



# Green Bank Earth Station Status Report



**Marty Bloss**

# Outline

- Quick review of 43m configuration for RadioAstron
- GBES Contract
- GBES Session statistics
- GBES Team



# 43m Telescope

- 43-meter diameter
- Equatorial mount
- Cassegrain and prime focus optical configurations
- 0.5mm surface RMS
- 35% efficiency at 15GHz
- Observing frequency range
- 750MHz - 15GHz



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# 43m Telescope

- In use since 1965 – structure in great shape
- Many key major drives and mechanisms are original
- Servo electronics replaced with PLC control system in mid 2000s
- Some wiring replaced but much original wiring remains
- Ongoing training of new support staff as 43m experience staff retire

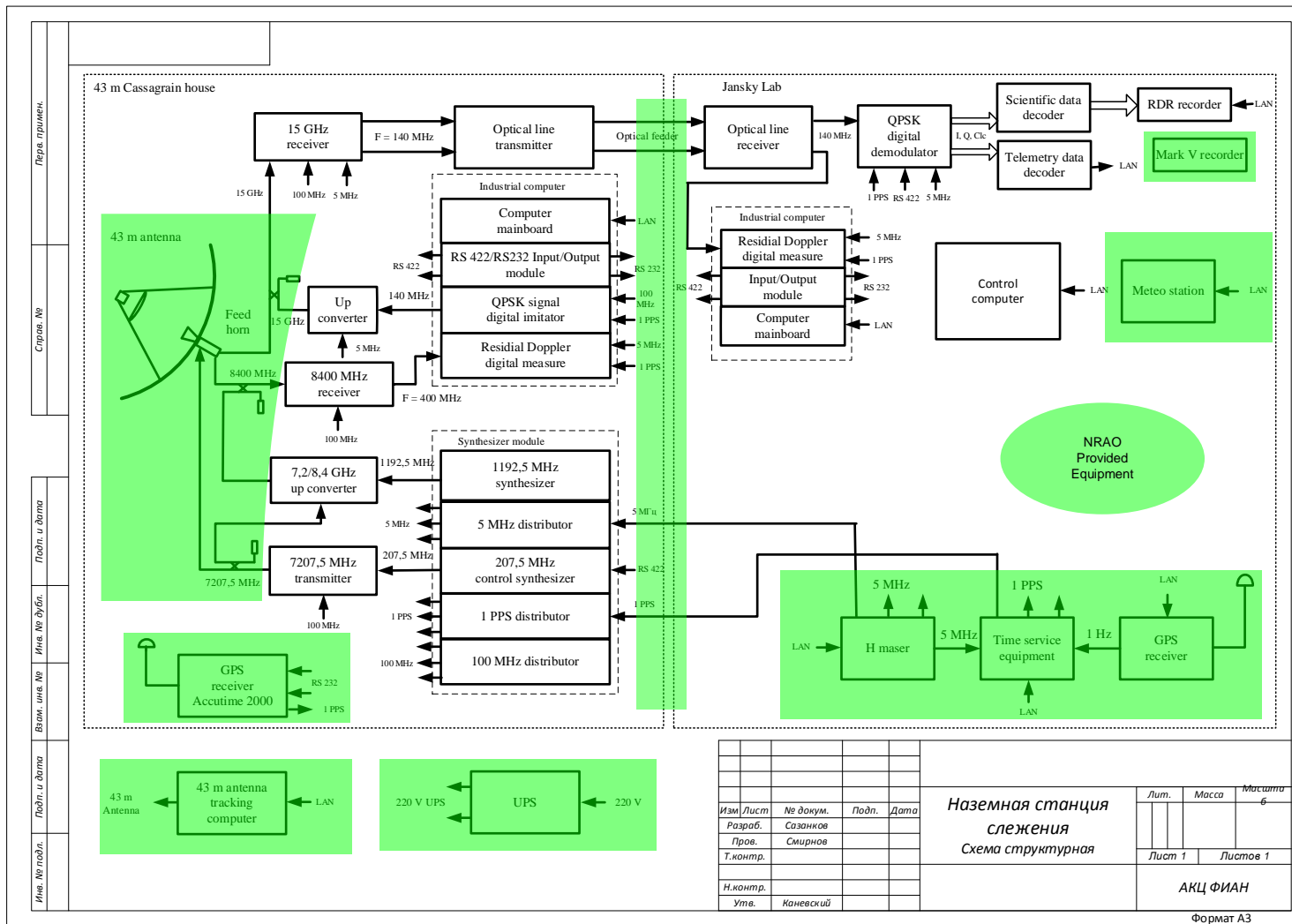


# Contract Status

- GBES operating under Additional Agreement #3
  - Two milestones completed
  - All terms current
- Scheduled end date: July 31, 2018



# GBES Equipment Configuration



# GBES Session Statistics

Time Period	Oct-Nov 2014	Dec-Jun 2015	Jun 2015 - Jun 2016	Jun 2016 - Jun 2017
Sessions Scheduled	68	195	260	249
Fully completed	63 (93%)	169 (81%)	244 (94%)	236 (95%)
Cancelled by LPI/ASC	1	8	5	1
Cancelled by GBES	1	3	1	8
GBES Availability	98%	97%	99%	97%
Partially completed	3	15	10	4



# Session Type

- Regular sessions: 186
- ‘Stereo’ sessions: 35
  - Unknown by GBO if all data taken during stereo sessions is usable.
  - Demodulator lock is often intermittent
- Coherent (uplink) sessions: 16





# Failure Log for Last 12 Months

Failure type	Instances	Cumulative lost time (minutes)
Telescope failure	9	460
Electronic systems	2	-
Weather	0	-
Power outage	2	180
Operator error	4	116
Other <sup>1</sup>	1	50
	Total:	(13 hr. 26 min.) 806

<sup>1</sup>Telescope scheduled outside observing limits



# GBES Team

- Dr. Karen O’Neil, GBO Director
- Marty Bloss, Technical Contact
- Richard Sakshaug, Contracts Contact
- Pete Chestnut, Telescope/Operations Mgr.
- Galen Watts, Microwave/Electronics Eng.
- Ron Maddalena, Scientist
- Amber Bonsall, Data Analyst
  - Plan to add a second analyst in FY18





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[greenbankobservatory.org](http://greenbankobservatory.org)

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