LITTLE THINGS in 3D: robust determination of the circular velocity of dwarf irregular galaxies

arXiv:1611.03865

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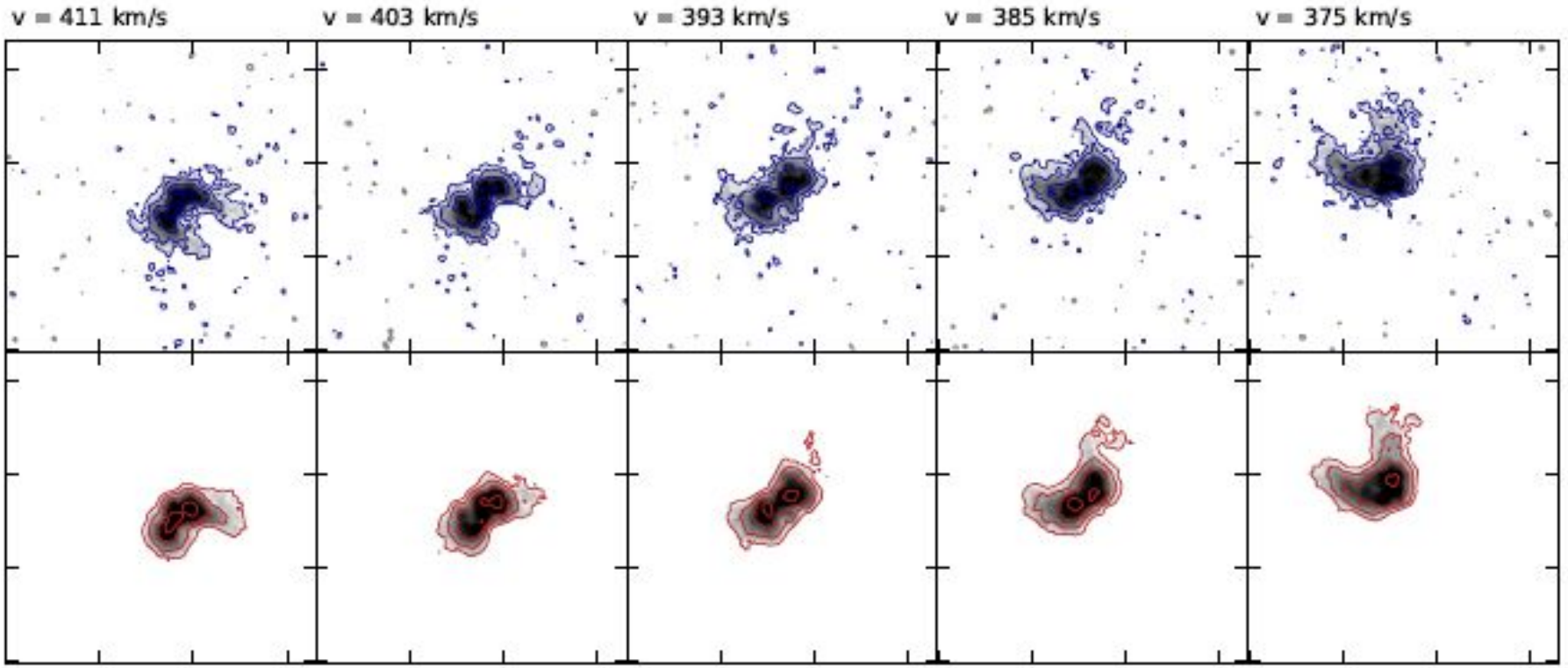
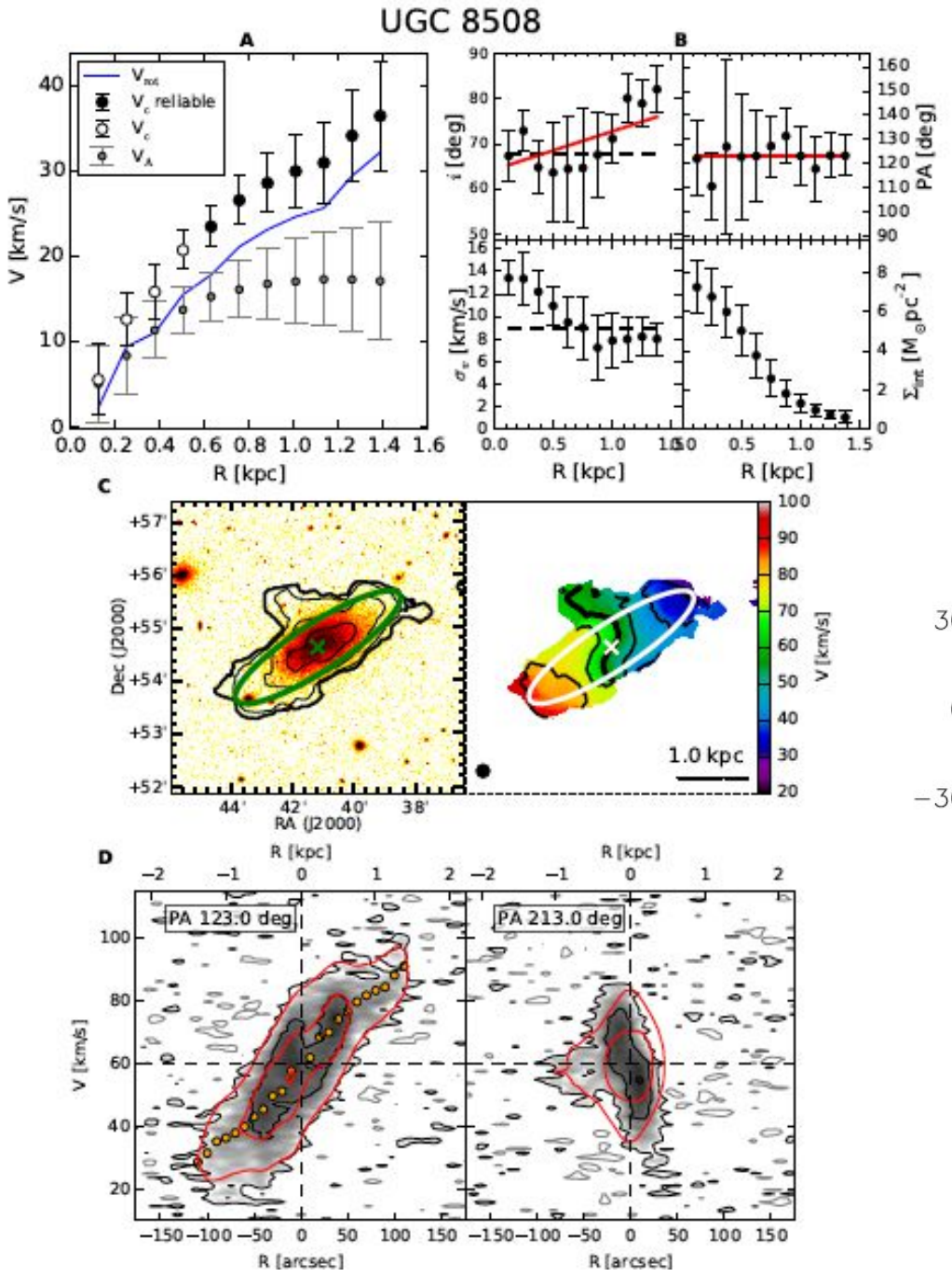
Кинематические параметры HI в 17 галактиках: кривые вращения, sigma...
Метод - ^{3D}BAROLOD (Teodoro & Fraternali 2015)

Galaxy	R_{max} (arcsec) (1)	R_{max} (kpc) (2)	ΔR (pc) (3)	centre RA (4a)	centre DEC (4b)	V_{sys} (km/s) (5)	i_{ini} (°) (6)	PA_{ini} (°) (7)	V_o (km/s) (8)	$< \sigma_v >$ (km/s) (9)	$<i>$ (°) (10)	<PA> (°) (11)
CVnIdwA	90	1.6	170	12 38 40.2^B	32 45 52^B	307.9^B	41^B	55^B	21.5 ± 3.9	7.7 ± 0.5	49.2 ± 10.9	60.6 ± 18.5
DDO 47	210	5.3	380	7 41 54.6^H	16 48 10^H	272.8^B	35^H	310^H	62.6 ± 5.2†	7.9 ± 0.2	37.4 ± 1.7†	317.4 ± 7.3
DDO 50	390	6.4	190	8 19 08.7^S	70 43 25^S	156.7^B	30^T	180^T	38.7 ± 10.1†	9.0 ± 1.5	33.1 ± 4.6†	174.9 ± 5.9
DDO 52	108	5.4	450	8 28 28.5^S	41 51 21^S	396.2^B	51^S	5^S	51.1 ± 6.3	8.0 ± 0.8	55.1 ± 2.9	6.5 ± 2.0
DDO 53	60	1.1	110	8 34 08.0^S	66 10 37^S	20.4^B	35^T	120^T	20.3 ± 6.6†	7.9 ± 0.1	37.0 ± 2.0†	123.4 ± 3.8
DDO 87	144	5.2	430	10 49 34.7^S	65 31 46^S	338.7^B	40^T	240^B	50.3 ± 9.1	6.3 ± 2.4	42.7 ± 7.3	238.6 ± 4.7
DDO 101	60	1.9	190	11 55 39.4^S	31 31 8^S	586.6^B	49^S	290^S	59.2 ± 3.6	4.8 ± 1.7	52.4 ± 1.7	287.4 ± 3.6
DDO 126	140	3.3	240	12 27 06.3^H	37 08 23^H	214.3^B	63^B	138^B	38.6 ± 3.1	9.1 ± 1.6	62.2 ± 2.9	140.7 ± 3.5
DDO 133	165	2.8	190	12 32 55.4^S	31 32 14^S	331.3^B	38^B	20^B	47.2 ± 5.1†	8.1 ± 0.7	38.9 ± 3.7†	−3.8 ± 8.9
DDO 154	390	7.0	270	12 54 06.2^S	27 09 02^S	375.2^B	65^S	224^S	47.1 ± 5.1	8.5 ± 0.9	67.9 ± 1.1	226.1 ± 2.6
DDO 168	225	4.7	310	13 14 27.9^B	45 55 24^B	191.9^B	60^T	300 − 270^T	56.2 ± 6.9	8.8 ± 1.3	62.0 ± 2.6	272.7 ± 4.2
DDO 210	100	0.4	40	29 46 52.0^S	-12 59 51^S	-140.0^B	60^T	65^T	16.4 ± 9.5	6.2 ± 0.6	63.2 ± 3.2	77.3 ± 15.2
DDO 216	195	1.0	80	23 28 32.1^H	14 44 50^H	-188.0^T	65^H	130^H	13.6 ± 5.5	5.6 ± 0.5	70.0 ± 5.0	130.4 ± 9.0
NGC 1569	150	2.5	250	4 30 49.8^S	64 50 51^S	-75.6^B	61^S	122^S	55.6 ± 22.4	21.0 ± 4.0	67.0 ± 5.6	114.6 ± 4.0
NGC 2366	384	6.3	260	7 28 48.8^S	69 12 22^S	100.8^B	65^B	35^B	57.7 ± 5.4	12.6 ± 1.8	65.1 ± 4.2	39.8 ± 2.8
UGC 8508	110	1.4	130	13 39 44.9^S	54 54 29^S	59.9^B	65^H	120^H	33.8 ± 6.4	9.1 ± 1.8	67.6 ± 5.3	123.2 ± 1.7
WLM	600	2.9	120	0 01 59.2^S	-15 27 41^S	-124.0^B	70^S	178^S	38.7 ± 3.4	7.7 ± 0.8	74.0 ± 2.3	174.0 ± 3.1

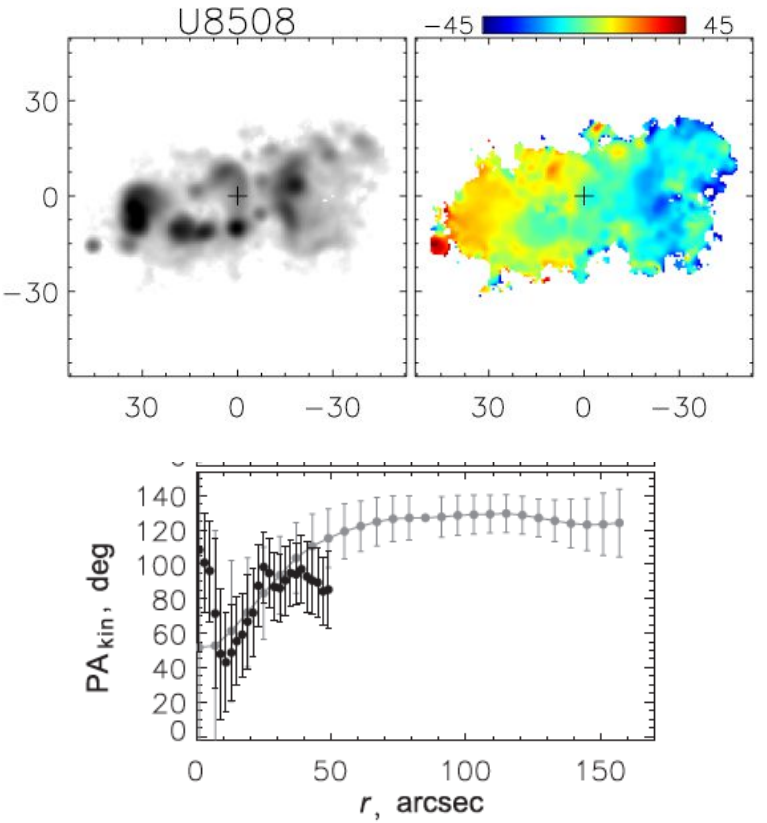
HI surface density: **pixel-by-pixel** or azimuthally averaged
HI scale height: constant 100 pc (?)
i and PA: using both the HI data cube and the optical data





- лучше ввести линейный рост *i.*
- радиальные скорости (ROTCUR) могут объяснить наблюдения, но параметры получаются нефизичные

Моисеев (2014):



Swift Supernovae:

http://people.physics.tamu.edu/pbrown/SwiftSN/swift_sn.html

No.	Supernova	Host Galaxy	Redshift	Type	Image | Plot | Data
463	**SN2016fej** ASASSN-16jc	NGC6942	0.0109140	NaN	
462	**GAIA16awf**		0.0360000	Ia	
461	**SN2016enk** ASASSN-16hy	UGC09857	0.00780000	IIP	
460	**SN2016eja** ASASSN-16hr	2MASXJ22253147+3859010	0.0400000	Ia	
459	**SN2016ewr**	UGC11214	NaN	NaN	
458	**SN 2016euj** ASASSN-16ip	ESO 479-G007	0.0170000	Ia	
457	**SN2016eoa** Gaia16bay		NaN	NaN	
456	**SN2016els** PS16dnq		0.217000	SLSN-I	
455	**SN2016ekt** ASASSN-16hw	GALEXASCJ215327.92-342420.8	0.0170000	Ia	
454	**SN2016ekg**	PGC67803	0.0170000	Ia	
453	**SN2016eiy** ASASSN-16hp	ESO509-IG064	0.00866300	Ia	

FITS images

ASI Science Data Center (ASDC), a facility of the Italian Space Agency (ASI) :
http://www.asdc.asi.it/

On-line XRT & UVOT data analysis:
http://www.asdc.asi.it/mmia/index.php?mission=swiftmastr

Field of View	17 x 17 arcmin
Detection Element	2048 x 2048 pixels
Telescope PSF	2.5 arcsec @ 350 nm
Wavelength Range	170-650 nm
Filters	7
Sensitivity	*B* = 22.3 in white light in 1000 s
Pixel Scale	0.502 arcsec