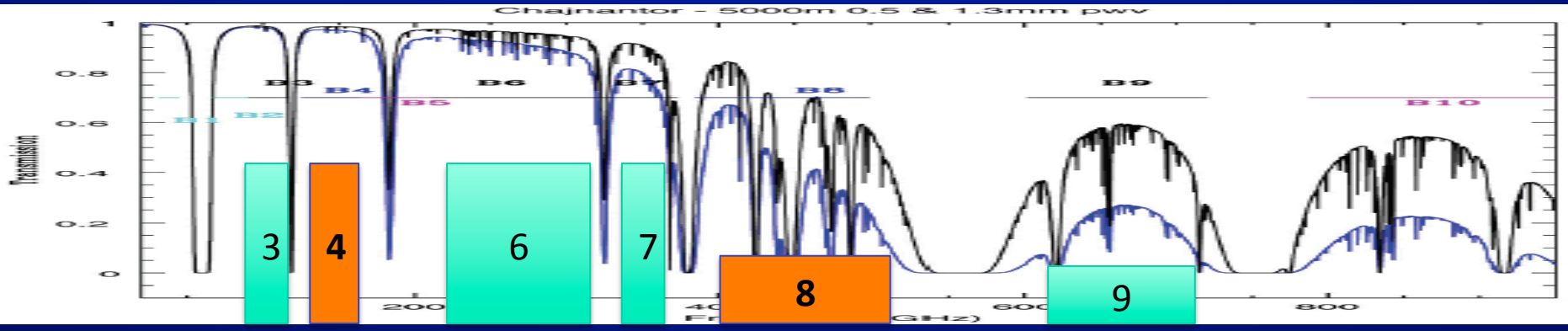
ALMA and the Magellanic System



3mm 1mm 850um 450um

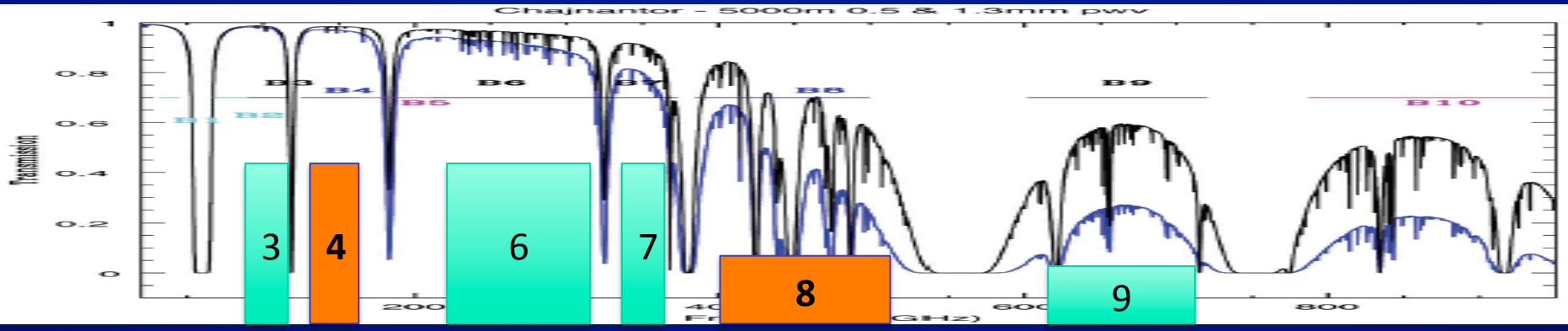
CI

CO 6-5

CO 1-0
HCO+ 1-0
HCN 1-0
HNC 1-0
CS 2-1
SiO 2-1

CO 2-1
*isotopologues
HCO+ 3-2
HCN 3-2
HNC 3-2
CS 2-1
SiO 5-4

CO 3-2
HCN 4-3
HCO+ 4-3



	3mm	1mm	850um		450um
Max res	0.45”		0.13”	0.16”	0.1”
	0.11pc		0.03pc	0.04pc	0.03pc
	24000AU		7000AU	8000AU	5000AU
	$15x10^{17}$cm		$4x10^{17}$cm	$5x10^{17}$cm	$0.8x10^{17}$cm
12m PB	60”		15”		9“

<< Cycle 2

Cycle 0:

30 Doradus:
CO 2-1 RI++ 2013
HCO+, HCN, CS Brogan++ 2015
detailed comparison with YSOs: 2015

87a: overview RI++ 2013
ALMA+Herschel SED: Matsuura submitted
spectral index maps: Zanardo submitted

Cycle 1:

CO in N159 (Fukui) - data in hand, 7m+12m maps being made – paper planning Wed.
CO in LMC giant molecular clouds (Kawamura) – data almost delivered (some QA issues)
CO in N11B (Lebouteiller) -- data looks good - talk to him here about planning
CO in N55 (Onishi) – data delivered
LMC Molecular Clouds at Various Evolutionary Stages (Sawada)
87a: high resolution – B7 observed
A low metallicity cloud in the Magellanic Bridge (Rubio) – some 7m observed

Cycle 2:

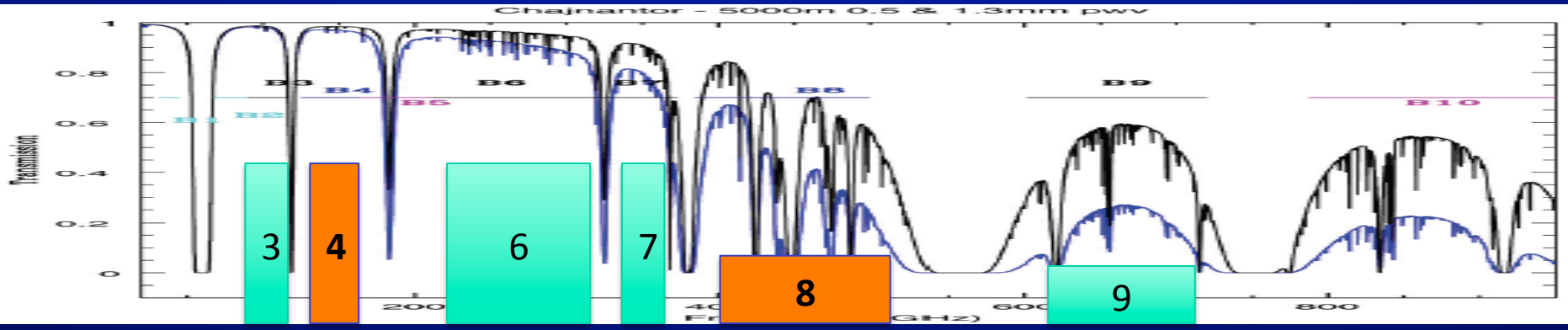
SMC N83 (Onishi) – some 7m observed
SMC south (Jameson) – some 7m observed
isolated YSOs (Onishi) – some 7m observed
most massive YSO (Seale > Meixner)
87a: spectral line survey (Matsuura and RI – 2x)
N132D SNR: (Sano)
mid-infrared excess sources (Srinivasan)
AGB stars (Groenewegen)
An exceptionally cold cloud in the LMC (Wong)
H/H2 transition in the Bridge (Stanimorivic)
Kinetic temp of LMC GMCs (Henkel)

Cycle 2 Operations Status

Single Dish calibration finally understood, software updates in progress

now-Nov: long baseline commissioning campaign
Dec/Jan: smaller configurations
~Feb+: weather/engineering shutdown
>> may not get high-res Magellanic data until mid- 2015 ☹

Cycle 3 proposal deadline Spring 2015, for observing to begin ~Oct



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<< Cycle 2

Cycle 3:

-- continuum polarization; line/Zeeman maybe

-- B10? 800-1000GHz

-- probably longer baselines, but how much – 2x?? 3x???

Cycle 3 Possibilities:

- more butterflies in CO? maybe if special, SMC/wing
- big CO survey of GMCs – personally, I doubt it before we analyze what we have
- big CO survey of one region e.g. the ridge – 100 sq arcmin - LARGE proposal

- more SNR – previous cycle submissions were solid

- more interesting lines: usual suspects are HCN, HCO+, CS, & isotologues for clump/core science, but why do it in the MC?

- polarization and dust physics

- CI and/or high-J CO, PDR physics – remember TINY regions (<sq arcmin)

- if we really get much higher angular resolution (few 1000 AU at mid-freq bands),
  - individual MYSOs
  - mass loss from high-mass AGB/PPN

-- what else?