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Digital Research: Crossing over Disciplines

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Digital Research: Crossing over Disciplines

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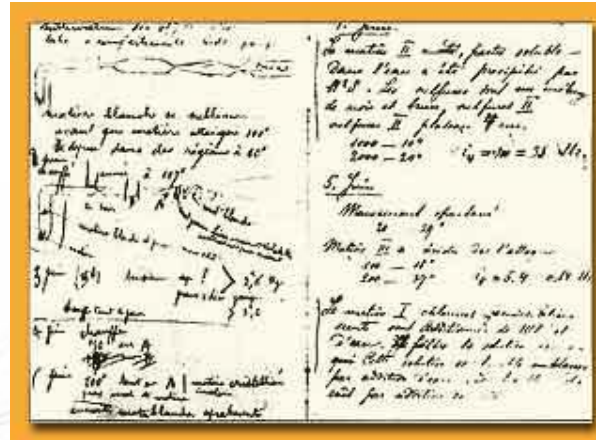
University of California, Los Angeles

Wolfson College, Oxford, 13 June 2013

Data practices are local



hudsonalpha.org



Marie Curie's notebook aip.org

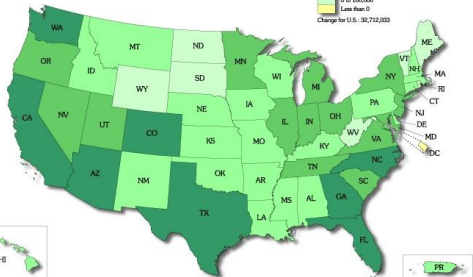


NASA Astronomy Picture of the Day



Figure 2. Numeric Change in Resident Population for the 50 States, the District of Columbia, and Puerto Rico: 1990 to 2000

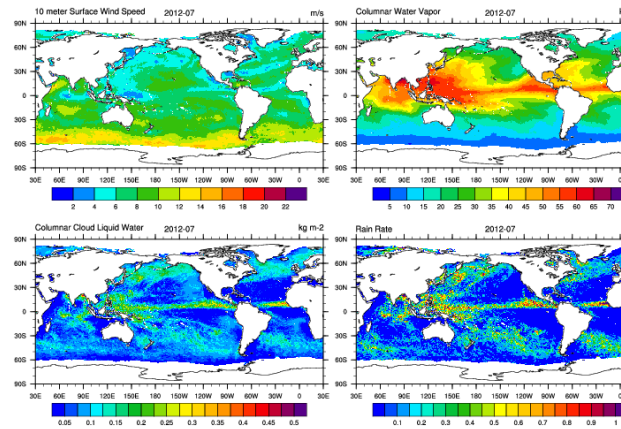
Change in Number of People
 Green: Less than 1 million
 Yellow: 1,000,000 to 2,000,000
 Orange: 2,000,000 to 3,000,000
 Red: More than 3,000,000
 Change for US: 38,712,000



USCENSUS BUREAU
 Making the Census Count

<http://www.census.gov/population/cen2000/map02.gif>

Monthly Mean: f17_ssmis_201207v7.nc



ncl.ucar.edu

Date: 1/2.07.75 Place: Sakaltutan
 Zafor

He will grow old in his present house; new house is for sons - 5 sons. Not sure they want to live in village. He will only build another if they want him to. eS came from Germany and did the plastering. He arranged the carpentry in Kayseri. Çok para gitti. (much money went) Has a tractor.

Date: July 1980 Place: Sakaltutan
 Zafor:

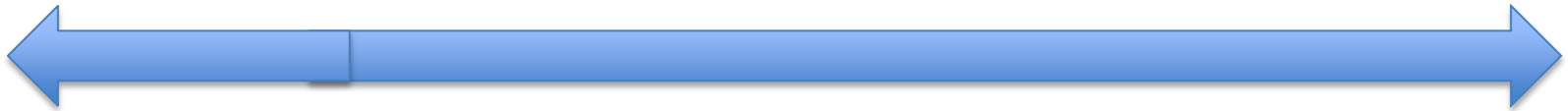
Household now Zafor and wife; Nazif Unal and wife and youngest son, still a boy. They run two dolmuş; one with a driver from Süleymanlı. Goes in and out once a day. He gets 8,000 a month. Zafor then said, keskin deOil. (not sharp - i.e.? not profitable) I said he did very well on 8,000 TL with only two journeys a day. Nazif Unal has "bought" a Durak (dolmuş stop) from Belediye and works all day in Kayseri.

http://onlineqda.hud.ac.uk/Intro_QDA/Examples_of_Qualitative_Data.php

Data practices are local

Industrial methods

Artisanal methods



Data practices are local

LETTERS

A role for self-gravity at multiple length scales in the process of star formation

Alyssa A. Goodman^{1,2}, Erik W. Rosolowsky^{3,4}, Michelle A. Borkin^{1,†}, Jonathan B. Foster², Michael Halle^{1,4}, Jens Kauffmann^{1,2} & Jaime E. Pineda²

Self-gravity plays a decisive role in the final stages of star formation, where dense cores (size ~ 0.1 parsecs) inside molecular clouds collapse to form star-plus-disk systems¹. But self-gravity's role at earlier times (and on larger length scales, such as ~ 1 parsec) is unclear; some molecular cloud simulations that do not include self-gravity suggest that 'turbulent fragmentation' alone is sufficient to create a mass distribution of dense cores that resembles, and sets, the stellar initial mass function². Here we report a 'dendrogram' (hierarchical tree-diagram) analysis that reveals that self-gravity plays a significant role over the full range of possible scales traced by ¹³CO observations in the L1448 molecular cloud, but not everywhere in the observed region. In particular, more than 90 per cent of the compact 'pre-stellar cores' traced by peaks of dust emission³ are projected on the sky within one of the dendrogram's self-gravitating 'leaves'. As these peaks mark the locations of already-forming stars, or of those probably about to form, a self-gravitating cocoon seems a critical condition for their existence. Turbulent fragmentation simulations without self-gravity—even of unmagnetized isothermal material—can yield mass and velocity power spectra very similar to what is observed in clouds like L1448. But a dendrogram of such a simulation⁴ shows that nearly all the gas in it (much more than in the observations) appears to be self-gravitating. A potentially significant role for gravity in 'non-self-gravitating' simulations suggests inconsistency in simulation assumptions and output, and that it is necessary to include self-gravity in any realistic simulation of the star-formation process on subparsec scales.

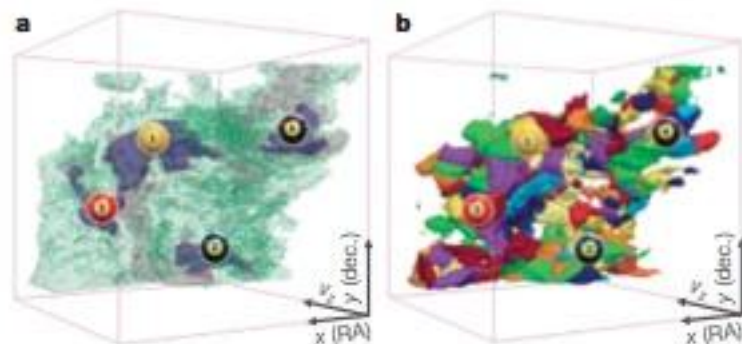
Spectral-line mapping shows whole molecular clouds (typically tens to hundreds of parsecs across, and surrounded by atomic gas) to be marginally self-gravitating⁵. When attempts are made to further break down clouds into pieces using 'segmentation' routines, some self-gravitating structures are always found on whatever scale is sampled^{6,7}. But no observational study to date has successfully used one spectral-line data cube to study how the role of self-gravity varies as a function of scale and conditions, within an individual region.

Most past structure identification in molecular clouds has been explicitly non-hierarchical, which makes difficult the quantification of physical conditions on multiple scales using a single data set. Consider, for example, the often-used algorithm CLUMPFIND⁸. In three-dimensional (3D) spectral-line data cubes, CLUMPFIND operates as a watershed segmentation algorithm, identifying local maxima in the position-position-velocity (p-p-v) cube and assigning nearby emission to each local maximum. Figure 1 gives a two-dimensional (2D) view of L1448, our sample star-forming region, and Fig. 2 includes a CLUMPFIND decomposition of it based on ¹³CO observations. As with any algorithm that does not offer hierarchically nested or

overlapping features as an option, significant emission found between prominent clumps is typically either appended to the nearest clump or turned into a small, usually 'pathological', feature needed to encompass all the emission being modelled. When applied to molecular-line



Figure 1 | Near-infrared image of the L1448 star-forming region with contours of molecular emission overlaid. The channels of the colour image correspond to the near-infrared bands J (blue), H (green) and K (red), and the contours of integrated intensity are from ¹³CO(1–0) emission⁹. Integrated intensity is monotonically, but not quite linearly (see Supplementary Information), related to column density¹⁰, and it gives a view of 'all' of the molecular gas along lines of sight, regardless of distance or velocity. The region within the yellow box immediately surrounding the protostar has been imaged more deeply in the near-infrared (using Calar Alto) than the remainder of the box (2MASS data only), revealing protostars as well as the scattered starlight known as 'Cloudshine'¹¹ and outflows (which appear orange in this colour scheme). The four billiard-ball labels indicate regions containing self-gravitating dense gas, as identified by the dendrogram analysis, and the leaves they identify are best shown in Fig. 2a. Asterisks show the locations of the four most prominent embedded young stars or compact stellar systems in the region (see Supplementary Table 1), and yellow circles show the millimetre-dust emission peaks identified as star-forming or 'pre-stellar' cores³.



Click to rotate

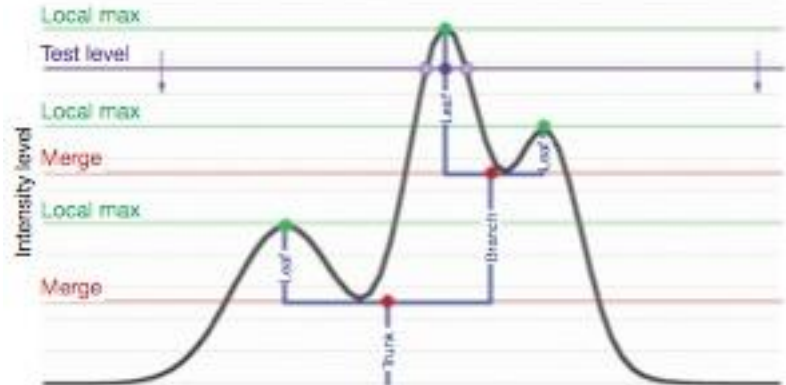
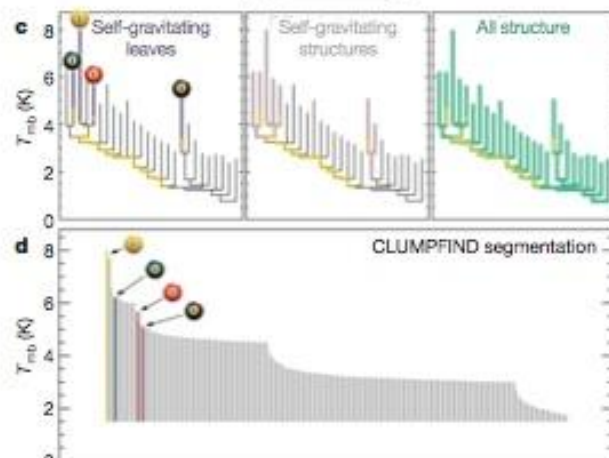


Figure 3 | Schematic illustration of the dendrogram process. Shown is the

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SYNOPTIC EDITION OF THE GUANG ZAN JING – CHAPTER 1: 光讚品

karmāntājivā
virahitakuśalakāyavānmanas-
karmāntājivā¹⁰⁹ ca bhavanti sma

§ 1.66 (147c 25-148a 1) 一切衆生得平等心，展轉相瞻如父、如母、如兄、如弟、如姊、如妹，各各同心，等無偏邪，皆行慈心。

PG 4r 4-5 (Ś 18, 22-19, 1; PD 10, 1-2; PSL *kā* a 4-5): sarvasatvās ca sarvasatveṣu samacittā abhūvan* yad uta¹¹⁰ mātāpitṛbhrātṛbhaginīsamacittāḥ mitrajñātisahāyasamacittāḥ¹¹¹

§ 1.67 (148a 1-2) 一切群萌悉修十善，清淨梵行，無有塵埃。

PD 10, 2-3 (PG 4r 5-6; Ś 19, 2-3; PSL *kā* a 5): daśakuśalakarmapathasevinaś ca bhavanti sma¹¹² / brahmacāriṇaḥ śucayo nirāmayagandhāḥ¹¹³

§ 1.68 (148a 2-4) 一切黎庶悉獲安隱，所得安隱猶如比丘得第三禪。于時衆生而致智慧，而悉具足善快調定，離於卑劣，逮得和雅。

PG 4r 6-8 (PD 10, 3-8; PSL *kā* a 5-6; Ś 19, 3-8): sarvasatvās tasmin samaye sarvasukhasamarpitā abhūvan* evamrūpeṇa sukhena samanvāgatās¹¹⁴ tadyathā {s} tṛtiyadhyānasamāpannasya bhikṣoḥ sukhāṃ sarvasatvās ca tasmin samaye evamrūpayā prajñayā samanvāgatā abhūvan* yad evaṃ jānānti sma¹¹⁵ • sādhu dānaṃ sādhu damaḥ sādhu saṃnyamaḥ¹¹⁶ sādhu satyaṃ • sādhu apramādaḥ sādhu maitrī sādhu karuṇā sādhu avihimsā prāṇibhūteṣu¹¹⁷ •

¹¹⁰ sarvasatvās ... yad uta: not in PD & PSL.

¹¹¹ PG wrongly repeats verbatim this latter compound. PD 10, 2 and PSL have at this point a longer reading: mitramātyajñātisahāyitasamacittā. Note that Ś has all the words construed as one compound.

¹¹² PG 4r 5-6 & Ś 19, 2: daśakuśalakarmapa(tha)samanvāgatā [Ś without daśa-] abhūvan.

¹¹³ PG 4r 6, Ś 19, 3 and PSL *kā* a 5: nirāmagandhāḥ, which seems to be the correct reading; after this word, PG & Ś + sarvakuśalavitarakavigatāḥ.

¹¹⁴ PD 10, 4 & PSL *kā* a 5: idrēṣaṃ sukhāṃ pratilabhante sma.

¹¹⁵ yad ... sma: PD 10, 6 & PSL *kā* a 6: yad anyabuddhakṣetrasthā buddhā bhagavanta evaṃ [PSL + udānaṃ] udānanti sma.

¹¹⁶ Ś 19, 7: saṃnyamaḥ.

¹¹⁷ sādhu dānaṃ ... prāṇibhūteṣu: PD 10, 7-8 & PSL *kā* a 6: sādhu damaḥ [PSL + sādhu śamaḥ] sādhu saṃnyamaḥ sādhu cīrṇo brahmacāryāvāsah sādhu prāṇibhūteṣu avihimseti.



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熱門連結

Zacchetti, S. (2005). In Praise of the Light: A Critical Synoptic Edition with an Annotated Translation of Chapters 1-3 of Dharmarakṣa's Guang zan jing, Being the Earliest Chinese Translation of the Larger Prajnaparamita. Tokyo, Japan: The International Research Institute for Advanced Buddhology, Soka University. Retrieved from http://iriab.soka.ac.jp/orc/Publications/BPPB/index_BPPB.html



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《緒高僧傳》牛頭智巖的標點

「磻溪王氏子。壯歲謁河庵。勤剪髮。聞別傳之旨。」的標點

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非常準確，棣，就是梅字。英也花，棣也是花。不過，未見

1 週 5 天 前

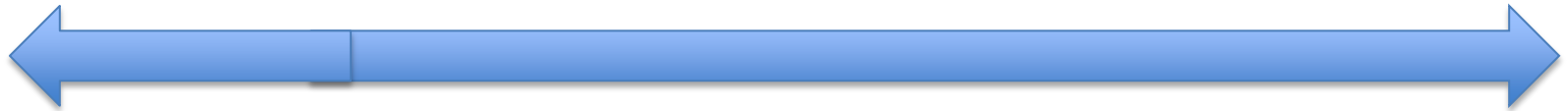
樓主斷句顯為更勝，呵呵。

同理，最後一句也可改為

Open access to data is a paradigm shift

Industrial methods

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