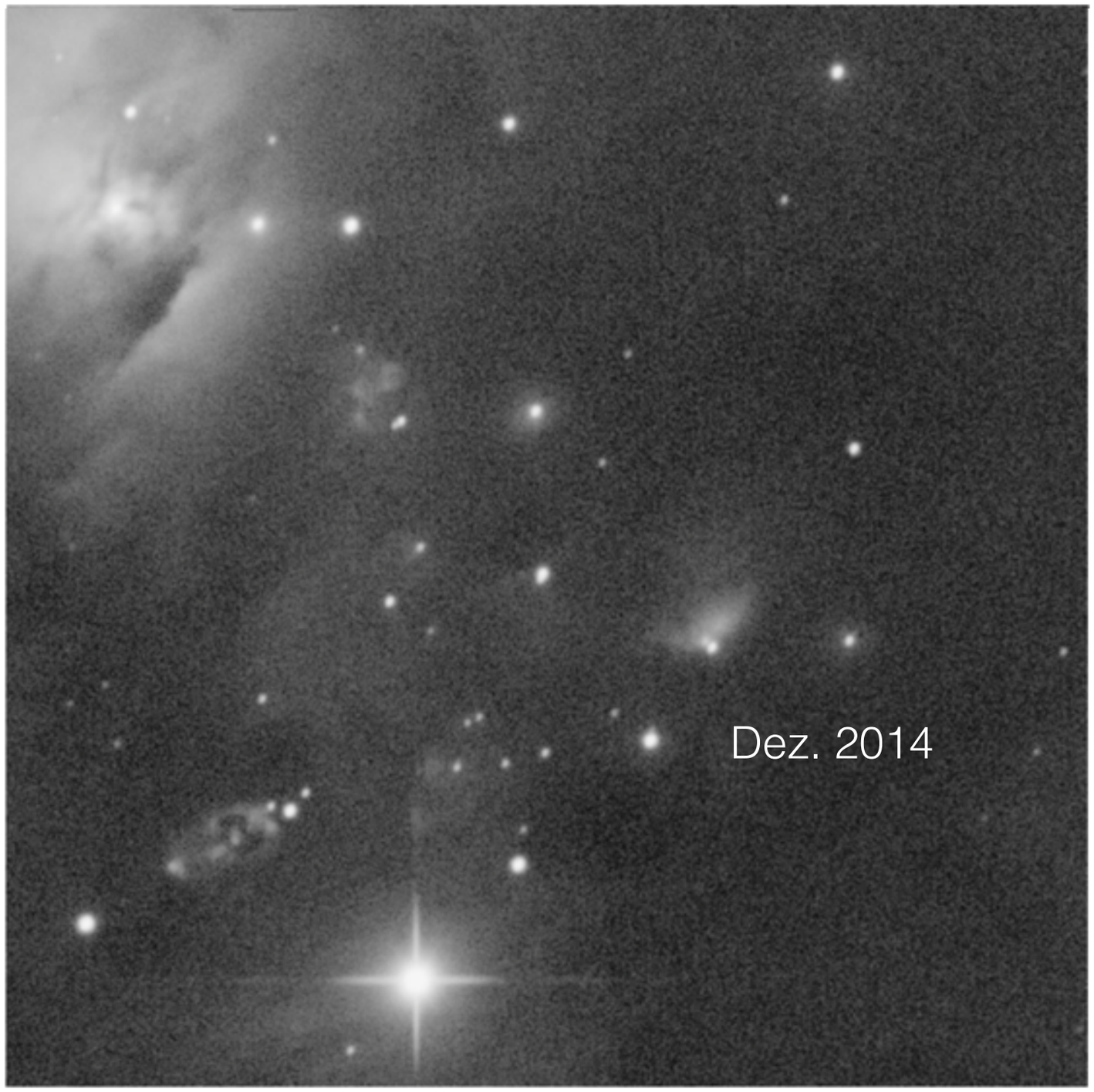
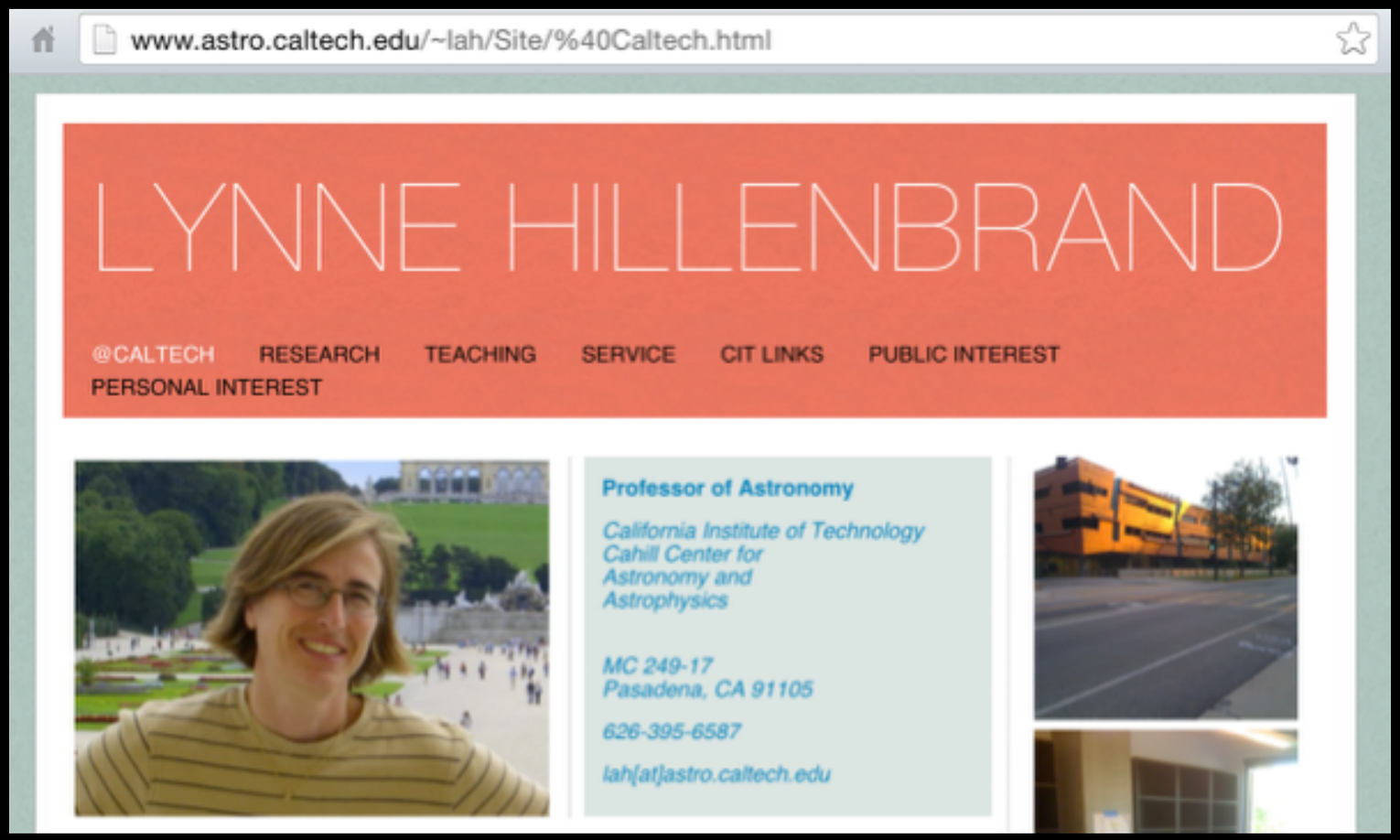


Figure 4.

Fourth observation taken on 2014-12-23 / 24 by Rainer Späni[1] and Christian Rusch[1] .
Teleskope: Newton 12.5“ on the Fornax 51 , camera: Canon 5DMKII mod.
Total exposure : 5h 19min , FWHM about 2.9 , field of view: 8.9’ x 8.9’

Rückmeldung von Lynne Hillenbrand
Professor of Astronomy am CALTECH



„…It turns out that I do have some light curve monitoring of this field and caught the rise of the object by about 2 mag…“

Rückmeldung von Lynne Hillenbrand
Daten aus der PTF (Palomar Transient Factory)

www.ptf.caltech.edu

PALOMAR OBSERVATORY

SYSTEMATIC EXPLORATION OF THE DYNAMIC SKY

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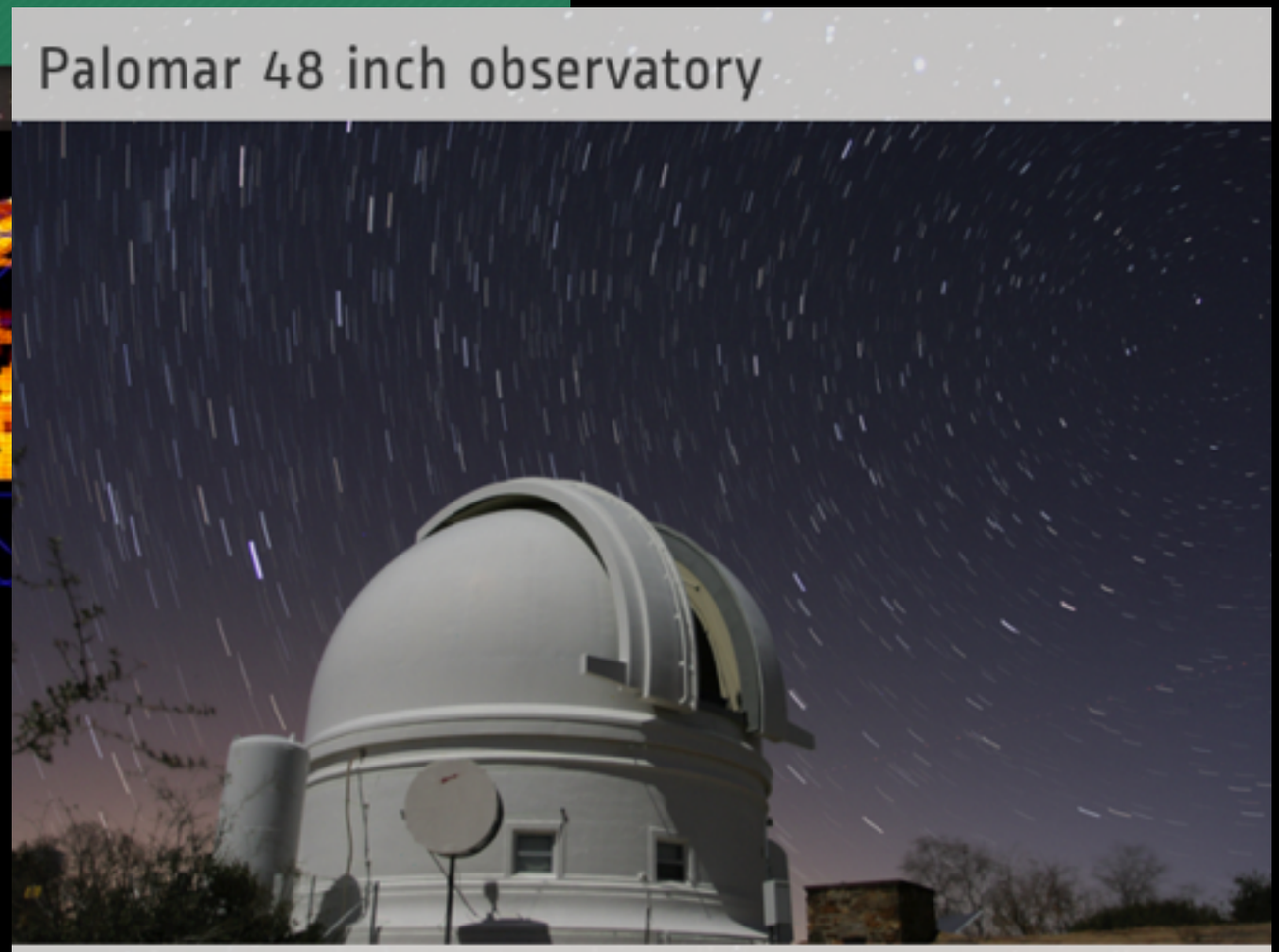
PTF Second Public Data Release

July 16, 2015 • News Release

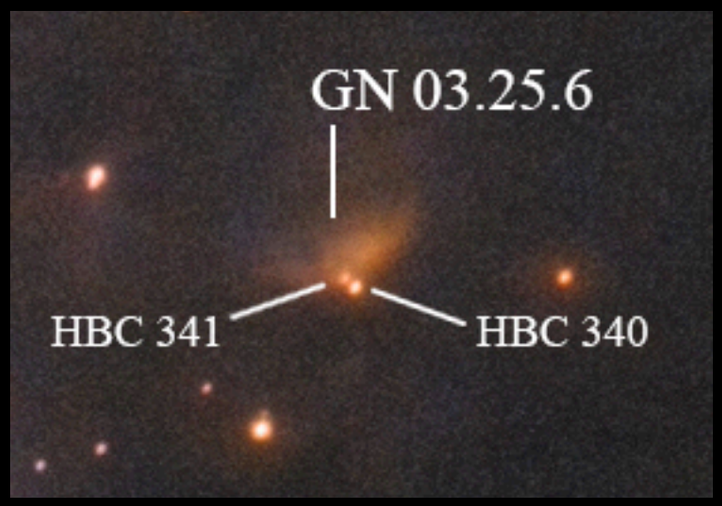
The PTF second data release (DR2) will occur on August 7, 2015. This will include all g- and R-band data obtained through the end of December, 2012. Unlike the first data release (DR1), there will be no spatial restrictions placed on the data and the release scope will encompass the entire northern sky. For details, go to http://www.ptf.caltech.edu/page/DR2.

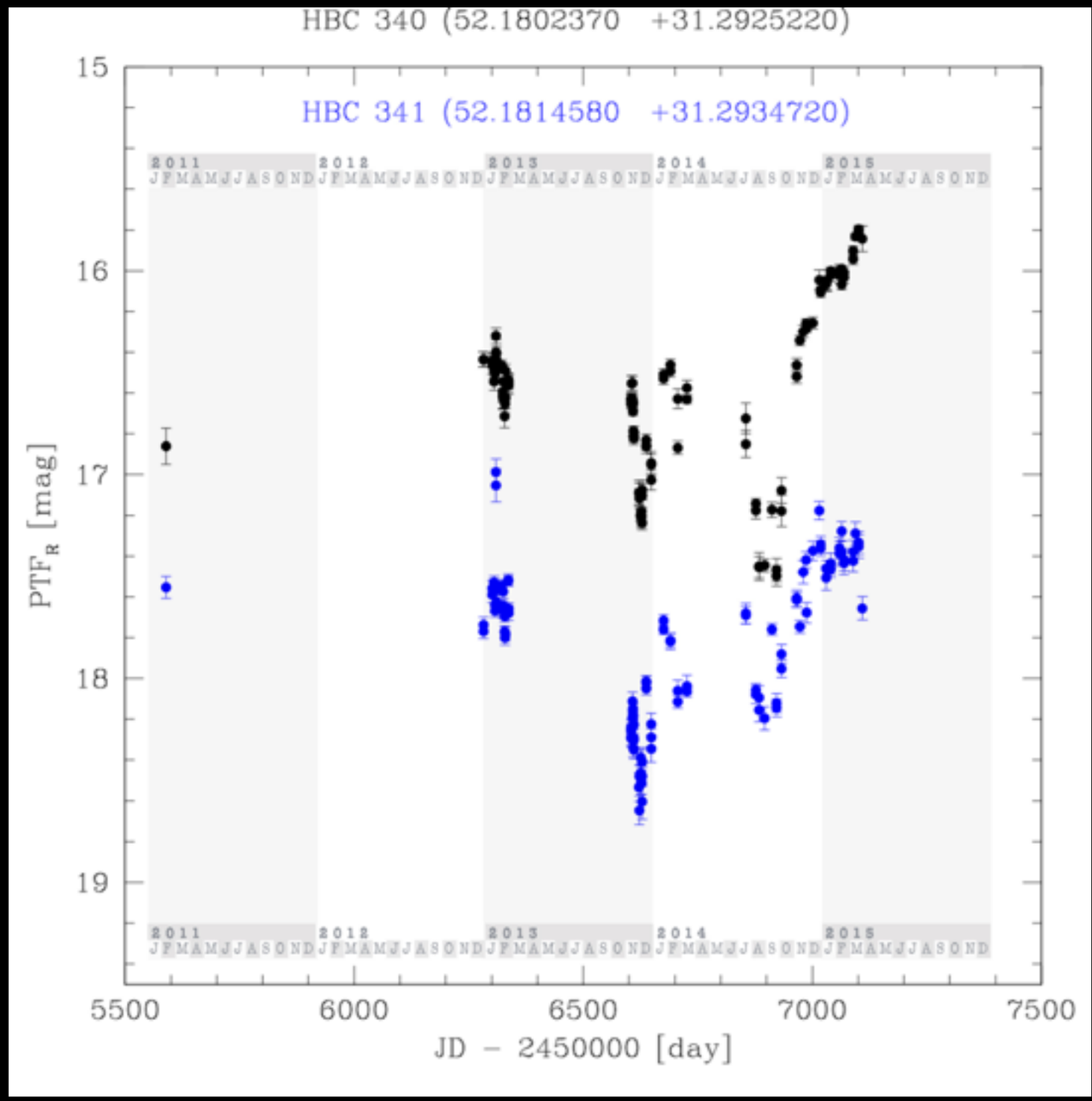
Palomar 48 inch observatory



The Palomar 48 inch telescope and time-lapse image of the night sky above.

PTF Lichtkurven von HBC341 und HBC340





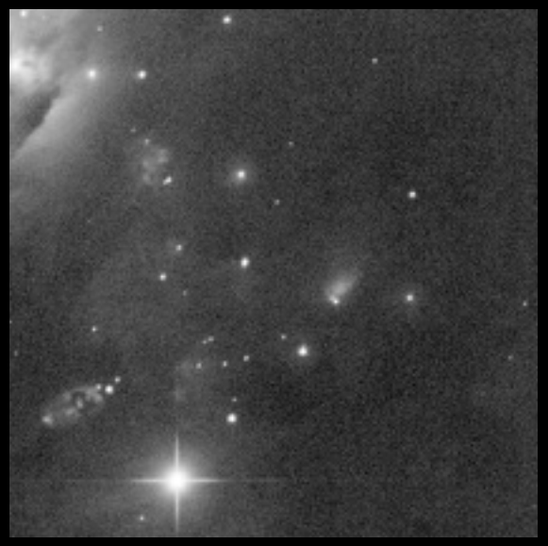
Im Mai 2015 gefundene Aufnahmen

CERES
Okt12
2.5h, 8“ Newton

Alexander Grasel
Feb14
5h, C11 Hyperstar

Andreas Röhrig
Sept/Okt14
12h, 12“ Newton

Sighard Schräbler
Okt 2014
0.5h, 12“Newton



CERES
ende Okt14
3.8h, 12.5“ Newton

CERES
ende Nov14
2.75h, 10“ Newton

CERES
ende Dez14
5.3h, 12.5“Newton

Thomas Henne
Dez14/Jan15
17h, 10“ Newton

Entdeckungsmeldung

ein beschwerlicher Weg bis zur offiziellen Bestätigung

27. Okt. 2014	Entdeckung der Veränderung	😂
30. Okt. 2014	Meldung per e-mail an IAU	😊 zZz 😞
11. Jan. 2015	Anfrage bei Sighard (Astrotrac-Freund) 1. Bestätigungsbild und viele weitere Hinweise und Unterstützung	😎
16. Jan. 2015	Anfrage bei Peter Riepe	😊
9. Feb. 2015	Observation Report in Englisch an Profiastronom Bo Reipurt Kontakt von Fabian	😊 zZz 😐
14. März 2015	5 weitere Kontakte von Profiastronomen von Fabian	😎
30. März 2015	Observation Report an die 5 Profis	😐 zZz 😐
17. April 2015	erste Rückmeldung Lynne Hillenbrand, Caltech, PTF	😎
2. Sept. 2015	Astronomers Telegram No.7982 by Lynne Hillenbrand	😂

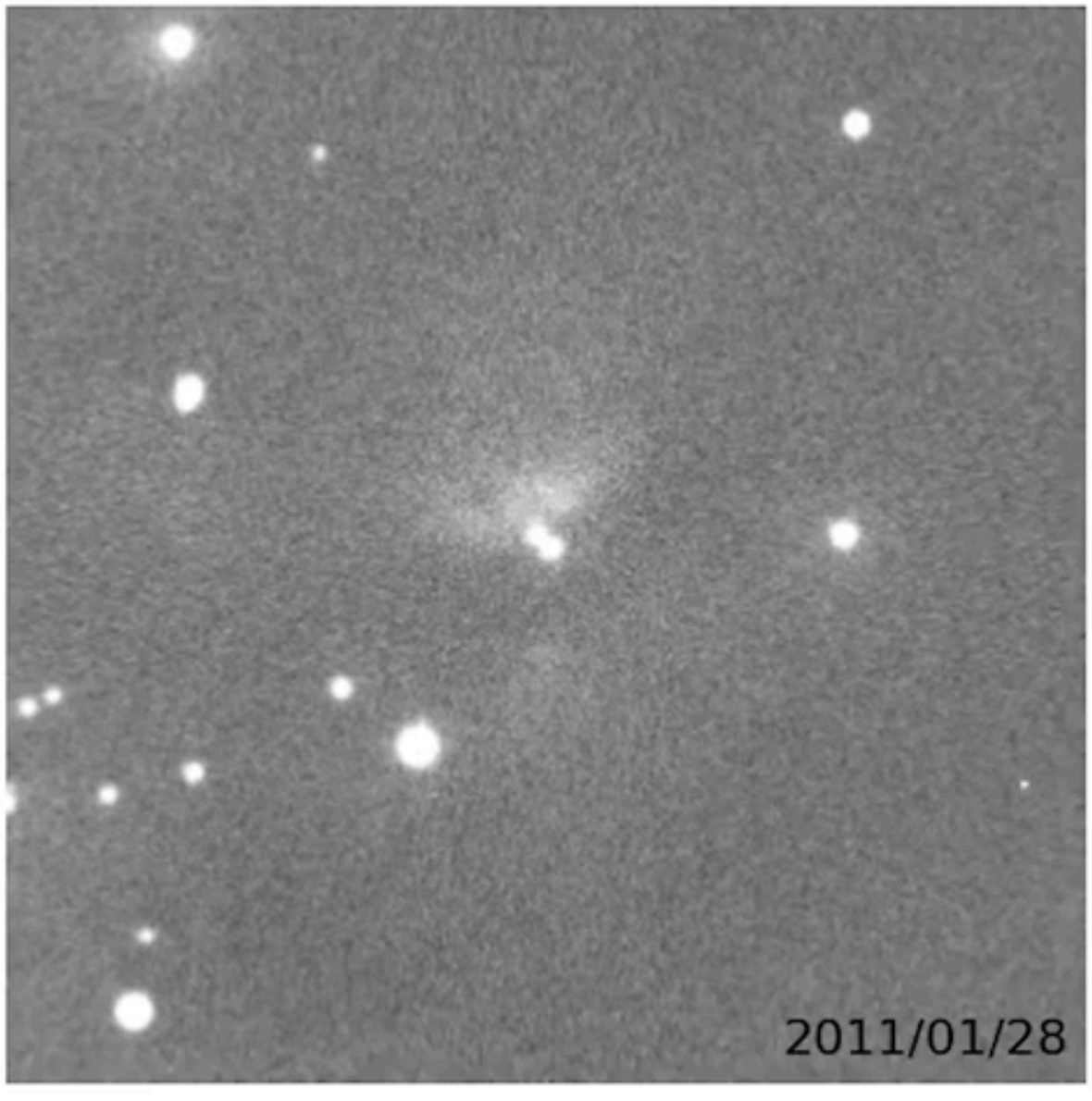
A Variable Nebula Associated with HBC 340 and HBC 341

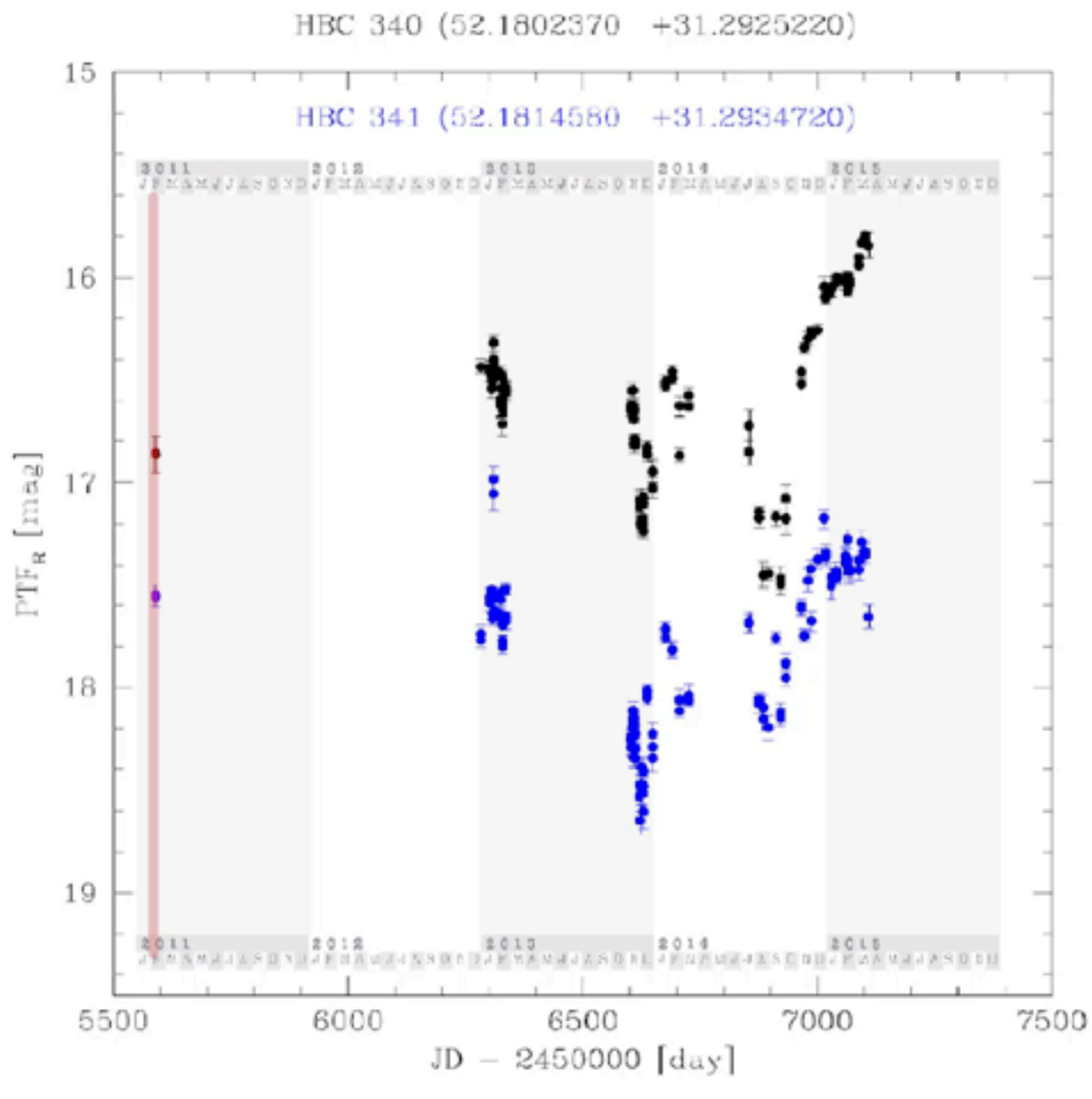
ATel #7982; ***Lynne A. Hillenbrand (Caltech), Celia Zhang (Caltech), Rainer Spaeni (astroteamCERES), Christian Rusch (astroteamCERES), Egon Eisenring (astroteamCERES), Adam A. Miller (Caltech) on behalf of the intermediate Palomar Transient Factory Collaboration***
on ***2 Sep 2015; 21:08 UT***
Credential Certification: Lynne Hillenbrand (lah@astro.caltech.edu)

Subjects: Variables, Young Stellar Object, Pre-Main-Sequence Star

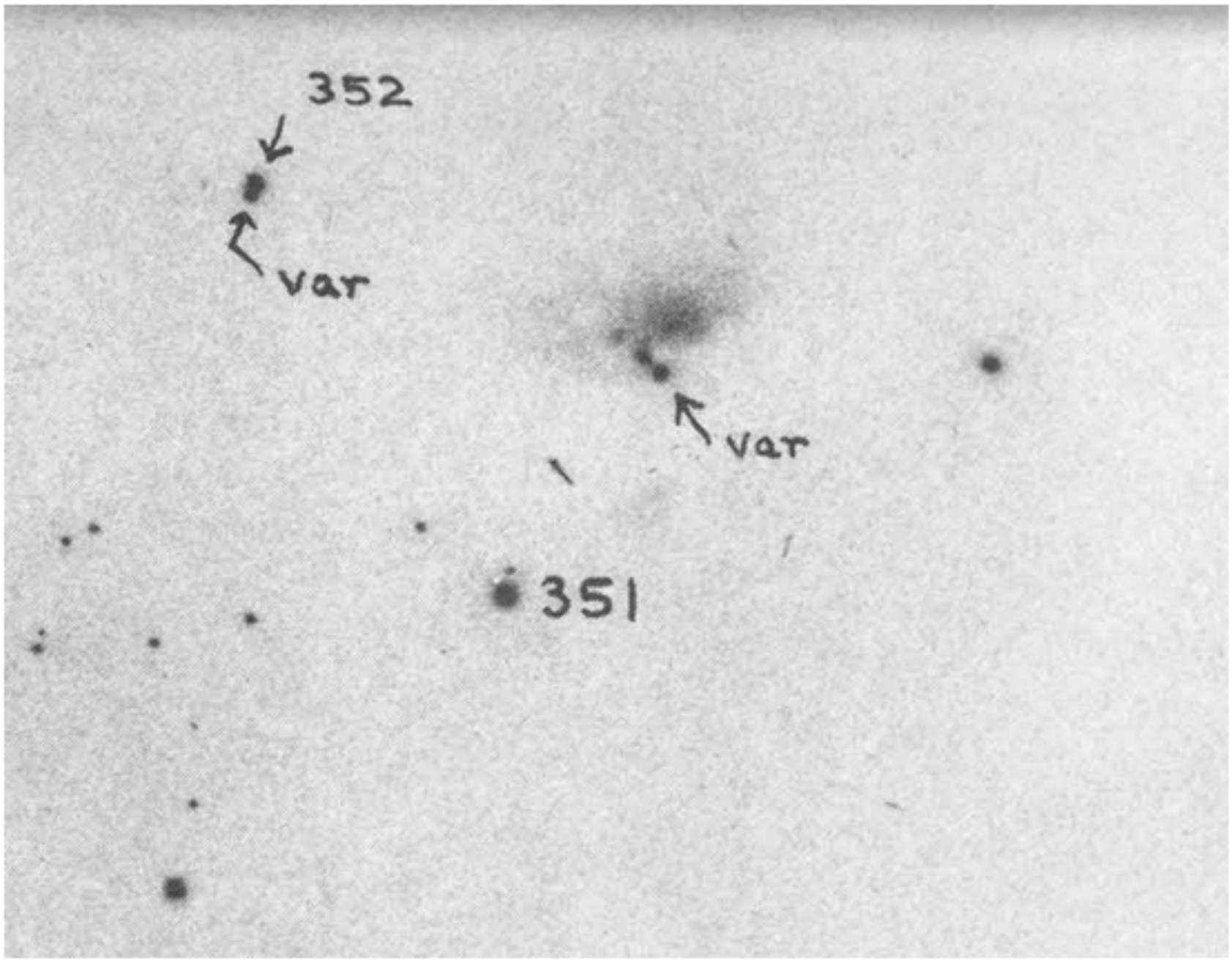
Amateur astronomers Rainer Spaeni, Christian Rusch, and Egon Eisenring in Switzerland identified in October of 2014 that a nebular structure in NGC 1333 associated with the known young stars HBC 340 and HBC 341 had changed appearance. They reported in a personal communication to LAH that the nebula had faded relative to previous images, but that by November and December of 2014 it had returned to its previous brightness. The Palomar Transient Factory (PTF) has been observing the NGC 1333 field over several seasons in R-band and has also detected variations in the nebular morphology and brightness, as documented at http://www.astro.caltech.edu/~lah/hbc340/

- The two nebular fading episodes in the movie correspond to the two minima in the light curve around JD 2456630 and JD 2456885. An alternate version of the movie shown above, now correlated (via the moving red line) with the point source light curves:





• The nebular fading behavior appears to be an ongoing phenomenon over at least several decades. Lick Observatory plates shown by Herbig (1974; Lick Obs. Bull. 658; Figures 1/2) illustrate a state in which the eastern side of the nebula is faint, while the western side is bright, similar to some epochs of the PTF data stream when the source is entering or recovering from the deep minima when the nebula disappears entirely. Herbig's plate data taken in 1959 at the 120" is shown below. The faint nebulous knot that is aligned with HBC 340 and HBC 341 just to the northeast, is not readily apparent in our Palomar 48" data except perhaps in the best seeing frame.



Herbig's Fotoplatte von 1959 am 120" Teleskop

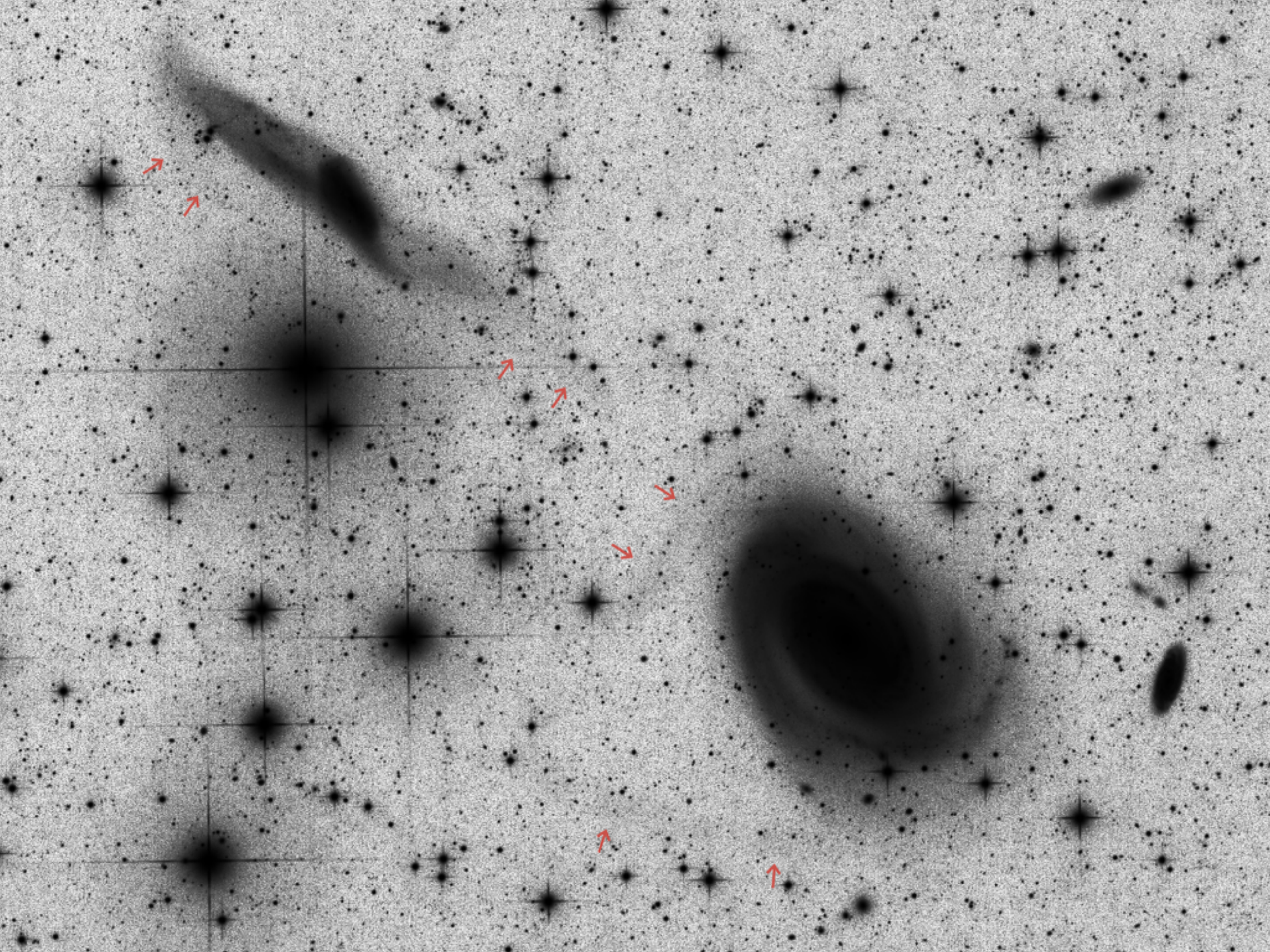
• It is suggested that the newly appreciated nature of the nebula could warrant it being known in the future as the NGC 1333 Rusch-Eisenring-Spaeni variable nebula (or RESVN), after the discoverers of its morphological changes on few month time scales.

NGC 1555

Credit: Adam Block/Mount Lemmon SkyCenter/University of Arizona

October 20, 1999

NGC 2261: Hubble's Variable Nebula
Credit: William Sparks (STScI), Sylvia Baggett (STScI) et al.,
& the Hubble Heritage Team (AURA/ STScI/ NASA)



Vielen Dank für Eure Aufmerksamkeit.