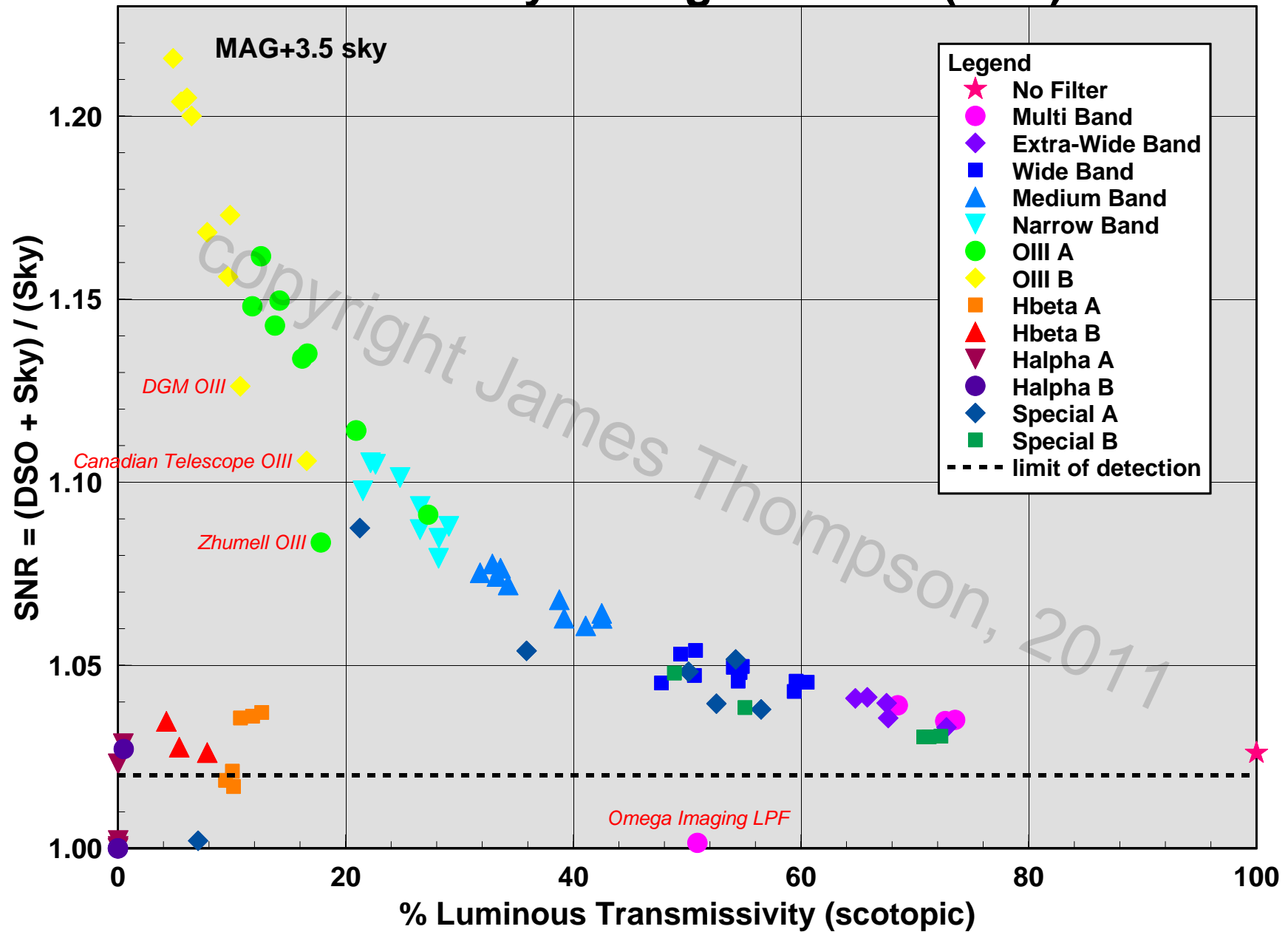
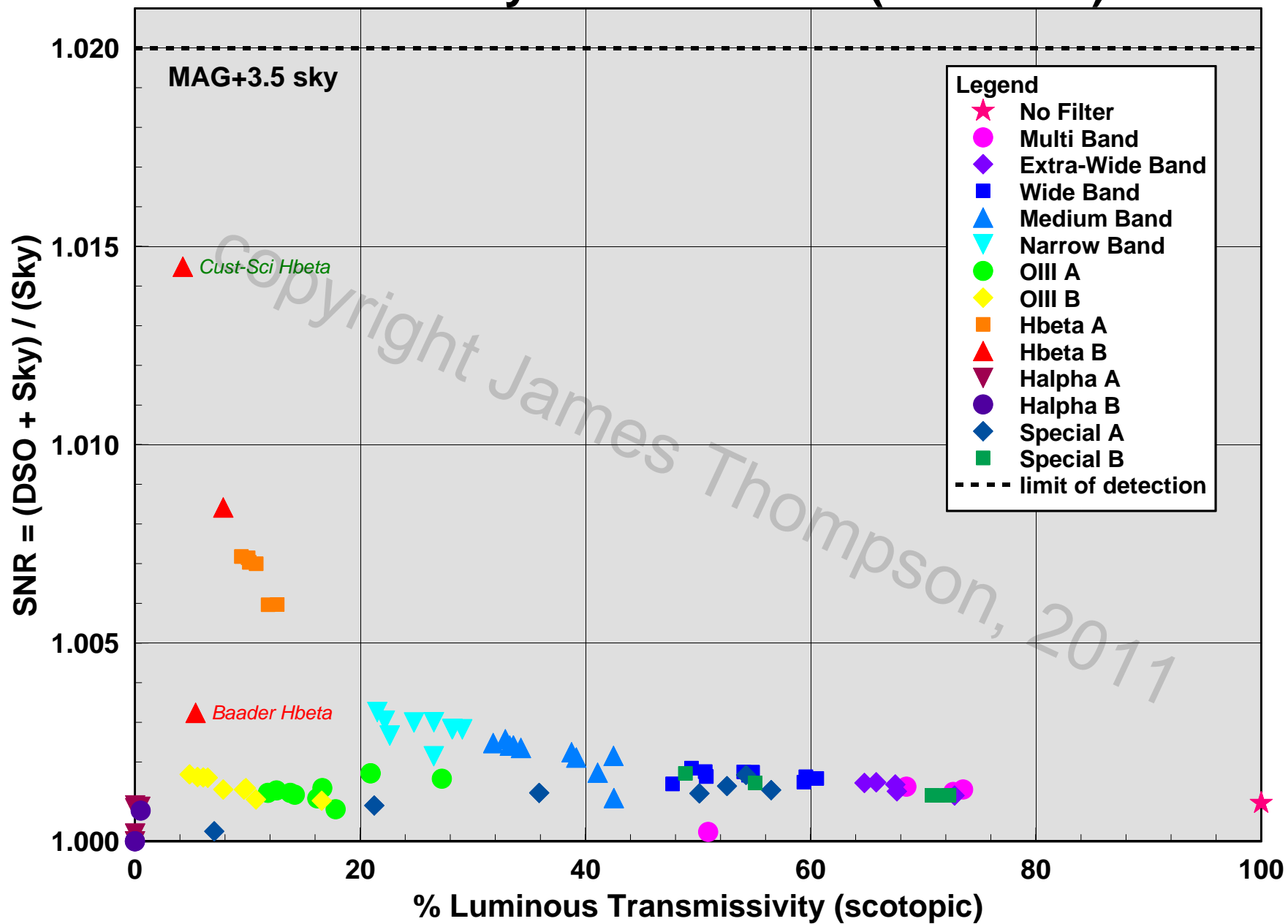


Appendix A – Deep-Sky Filter SNR vs. %LT Plots

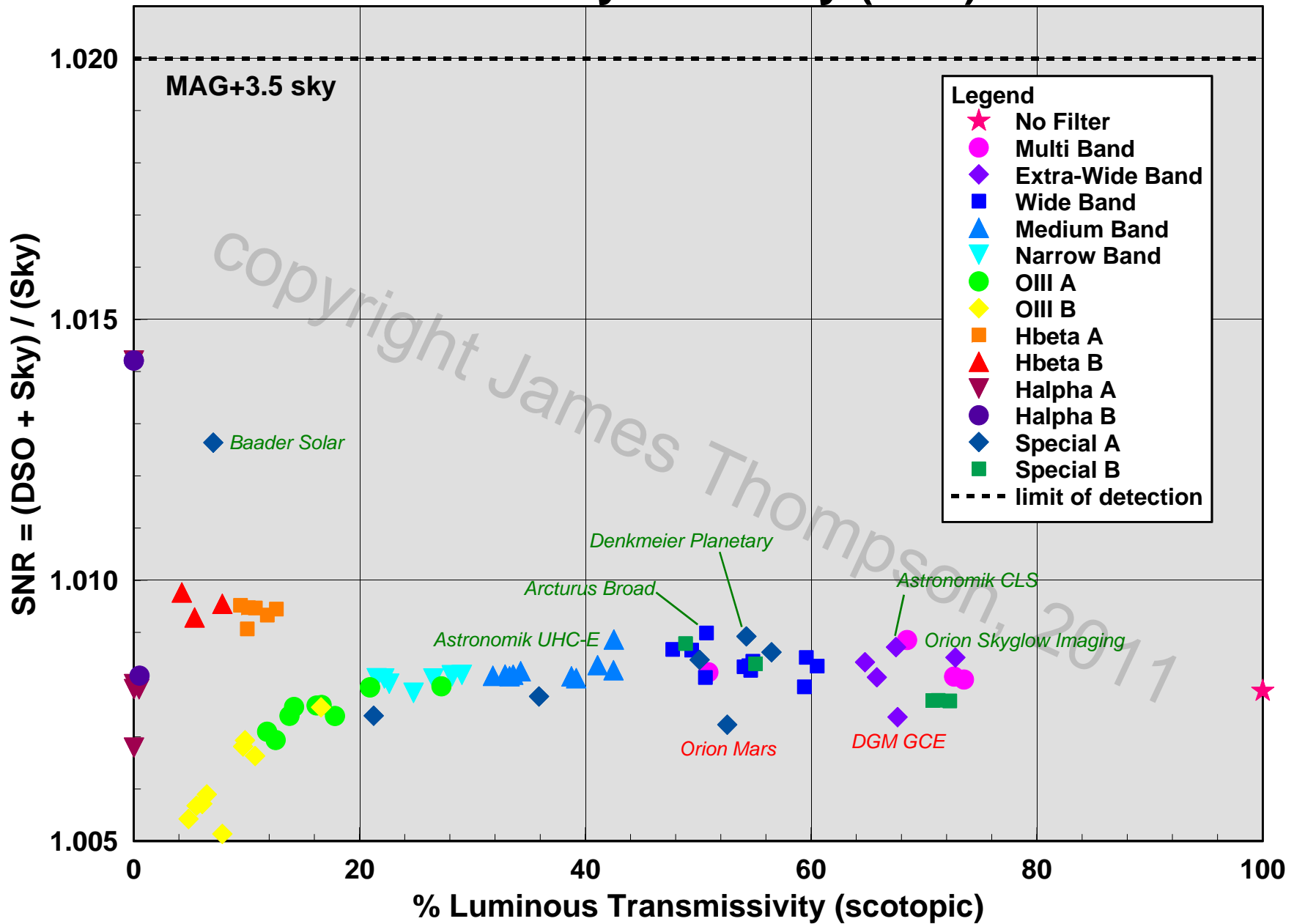
Human Eye - Bright Nebula (M27)



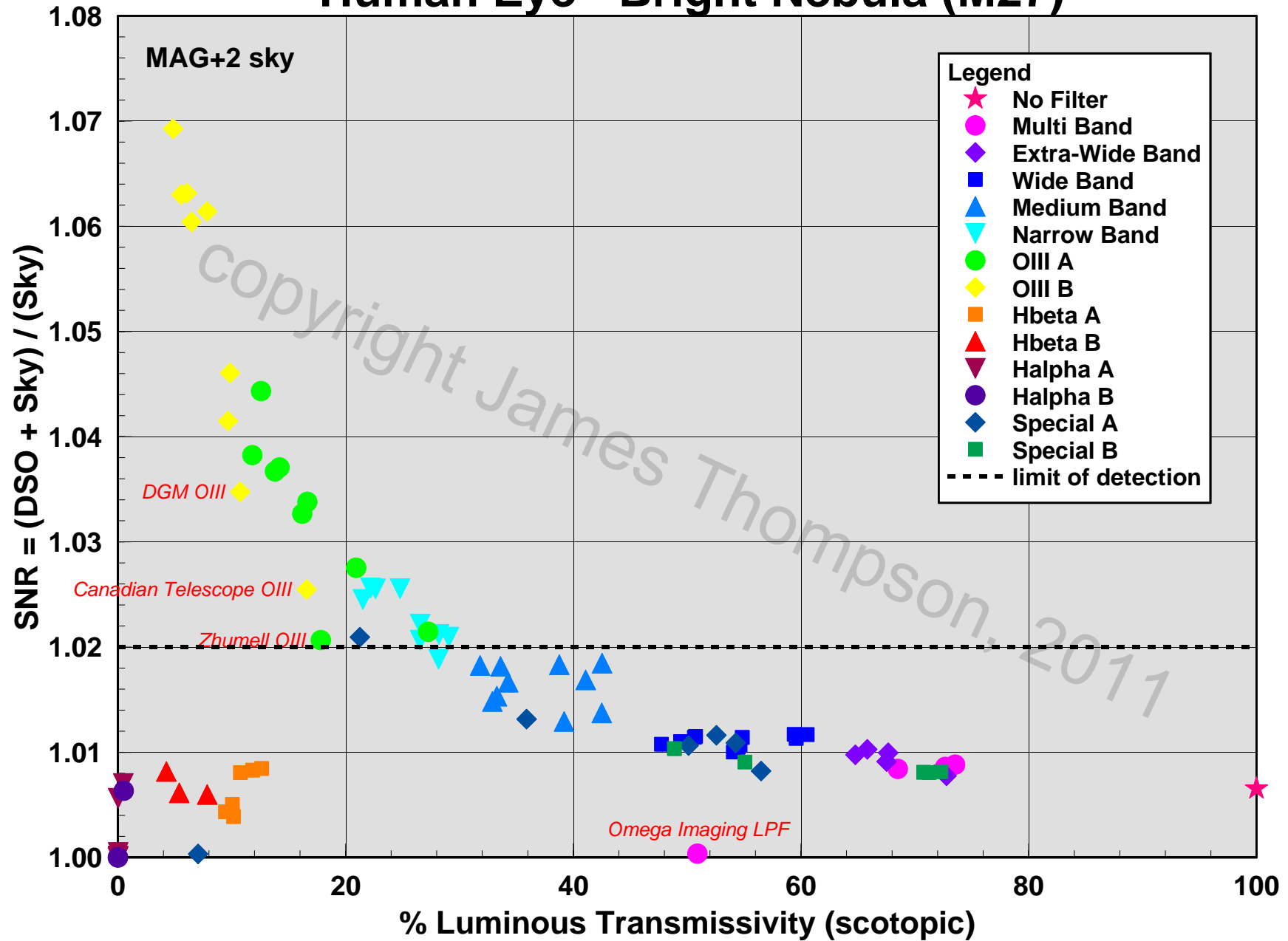
Human Eye - Dim Nebula (NGC7000)



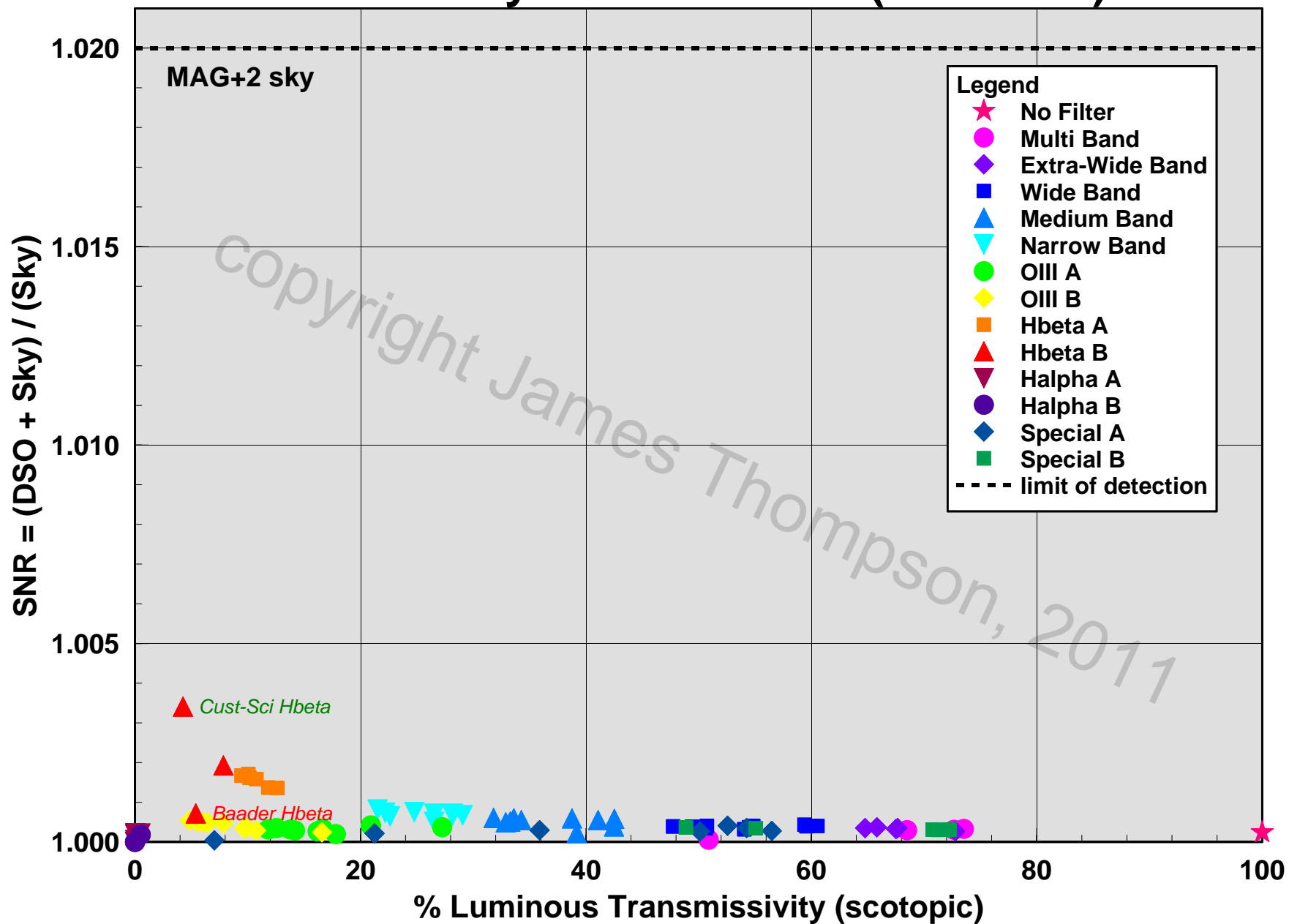
Human Eye - Galaxy (M51)



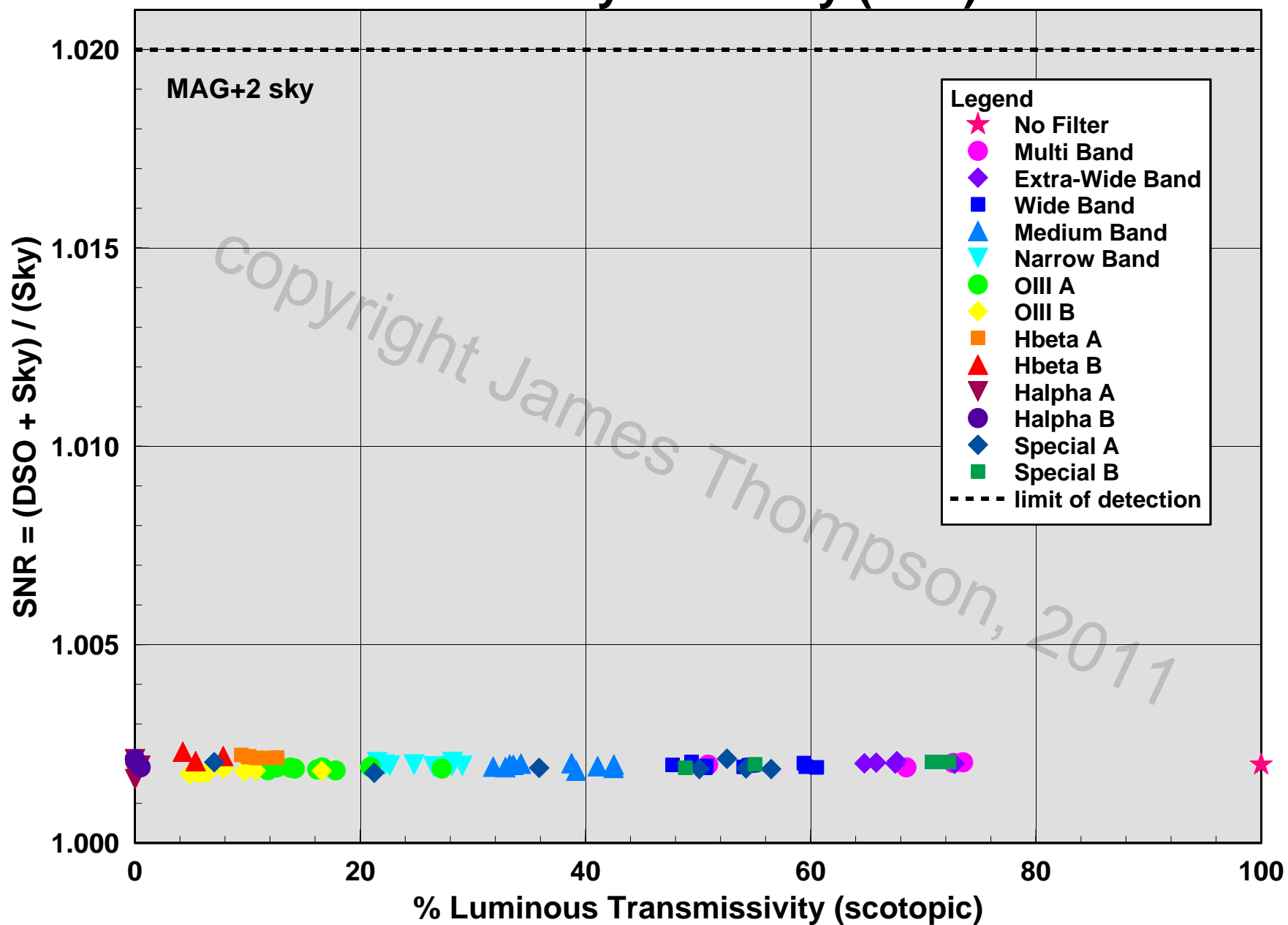
Human Eye - Bright Nebula (M27)



Human Eye - Dim Nebula (NGC7000)

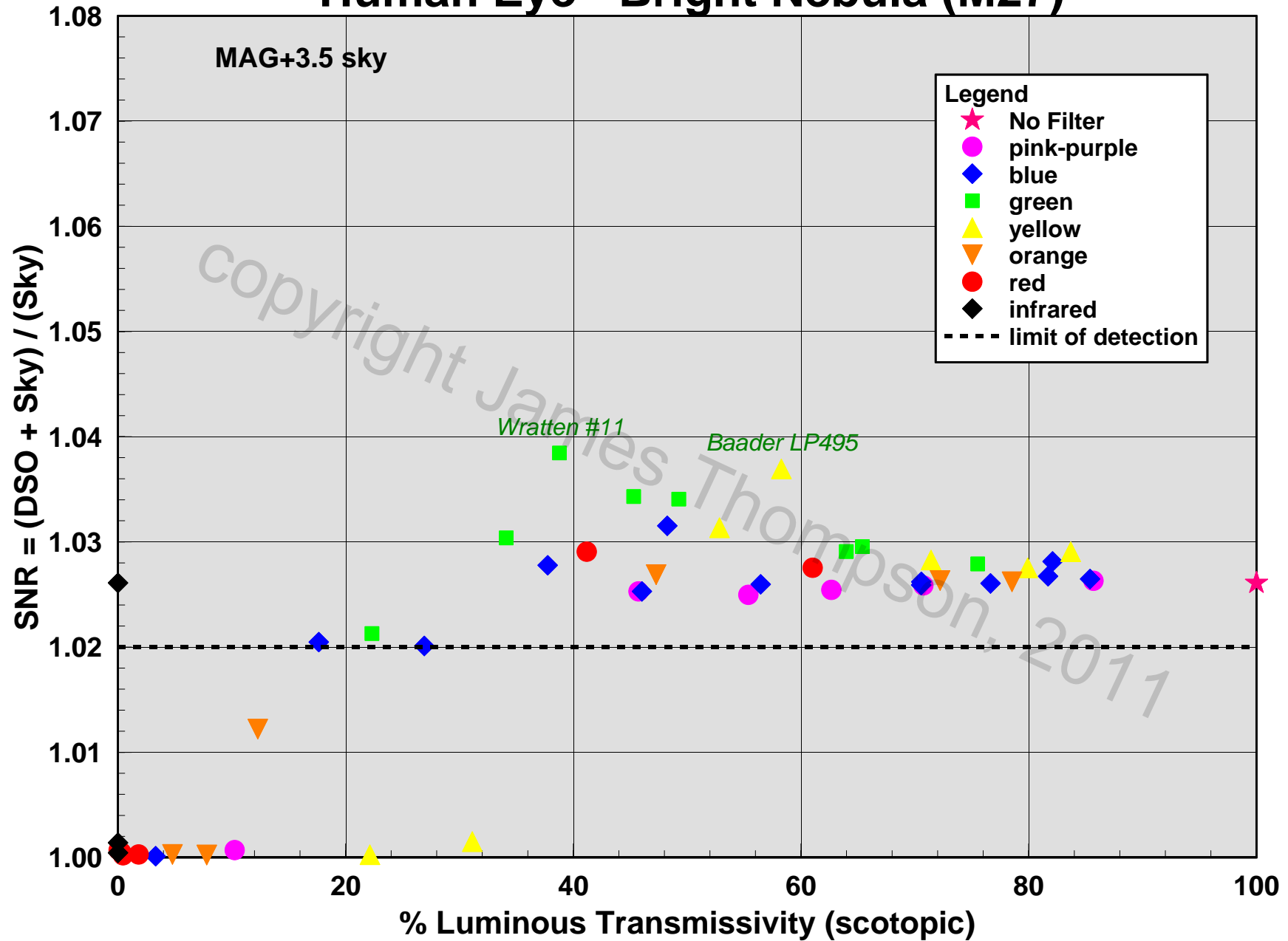


Human Eye - Galaxy (M51)

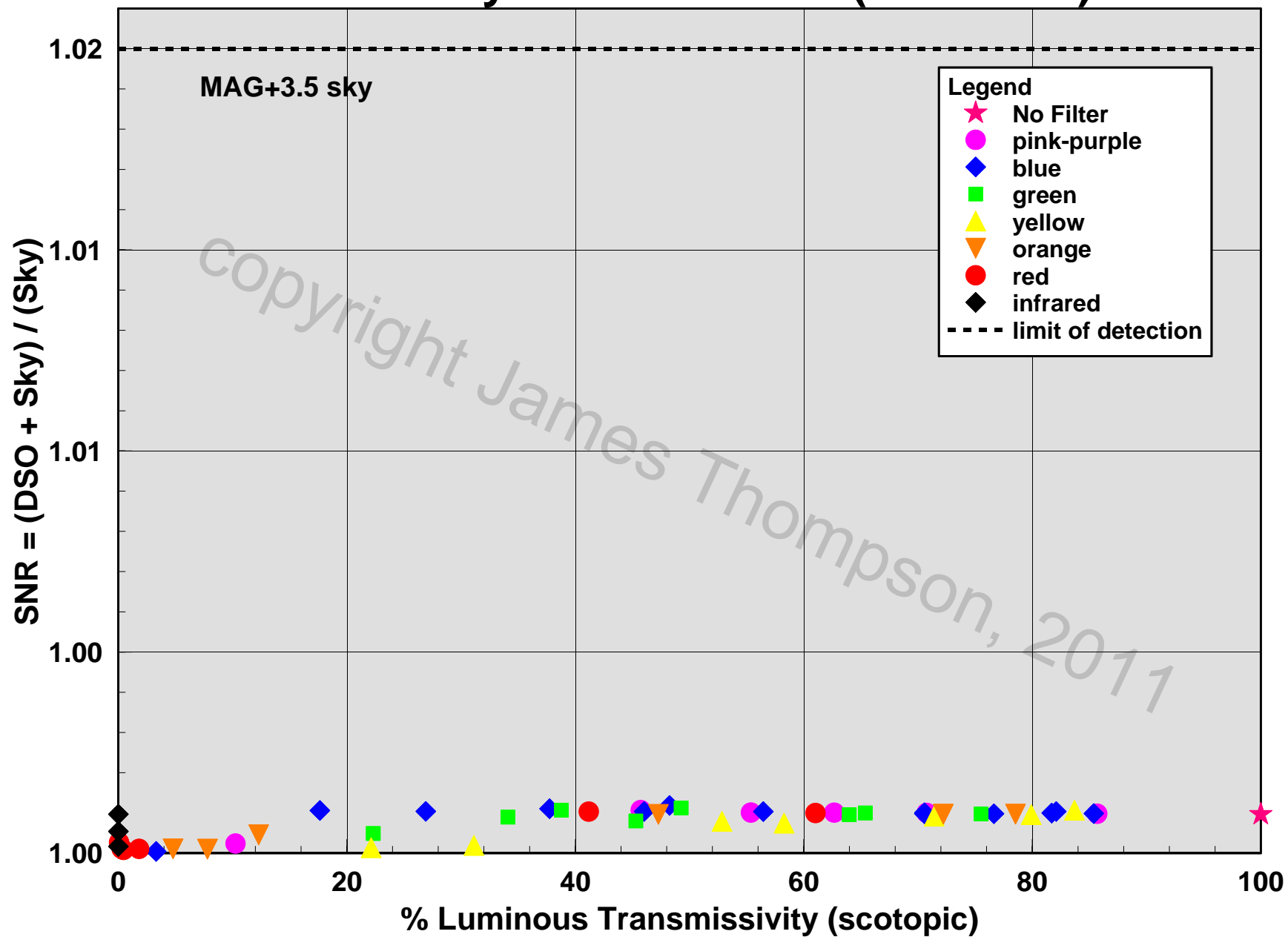


Appendix B – Planetary Filter SNR vs. %LT Plots

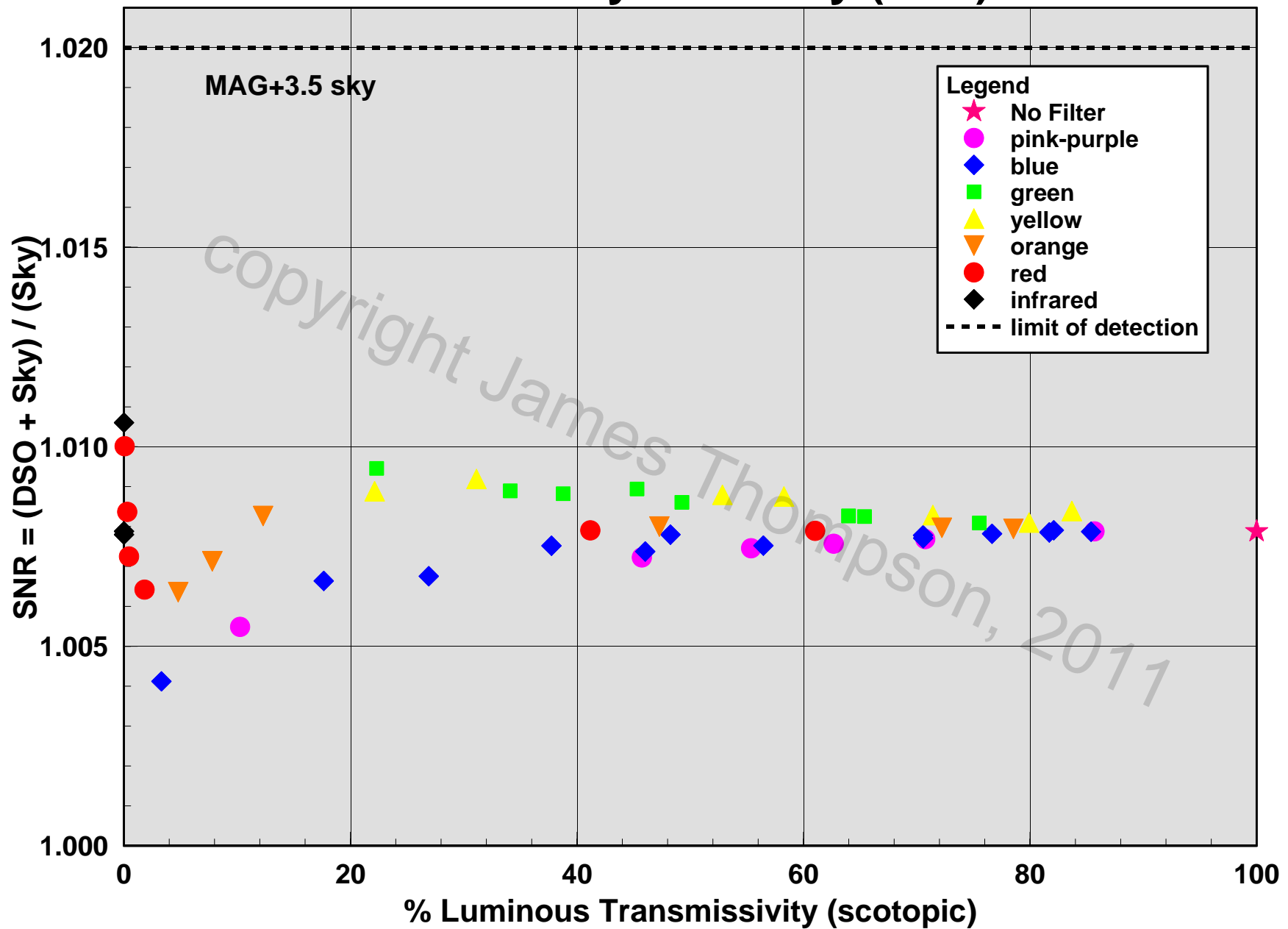
Human Eye - Bright Nebula (M27)



Human Eye - Dim Nebula (NGC7000)

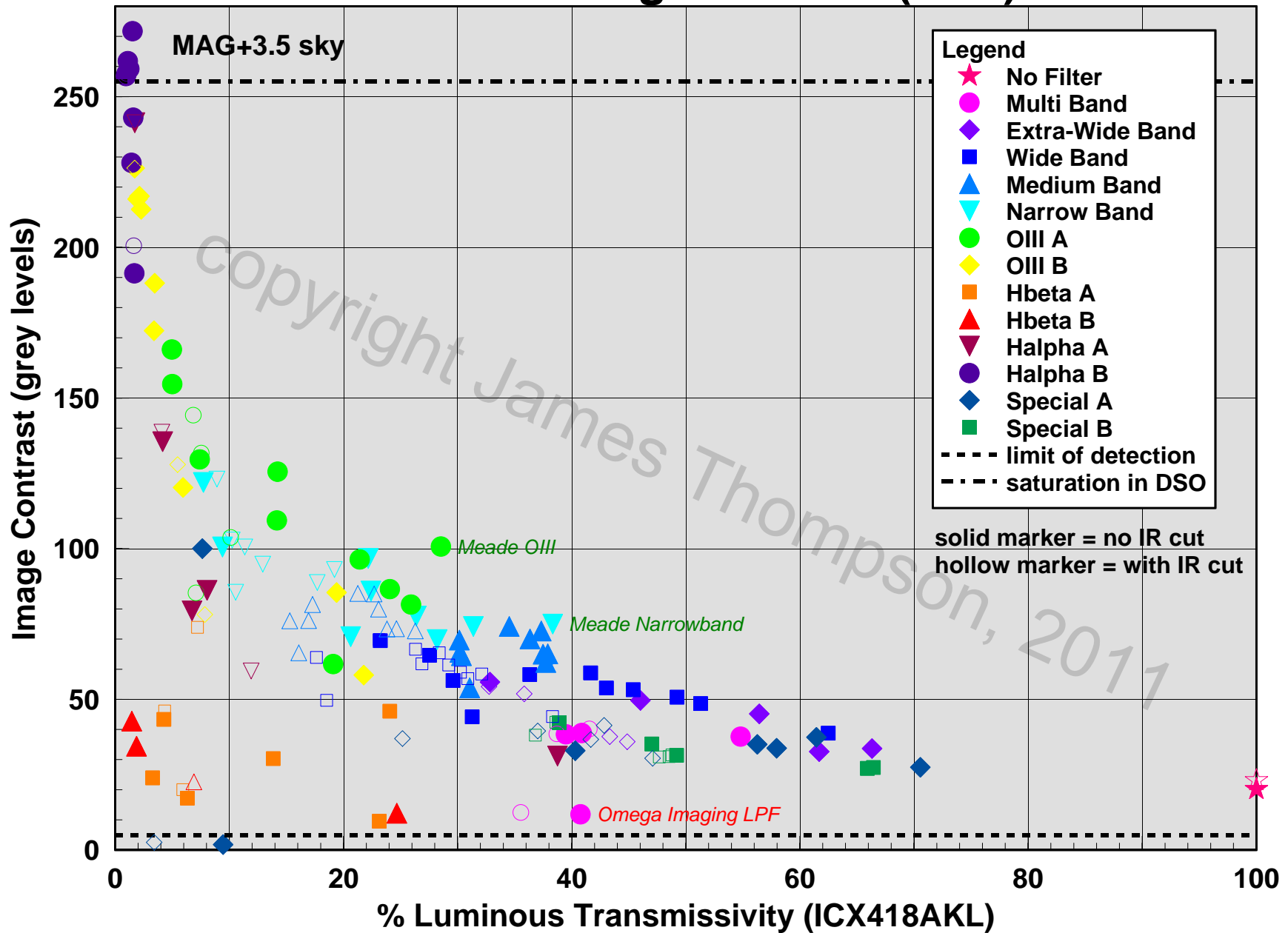


Human Eye - Galaxy (M51)

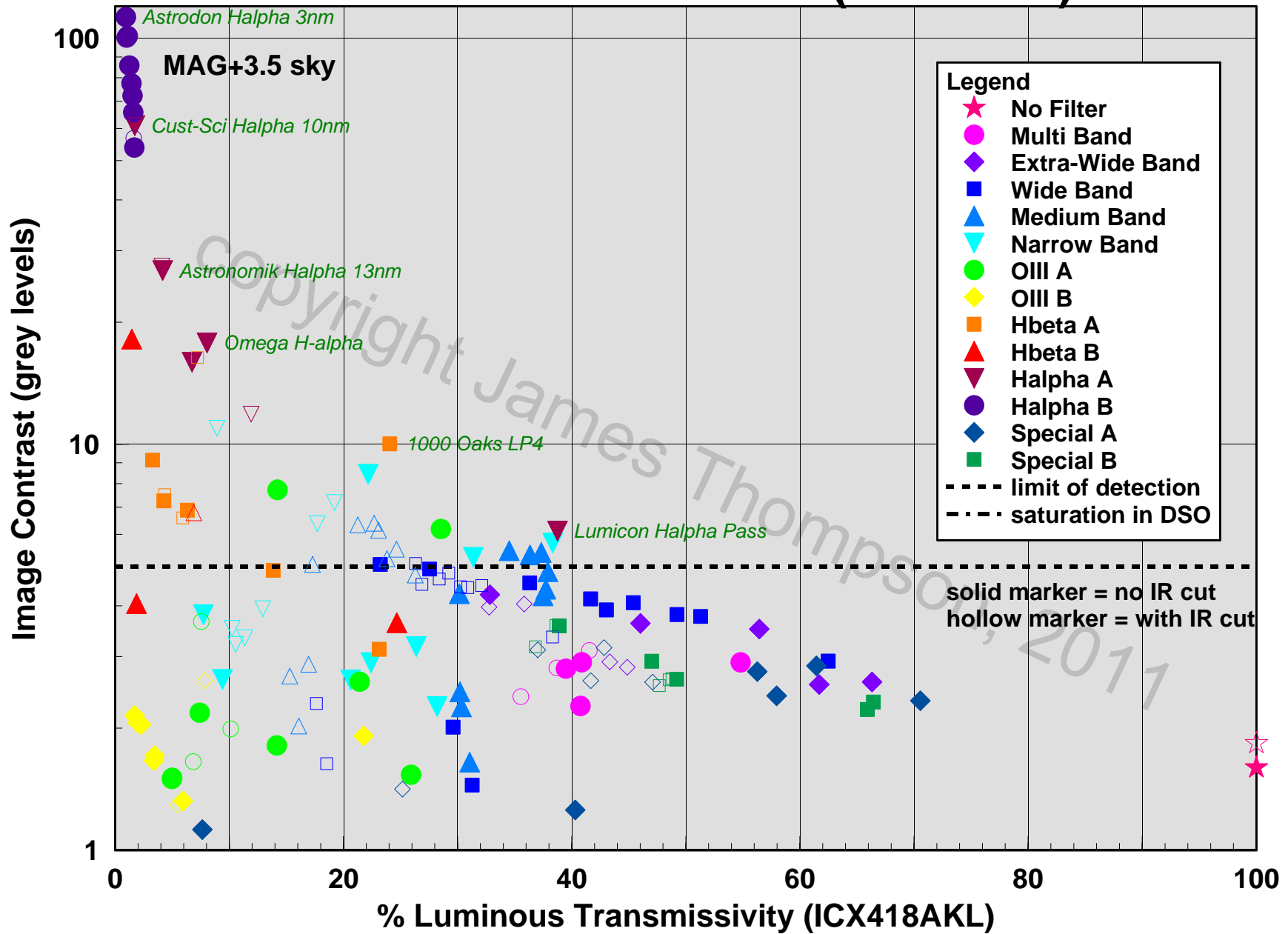


Appendix C – Deep-Sky Filter Δ RGB vs. %LT Plots

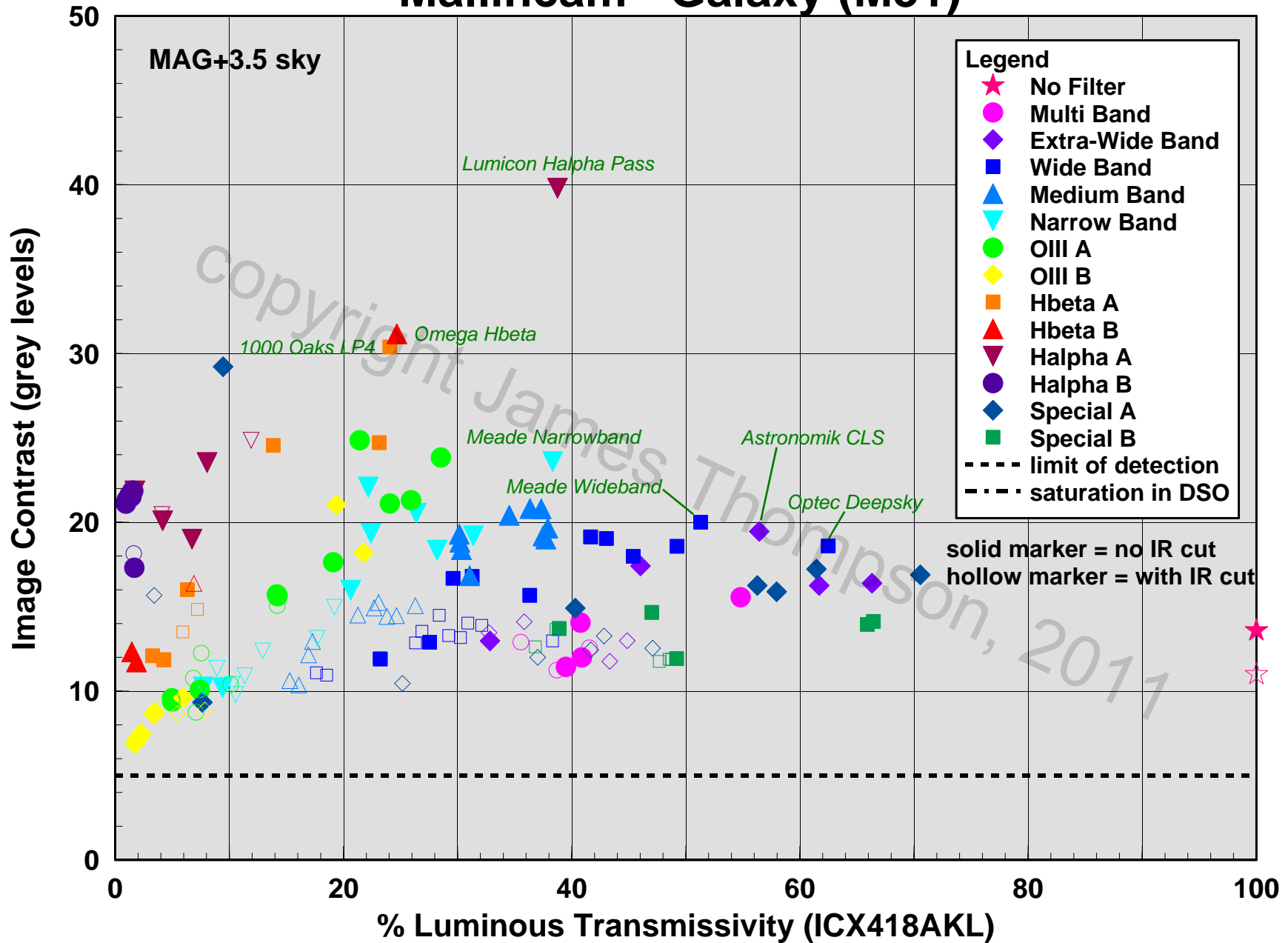
Mallincam - Bright Nebula (M27)



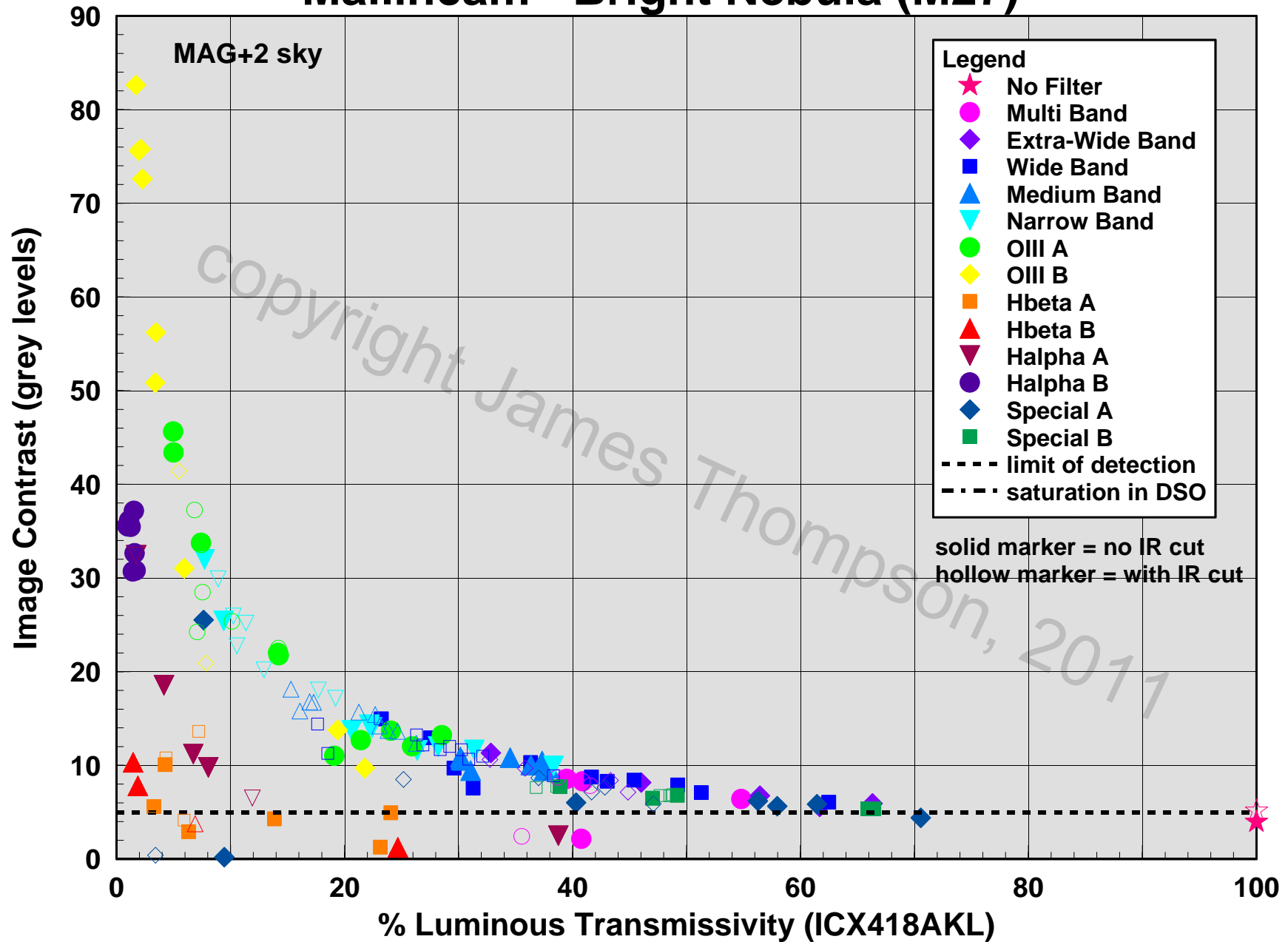
Mallincam - Dim Nebula (NGC7000)



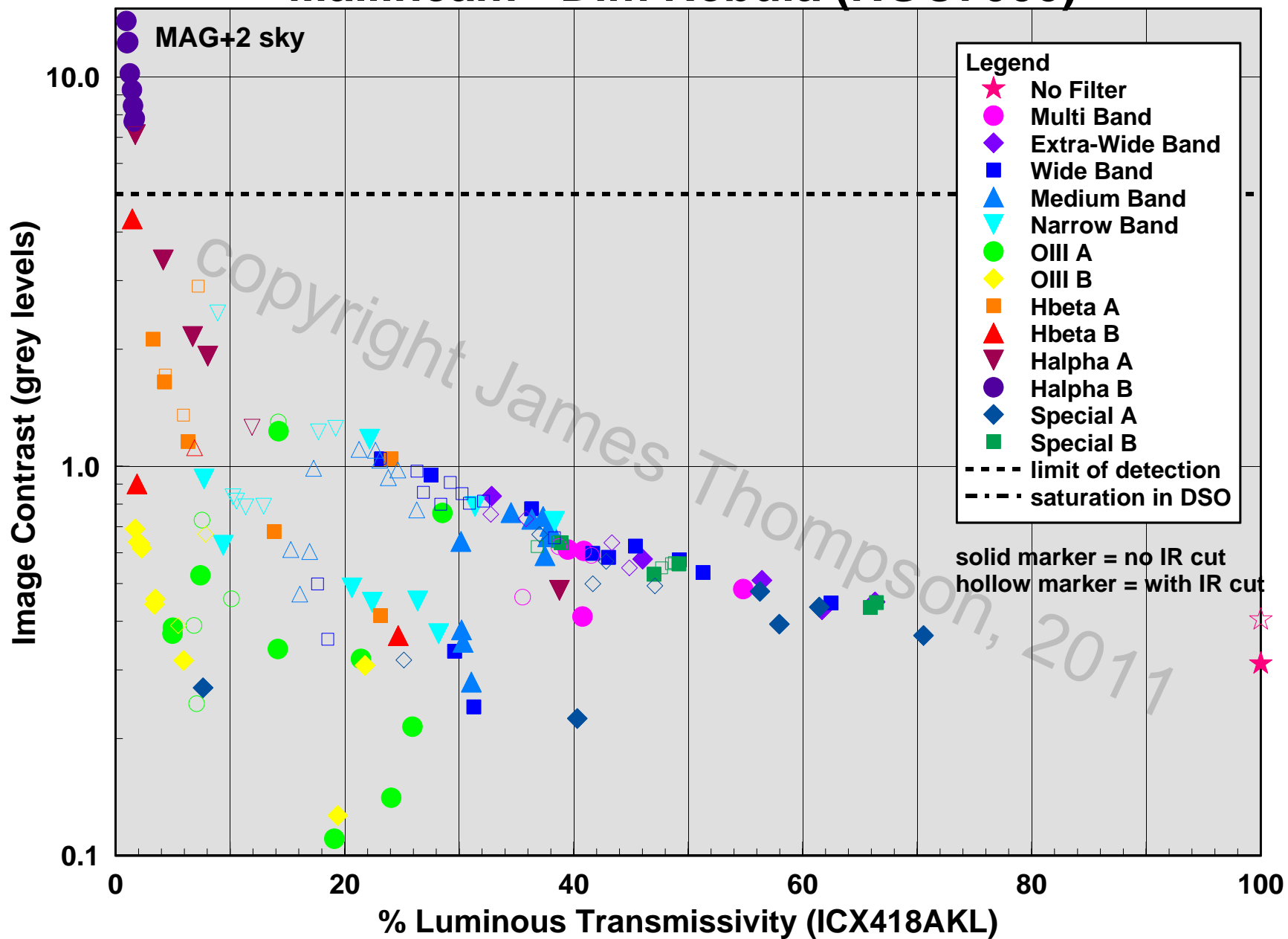
Mallincam - Galaxy (M51)



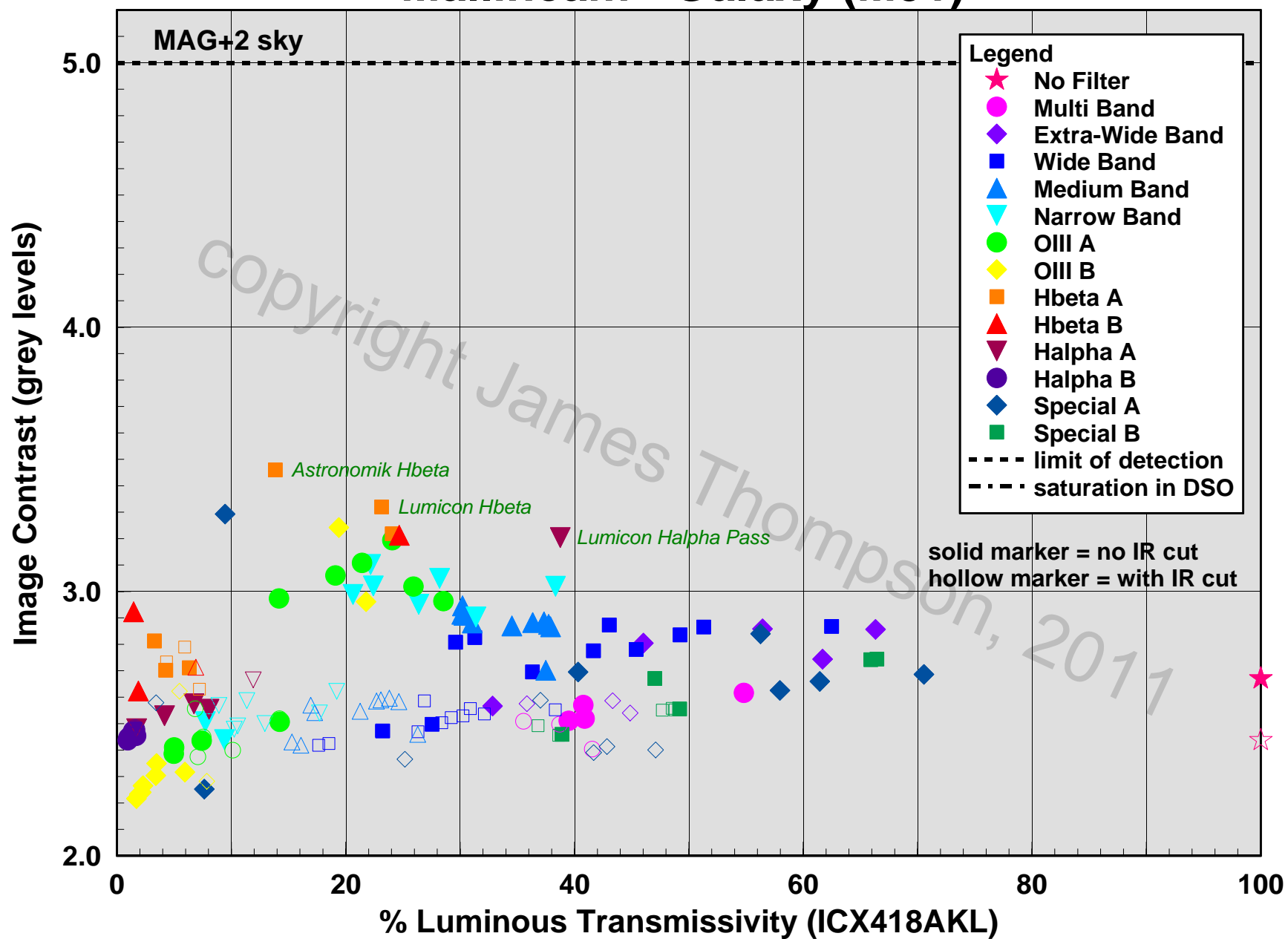
Mallincam - Bright Nebula (M27)



Mallincam - Dim Nebula (NGC7000)

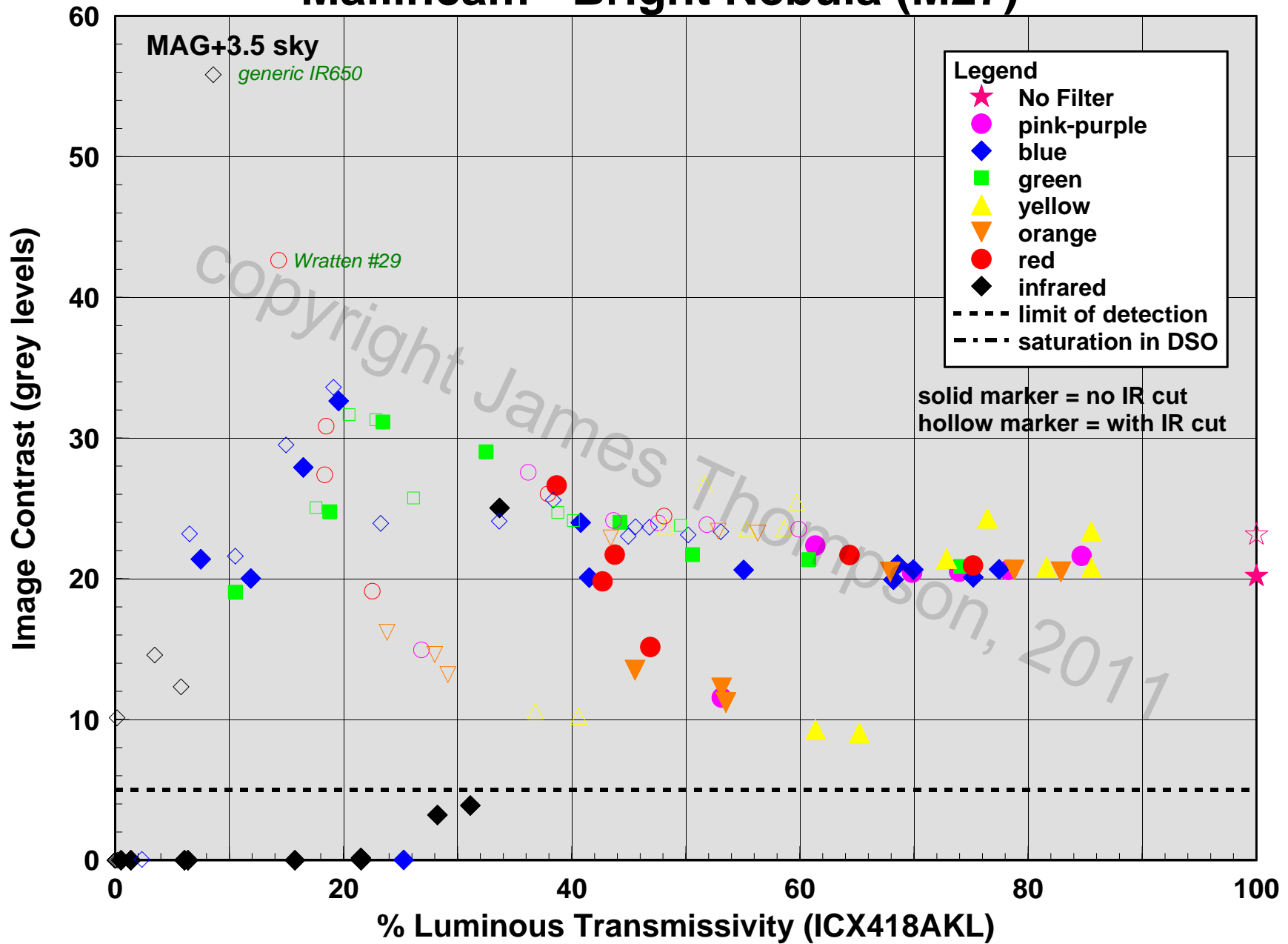


Mallincam - Galaxy (M51)

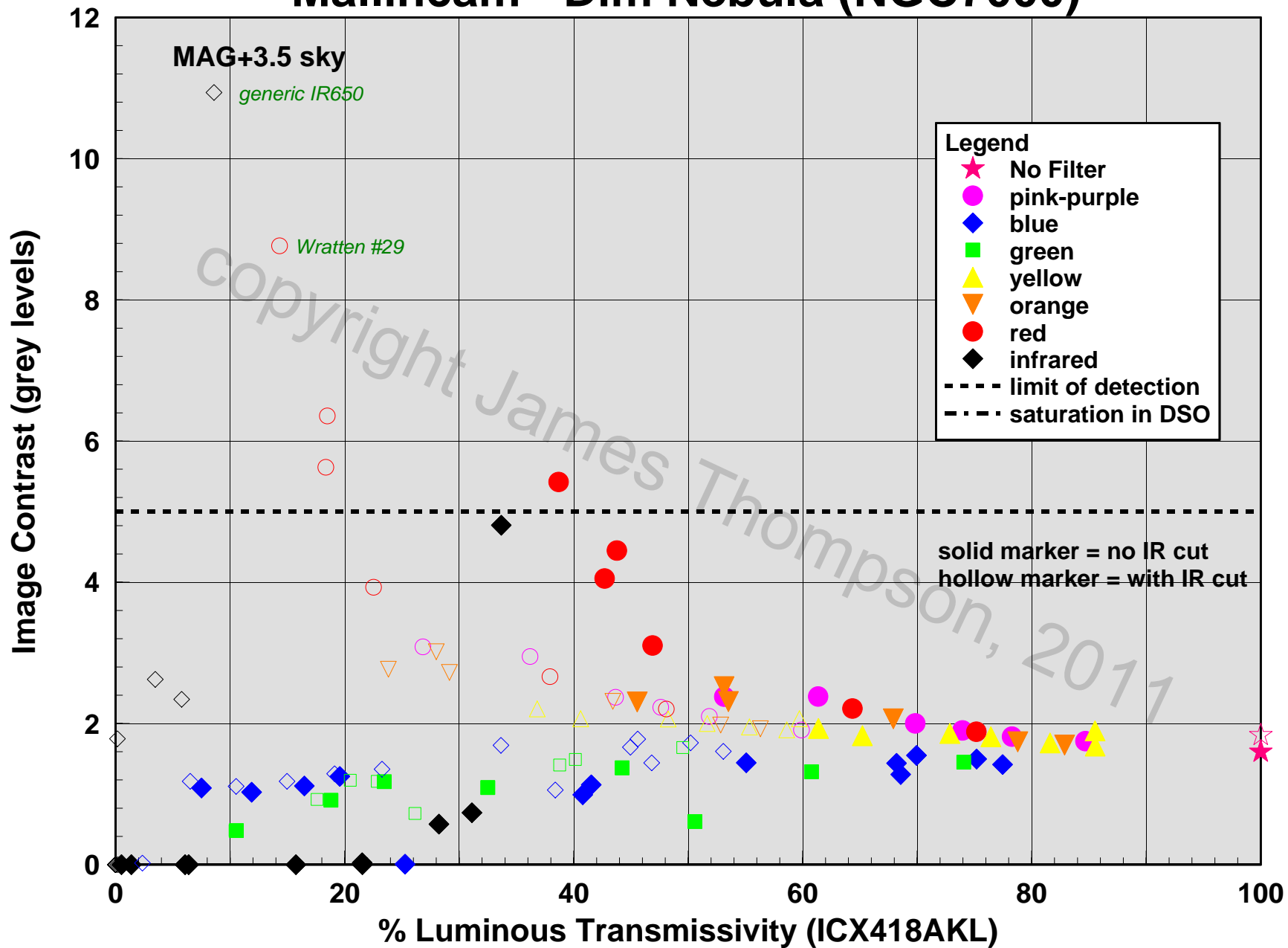


Appendix D - Planetary Filter Δ RGB vs. %LT Plots

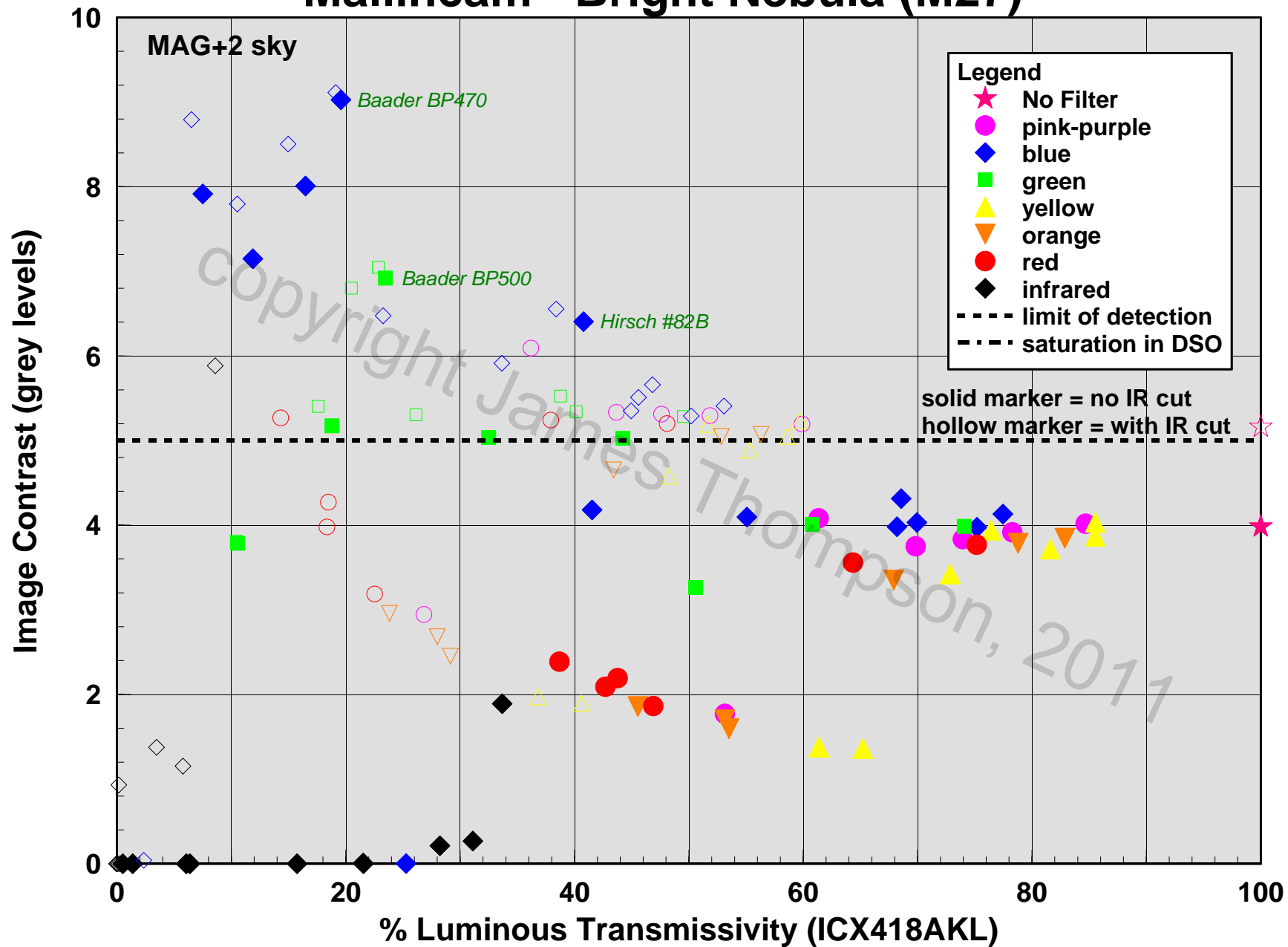
Mallincam - Bright Nebula (M27)



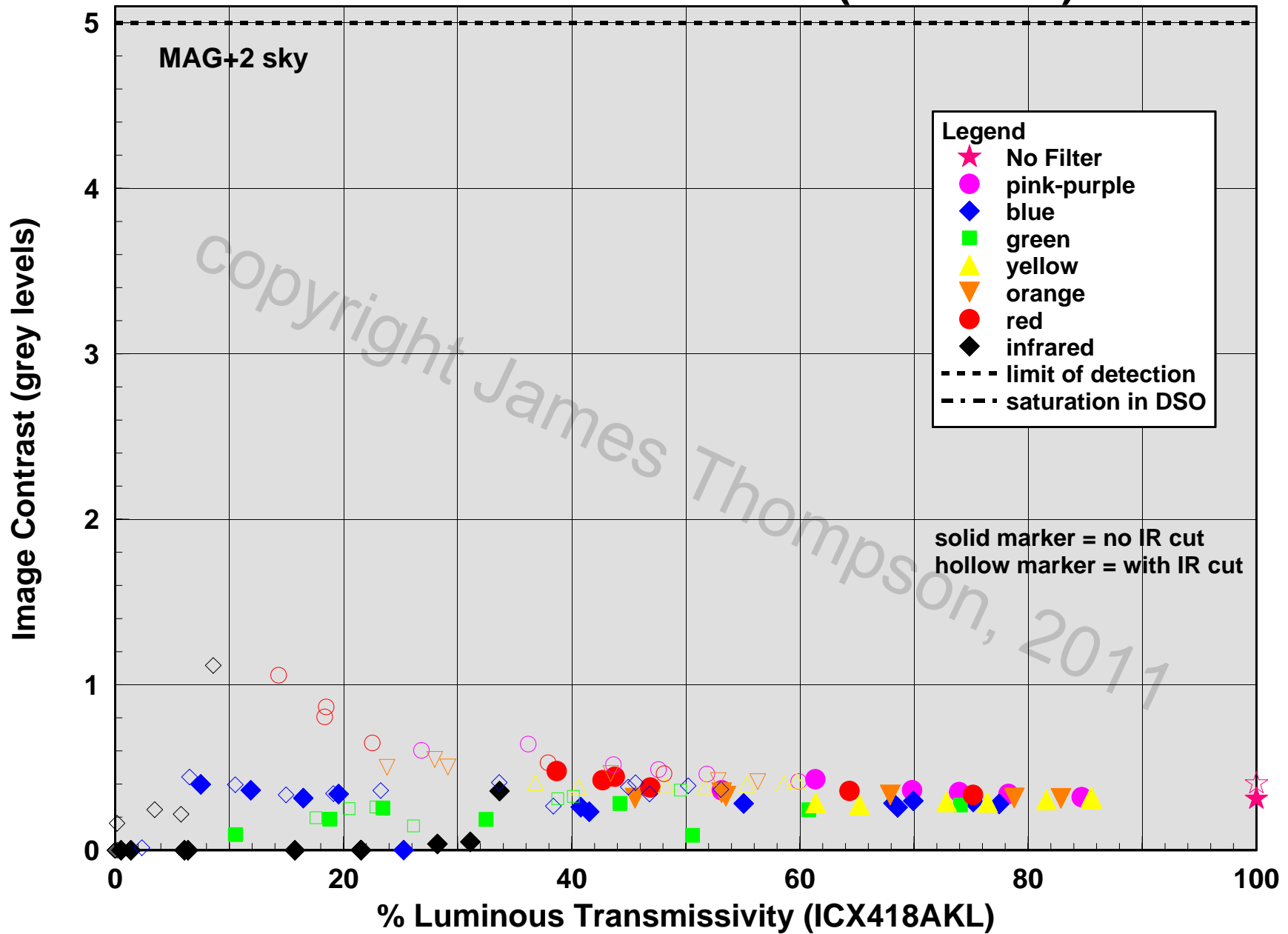
Mallincam - Dim Nebula (NGC7000)



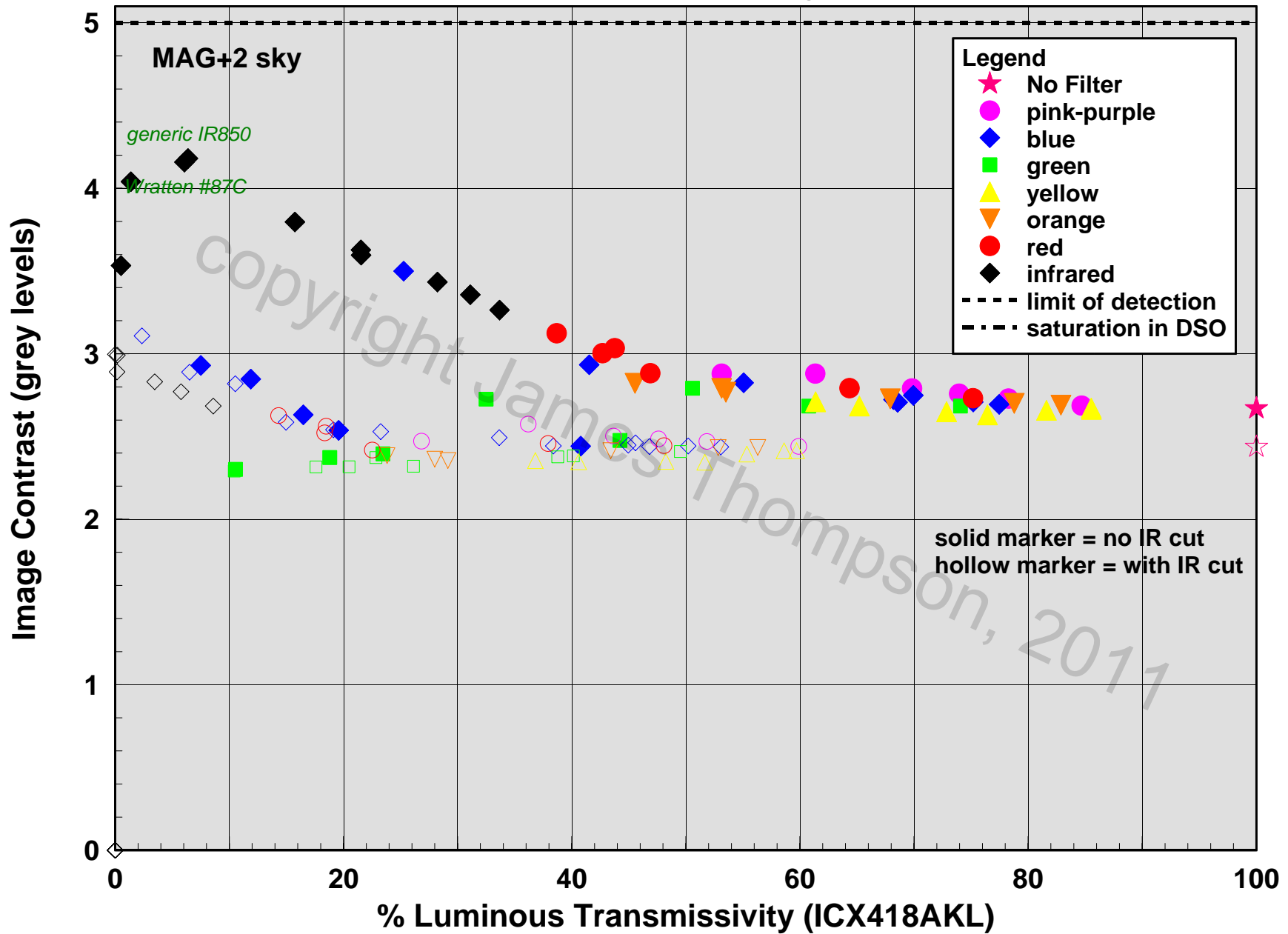
Mallincam - Bright Nebula (M27)



Mallincam - Dim Nebula (NGC7000)



Mallincam - Galaxy (M51)



Appendix E – Deep-Sky Filter Grades

Deep-Sky Filter Grade - Human Eye (SNR) Sorted By Category

Filter Category	Filter Model	%LT	Filter Grade		
			Bright Nebulae	Dim Nebulae	Galaxies
multi band	IDAS LPS-P1	73.54	A+	A+	C
multi band	IDAS LPS-P2	72.67	A	B	C
multi band	Omega Imaging LPF	50.90	D	D	C
multi band	Orion Skyglow Imaging	68.51	A	B	A+
extra wide band	Astronomik CLS	67.52	A	A	A
extra wide band	Astronomik CLS CCD	65.82	A	A	C
extra wide band	DGM GCE	67.66	C	C	D
extra wide band	Omega Hg&Na Reject	72.78	B	C	A+
extra wide band	Orion Skyglow Broadband	64.78	A	B	C
wide band	Optec Deepsky	59.40	B	B	C
wide band	Meade Wideband	54.47	B	B	C
wide band	1000 Oaks LP1	50.64	C	B	C
wide band	Antares ALP	59.58	A	A	B
wide band	Arcturus Broad	50.74	A	B	A+
wide band	IDAS LPS-V3	54.84	A	A	B
wide band	IDAS LPS-V4	54.06	B	A	C
wide band	Baader UHC-S	54.65	B	A	C
wide band	Burgess LPR	47.74	C	C	A+
wide band	Lumicon Deepsky	60.54	A	A	C
wide band	Omega Wide	49.42	B	A	A+
medium band	Arcturus Narrow	31.81	B	B	A
medium band	Astronomik UHC	33.60	A	A	A
medium band	Astronomik UHC-E	42.52	A	C	A+
medium band	Canadian Telescope UHC	39.19	B	B	C
medium band	DGM VHT	33.28	A	A	B
medium band	Denkmeier UHC	38.76	A	A	B
medium band	Omega Narrow	34.27	A	A	A+
medium band	Sirius NEB1	41.08	B	C	A+
medium band	Televue Nebustar	42.49	A	A	A
medium band	Andover 3ch Nebula	32.88	A	A	A
narrow band	1000 Oaks LP2	26.54	A	A	C
narrow band	Antares Narrow	29.06	A	A	A
narrow band	Cust-Sci Multiband	21.52	B	B	C
narrow band	DGM NPB	22.63	A	C	C
narrow band	Lumicon UHC	24.78	A	B	D
narrow band	Meade Narrowband	28.19	A	A	B
narrow band	Orion Ultrablock	26.54	B	C	C
narrow band	TS UHC	22.20	A	B	C
narrow band	Zhumell UHC	28.16	B	A	A
O-III A	1000 Oaks LP3	11.81	B	C	D
O-III A	Andover OIII	14.19	A	C	D
O-III A	IDAS OIII	16.19	A	C	D
O-III A	Astronomik OIII	20.93	A	C	C
O-III A	Astronomik OIII CCD	20.92	A	C	C
O-III A	Lumicon OIII	12.57	A	C	D
O-III A	Meade OIII	16.64	A	C	D

O-III A	Orion OIII	13.79		B	C	D
O-III A	Televue OIII	27.25		A	C	C
O-III A	Zhumell OIII	17.82		C	D	D
O-III B	Baader OIII	6.47		A	C	D
O-III B	Canadian Telescope OIII	16.59		C	C	D
O-III B	Cust-Sci OIII	4.85		A	C	D
O-III B	DGM OIII	10.74		C	C	D
O-III B	Denkmeier O-III	7.84		B	C	D
O-III B	FLI OIII 8nm	6.06		A	C	D
O-III B	Omega OIII	5.56		A	C	D
O-III B	Optec OIII	9.68		B	C	D
O-III B	TS OIII	9.86		A	C	D
H-beta A	1000 Oaks LP4	10.76		C	A	A+
H-beta A	IDAS Hbeta	10.16		D	B	A+
H-beta A	Astronomik Hbeta	12.63		C	A	A+
H-beta A	Astronomik Hbeta CCD	11.82		C	B	A+
H-beta A	Lumicon Hbeta	10.05		D	B	B
H-beta A	Orion Hbeta	9.45		D	B	A
H-beta B	Baader Hbeta	5.09		C	C	C
H-beta B	Cust-Sci Hbeta	4.25		C	A+	B
H-beta B	Omega Hbeta	7.85		C	B	B
special A	Baader Solar	7.04		D	D	A+
special A	Denkmeier Planetary	54.27		A	B	A+
special A	Lumicon Comet	21.25		C	D	D
special A	Orion Mars	52.58		C	C	D
special A	Sirius CE1	50.12		B	C	A
special A	Sirius PC1	35.89		C	C	D
special A	Televue Mars-A	56.50		C	C	A
special B	Baader Moon&Sky	72.28		C	C	D
special B	Baader Contrast Booster	48.87		C	B	A+
special B	Canadian Telescope Moon&Sky	70.78		C	C	D
special B	Sirius NPC	55.08		C	C	C
special B	Zhumell Moon&Sky	71.26		C	C	D

Deep-Sky Filter Grade - Human Eye (SNR) Sorted By %LT

Filter Category	Filter Model	%LT	Filter Grade		
			Bright Nebulae	Dim Nebulae	Galaxies
H-beta B	Cust-Sci Hbeta	4.25	C	A+	B
O-III B	Cust-Sci OIII	4.85	A	C	D
H-beta B	Baader Hbeta	5.09	C	C	C
O-III B	Omega OIII	5.56	A	C	D
O-III B	FLI OIII 8nm	6.06	A	C	D
O-III B	Baader OIII	6.47	A	C	D
special A	Baader Solar	7.04	D	D	A+
O-III B	Denkmeier O-III	7.84	B	C	D
H-beta B	Omega Hbeta	7.85	C	B	B
H-beta A	Orion Hbeta	9.45	D	B	A
O-III B	Optec OIII	9.68	B	C	D
O-III B	TS OIII	9.86	A	C	D
H-beta A	Lumicon Hbeta	10.05	D	B	B
H-beta A	IDAS Hbeta	10.16	D	B	A+
O-III B	DGM OIII	10.74	C	C	D
H-beta A	1000 Oaks LP4	10.76	C	A	A+
O-III A	1000 Oaks LP3	11.81	B	C	D
H-beta A	Astronomik Hbeta CCD	11.82	C	B	A+
O-III A	Lumicon OIII	12.57	A	C	D
H-beta A	Astronomik Hbeta	12.63	C	A	A+
O-III A	Orion OIII	13.79	B	C	D
O-III A	Andover OIII	14.19	A	C	D
O-III A	IDAS OIII	16.19	A	C	D
O-III B	Canadian Telescope OIII	16.59	C	C	D
O-III A	Meade OIII	16.64	A	C	D
O-III A	Zhumell OIII	17.82	C	D	D
O-III A	Astronomik OIII CCD	20.92	A	C	C
O-III A	Astronomik OIII	20.93	A	C	C
special A	Lumicon Comet	21.25	C	D	D
narrow band	Cust-Sci Multiband	21.52	B	B	C
narrow band	TS UHC	22.20	A	B	C
narrow band	DGM NPB	22.63	A	C	C
narrow band	Lumicon UHC	24.78	A	B	D
narrow band	Orion Ultrablock	26.54	B	C	C
narrow band	1000 Oaks LP2	26.54	A	A	C
O-III A	Televue OIII	27.25	A	C	C
narrow band	Zhumell UHC	28.16	B	A	A
narrow band	Meade Narrowband	28.19	A	A	B
narrow band	Antares Narrow	29.06	A	A	A
medium band	Arcturus Narrow	31.81	B	B	A
medium band	Andover 3ch Nebula	32.88	A	A	A
medium band	DGM VHT	33.28	A	A	B
medium band	Astronomik UHC	33.60	A	A	A
medium band	Omega Narrow	34.27	A	A	A+
special A	Sirius PC1	35.89	C	C	D
medium band	Denkmeier UHC	38.76	A	A	B

medium band	Canadian Telescope UHC	39.19		B	B	C
medium band	Sirius NEB1	41.08		B	C	A+
medium band	Televue Nebustar	42.49		A	A	A
medium band	Astronomik UHC-E	42.52		A	C	A+
wide band	Burgess LPR	47.74		C	C	A+
special B	Baader Contrast Booster	48.87		C	B	A+
wide band	Omega Wide	49.42		B	A	A+
special A	Sirius CE1	50.12		B	C	A
wide band	1000 Oaks LP1	50.64		C	B	C
wide band	Arcturus Broad	50.74		A	B	A+
multi band	Omega Imaging LPF	50.90		D	D	C
special A	Orion Mars	52.58		C	C	D
wide band	IDAS LPS-V4	54.06		B	A	C
special A	Denkmeier Planetary	54.27		A	B	A+
wide band	Meade Wideband	54.47		B	B	C
wide band	Baader UHC-S	54.65		B	A	C
wide band	IDAS LPS-V3	54.84		A	A	B
special B	Sirius NPC	55.08		C	C	C
special A	Televue Mars-A	56.50		C	C	A
wide band	Optec Deepsky	59.40		B	B	C
wide band	Antares ALP	59.58		A	A	B
wide band	Lumicon Deepsky	60.54		A	A	C
extra wide band	Orion Skyglow Broadband	64.78		A	B	C
extra wide band	Astronomik CLS CCD	65.82		A	A	C
extra wide band	Astronomik CLS	67.52		A	A	A
extra wide band	DGM GCE	67.66		C	C	D
multi band	Orion Skyglow Imaging	68.51		A	B	A+
special B	Canadian Telescope Moon&Sky	70.78		C	C	D
special B	Zhumell Moon&Sky	71.26		C	C	D
special B	Baader Moon&Sky	72.28		C	C	D
multi band	IDAS LPS-P2	72.67		A	B	C
extra wide band	Omega Hg&Na Reject	72.78		B	C	A+
multi band	IDAS LPS-P1	73.54		A+	A+	C

Deep-Sky Filter Grade - Mallincam (Δ RGB), No IR Cut, Sorted By Category

Filter Category	Filter Model	%LT	Filter Grade		
			Bright Nebulae	Dim Nebulae	Galaxies
multi band	IDAS LPS-P1	39.50	C	C	D
multi band	IDAS LPS-P2	40.89	C	C	D
multi band	Omega Imaging LPF	40.77	D	C	C
multi band	Orion Skyglow Imaging	54.82	C	C	C
extra wide band	Astronomik CLS	56.45	A	A	A
extra wide band	Astronomik CLS CCD	32.84	C	C	D
extra wide band	DGM GCE	66.32	A+	A+	B
extra wide band	Omega Hg&Na Reject	61.70	B	B	C
extra wide band	Orion Skyglow Broadband	46.02	B	C	C
wide band	Meade Wideband	51.30	A	A	A
wide band	Optec Deepsky	62.48	A+	A+	A
wide band	1000 Oaks LP1	43.04	B	C	B
wide band	Antares ALP	45.39	B	B	C
wide band	Arcturus Broad	41.65	A	B	B
wide band	IDAS LPS-V3	27.55	C	C	D
wide band	IDAS LPS-V4	23.23	C	C	D
wide band	Baader UHC-S	36.32	B	B	D
wide band	Burgess LPR	31.28	C	D	C
wide band	Lumicon Deepsky	49.22	A	B	B
wide band	Omega Wide	29.60	B	C	C
medium band	Arcturus Narrow	36.34	A	A	A
medium band	Astronomik UHC	37.32	A	A	A
medium band	Astronomik UHC-E	37.49	A	C	C
medium band	Canadian Telescope UHC	37.90	A	B	B
medium band	DGM VHT	37.73	B	B	C
medium band	Denkmeier UHC	30.21	B	C	C
medium band	Omega Narrow	30.16	B	C	C
medium band	Sirius NEB1	31.06	C	C	C
medium band	Televue Nebustar	30.34	B	C	C
medium band	Andover 3ch Nebula	34.52	A	A	B
narrow band	1000 Oaks LP2	26.38	B	C	B
narrow band	Antares Narrow	22.41	A	C	C
narrow band	Cust-Sci Multiband	22.17	A	A+	A
narrow band	DGM NPB	31.38	A	B	C
narrow band	Lumicon UHC	28.21	B	C	C
narrow band	Meade Narrowband	38.34	A+	A+	A+
narrow band	Orion Ultrablock	9.40	B	C	D
narrow band	TS UHC	7.73	A	C	D
narrow band	Zhumell UHC	20.64	C	C	C
O-III A	1000 Oaks LP3	21.43	A	C	A+
O-III A	Andover OIII	4.97	A+	D	D
O-III A	IDAS OIII	14.23	A+	A	C
O-III A	Astronomik OIII	14.17	A	C	C
O-III A	Astronomik OIII CCD	7.42	A+	C	D
O-III A	Lumicon OIII	24.07	A	D	A
O-III A	Meade OIII	28.55	A+	A	A+

O-III A	Orion OIII	5.00		A+	D	D
O-III A	Televue OIII	25.92		A	D	A
O-III A	Zhumell OIII	19.10		C	D	C
O-III B	Baader OIII	2.27		A+	C	D
O-III B	Canadian Telescope OIII	5.94		A	D	D
O-III B	Cust-Sci OIII	1.70		A+	C	D
O-III B	DGM OIII	21.78		C	C	C
O-III B	Denkmeier O-III	19.39		B	D	A
O-III B	FLI OIII 8nm	2.13		A+	C	D
O-III B	Omega OIII	1.95		A+	C	D
O-III B	Optec OIII	3.40		A+	C	D
O-III B	TS OIII	3.46		A+	C	D
H-alpha A	Astronomik Halpha 13nm	4.16		A+	A+	C
H-alpha A	Baader Halpha 35nm	6.73		C	A+	C
H-alpha A	Cust-Sci Halpha 10nm	1.71		A+	A+	A
H-alpha A	Lumicon Halpha Pass	38.75		C	A+	A+
H-alpha A	Omega H-alpha	8.04		C	A+	A
H-alpha B	Astrodon Halpha 3nm	0.93		A+	A+	A+
H-alpha B	Astrodon Halpha 5nm	1.11		A+	A+	A+
H-alpha B	Astronomik Halpha 6nm	1.68		A+	A+	C
H-alpha B	Baader Halpha 7nm	1.52		A+	A+	A+
H-alpha B	Cust-Sci Halpha 4nm	1.00		A+	A+	A+
H-alpha B	FLI Halpha 8nm	1.42		A+	A+	A
H-alpha B	Optec Halpha	1.58		A+	A+	A
H-alpha B	Orion Halpha	1.24		A+	A+	A+
H-beta A	1000 Oaks LP4	24.06		C	A+	A+
H-beta A	IDAS Hbeta	6.32		D	C	C
H-beta A	Astronomik Hbeta	13.84		C	C	A+
H-beta A	Astronomik Hbeta CCD	4.26		C	C	D
H-beta A	Lumicon Hbeta	23.14		D	C	A+
H-beta A	Orion Hbeta	3.28		C	A	D
H-beta B	Baader Hbeta	1.72		C	A+	D
H-beta B	Cust-Sci Hbeta	1.45		C	A+	D
H-beta B	Omega Hbeta	24.68		D	C	A+
special A	Baader Solar	9.45		D	D	A+
special A	Denkmeier Planetary	61.45		A	A	B
special A	Lumicon Comet	7.64		B	D	D
special A	Orion Mars	56.27		C	C	C
special A	Sirius CE1	57.96		C	C	C
special A	Sirius PC1	40.31		C	D	C
special A	Televue Mars-A	70.56		A	A	A
special B	Baader Moon&Sky	49.19		C	C	D
special B	Baader Contrast Booster	38.90		C	C	C
special B	Canadian Telescope Moon&Sky	66.45		A	A	C
special B	Sirius NPC	47.02		C	C	C
special B	Zhumell Moon&Sky	65.91		A	A	C

Deep-Sky Filter Grade - Mallincam (Δ RGB), No IR Cut, Sorted By %LT

Filter Category	Filter Model	%LT	Filter Grade		
			Bright Nebulae	Dim Nebulae	Galaxies
H-alpha B	Astrodon Halpha 3nm	0.93	A+	A+	A+
H-alpha B	Cust-Sci Halpha 4nm	1.00	A+	A+	A+
H-alpha B	Astrodon Halpha 5nm	1.11	A+	A+	A+
H-alpha B	Orion Halpha	1.24	A+	A+	A+
H-alpha B	FLI Halpha 8nm	1.42	A+	A+	A
H-beta B	Cust-Sci Hbeta	1.45	C	A+	D
H-alpha B	Baader Halpha 7nm	1.52	A+	A+	A+
H-alpha B	Optec Halpha	1.58	A+	A+	A
H-alpha B	Astronomik Halpha 6nm	1.68	A+	A+	C
O-III B	Cust-Sci OIII	1.70	A+	C	D
H-alpha A	Cust-Sci Halpha 10nm	1.71	A+	A+	A
H-beta B	Baader Hbeta	1.72	C	A+	D
O-III B	Omega OIII	1.95	A+	C	D
O-III B	FLI OIII 8nm	2.13	A+	C	D
O-III B	Baader OIII	2.27	A+	C	D
H-beta A	Orion Hbeta	3.28	C	A	D
O-III B	Optec OIII	3.40	A+	C	D
O-III B	TS OIII	3.46	A+	C	D
H-alpha A	Astronomik Halpha 13nm	4.16	A+	A+	C
H-beta A	Astronomik Hbeta CCD	4.26	C	C	D
O-III A	Andover OIII	4.97	A+	D	D
O-III A	Orion OIII	5.00	A+	D	D
O-III B	Canadian Telescope OIII	5.94	A	D	D
H-beta A	IDAS Hbeta	6.32	D	C	C
H-alpha A	Baader Halpha 35nm	6.73	C	A+	C
O-III A	Astronomik OIII CCD	7.42	A+	C	D
special A	Lumicon Comet	7.64	B	D	D
narrow band	TS UHC	7.73	A	C	D
H-alpha A	Omega H-alpha	8.04	C	A+	A
narrow band	Orion Ultrablock	9.40	B	C	D
special A	Baader Solar	9.45	D	D	A+
H-beta A	Astronomik Hbeta	13.84	C	C	A+
O-III A	Astronomik OIII	14.17	A	C	C
O-III A	IDAS OIII	14.23	A+	A	C
O-III A	Zhumell OIII	19.10	C	D	C
O-III B	Denkmeier O-III	19.39	B	D	A
narrow band	Zhumell UHC	20.64	C	C	C
O-III A	1000 Oaks LP3	21.43	A	C	A+
O-III B	DGM OIII	21.78	C	C	C
narrow band	Cust-Sci Multiband	22.17	A	A+	A
narrow band	Antares Narrow	22.41	A	C	C
H-beta A	Lumicon Hbeta	23.14	D	C	A+
wide band	IDAS LPS-V4	23.23	C	C	D
H-beta A	1000 Oaks LP4	24.06	C	A+	A+
O-III A	Lumicon OIII	24.07	A	D	A
H-beta B	Omega Hbeta	24.68	D	C	A+

O-III A	Televue OIII	25.92		A	D	A
narrow band	1000 Oaks LP2	26.38		B	C	B
wide band	IDAS LPS-V3	27.55		C	C	D
narrow band	Lumicon UHC	28.21		B	C	C
O-III A	Meade OIII	28.55		A+	A	A+
wide band	Omega Wide	29.60		B	C	C
medium band	Omega Narrow	30.16		B	C	C
medium band	Denkmeier UHC	30.21		B	C	C
medium band	Televue Nebustar	30.34		B	C	C
medium band	Sirius NEB1	31.06		C	C	C
wide band	Burgess LPR	31.28		C	D	C
narrow band	DGM NPB	31.38		A	B	C
extra wide band	Astronomik CLS CCD	32.84		C	C	D
medium band	Andover 3ch Nebula	34.52		A	A	B
wide band	Baader UHC-S	36.32		B	B	D
medium band	Arcturus Narrow	36.34		A	A	A
medium band	Astronomik UHC	37.32		A	A	A
medium band	Astronomik UHC-E	37.49		A	C	C
medium band	DGM VHT	37.73		B	B	C
medium band	Canadian Telescope UHC	37.90		A	B	B
narrow band	Meade Narrowband	38.34		A+	A+	A+
H-alpha A	Lumicon Halpha Pass	38.75		C	A+	A+
special B	Baader Contrast Booster	38.90		C	C	C
multi band	IDAS LPS-P1	39.50		C	C	D
special A	Sirius PC1	40.31		C	D	C
multi band	Omega Imaging LPF	40.77		D	C	C
multi band	IDAS LPS-P2	40.89		C	C	D
wide band	Arcturus Broad	41.65		A	B	B
wide band	1000 Oaks LP1	43.04		B	C	B
wide band	Antares ALP	45.39		B	B	C
extra wide band	Orion Skyglow Broadband	46.02		B	C	C
special B	Sirius NPC	47.02		C	C	C
special B	Baader Moon&Sky	49.19		C	C	D
wide band	Lumicon Deepsky	49.22		A	B	B
wide band	Meade Wideband	51.30		A	A	A
multi band	Orion Skyglow Imaging	54.82		C	C	C
special A	Orion Mars	56.27		C	C	C
extra wide band	Astronomik CLS	56.45		A	A	A
special A	Sirius CE1	57.96		C	C	C
special A	Denkmeier Planetary	61.45		A	A	B
extra wide band	Omega Hg&Na Reject	61.70		B	B	C
wide band	Optec Deepsky	62.48		A+	A+	A
special B	Zhumell Moon&Sky	65.91		A	A	C
extra wide band	DGM GCE	66.32		A+	A+	B
special B	Canadian Telescope Moon&Sky	66.45		A	A	C
special A	Televue Mars-A	70.56		A	A	A